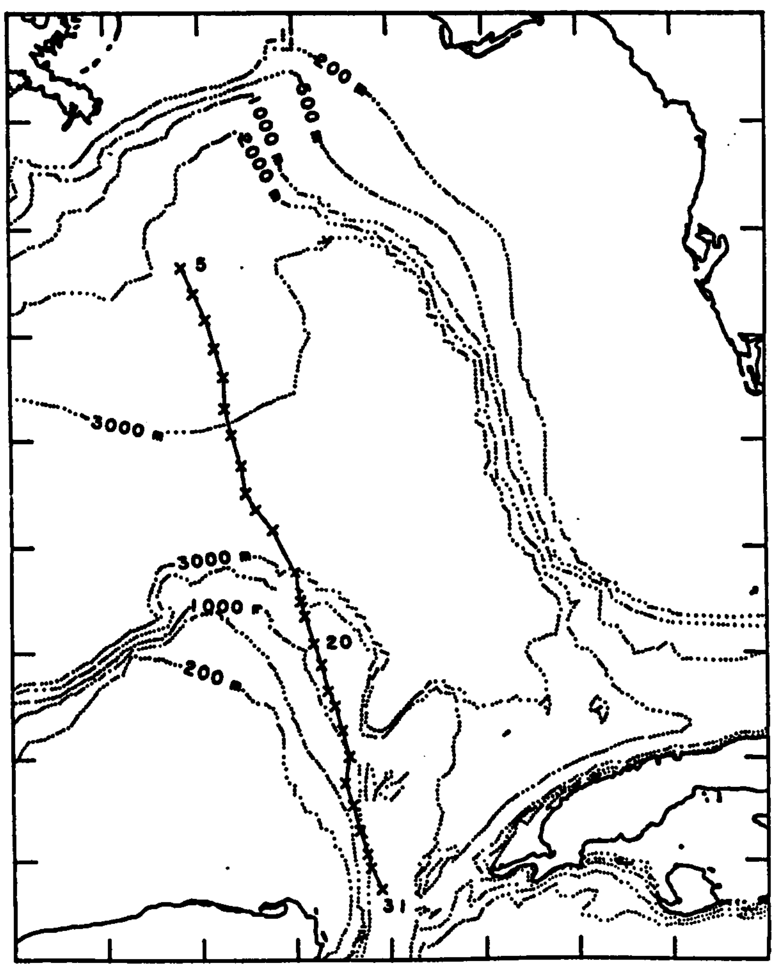
OCS STUDY
MMS 86-0028

COTR
COPY

GULF OF MEXICO
SHIP-OF-OPPORTUNITY DATA REPORT

January 1983 - October 1985



U.S. DEPARTMENT OF THE INTERIOR/MINERALS MANAGEMENT SERVICE

This report has been technically reviewed according to contractual specifications. It, however, is exempt from review by the Minerals Management Service Technical Publications Unit and the Regional Editor.

OCS STUDY
MMS 86-0028

GULF OF MEXICO
SHIP-OF-OPPORTUNITY DATA REPORT

January 1983 - October 1985

Minerals Management Service
Murray Brown

Science Applications International Corporation
Evans Waddell
Joseph Karpen
Robert Wayland

Prepared as part of the
Gulf of Mexico Physical Oceanography Study
Contract No. 14-12-0001-29158

for

U.S. Department of the Interior
Minerals Management Service
Gulf of Mexico OCS Regional Office
1420 South Clearview Parkway
New Orleans, Louisiana 70123

March 1986

U.S. DEPARTMENT OF THE INTERIOR/MINERALS MANAGEMENT SERVICE

REPORT AVAILABILITY

Preparation of this report was conducted under Contract between the Minerals Management Service and Science Applications International Corporation. Extra copies of the report may be obtained from the Public Information Unit (Mail Stop OPS-3-4) at the following address:

Minerals Management Service
Gulf of Mexico OCS Regional Office
U.S. Department of the Interior
1420 South Clearview Parkway
New Orleans, Louisiana 70123
Attn: Public Information Unit
Telephone: (504) 736-2519

DISCLAIMER

This report has been reviewed by the Minerals Management Service and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the Service, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

INTRODUCTION

In January 1983 the Minerals Management Service (MMS) began a 5-year program of physical oceanographic measurements in the Gulf of Mexico, including current moorings, drifting buoys, satellite observations, and hydrographic surveys. To provide additional information on the time-varying circulation features in the Gulf, linking the various other data sets which usually emphasize specific processes or limited periods of time, MMS has supported a ship-of-opportunity (SOOP) program. The SOOP observations consist primarily of expendable bathythermograph profiles, usually T-7 probes, obtained by a number of cooperating vessels. This data report contains station charts, temperature sections (full-scale and an expanded version of the upper layer), and sea surface temperature plots from all the cruises supported between January 1983 and October 1985.

The data obtained by the vessel E.M. Queeny along a transect between the Straits of Florida and Galveston are part of a cooperative effort between the National Marine Fisheries Service (NMFS) and MMS. The data appearing here are also catalogued in a series of announcements issued by NMFS' Narragansett, Rhode Island, office.

The largest portion of the data were obtained by vessels operated by Coordinated Carribean Transport (CCT Lines) out of the Port of New Orleans. In order, the vessels Oyster Bay, Lion Heart, Nordic Wasa, Nestor I, Stena Hispania, and Ambassador have provided data from a transect between New Orleans and the Yucatan Strait.

Many other vessels, mostly oceanographic research ships of institutions around the Gulf Coast, have also provided data from various transects defined by their own research interests or transit schedules. The following institutions have participated: National Oceanic and Atmospheric Administration (Atlantic Oceanographic and Meteorological Laboratory); Florida Institute of Oceanography; NMFS (Pascagoula Laboratory); Texas A&M University; Autonomous National University of Mexico; Navy of Mexico; U.S. Naval Oceanographic Research and Development Activity (NORDA).

MMS is grateful to the institutions and vessels involved in this program, particularly to the ships' officers and crewmen who have volunteered their time to obtain these data. Their cooperation and interest has made the effort both effective and pleasurable.

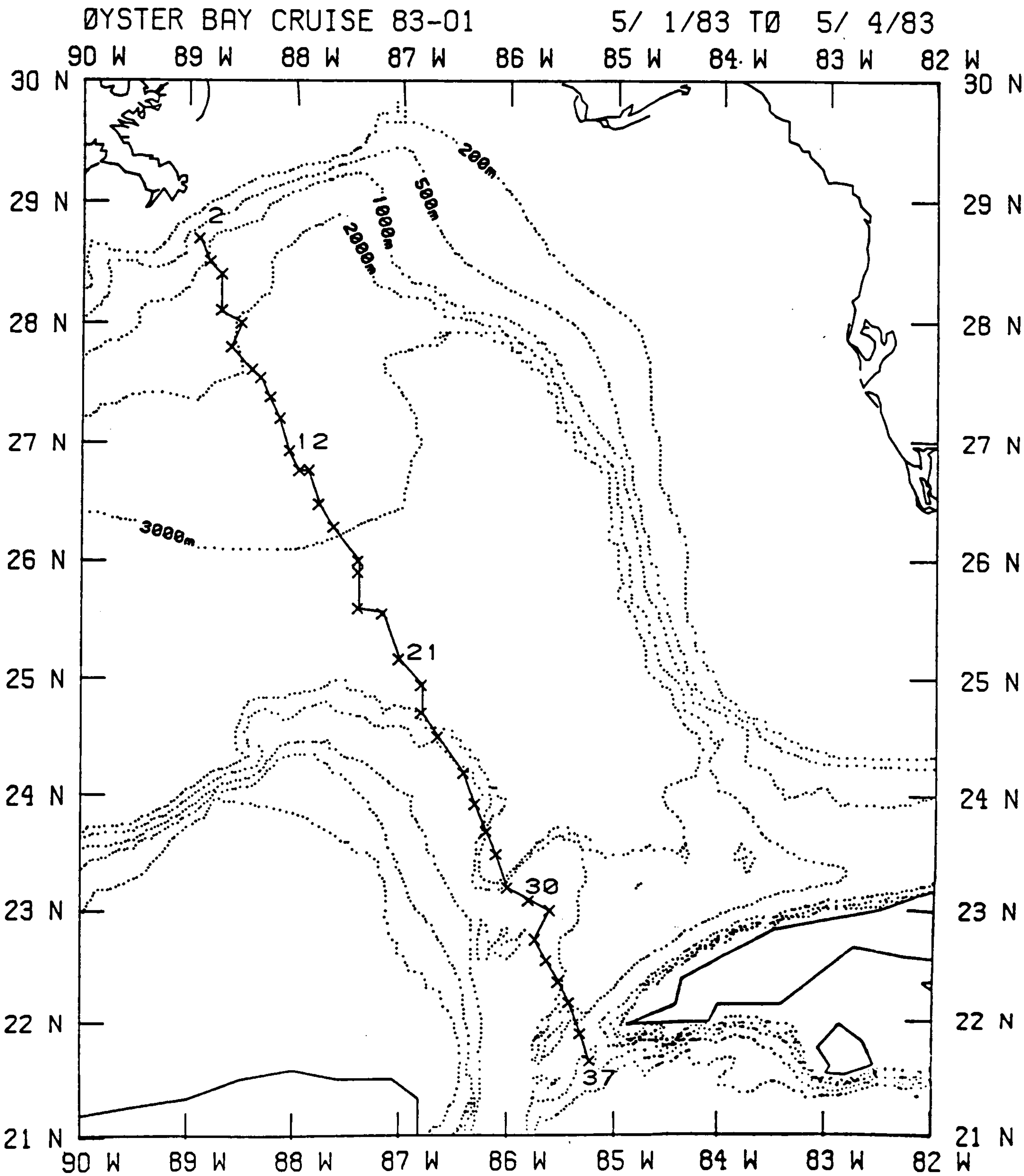
TABLE OF CONTENTS

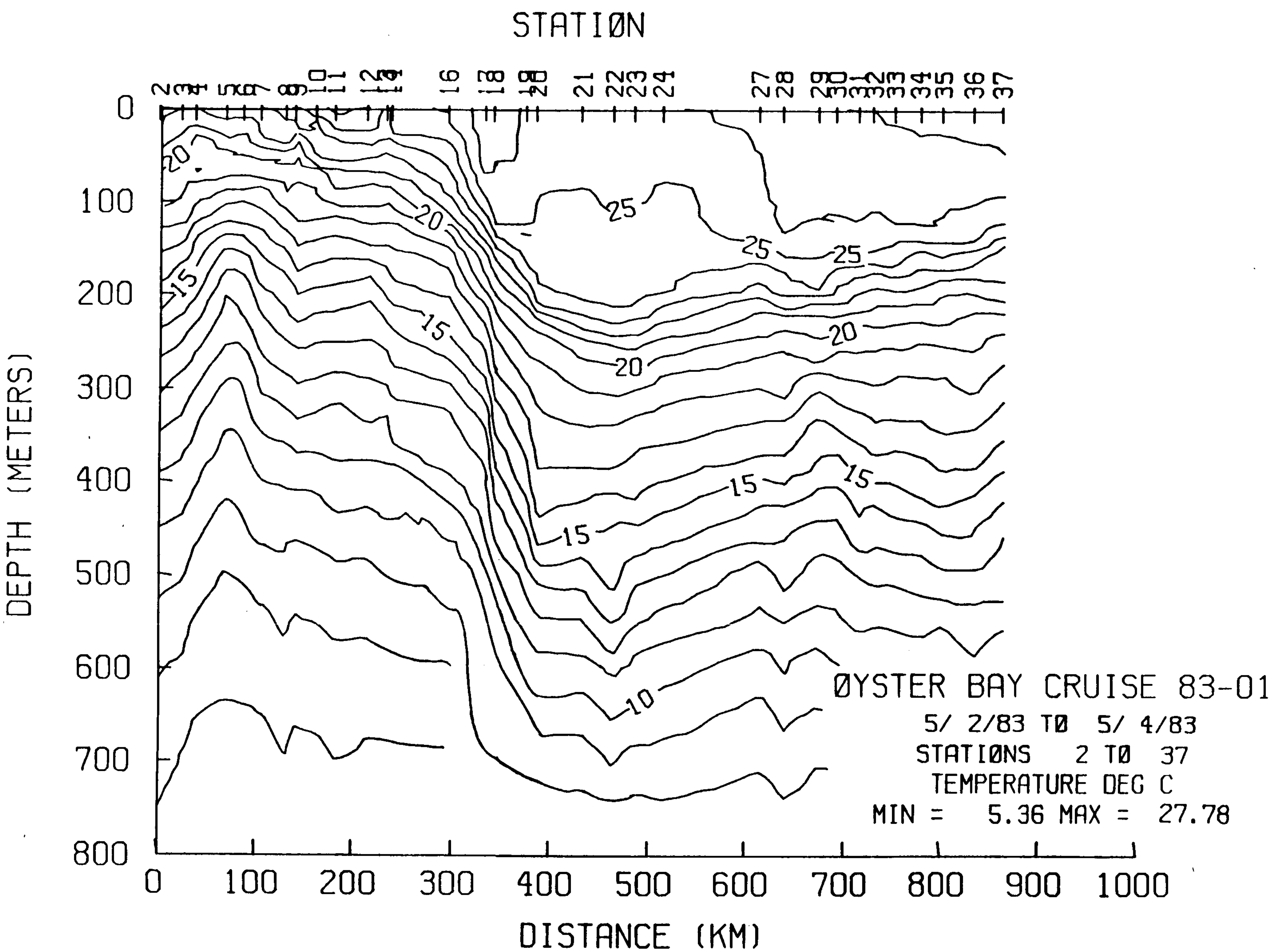
1983 SOOP DATA BY VESSEL

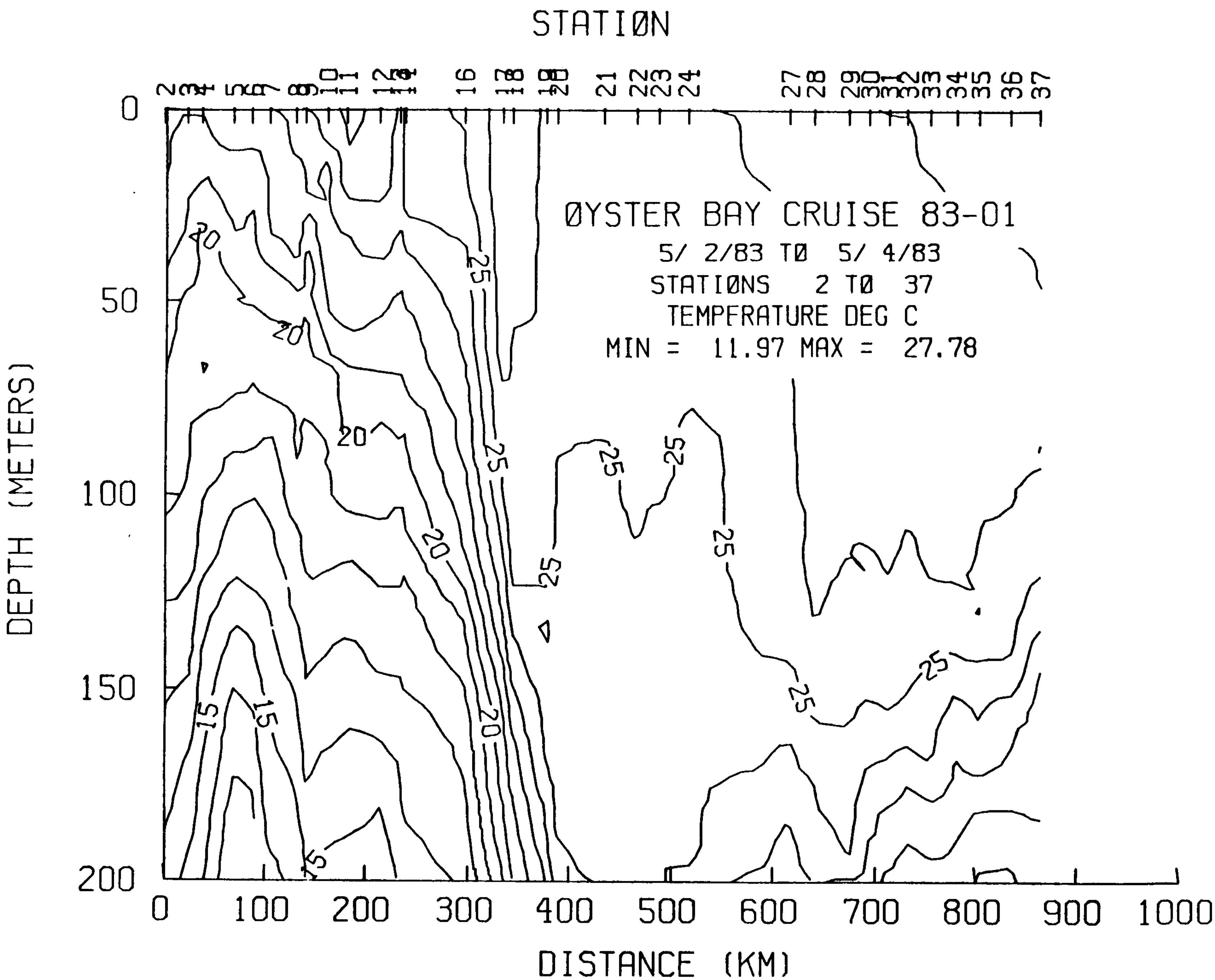
ID	Cruise	Dates
OB83-01	Oyster Bay Cruise 83-01	83-05-01 to 83-05-04
OB83-02	Oyster Bay Cruise 83-02	83-05-14 to 83-05-16
LH83-01	Lion Heart Cruise 83-01	83-06-21 to 83-06-23
NW83-01	Nordic Wasa Cruise 83-01	83-08-31 to 83-09-01
NW83-02	Nordic Wasa Cruise 83-02	83-09-11 to 83-09-13
NW83-03	Nordic Wasa Cruise 83-03	83-09-24 to 83-09-25
NW83-04	Nordic Wasa Cruise 83-04	83-10-08 to 83-10-10
NW83-05	Nordic Wasa Cruise 83-05	83-10-21 to 83-10-23
NW83-06	Nordic Wasa Cruise 83-06	83-11-06 to 83-11-06
NW83-07	Nordic Wasa Cruise 83-07	83-12-01 to 83-12-02
NW83-08	Nordic Wasa Cruise 83-08	83-12-11 to 83-12-12
NW83-09	Nordic Wasa Cruise 83-09	83-12-13 to 83-12-14
NW83-10	Nordic Wasa Cruise 83-10	83-12-22 to 83-12-22
NW83-11	Nordic Wasa Cruise 83-11	83/12/24 to 83-12-25
RE01	Researcher Transit	83-03-12 to 83-03-14
JB83-01	June Bollinger Cruise 83-01	83-07-21 to 83-07-23
PPRIMEIV	P-Prime IV Cruise	83-11-08 to 83-11-20
SC 83-01	Suncoaster Cruise 83-01	83-02-19 to 83-02-19
B83-04	Bellows Cruise 83-04	83-03-24 to 83-03-25
B83-06	Bellows Cruise 83-06	83-04-04 to 83-04-06
B83-09	Bellows Cruise 83-09	83-04-22 to 83-04-27
QU83-01	E.M. Queeny Cruise 83-01	83-01-07 to 83-01-08
QU83-02	E.M. Queeny Cruise 83-02	83-01-24 to 83-01-25
QU83-05	E.M. Queeny Cruise 83-05	83-03-26 to 83-03-27
QU83-06	E.M. Queeny Cruise 83-06	83-04-15 to 83-04-16
QU83-08	E.M. Queeny Cruise 83-08	83-06-05 to 83-06-06
QU83-09	E.M. Queeny Cruise 83-09	83-06-26 to 83-06-27
QU83-10	E.M. Queeny Cruise 83-10	83-07-03 to 83-07-04
QU83-11	E.M. Queeny Cruise 83-11	83-09-28 to 83-09-29
QU83-12	E.M. Queeny Cruise 83-12	83-10-13 to 83-10-14
QU83-13	E.M. Queeny Cruise 83-13	83-10-24 to 83-10-25
QU83-14	E.M. Queeny Cruise 83-14	83-11-06 to 83-11-07
ORII138	Oregon II Cruise 138	83-10-12 to 83-10-19
ORII140	Oregon II Cruise 140	83-12-08 to 83-12-21

1983 CHRONOLOGICAL SOOP DATA LISTING

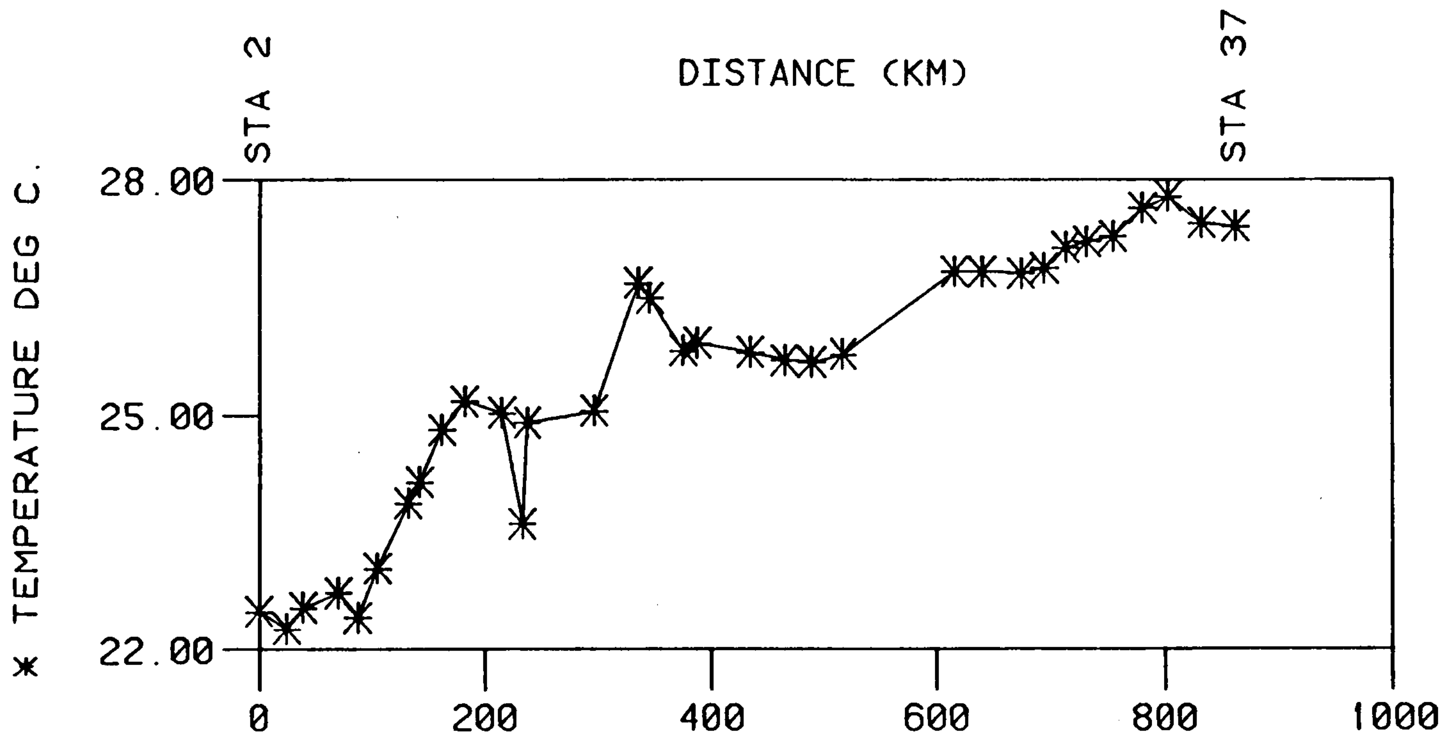
ID	Cruise	Dates
QU83-01	E.M. Queeny Cruise 83-01	83-01-07 to 83-01-08
QU83-02	E.M. Queeny Cruise 83-02	83-01-24 to 83-01-25
SC 83-01	Suncoaster Cruise 83-01	83-02-19 to 83-02-19
RE01	Researcher Transit	83-03-12 to 83-03-14
B83-04	Bellows Cruise 83-04	83-03-24 to 83-03-25
QU83-05	E.M. Queeny Cruise 83-05	83-03-26 to 83-03-27
B83-06	Bellows Cruise 83-06	83-04-04 to 83-04-06
QU83-06	E.M. Queeny Cruise 83-06	83-04-15 to 83-04-16
B83-09	Bellows Cruise 83-09	83-04-22 to 83-04-27
OB83-01	Oyster Bay Cruise 83-01	83-05-01 to 83-05-04
OB83-02	Oyster Bay Cruise 83-02	83-05-14 to 83-05-16
QU83-08	E.M. Queeny Cruise 83-08	83-06-05 to 83-06-06
LH83-01	Lion Heart Cruise 83-01	83-06-21 to 83-06-23
QU83-09	E.M. Queeny Cruise 83-09	83-06-26 to 83-06-27
QU83-10	E.M. Queeny Cruise 83-10	83-07-03 to 83-07-04
JB83-01	June Bollinger Cruise 83-01	83-07-21 to 83-07-23
NW83-01	Nordic Wasa Cruise 83-01	83-08-31 to 83-09-01
NW83-02	Nordic Wasa Cruise 83-02	83-09-11 to 83-09-13
NW83-03	Nordic Wasa Cruise 83-03	83-09-24 to 83-09-25
QU83-11	E.M. Queeny Cruise 83-11	83-09-28 to 83-09-29
NW83-04	Nordic Wasa Cruise 83-04	83-10-08 to 83-10-10
ORII138	Oregon II Cruise 138	83-10-12 to 83-10-19
QU83-12	E.M. Queeny Cruise 83-12	83-10-13 to 83-10-14
NW83-05	Nordic Wasa Cruise 83-05	83-10-21 to 83-10-23
QU83-13	E.M. Queeny Cruise 83-13	83-10-24 to 83-10-25
NW83-06	Nordic Wasa Cruise 83-06	83-11-06 to 83-11-06
PPRIMEIV	P-Prime IV Cruise	83-11-08 to 83-11-20
QU83-14	E.M. Queeny Cruise 83-14	83-11-06 to 83-11-07
NW83-07	Nordic Wasa Cruise 83-07	83-12-01 to 83-12-02
ORII140	Oregon II Cruise 140	83-12-08 to 83-12-21
NW83-08	Nordic Wasa Cruise 83-08	83-12-11 to 83-12-12
NW83-09	Nordic Wasa Cruise 83-09	83-12-13 to 83-12-14
NW83-10	Nordic Wasa Cruise 83-10	83-12-22 to 83-12-22
NW83-11	Nordic Wasa Cruise 83-11	83/12/24 to 83-12-25


ØYSTER BAY CRUISE 83-01 5/ 1/83 TØ 5/ 4/83
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200m
500m
1000m
2000m
3000m
2
12
21
30
37

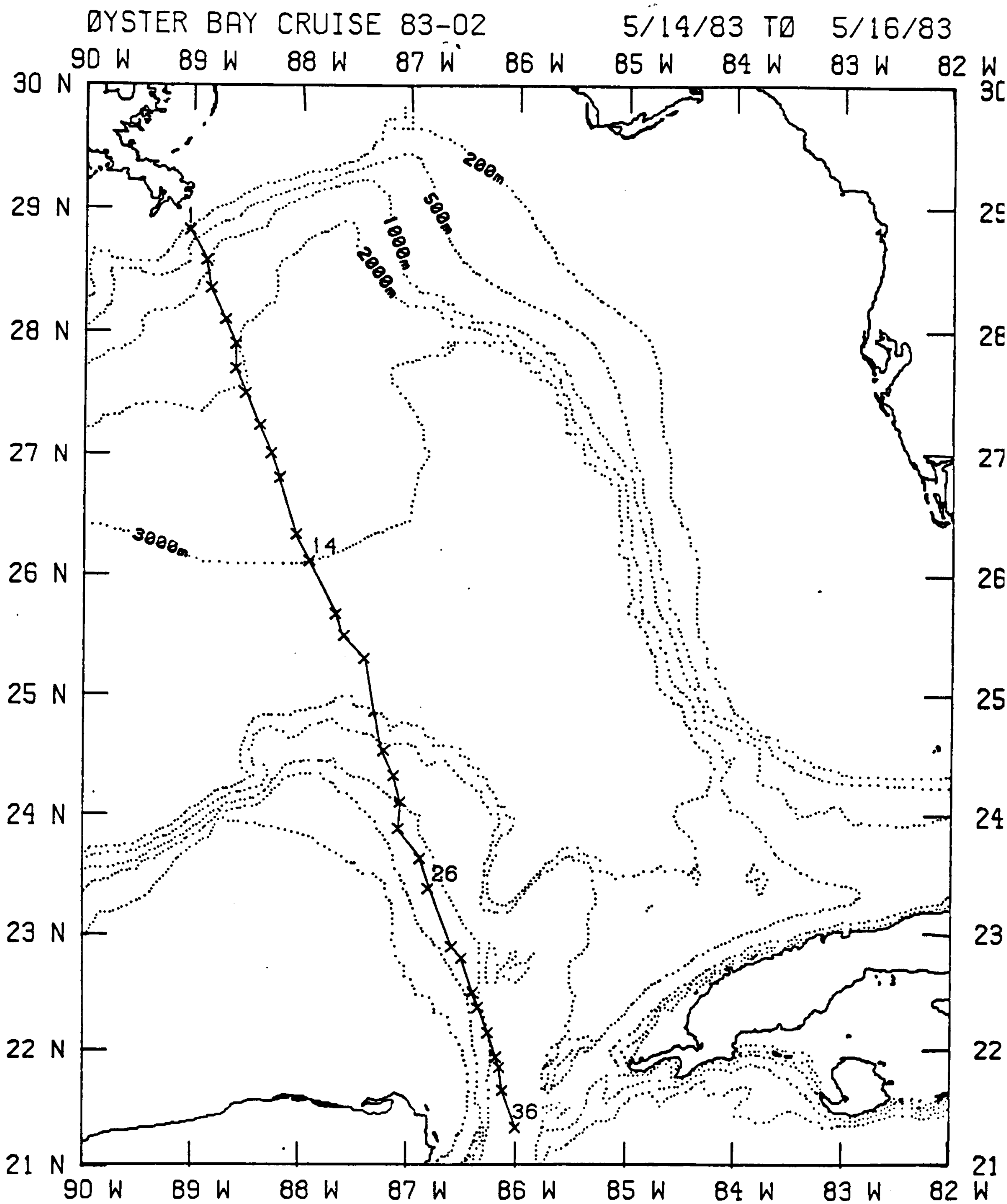

STATIØN
2 3 4 5 6 7 8 9 10 11 12 13 14 16 18 19 20 21 22 23 24 27 28 29 30 31 32 33 34 35 36 37
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
25
25
20
20
20
20
15
15
15
15
15
10
ØYSTER BAY CRUISE 83-01
5/ 2/83 TØ 5/ 4/83
STATIØNS 2 TØ 37
TEMPERATURE DEG C
MIN = 5.36 MAX = 27.78



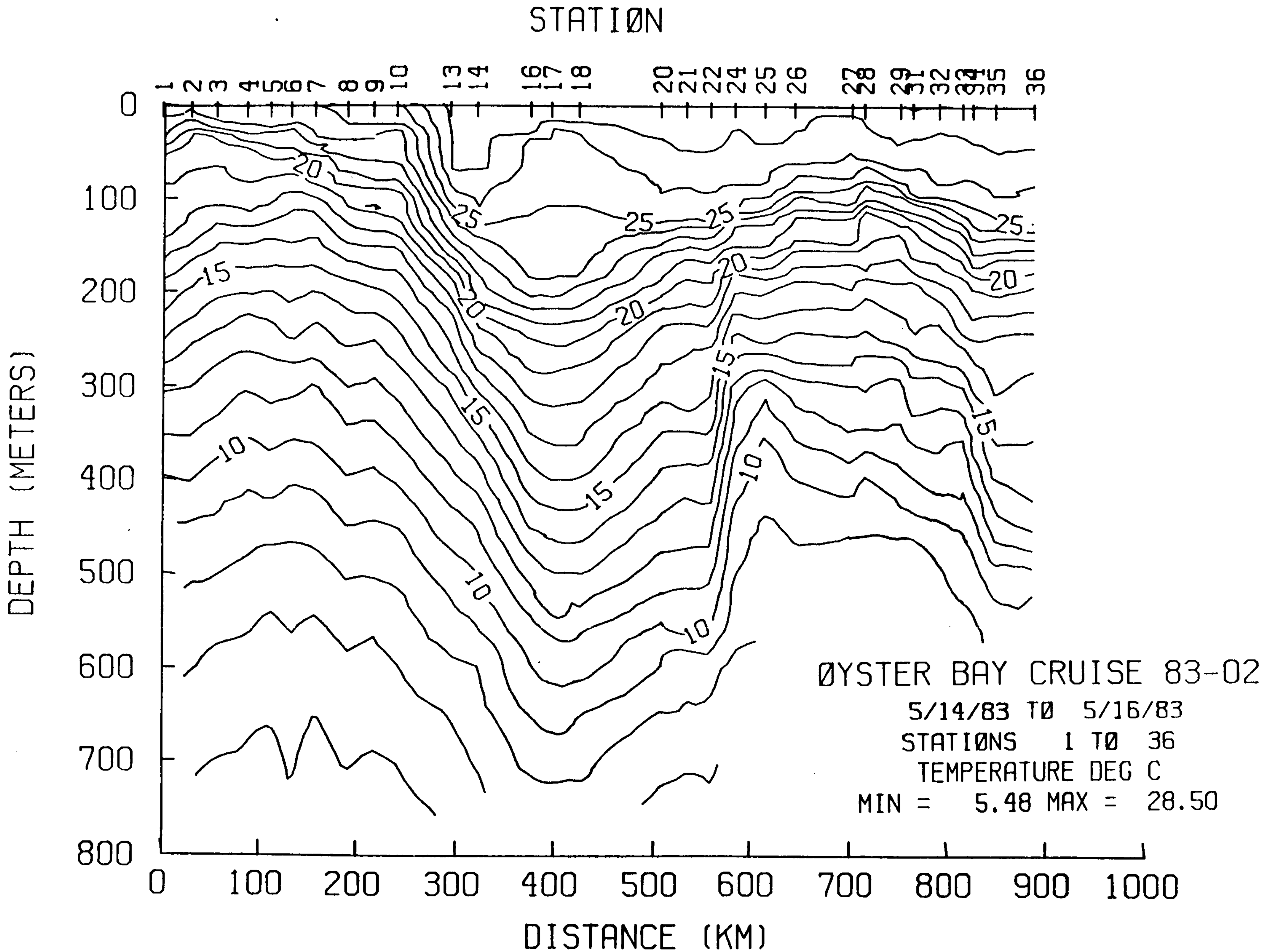
STATIØN
ØYSTER BAY CRUISE 83-01
5/ 2/83 TØ 5/ 4/83
STATIØNS 2 TØ 37
TEMPERATURE DEG C
MIN = 11.97 MAX = 27.78
DEPTH (METERS)
DISTANCE (KM)

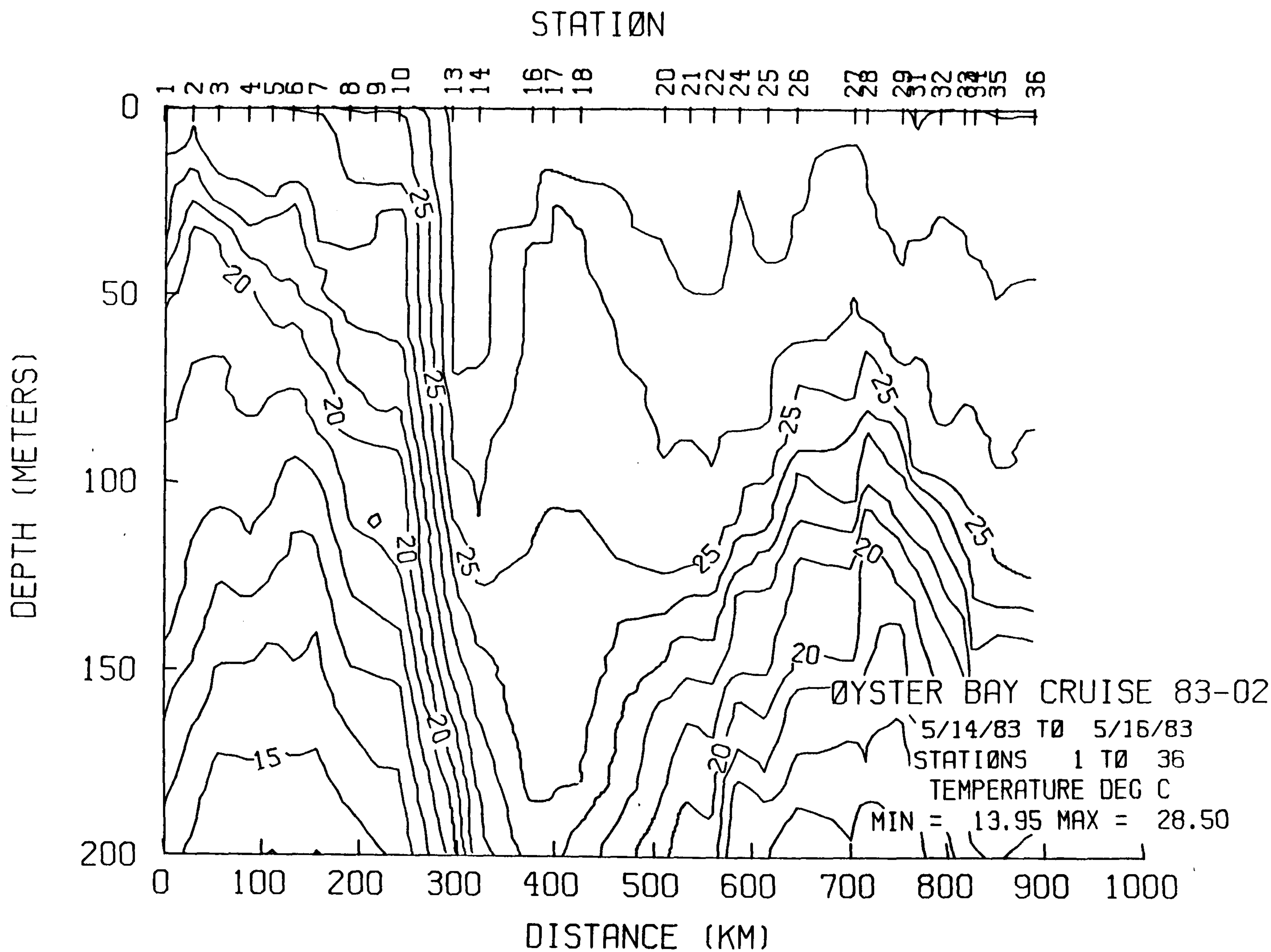


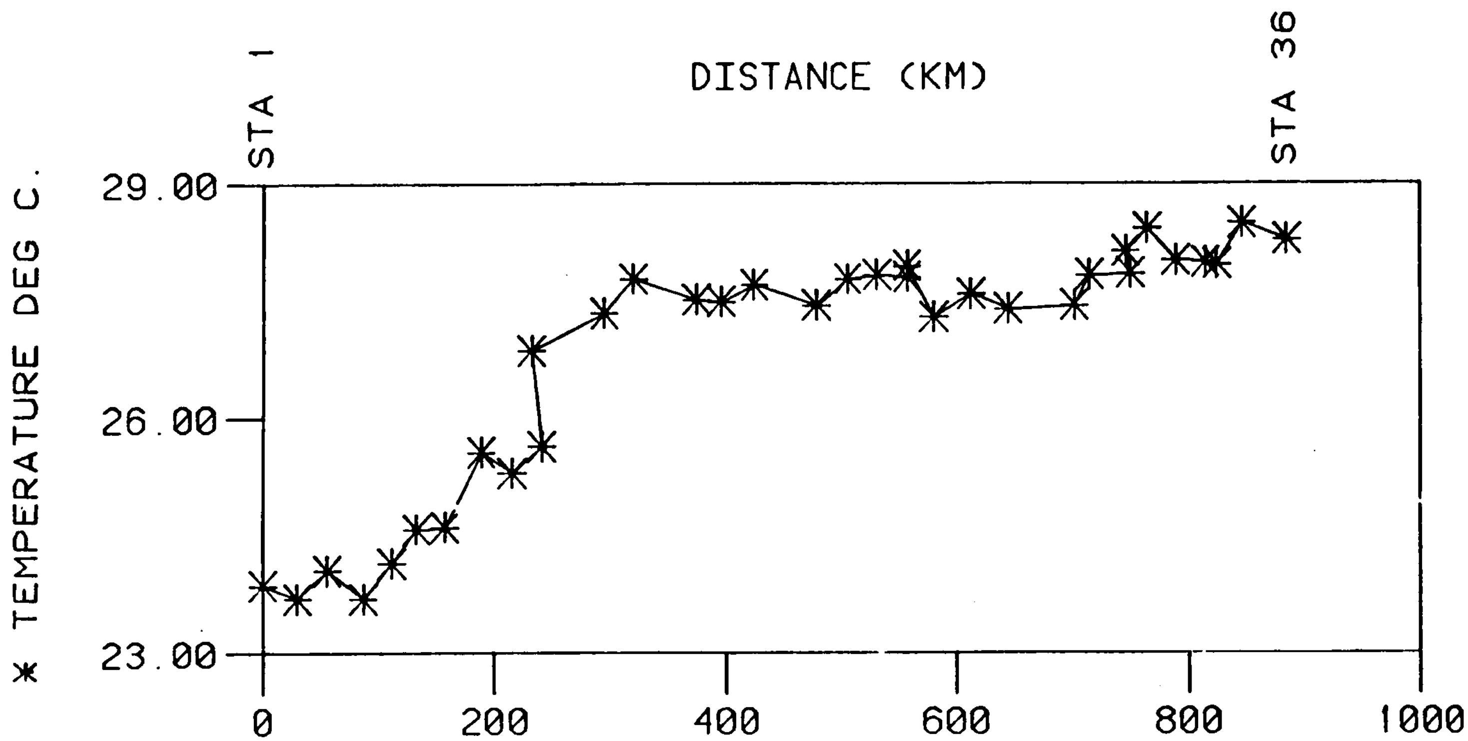
PARAMETERS AT SURFACE OYSTER BAY CRUISE 83-01



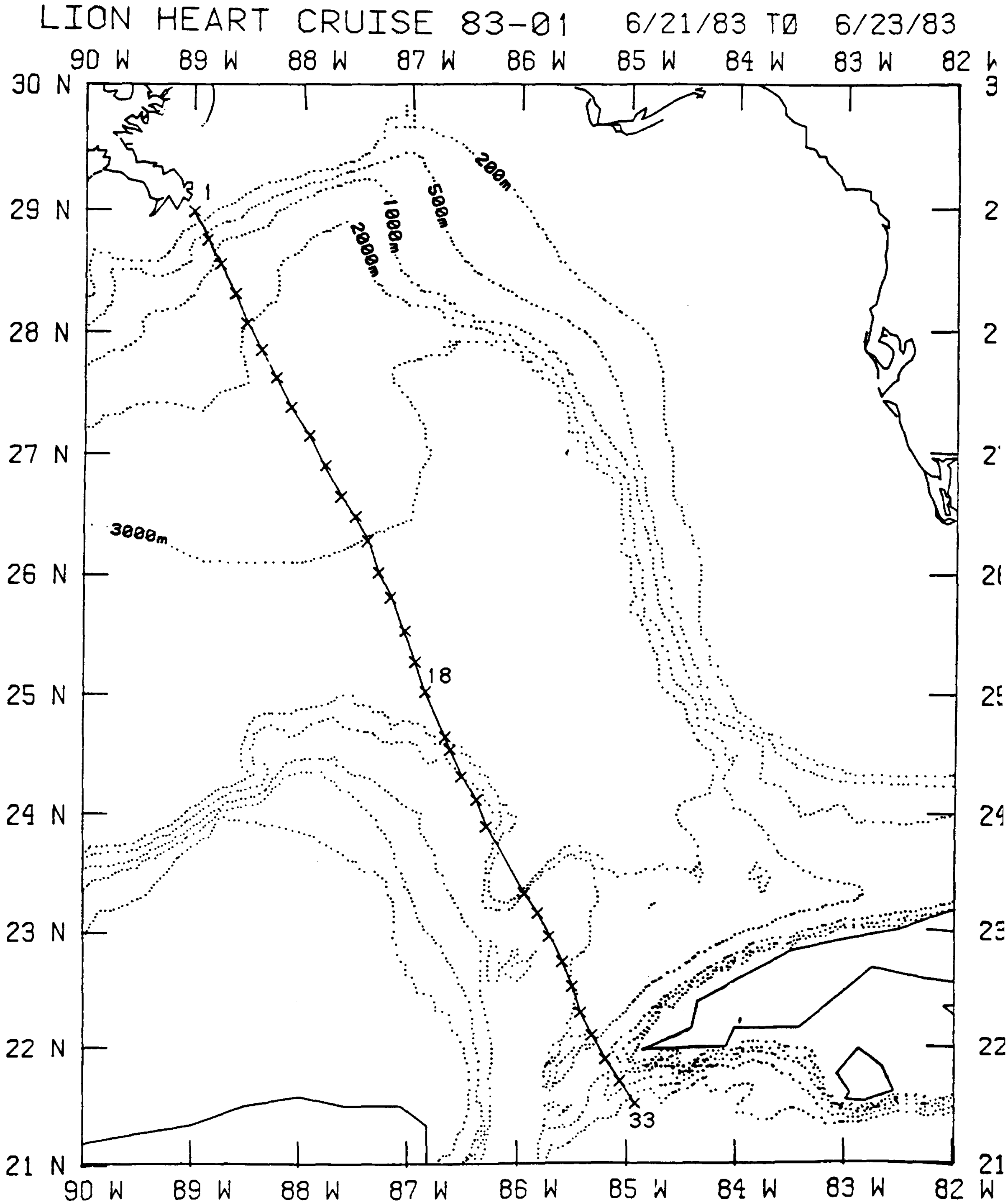
ØYSTER BAY CRUISE 83-02
5/14/83 TØ 5/16/83
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200m
500m
1000m
2000m
3000m
1
14
26
36

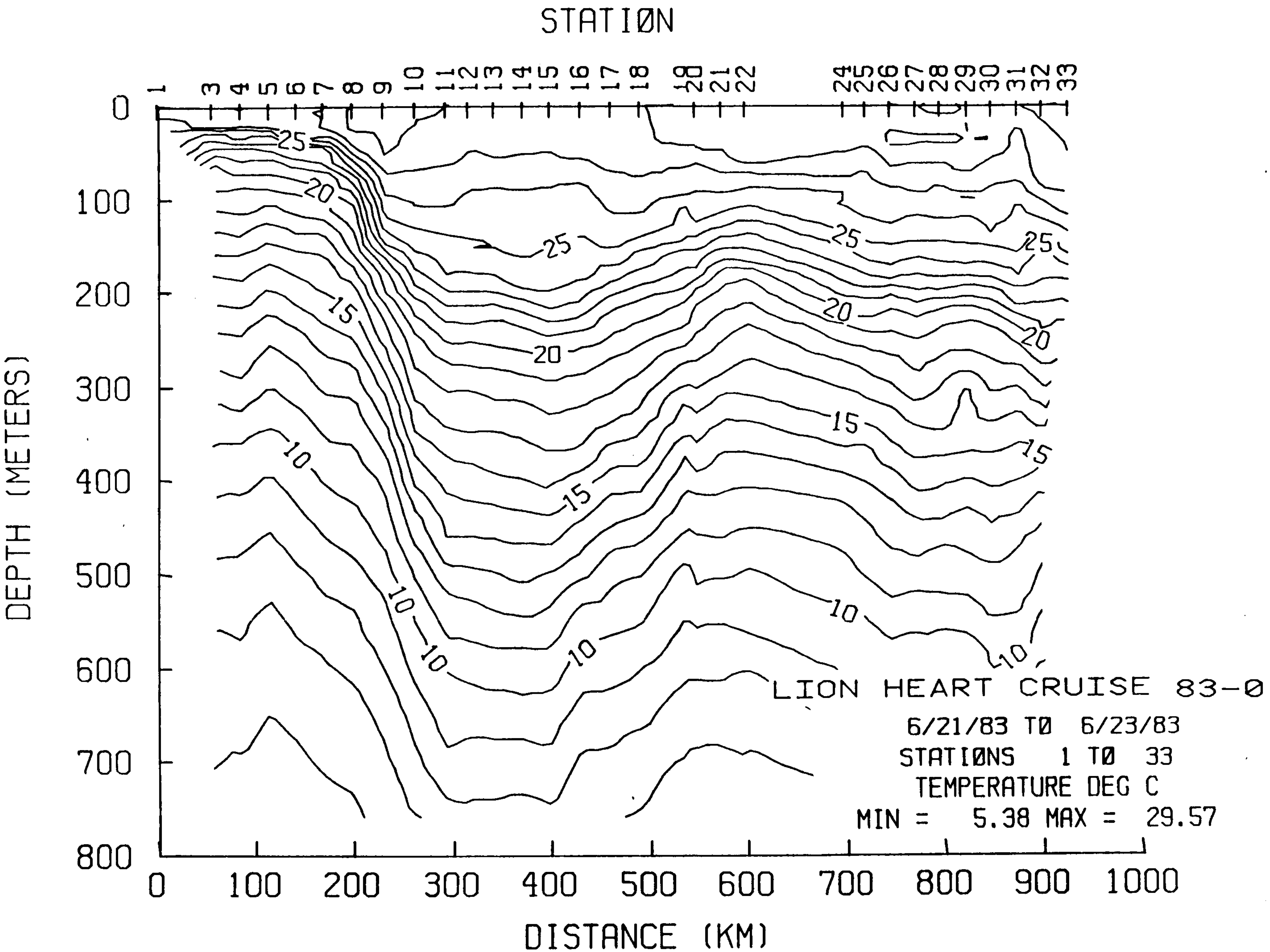

STATIØN
1 2 3 4 5 6 7 8 9 10 13 14 16 17 18 20 21 22 24 25 26 27 28 29 31 32 33 34 35 36
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
10
ØYSTER BAY CRUISE 83-02
5/14/83 TØ 5/16/83
STATIØNS 1 TØ 36
TEMPERATURE DEG C
MIN = 5.48 MAX = 28.50

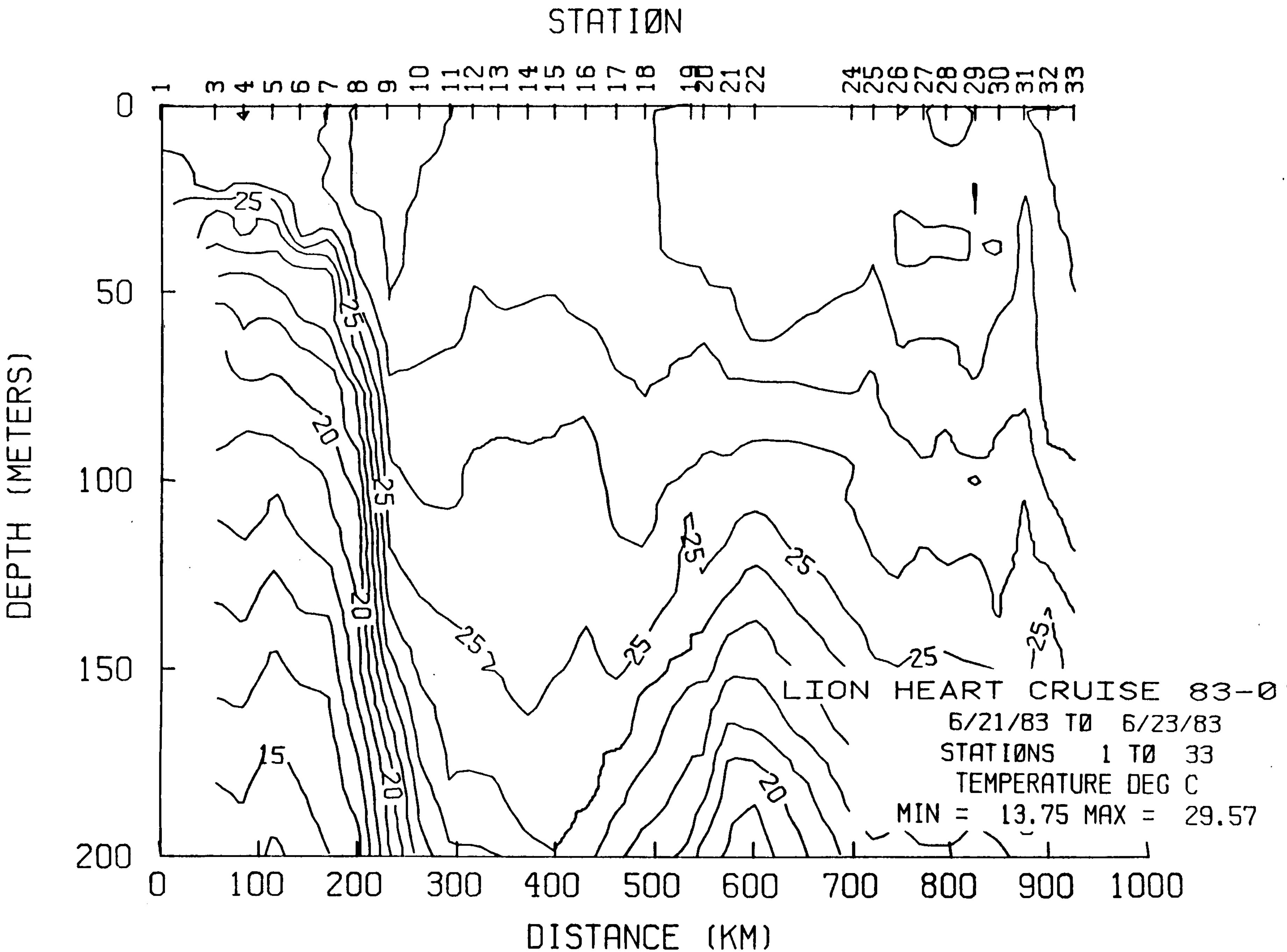

STATIØN
1 2 3 4 5 6 7 8 9 10 13 14 16 17 18 20 21 22 24 25 26 27 28 29 31 32 33 34 35 36
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
ØYSTER BAY CRUISE 83-02
5/14/83 TØ 5/16/83
STATIØNS 1 TØ 36
TEMPERATURE DEG C
MIN = 13.95 MAX = 28.50



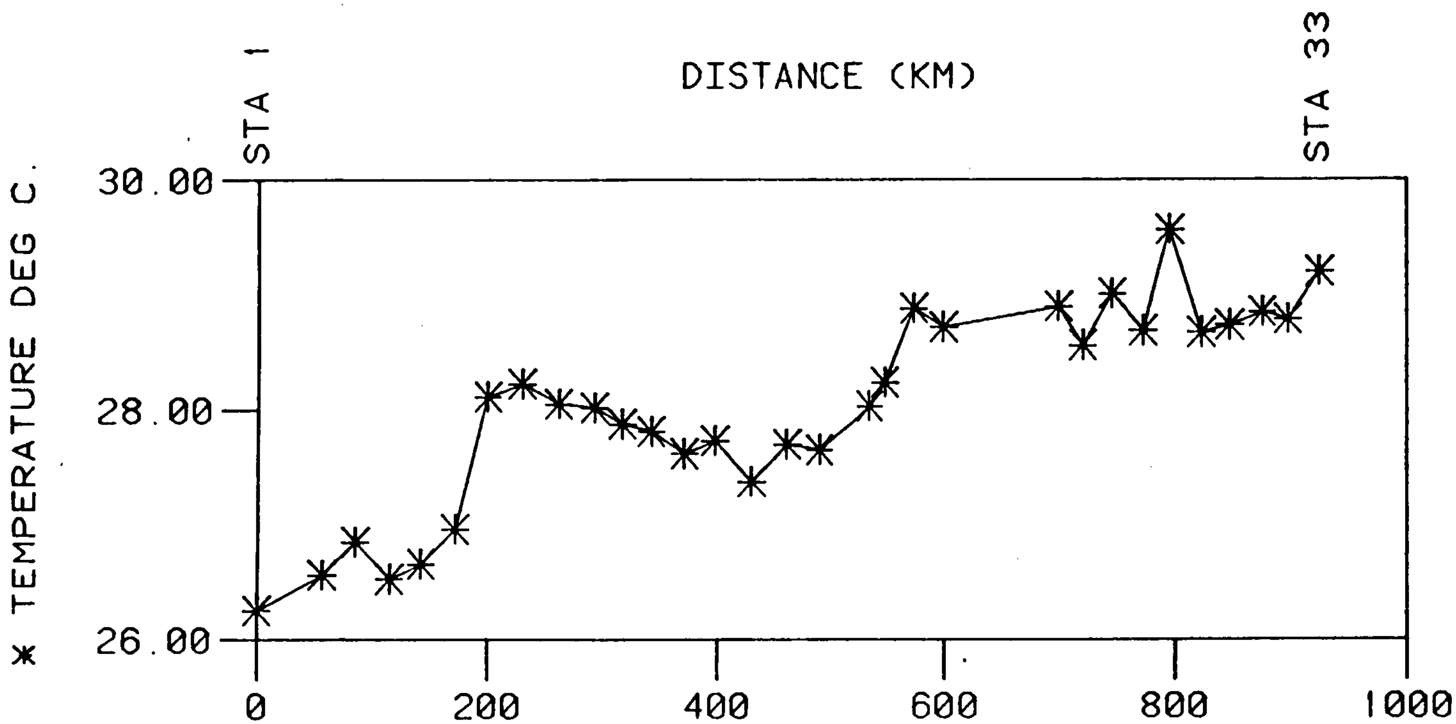
PARAMETERS AT SURFACE OYSTER BAY CRUISE 83-02


LION HEART CRUISE 83-01 6/21/83 TØ 6/23/83
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200m
500m
1000m
2000m
3000m
1
18
33

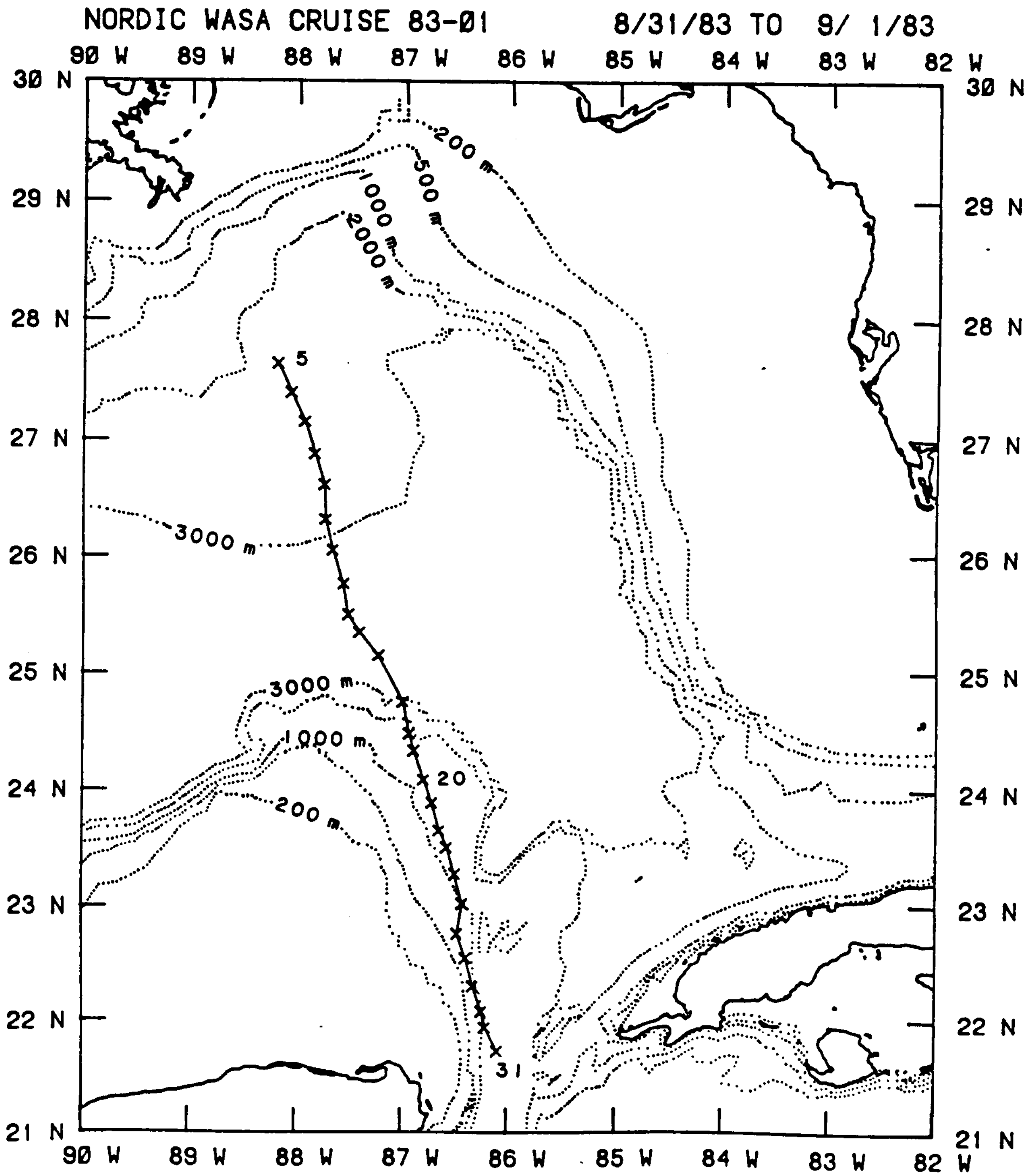

STATIØN
1 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 25 26 27 28 29 30 31 32 33
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
25
20
15
10
25
20
15
10
25
20
15
10
LION HEART CRUISE 83-01
6/21/83 TØ 6/23/83
STATIØNS 1 TØ 33
TEMPERATURE DEG C
MIN = 5.38 MAX = 29.57
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)

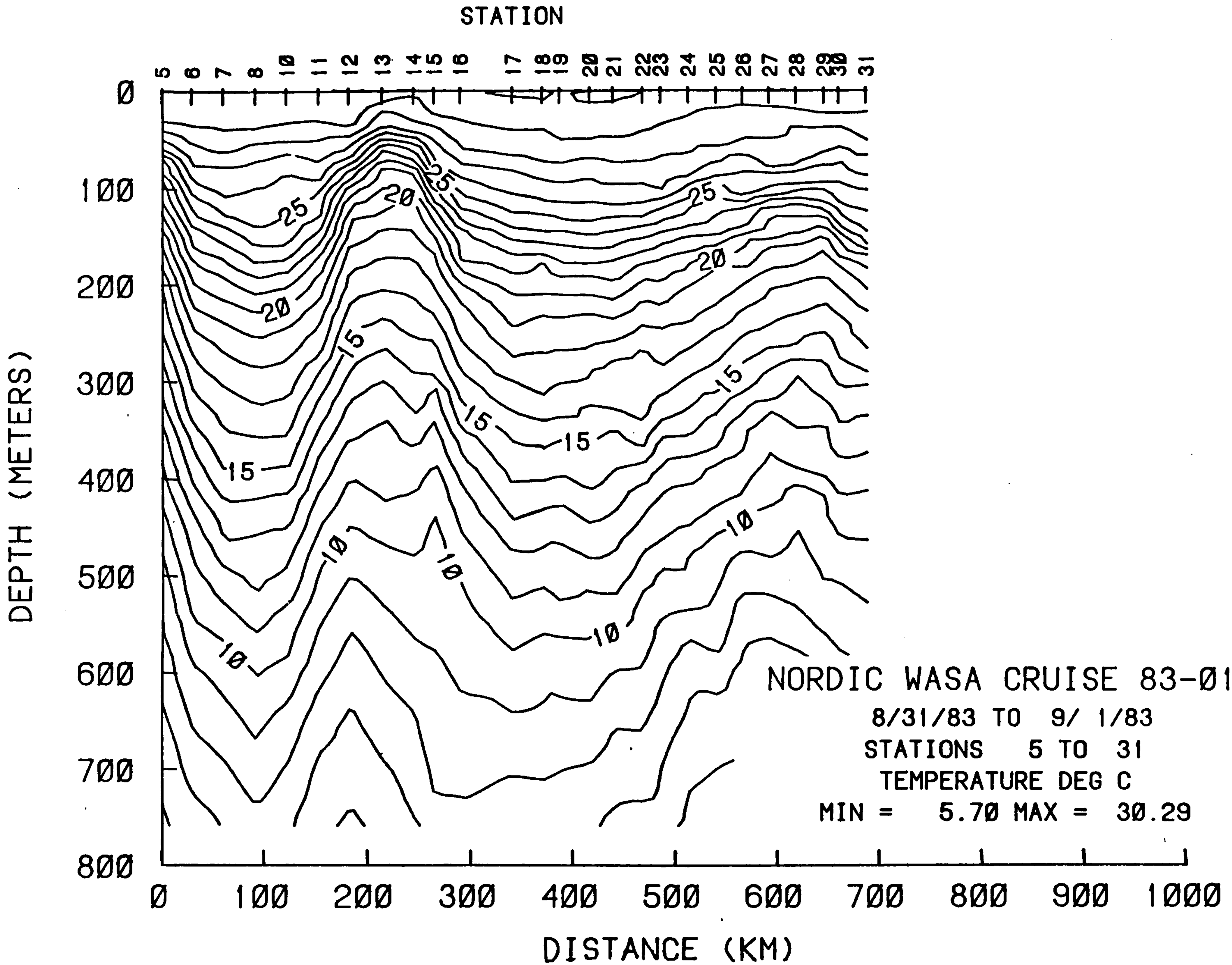


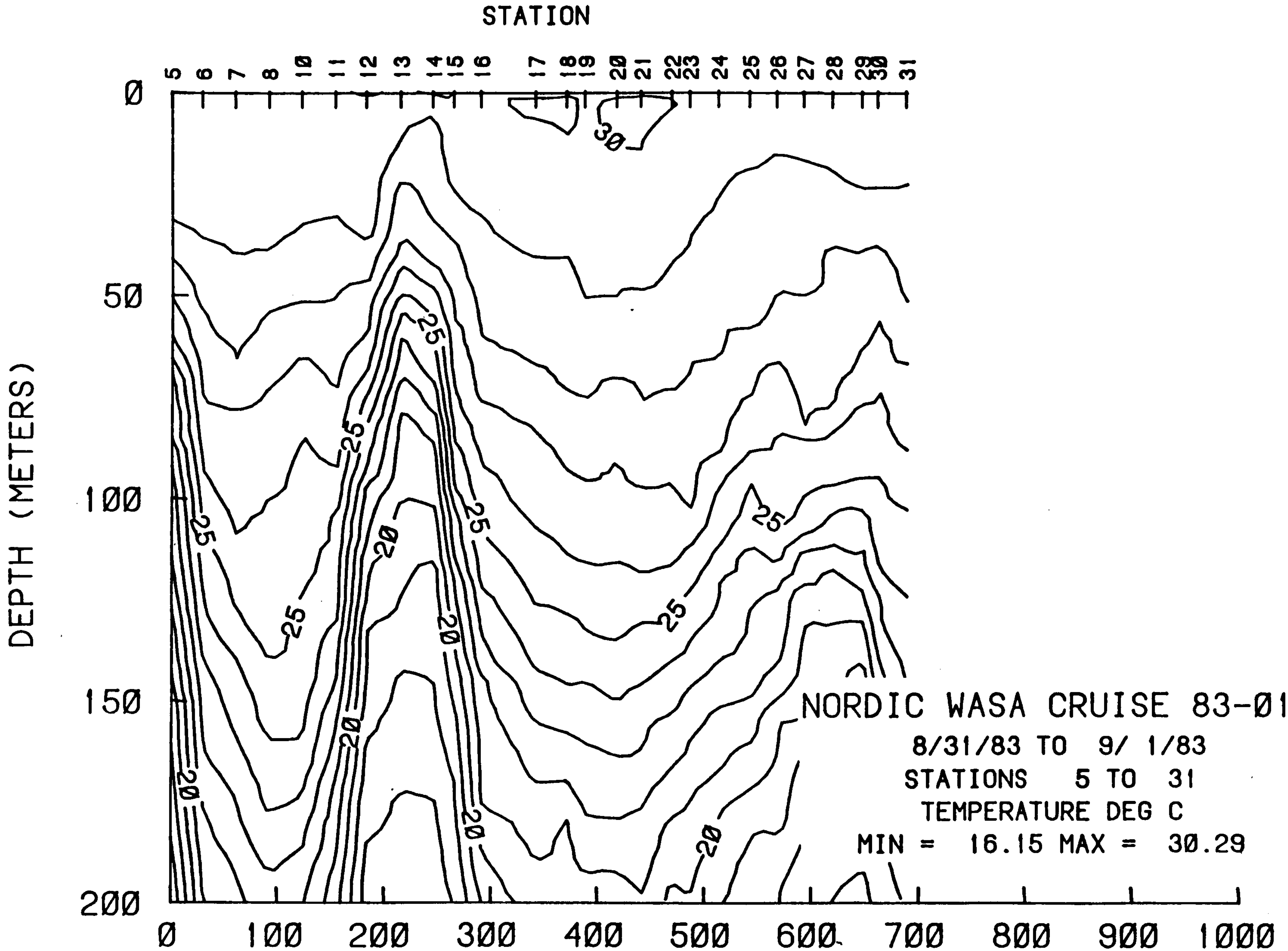
STATIØN
1 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 24 25 26 27 28 29 30 31 32 33
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
LION HEART CRUISE 83-01
6/21/83 TØ 6/23/83
STATIØNS 1 TØ 33
TEMPERATURE DEG C
MIN = 13.75 MAX = 29.57

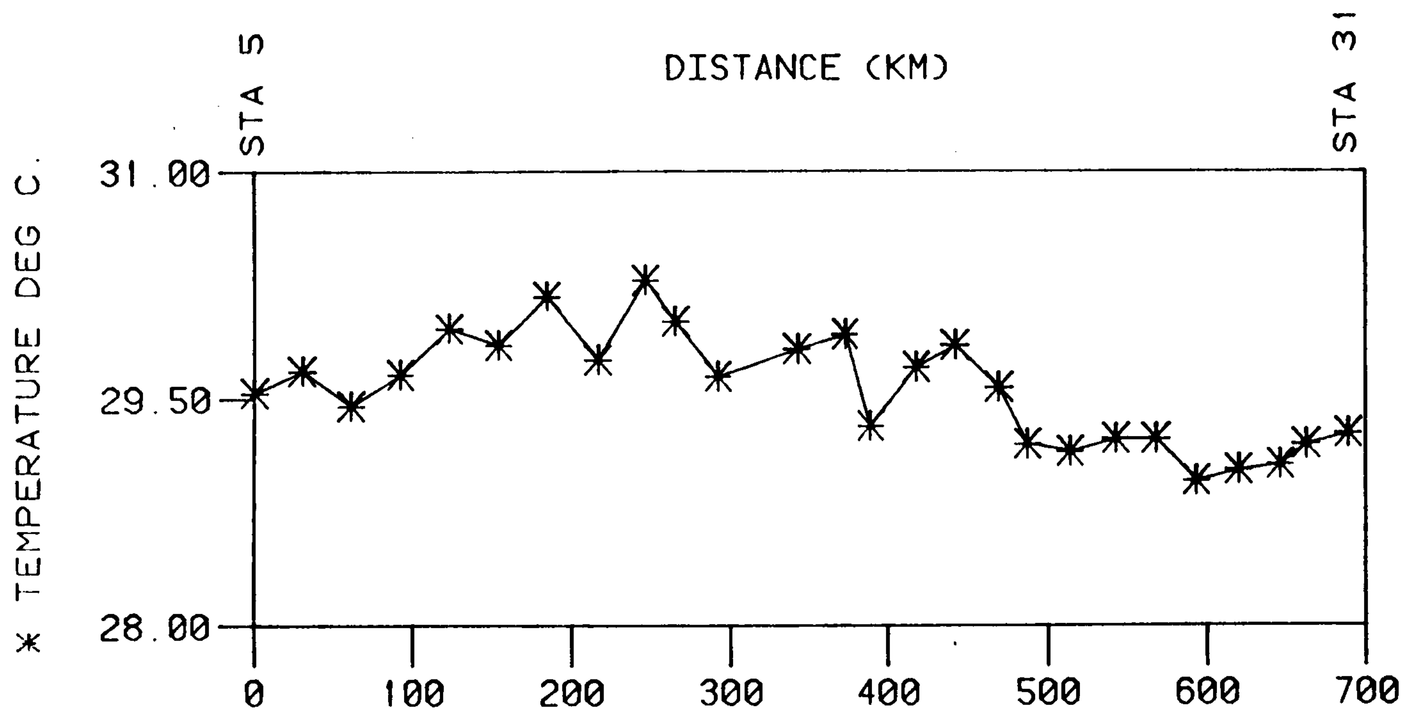


PARAMETERS AT SURFACE LION HEART CRUISE 83-01

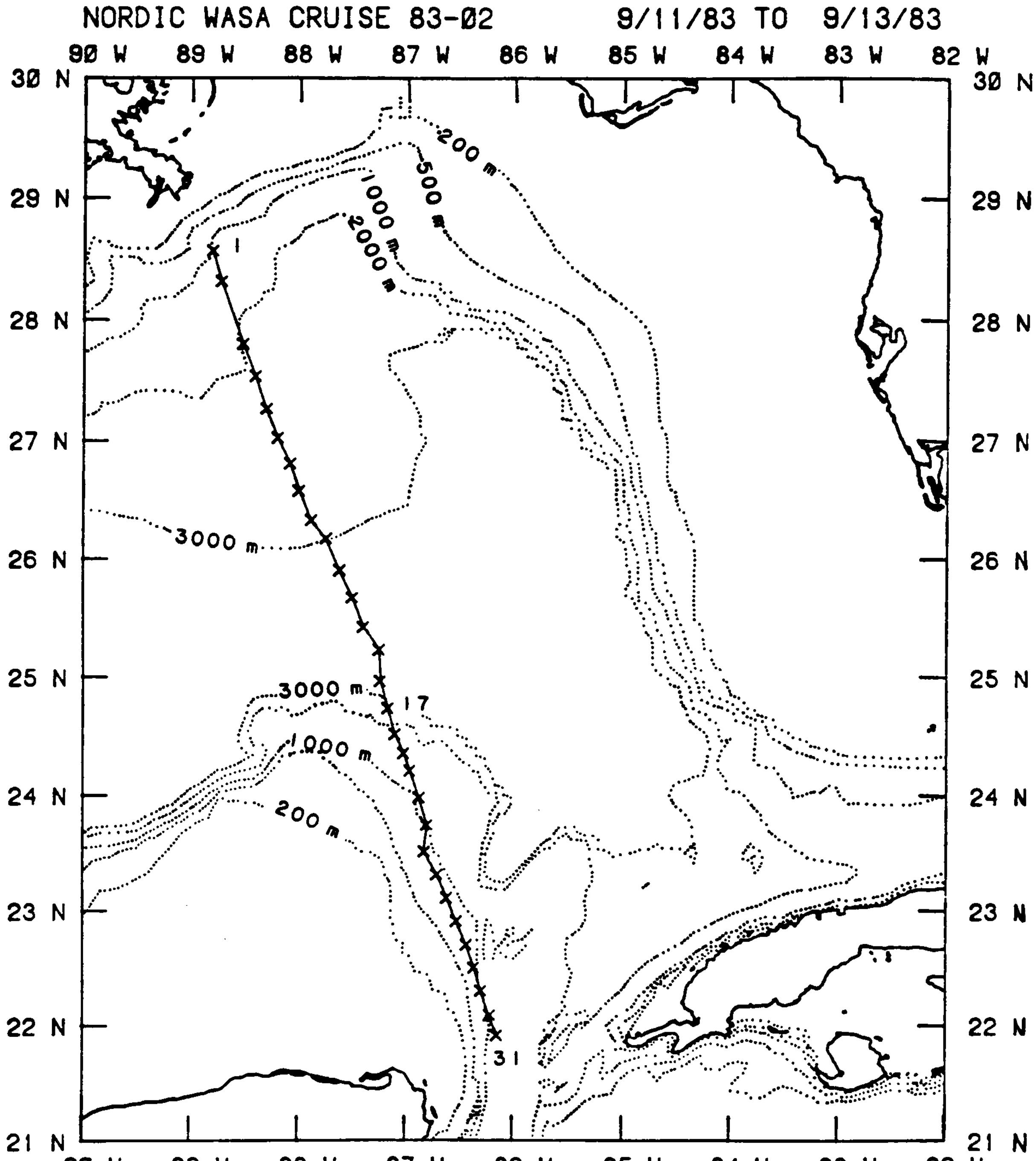

NORDIC WASA CRUISE 83-Ø1
8/31/83 TO 9/ 1/83
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
5
20
31


STATION
5 6 7 8 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
DEPTH (METERS)
0 100 200 300 400 500 600 700 800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25 20 15 10
NORDIC WASA CRUISE 83-01
8/31/83 TO 9/ 1/83
STATIONS 5 TO 31
TEMPERATURE DEG C
MIN = 5.70 MAX = 30.29

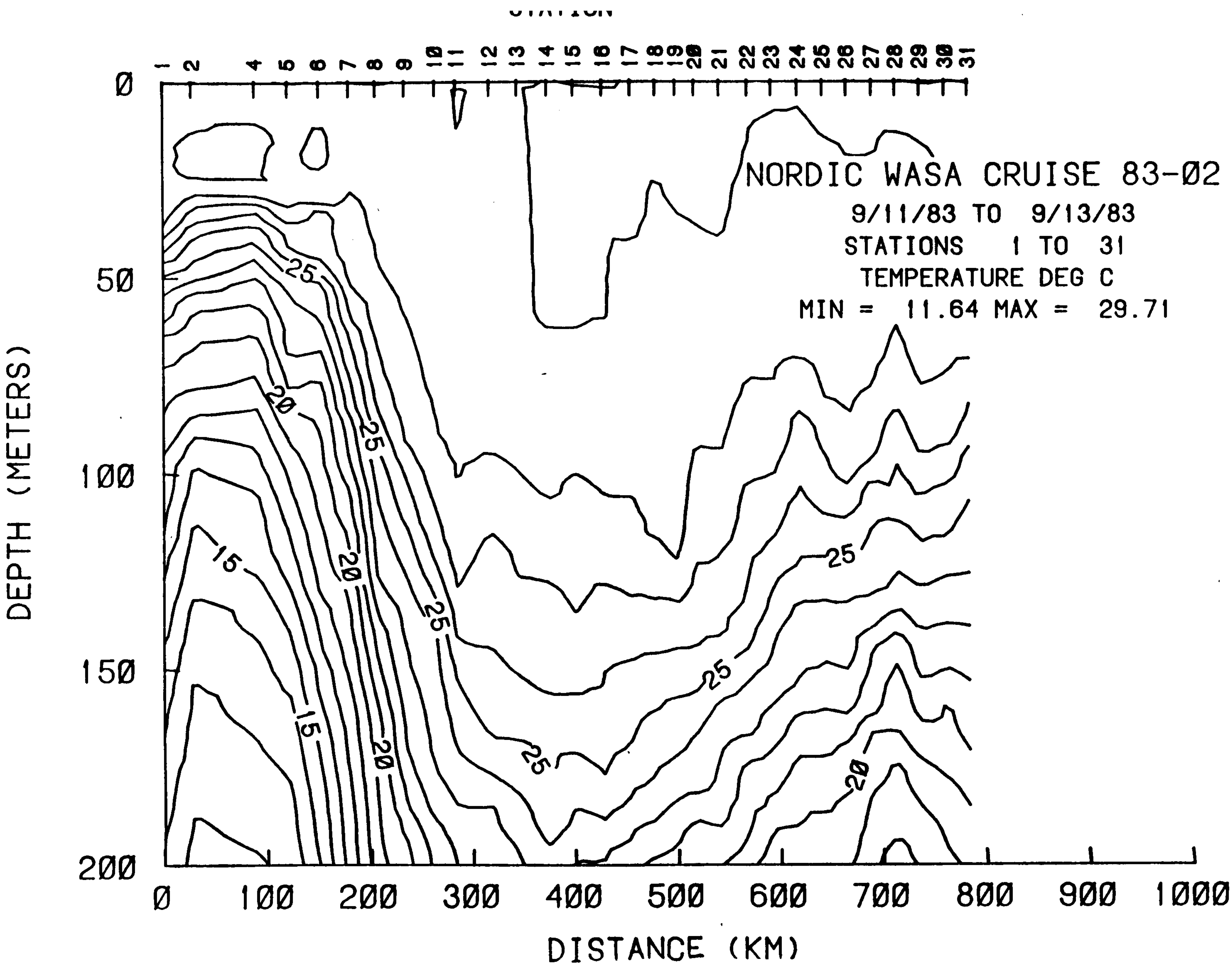

STATION
5 6 7 8 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
DEPTH (METERS)
0
50
100
150
200
0 100 200 300 400 500 600 700 800 900 1000
30
25
20
NORDIC WASA CRUISE 83-01
8/31/83 TO 9/ 1/83
STATIONS 5 TO 31
TEMPERATURE DEG C
MIN = 16.15 MAX = 30.29

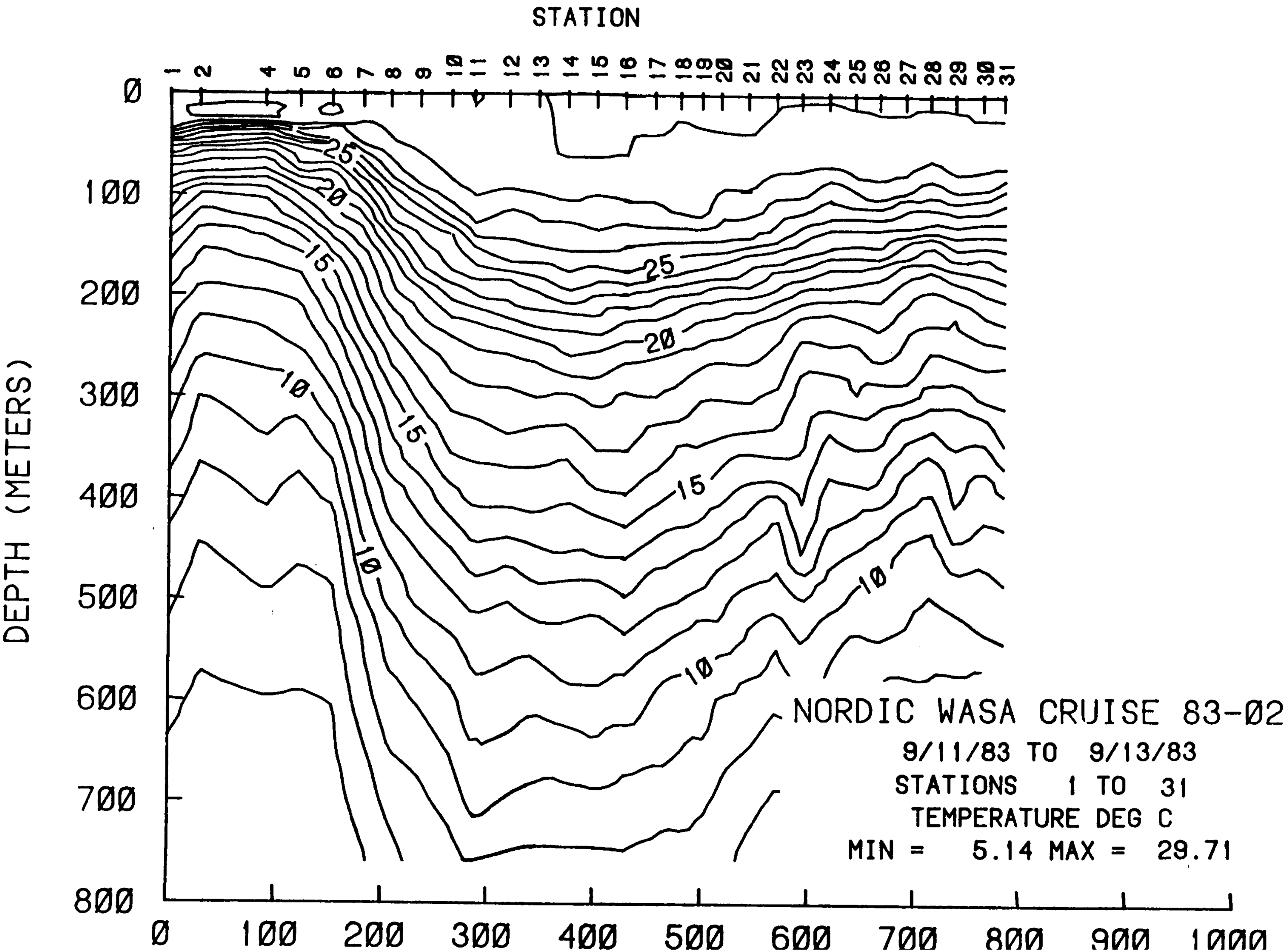


PARAMETERS AT SURFACE NORDIC WASA CRUISE 83-01

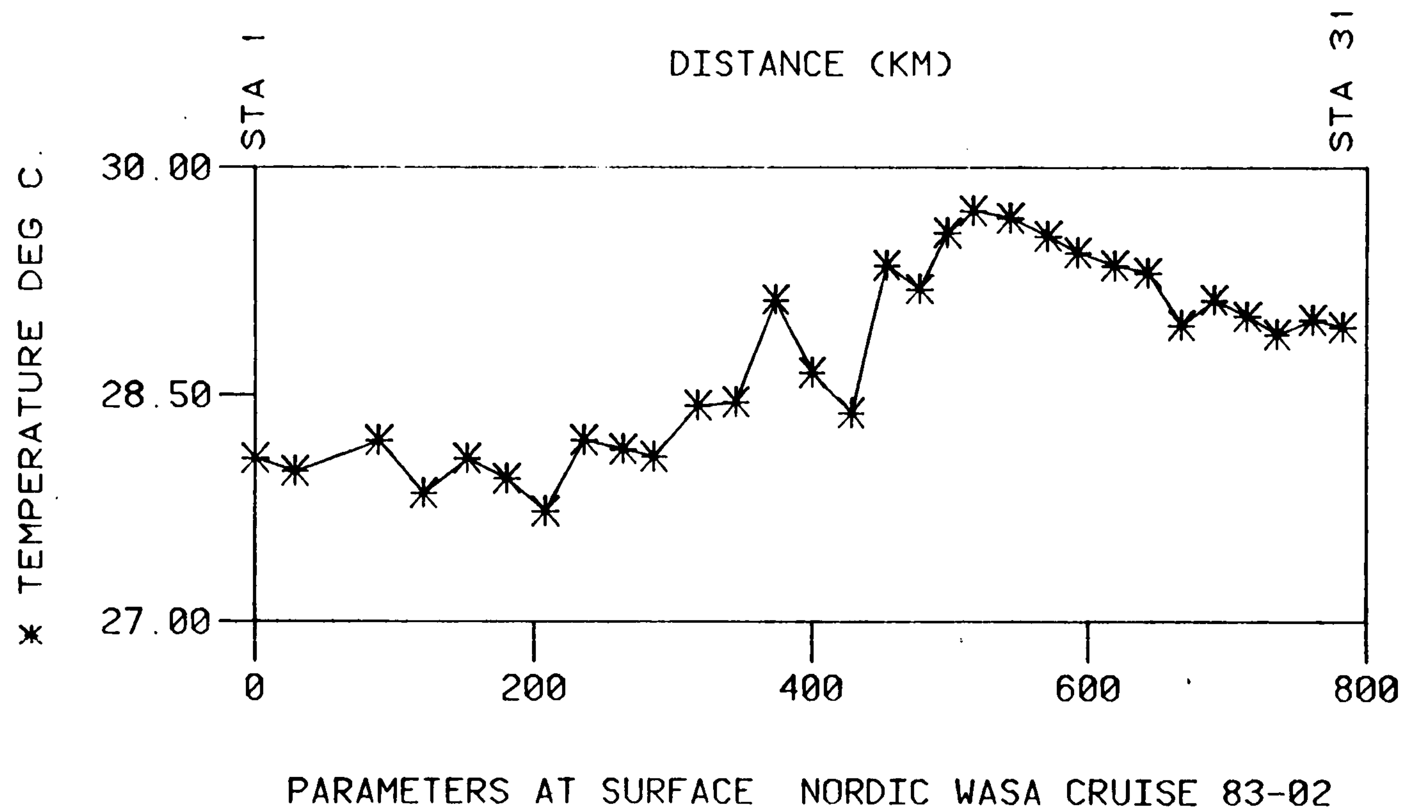


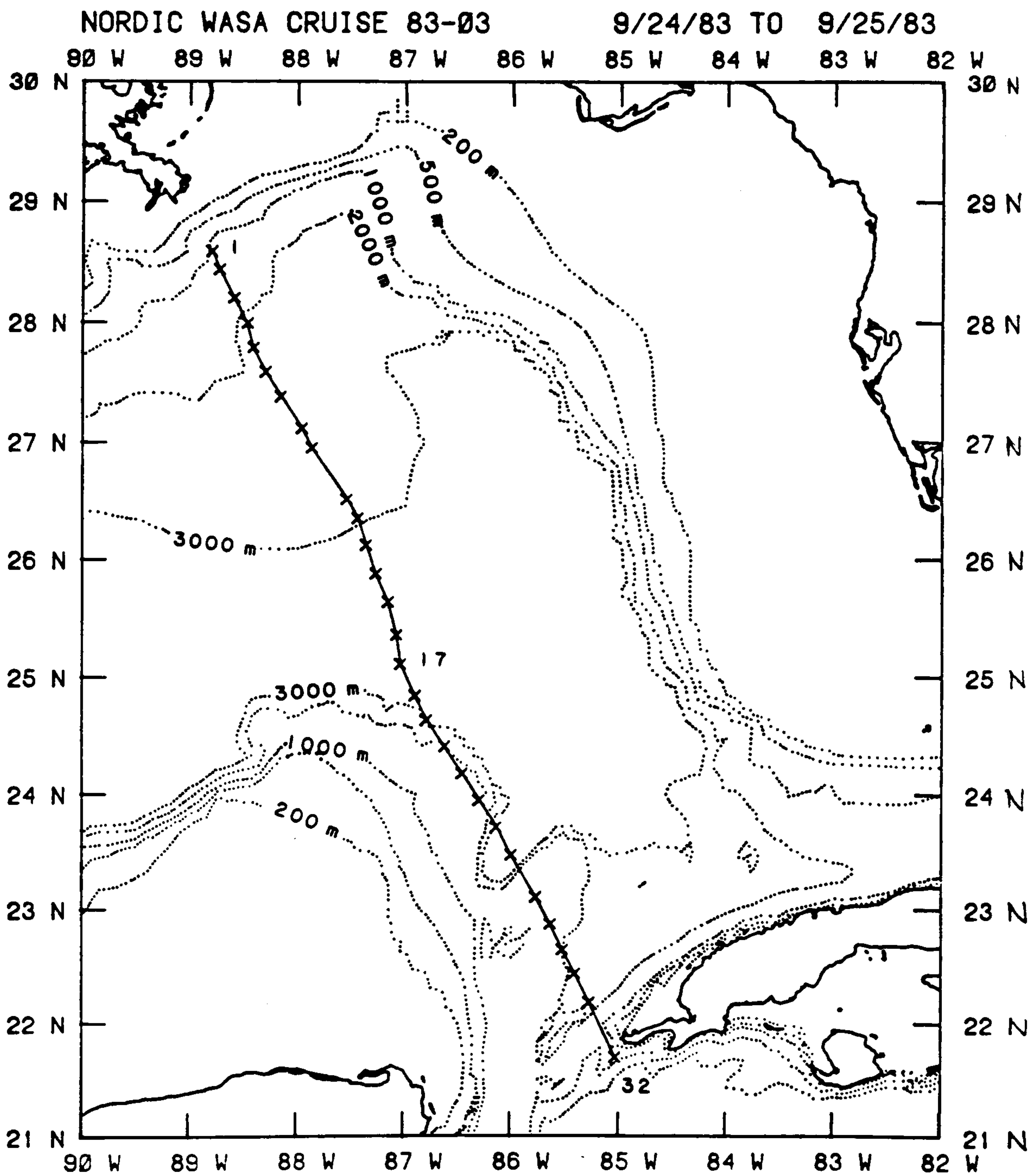
NORDIC WASA CRUISE 83-02
9/11/83 TO 9/13/83
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
1000 m
200 m
1
17
31

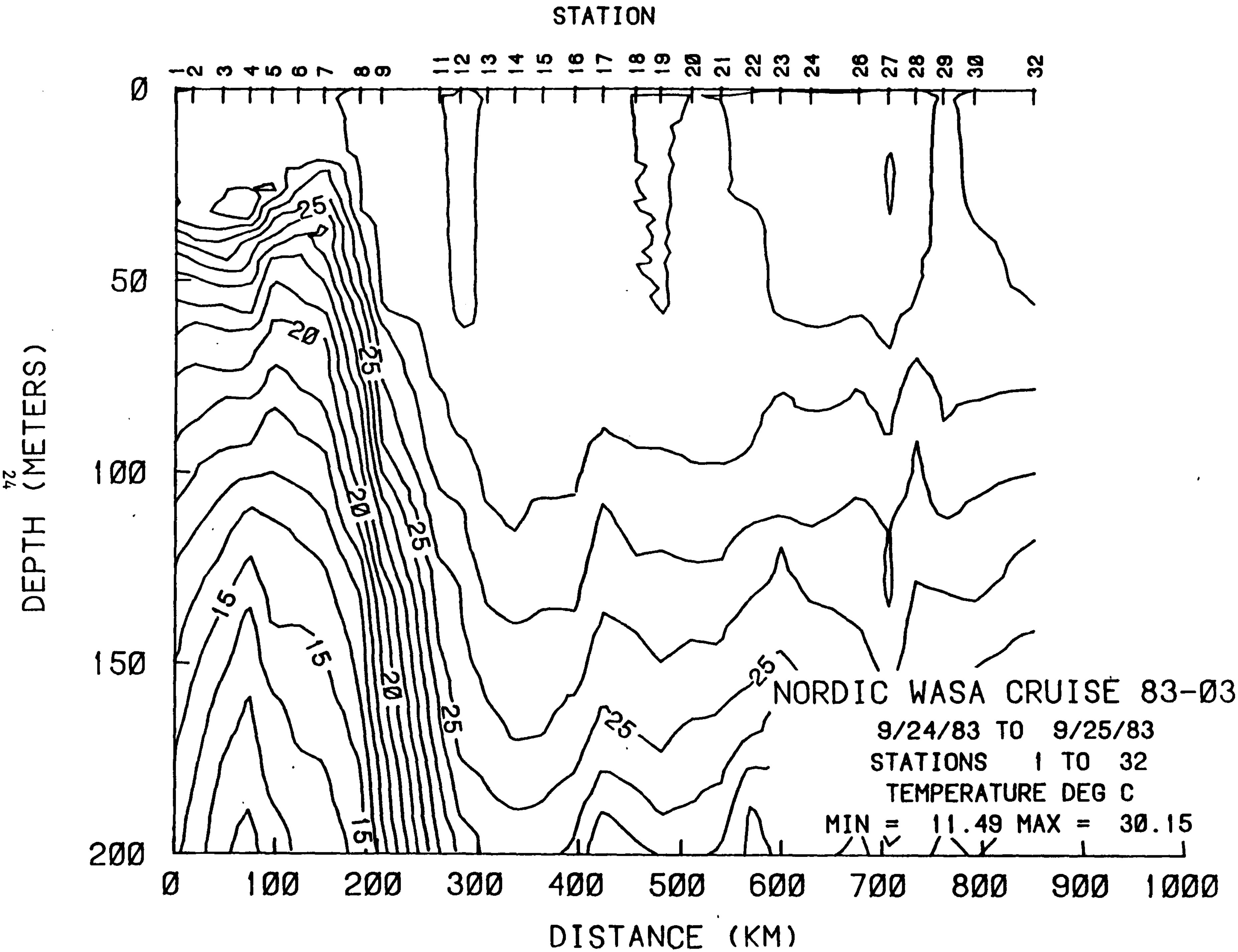

STATION
1 2 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
NORDIC WASA CRUISE 83-02
9/11/83 TO 9/13/83
STATIONS 1 TO 31
TEMPERATURE DEG C
MIN = 11.64 MAX = 29.71
DEPTH (METERS)
0
50
100
150
200
25
20
25
15
20
25
15
20
25
25
25
20
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)



STATION
DEPTH (METERS)
NORDIC WASA CRUISE 83-02
9/11/83 TO 9/13/83
STATIONS 1 TO 31
TEMPERATURE DEG C
MIN = 5.14 MAX = 29.71

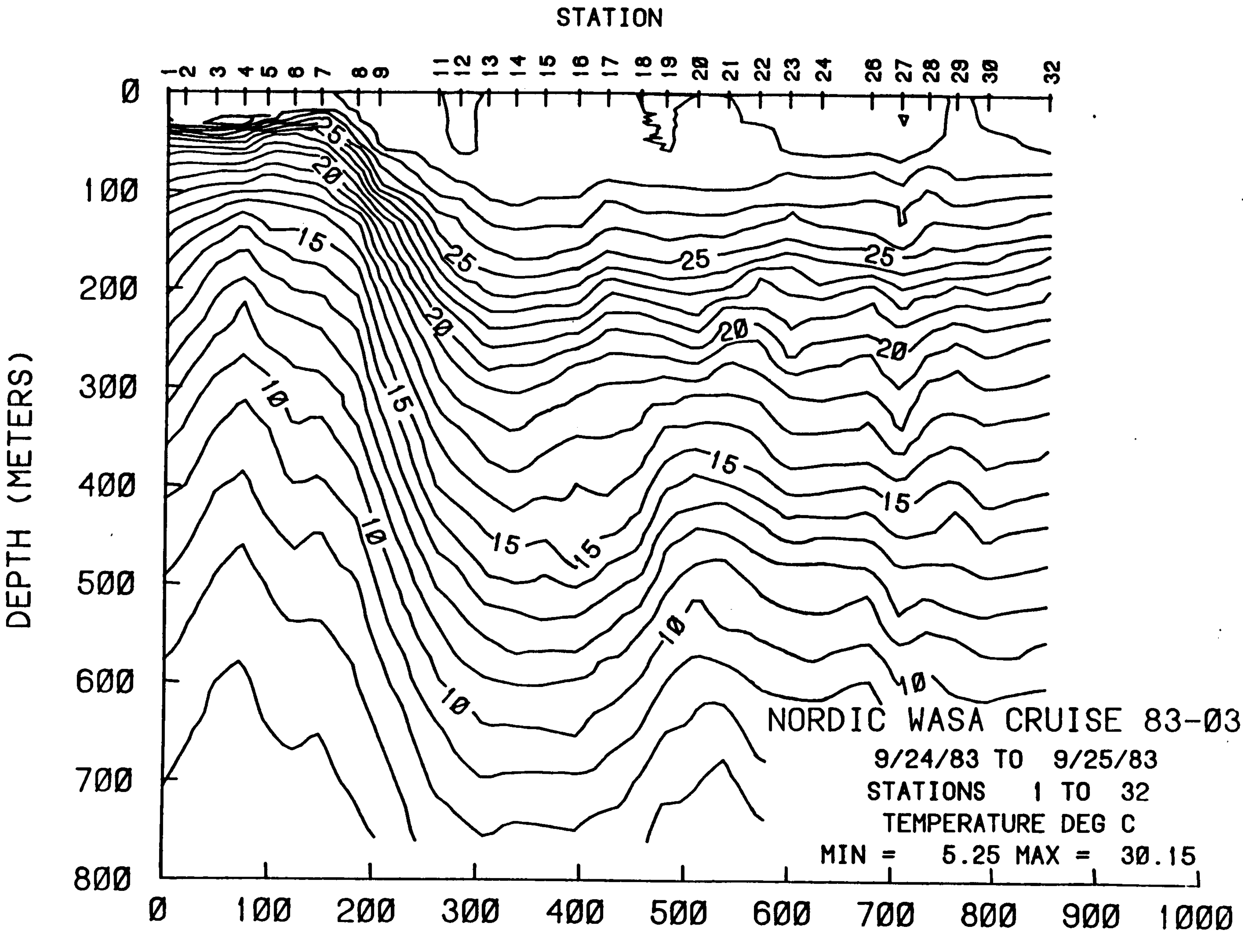

DISTANCE (KM)
STA 1
STA 31
* TEMPERATURE DEG C.
30.00
28.50
27.00
0
200
400
600
800
PARAMETERS AT SURFACE NORDIC WASA CRUISE 83-02


NORDIC WASA CRUISE 83-Ø3 9/24/83 TO 9/25/83
9Ø W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
3Ø N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
17
32
3000 m
1000 m
200 m

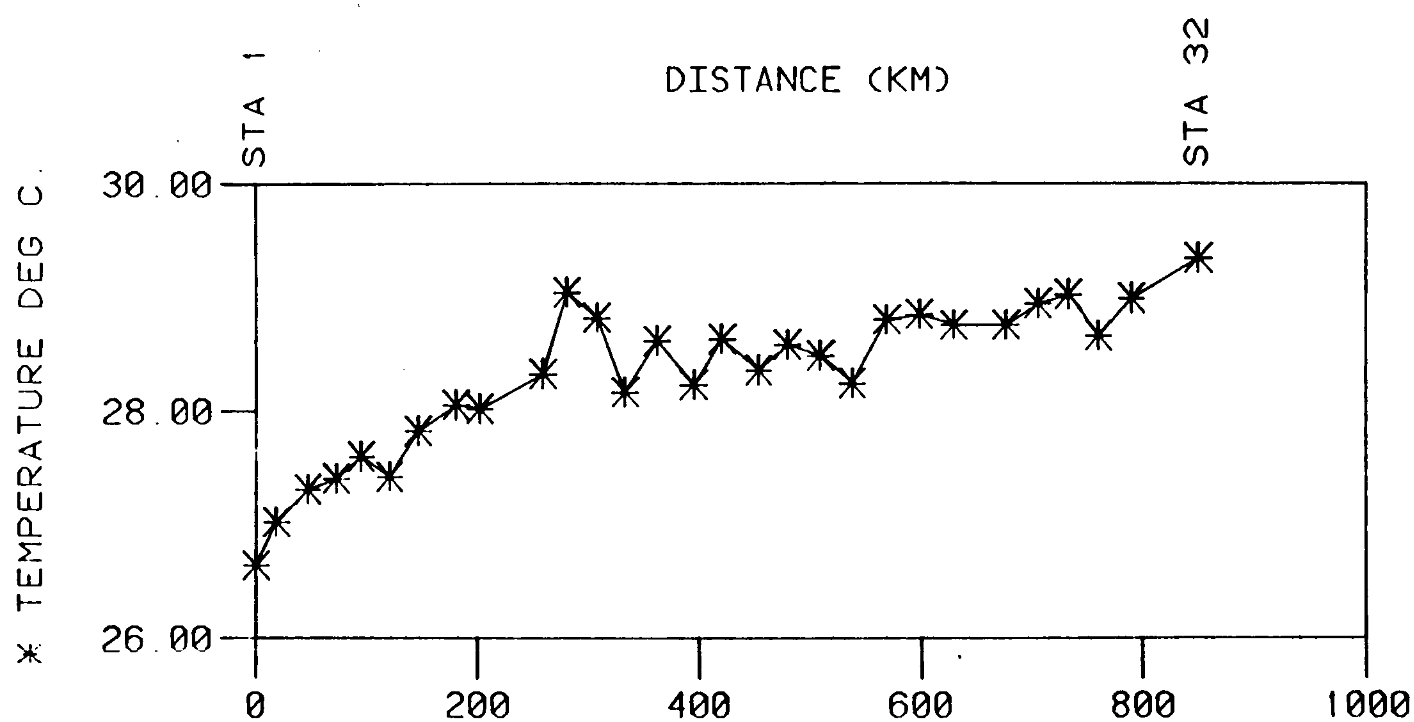


STATION
1 2 3 4 5 6 7 8 9 11 12 13 14 15 16 17 18 19 20 21 22 23 24 26 27 28 29 30 32
DEPTH (METERS)
0
50
100
150
200
25
20
15
NORDIC WASA CRUISE 83-03
9/24/83 TO 9/25/83
STATIONS 1 TO 32
TEMPERATURE DEG C
MIN = 11.49 MAX = 30.15
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)

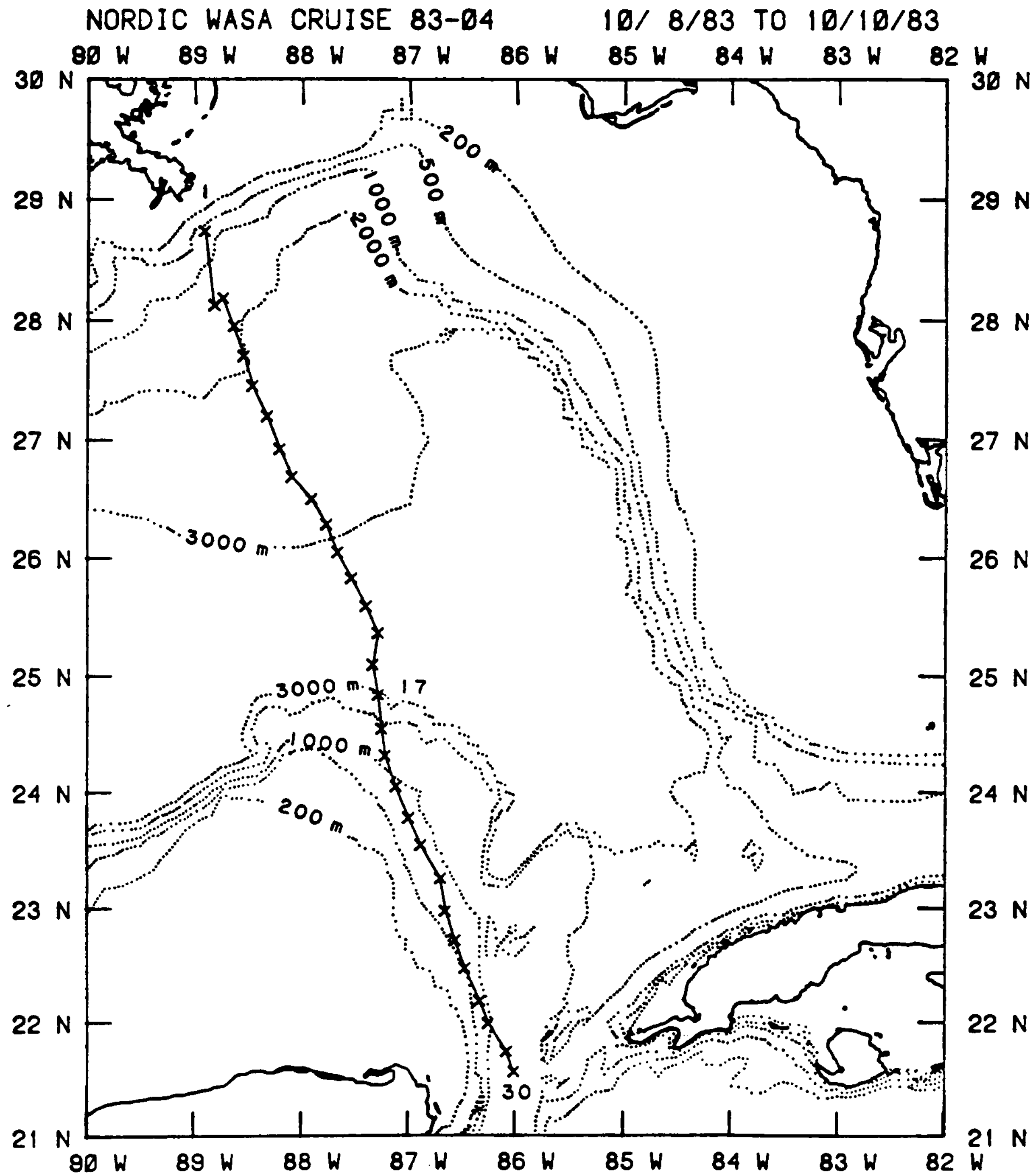
24

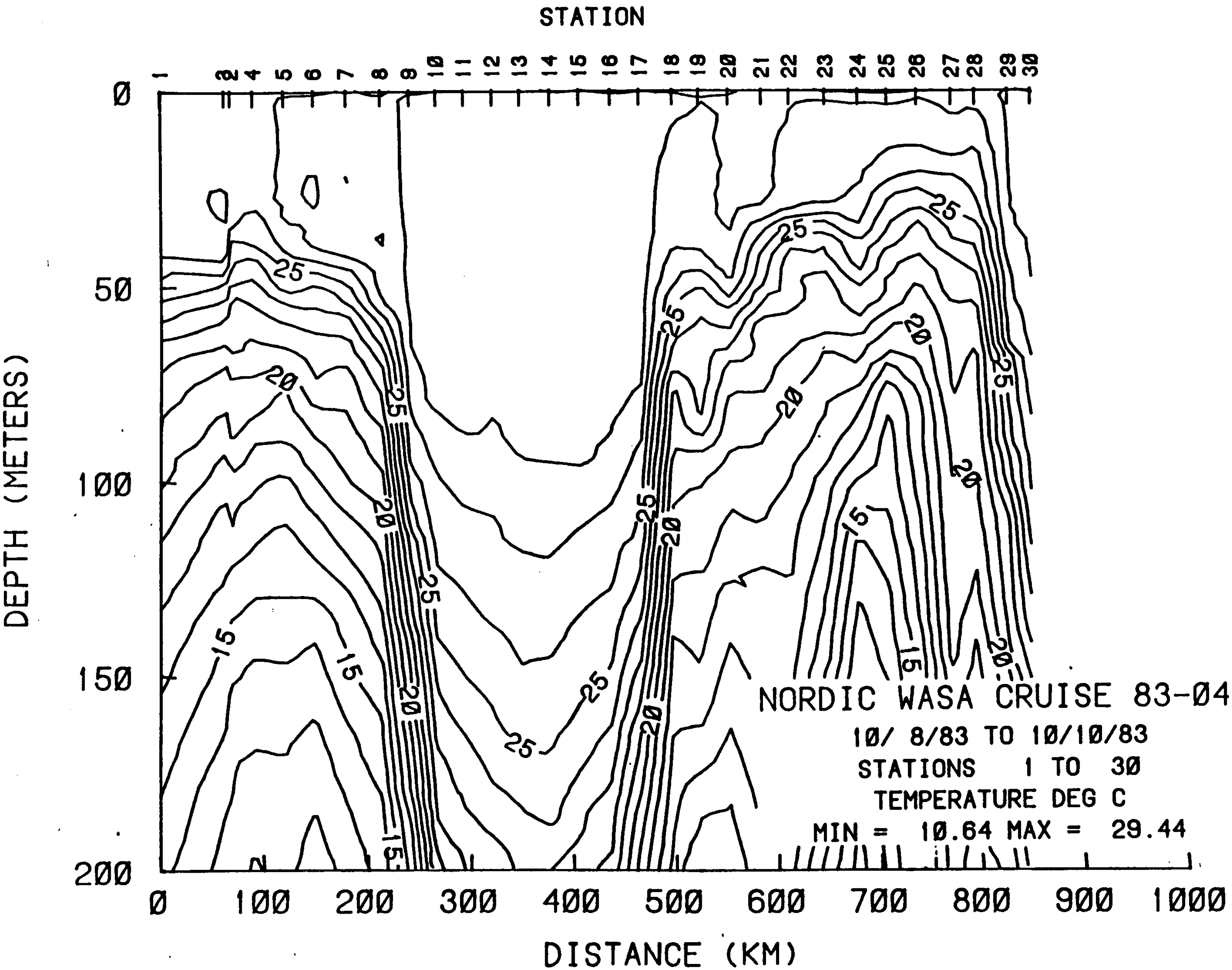


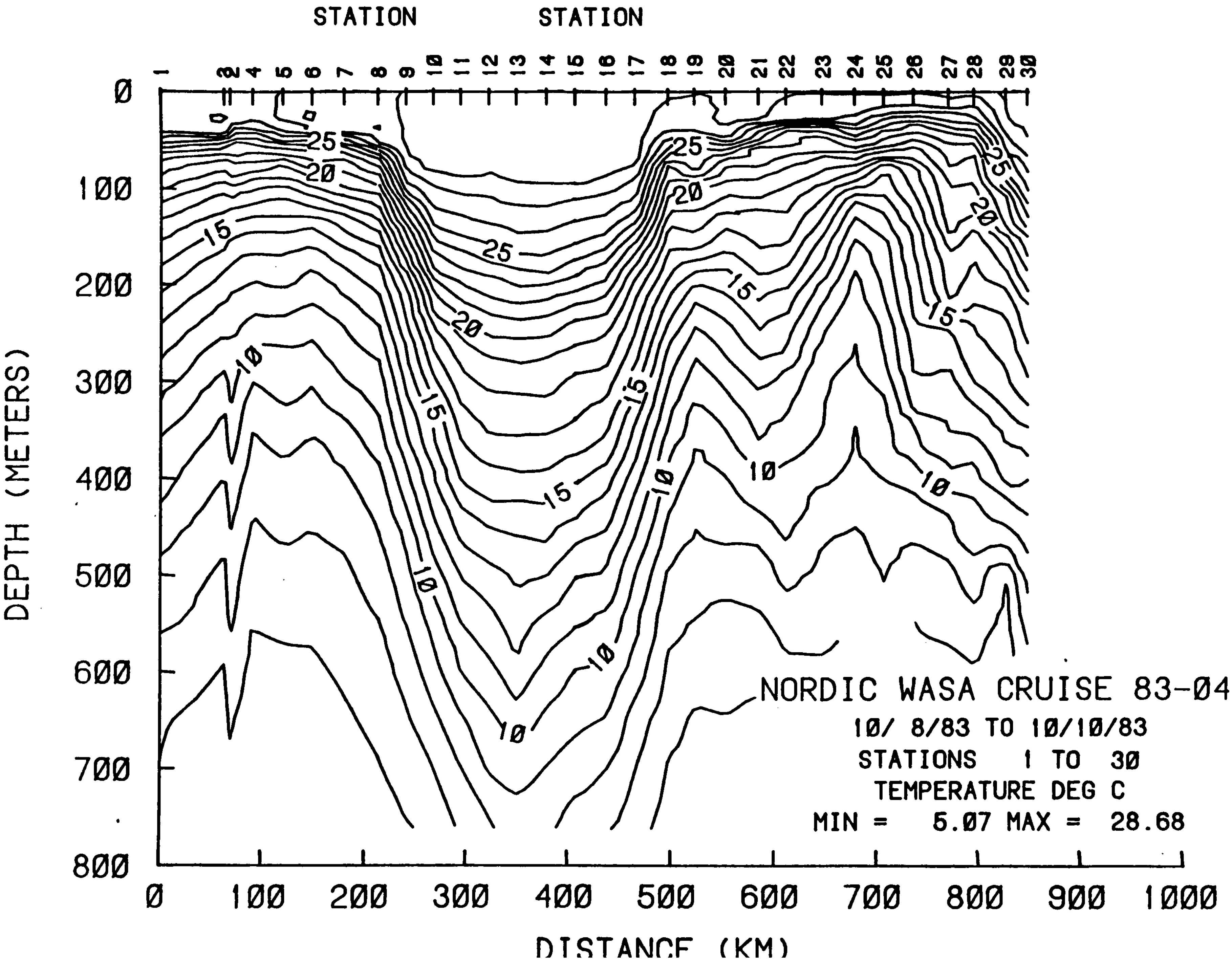
STATION
1 2 3 4 5 6 7 8 9 11 12 13 14 15 16 17 18 19 20 21 22 23 24 26 27 28 29 30 32
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
10
NORDIC WASA CRUISE 83-03
9/24/83 TO 9/25/83
STATIONS 1 TO 32
TEMPERATURE DEG C
MIN = 5.25 MAX = 30.15



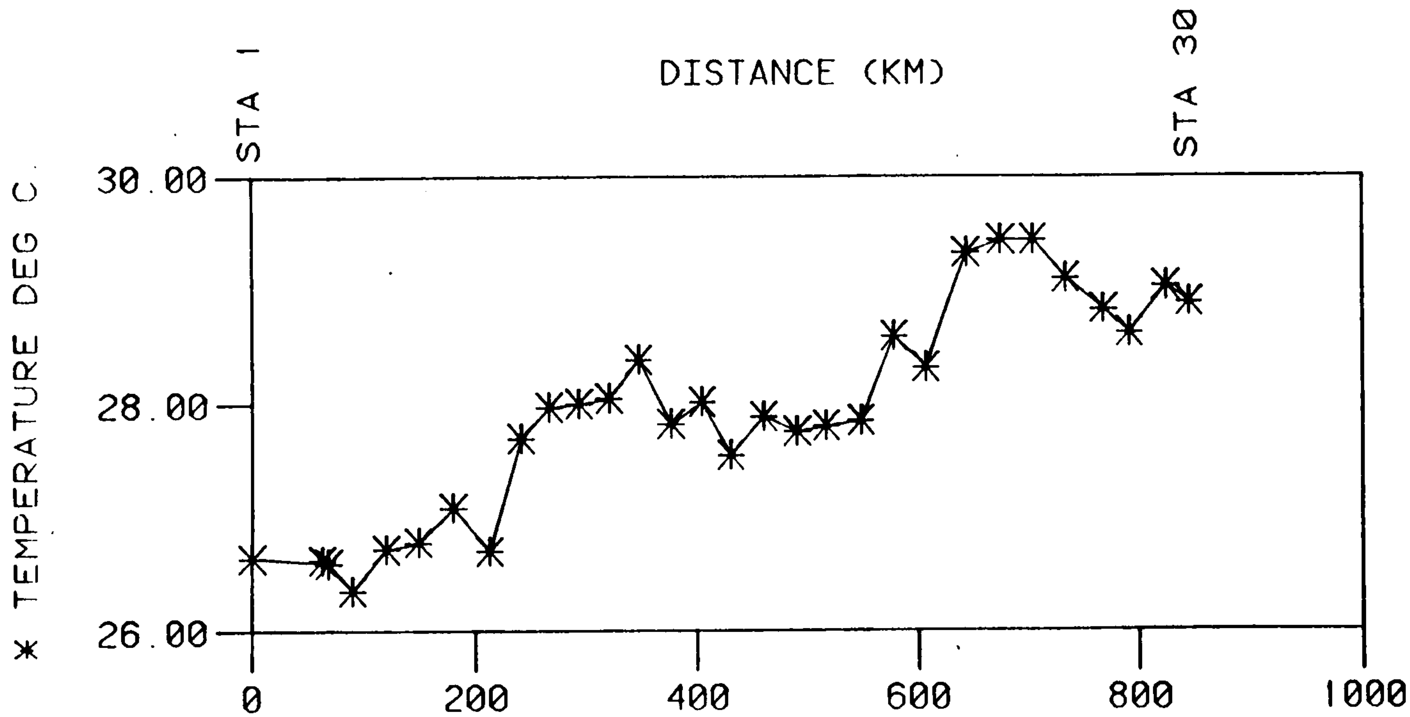
PARAMETERS AT SURFACE NORDIC WASA CRUISE 83-03


NORDIC WASA CRUISE 83-04
10/ 8/83 TO 10/10/83
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
1000 m
200 m
1
17
30

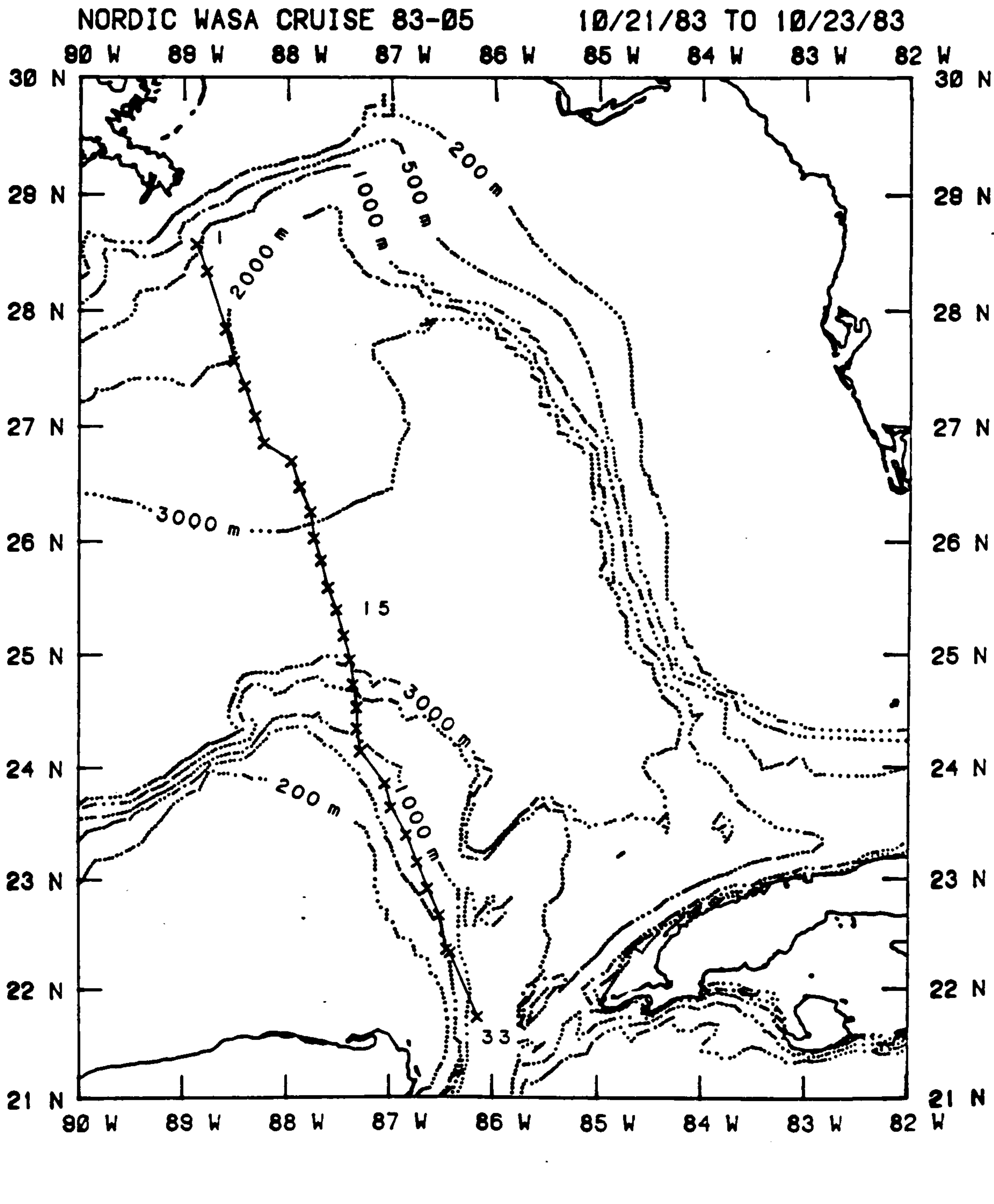

STATION
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
NORDIC WASA CRUISE 83-04
10/ 8/83 TO 10/10/83
STATIONS 1 TO 30
TEMPERATURE DEG C
MIN = 10.64 MAX = 29.44



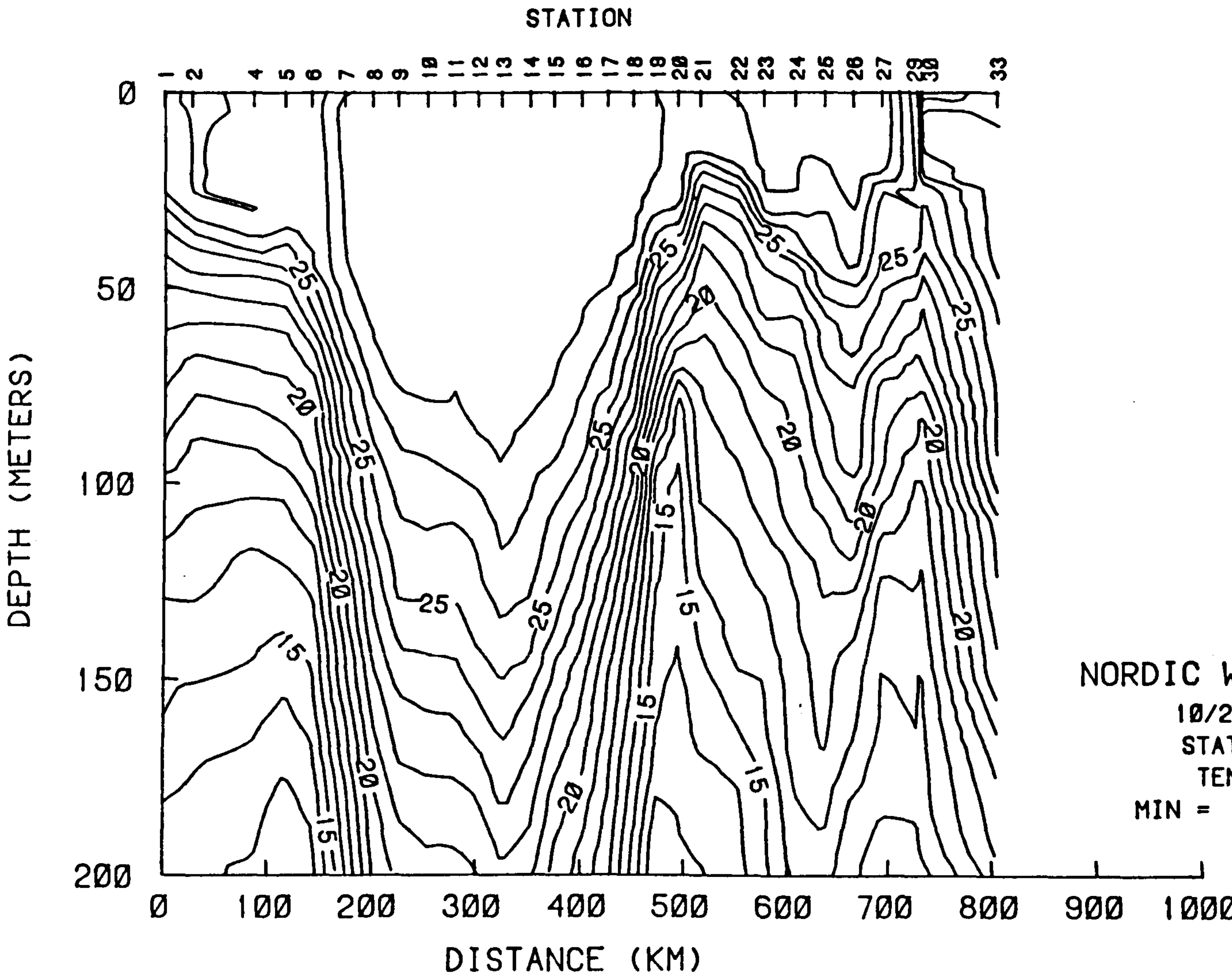
STATION
STATION
1 2 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30
25
20
15
10
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
0
100
200
300
400
500
600
700
800
900
1000
DISTANCE (KM)
NORDIC WASA CRUISE 83-04
10/ 8/83 TO 10/10/83
STATIONS 1 TO 30
TEMPERATURE DEG C
MIN = 5.07 MAX = 28.68



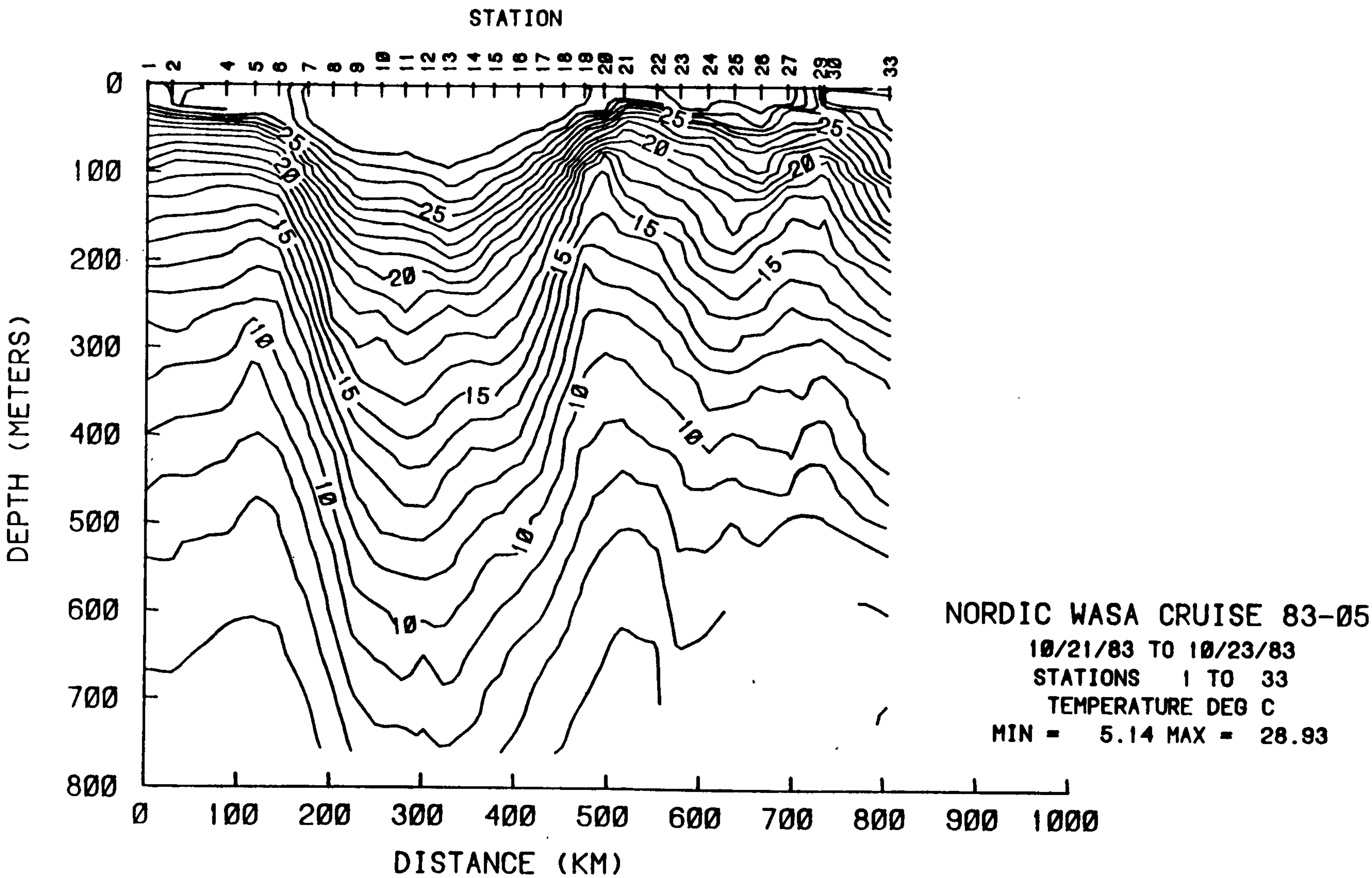
PARAMETERS AT SURFACE NORDIC WASA CRUISE 83-04

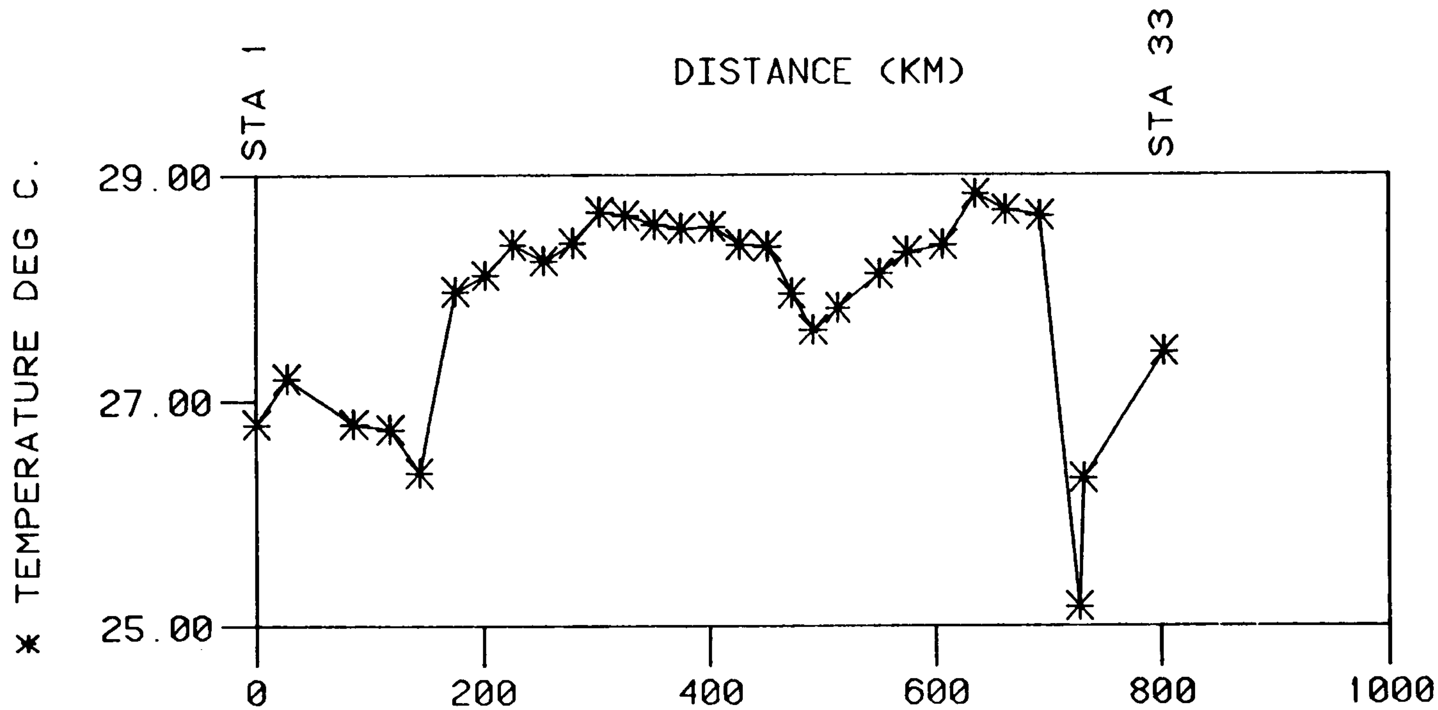


NORDIC WASA CRUISE 83-05
10/21/83 TO 10/23/83
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
15
33

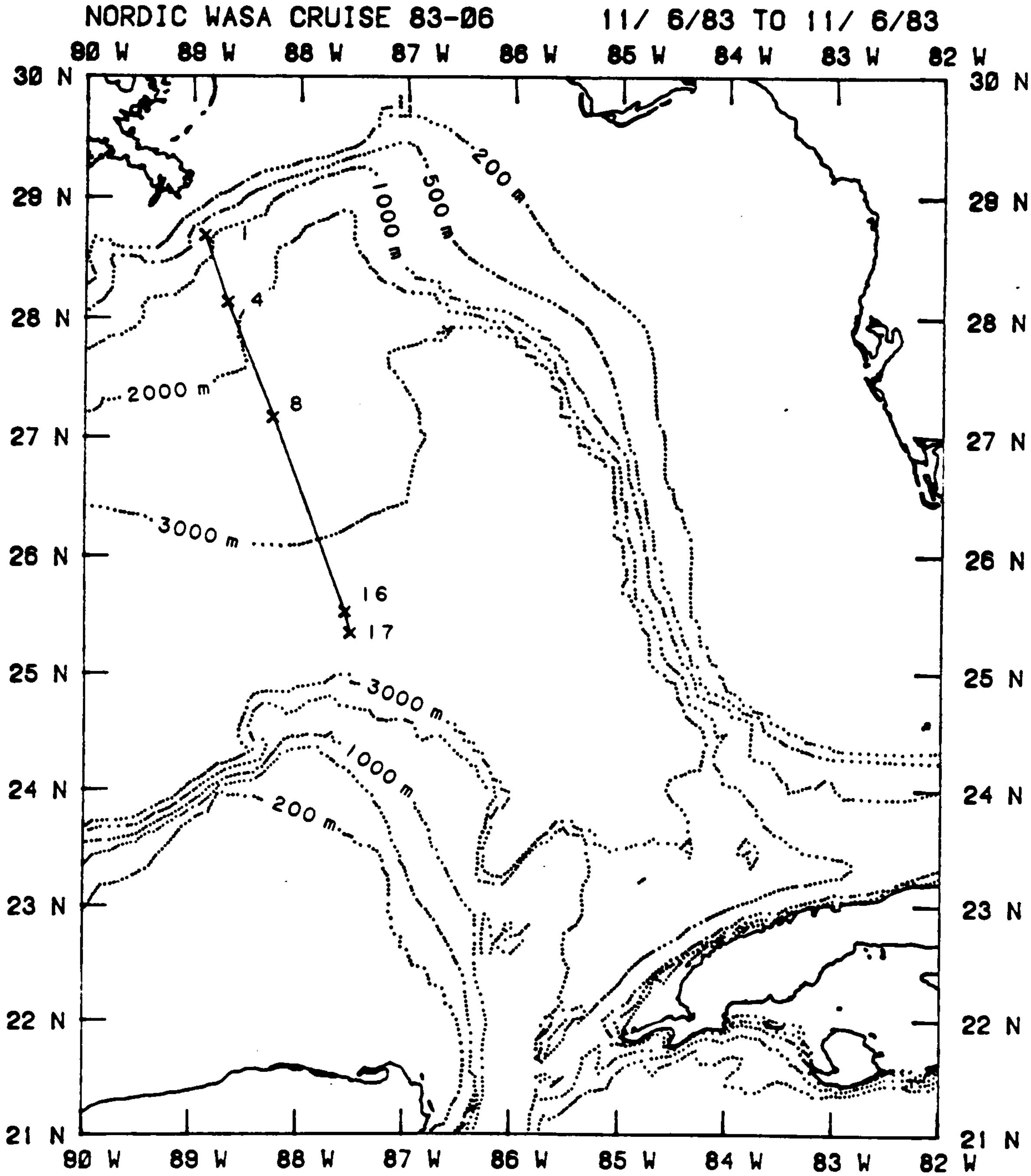


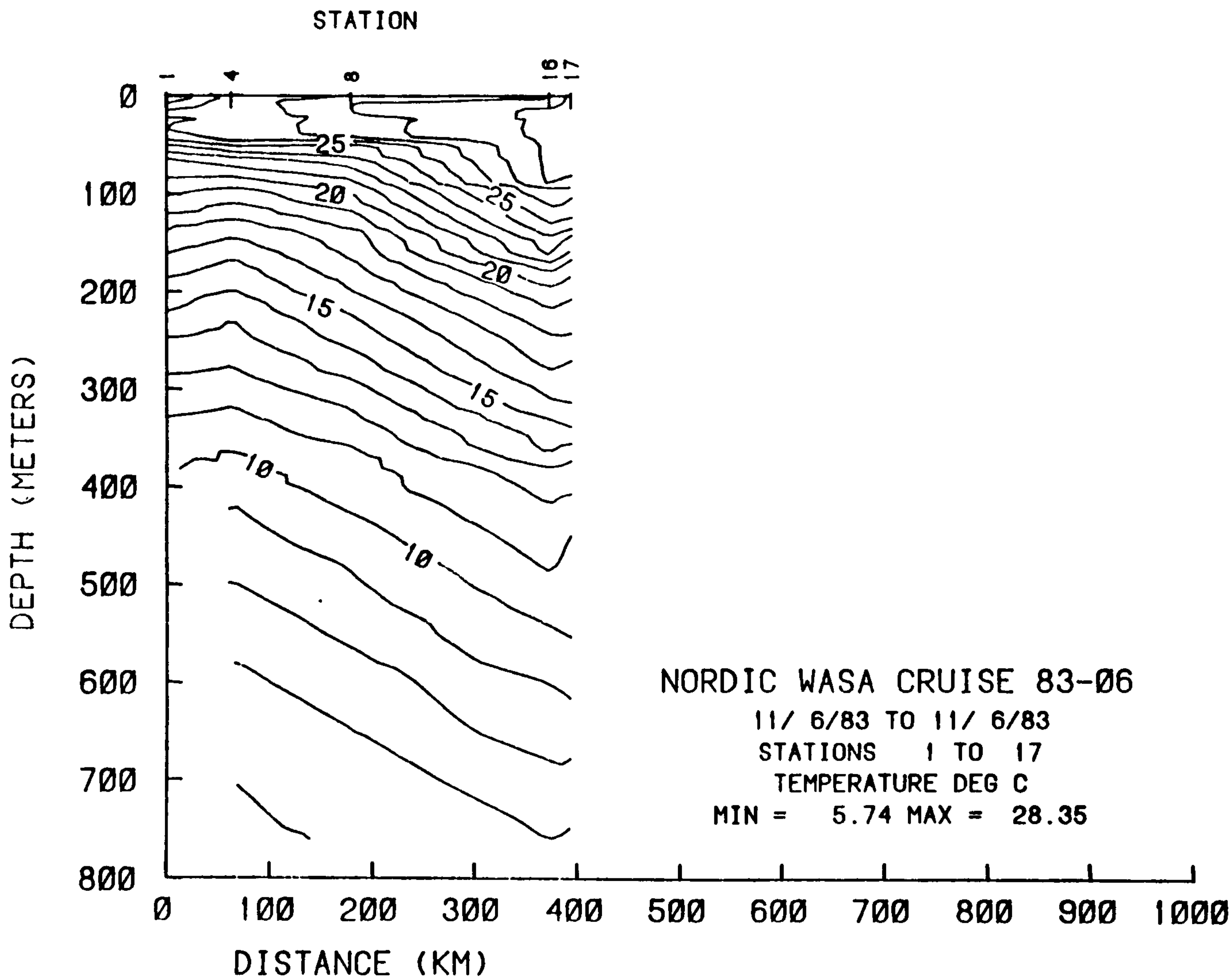
NORDIC WASA CRUISE 83-05
10/21/83 TO 10/23/83
STATIONS 1 TO 33
TEMPERATURE DEG C
MIN = 12.02 MAX = 28.93

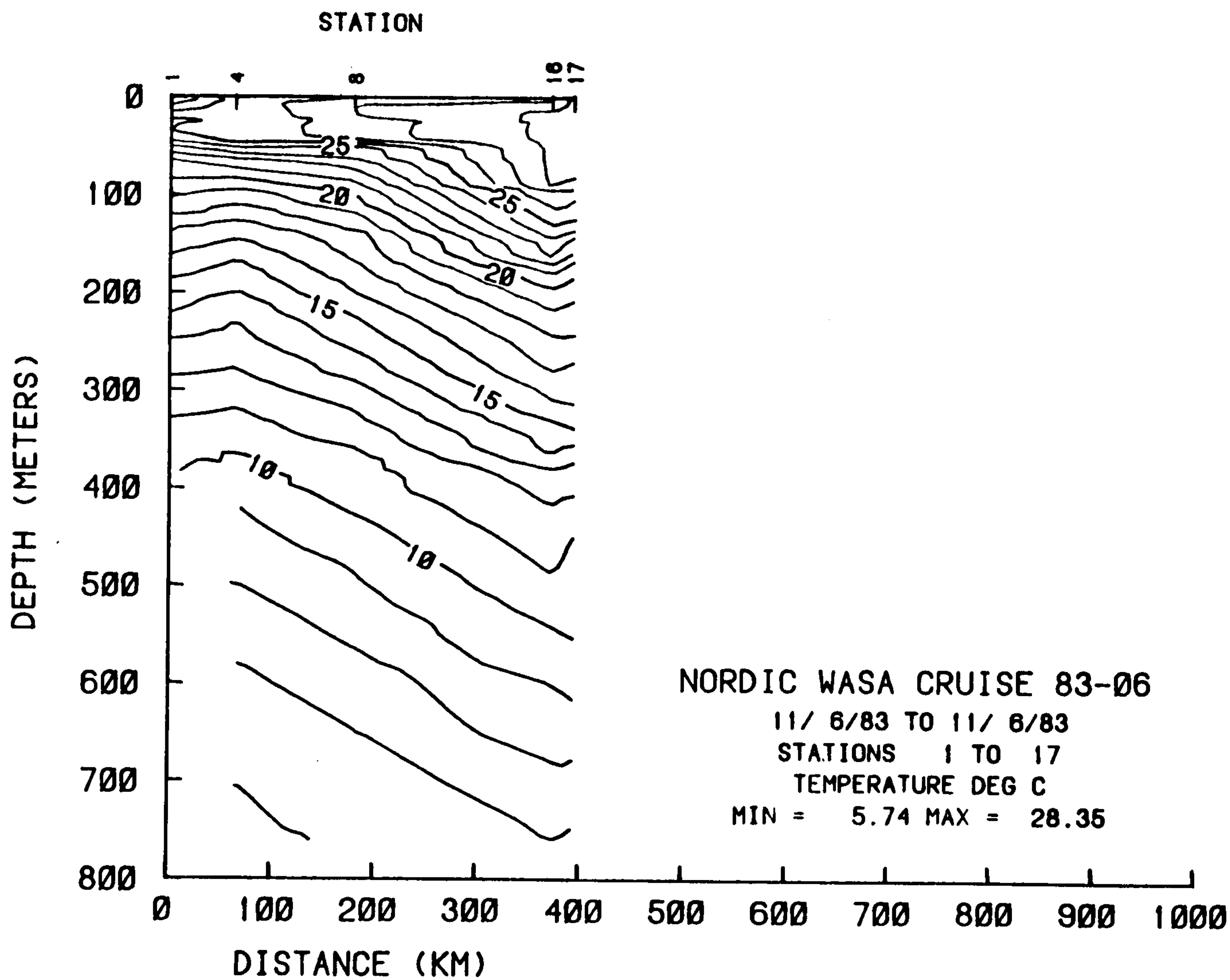

STATION
1 2 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 29 30 33
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
NORDIC WASA CRUISE 83-05
10/21/83 TO 10/23/83
STATIONS 1 TO 33
TEMPERATURE DEG C
MIN = 5.14 MAX = 28.93

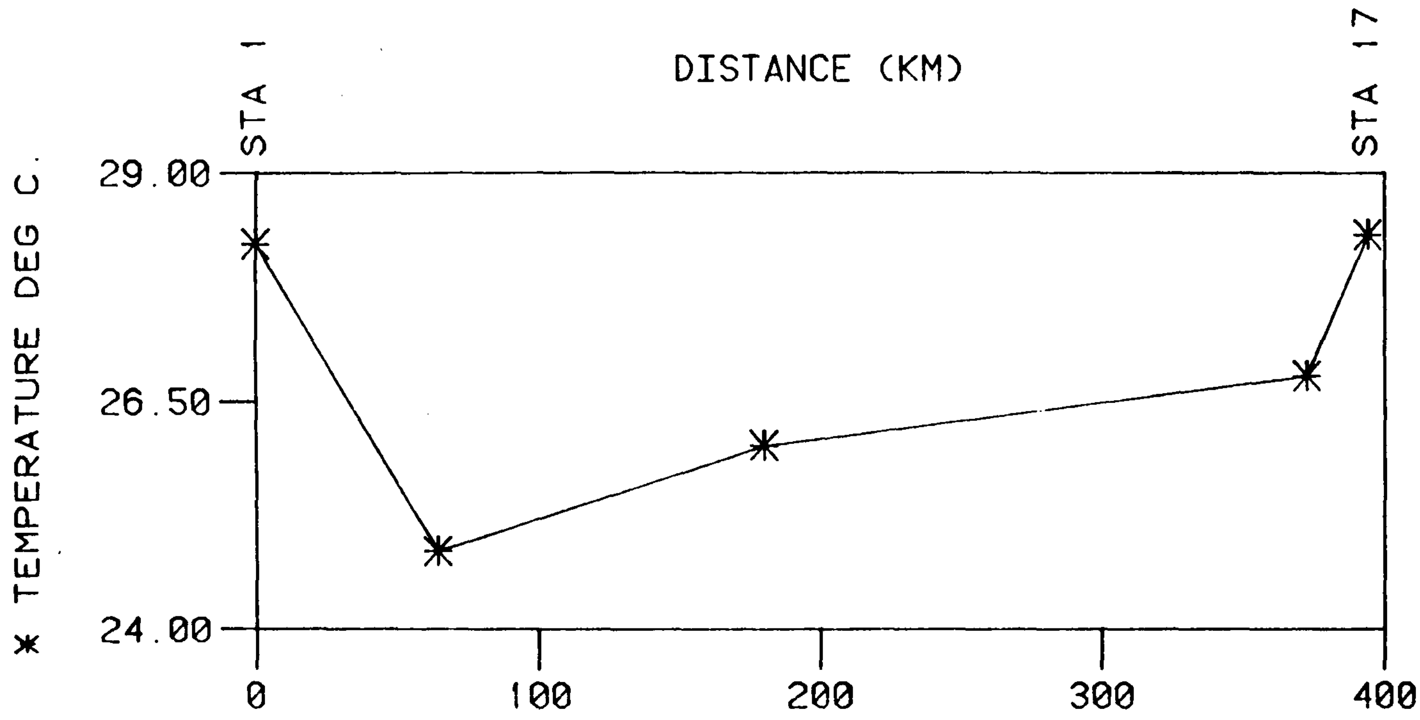


PARAMETERS AT SURFACE NORDIC WASA CRUISE 83-05


NORDIC WASA CRUISE 83-06
11/ 6/83 TO 11/ 6/83
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
4
8
16
17

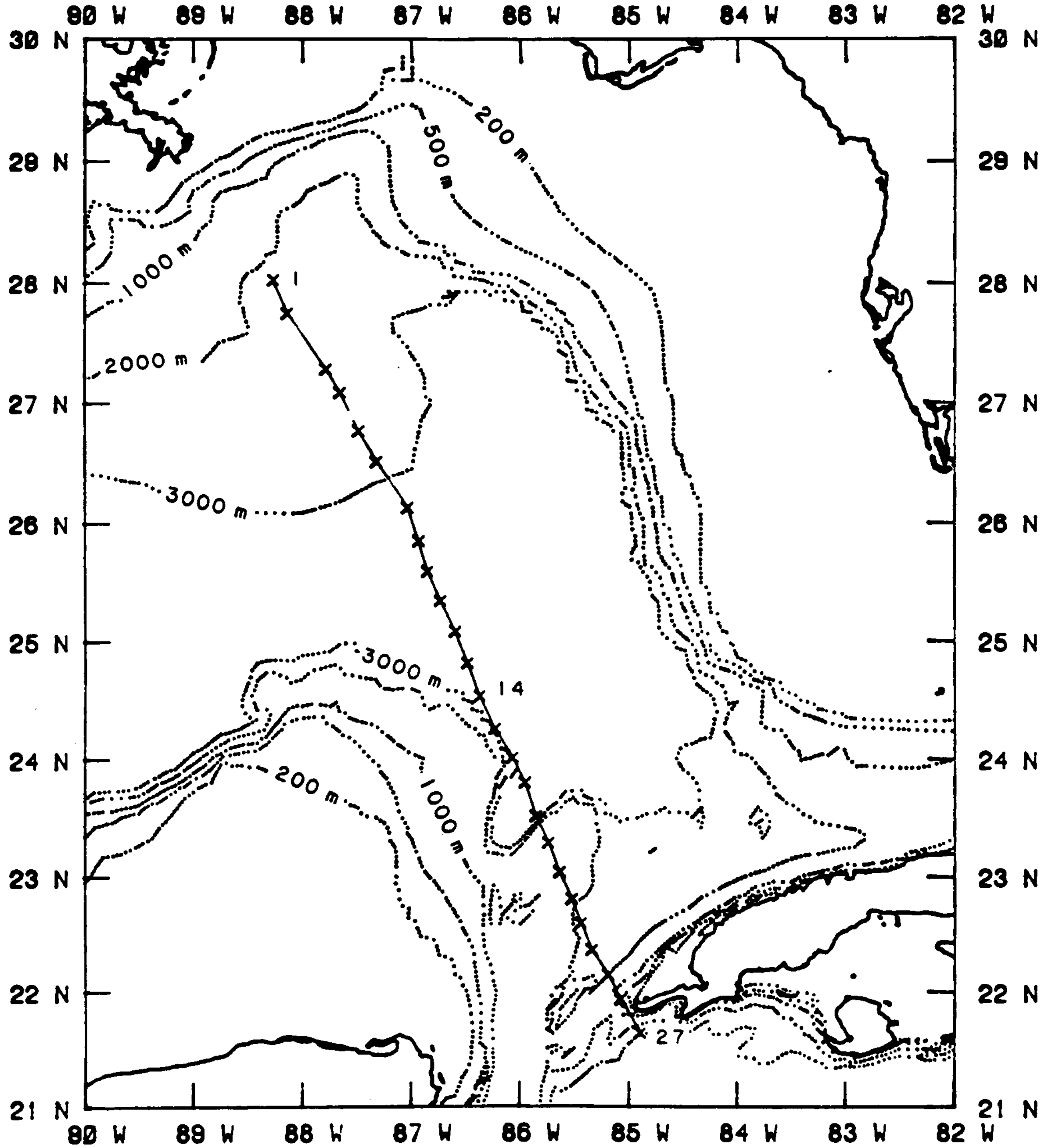

STATION
1 4 8 16 17
25
20
25
20
15
15
10
10
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
NORDIC WASA CRUISE 83-06
11/ 6/83 TO 11/ 6/83
STATIONS 1 TO 17
TEMPERATURE DEG C
MIN = 5.74 MAX = 28.35

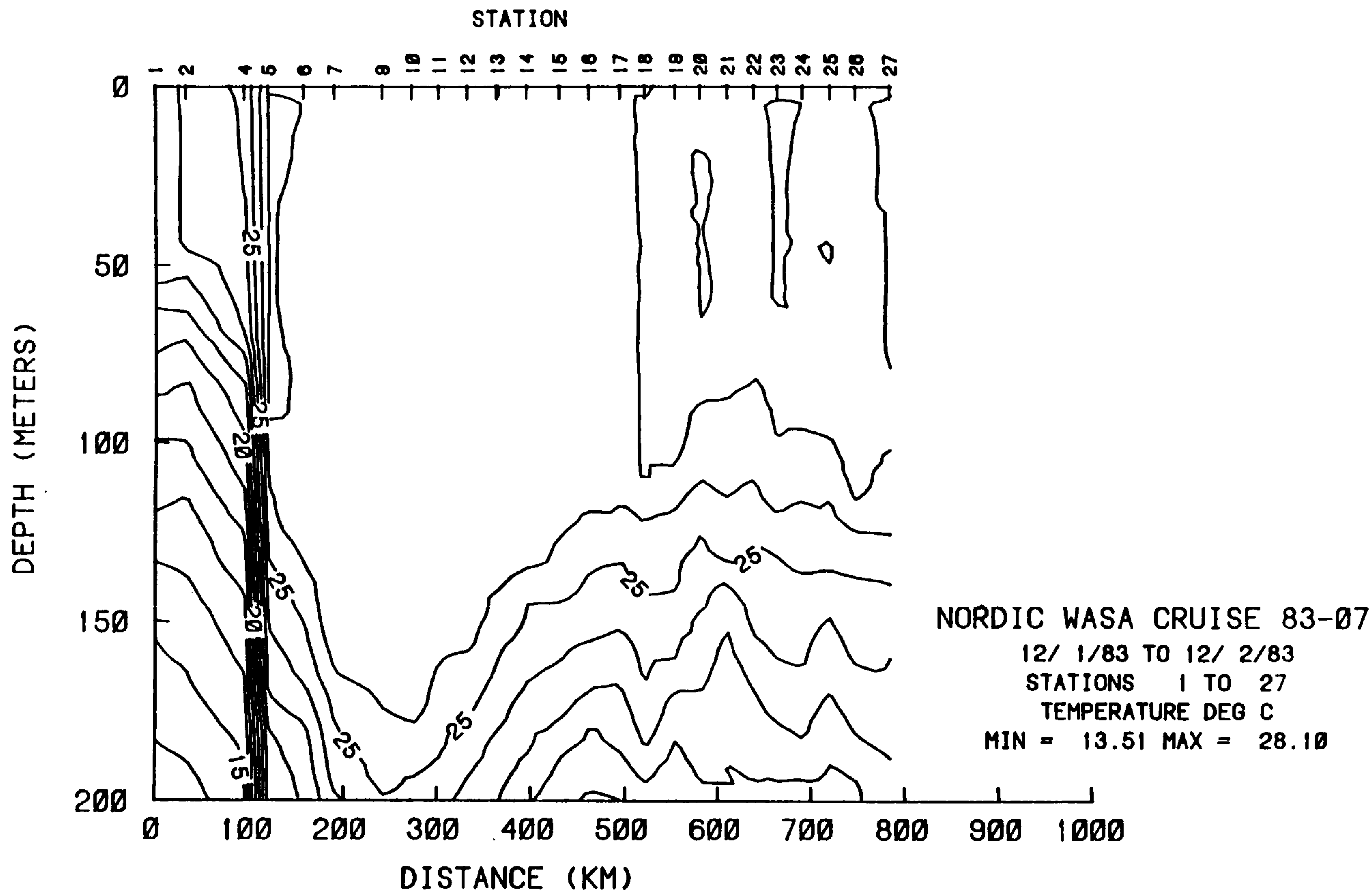

STATION
1
4
8
16
17
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
25
20
25
20
15
15
10
10
DISTANCE (KM)
0
100
200
300
400
500
600
700
800
900
1000
NORDIC WASA CRUISE 83-06
11/ 6/83 TO 11/ 6/83
STATIONS 1 TO 17
TEMPERATURE DEG C
MIN = 5.74 MAX = 28.35

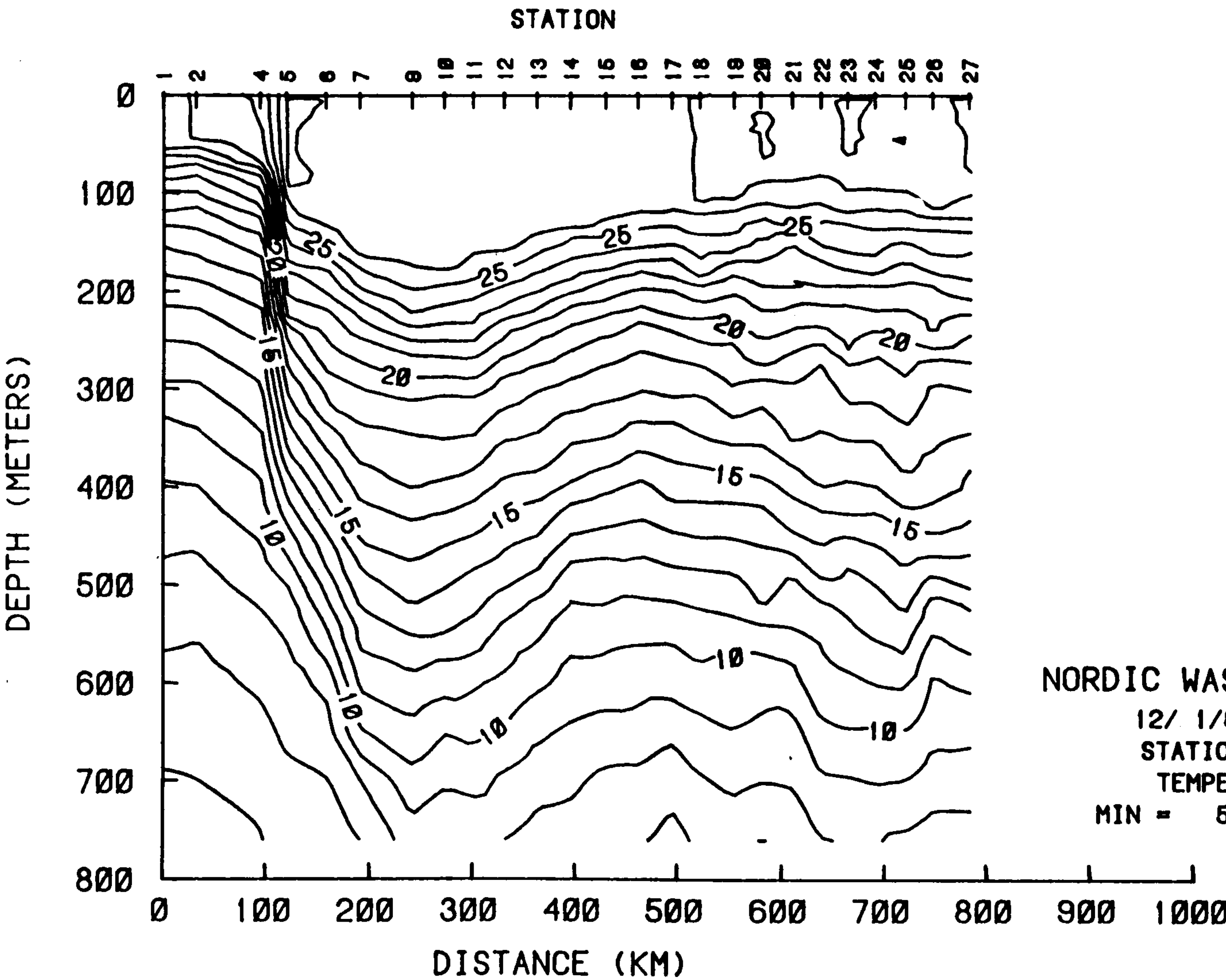


PARAMETERS AT SURFACE NORDIC WASA CRUISE 83-06

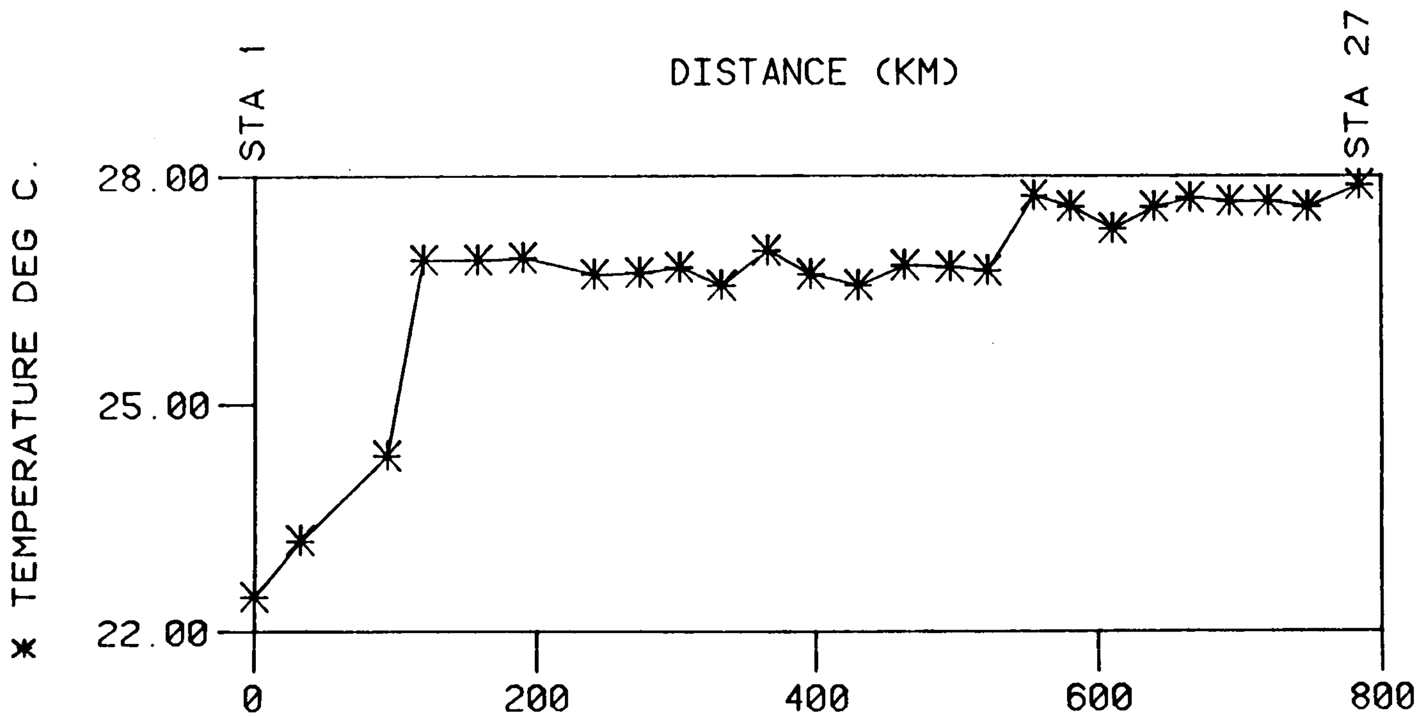
NORDIC WASA CRUISE 83-07 12/ 1/83 TO 12/ 2/83



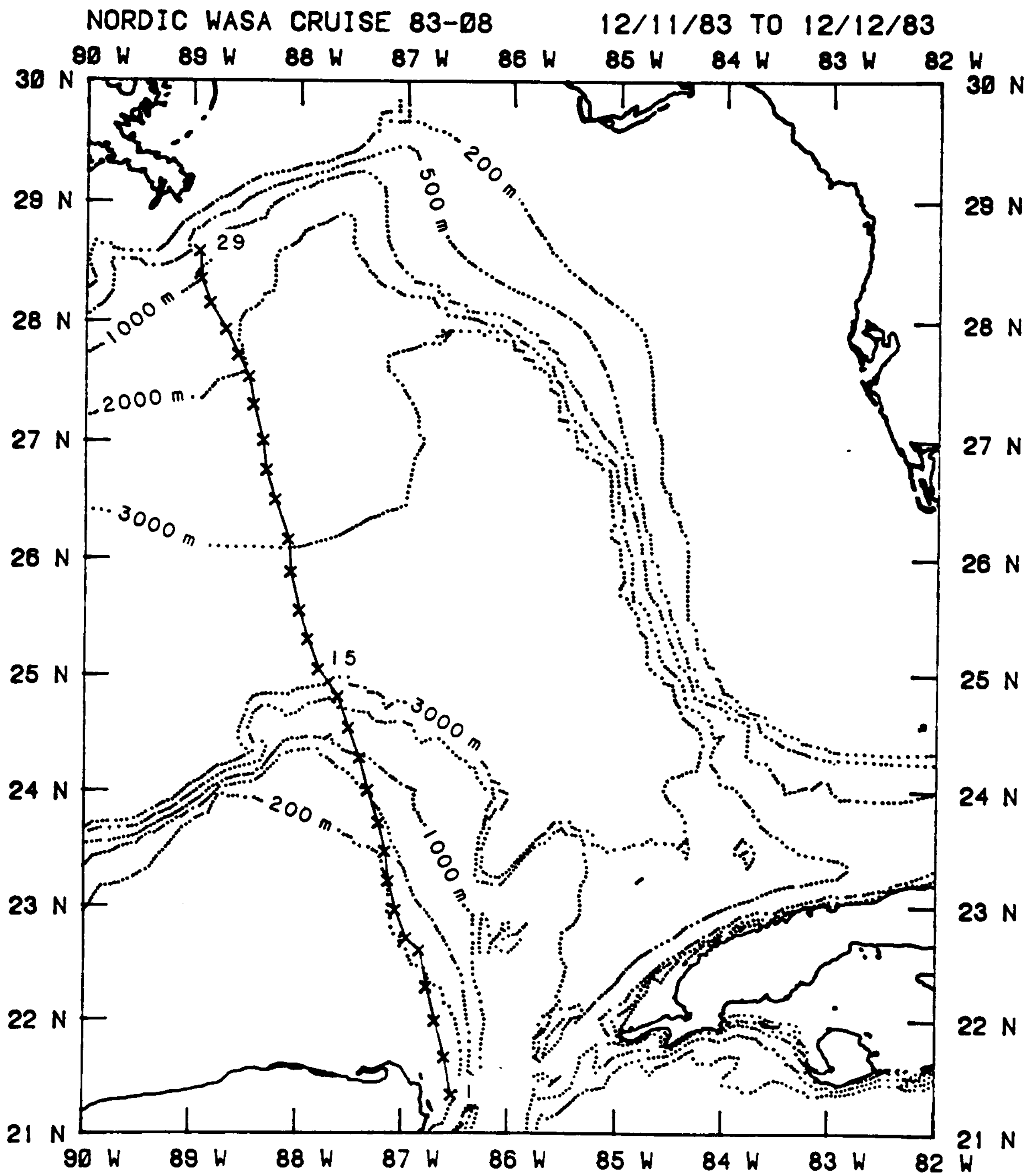

STATION
1 2 4 5 6 7 8 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
NORDIC WASA CRUISE 83-07
12/ 1/83 TO 12/ 2/83
STATIONS 1 TO 27
TEMPERATURE DEG C
MIN = 13.51 MAX = 28.10

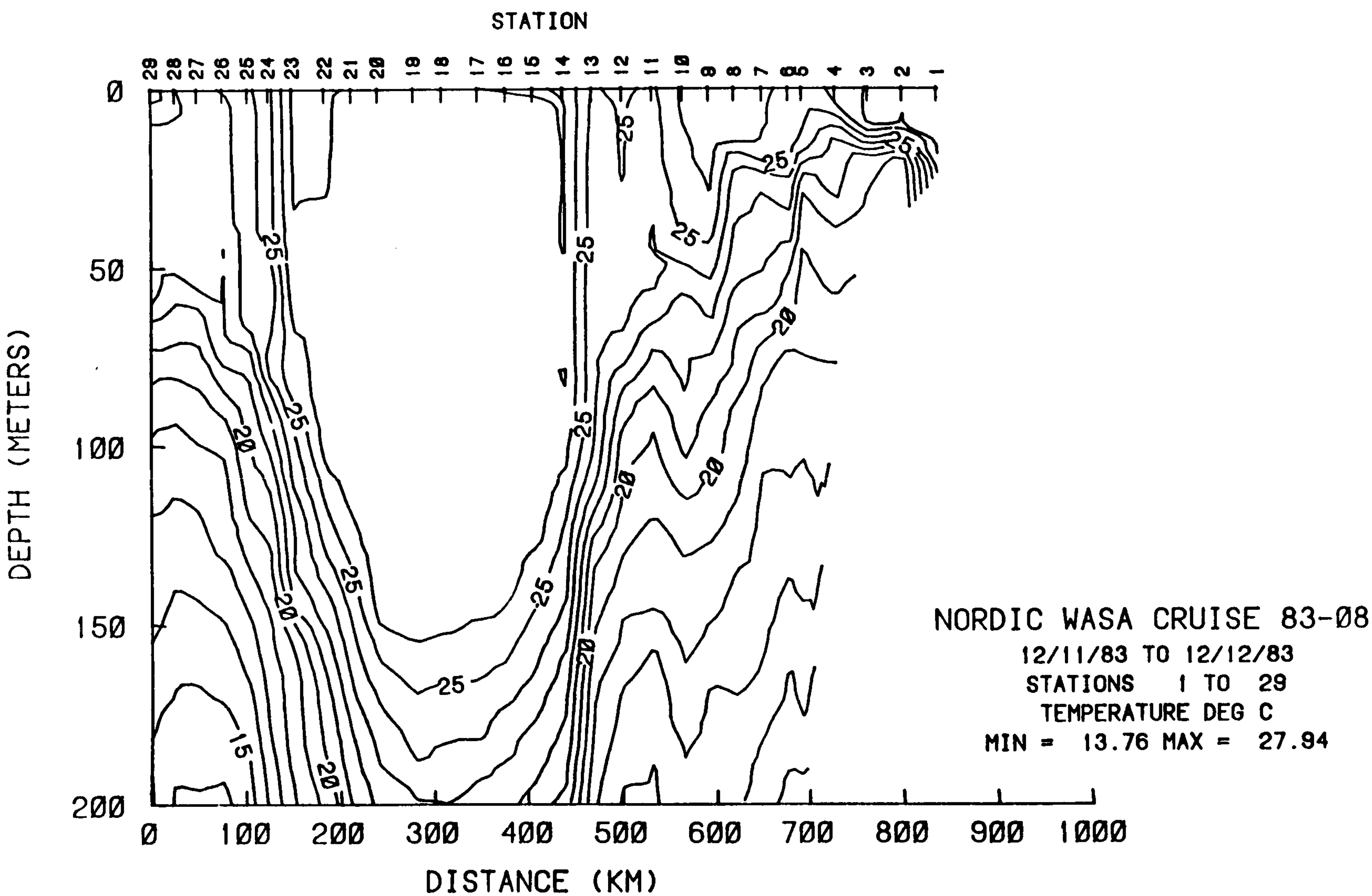


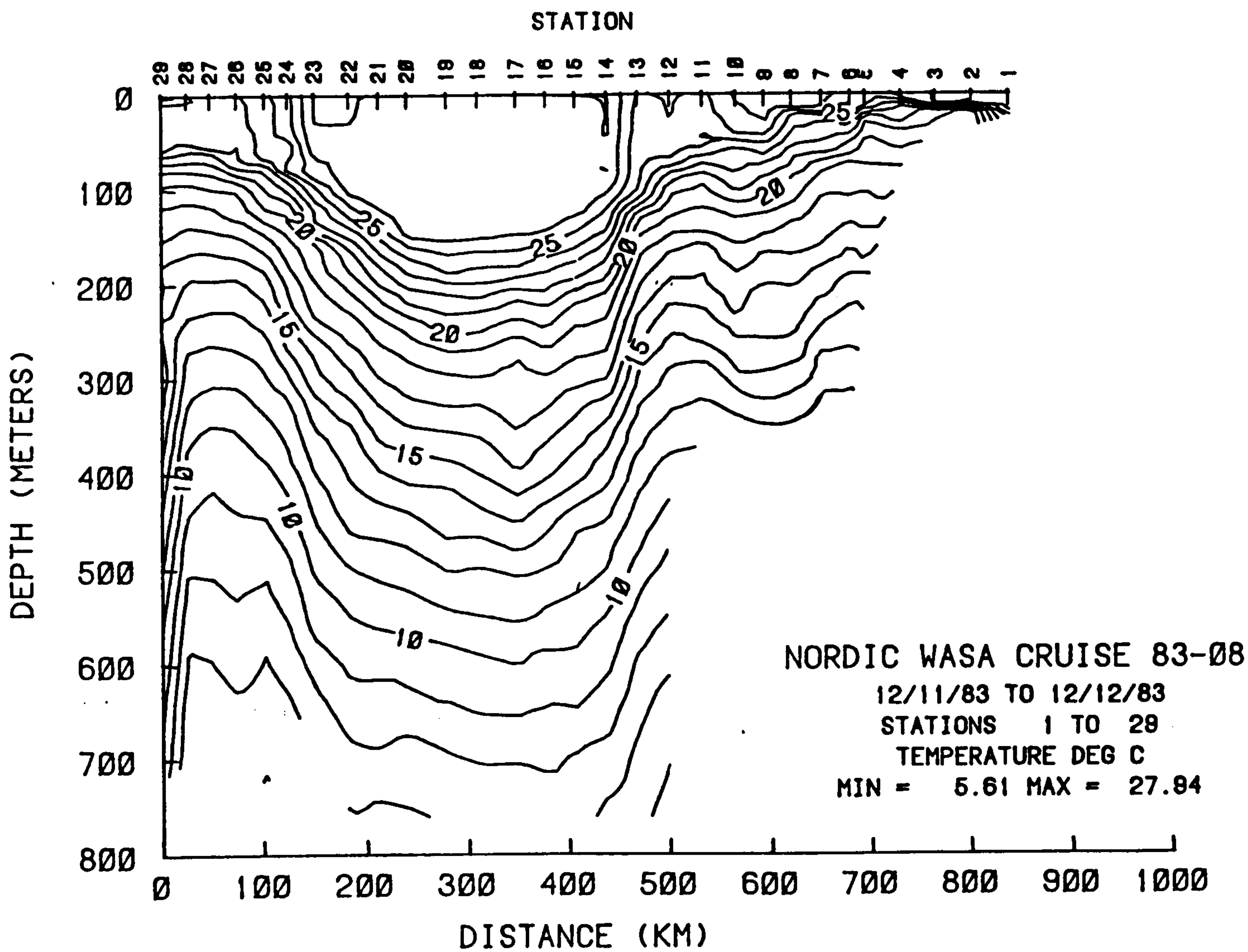
NORDIC WASA CRUISE 83-07
12/ 1/83 TO 12/ 2/83
STATIONS 1 TO 27
TEMPERATURE DEG C
MIN = 5.62 MAX = 28.10

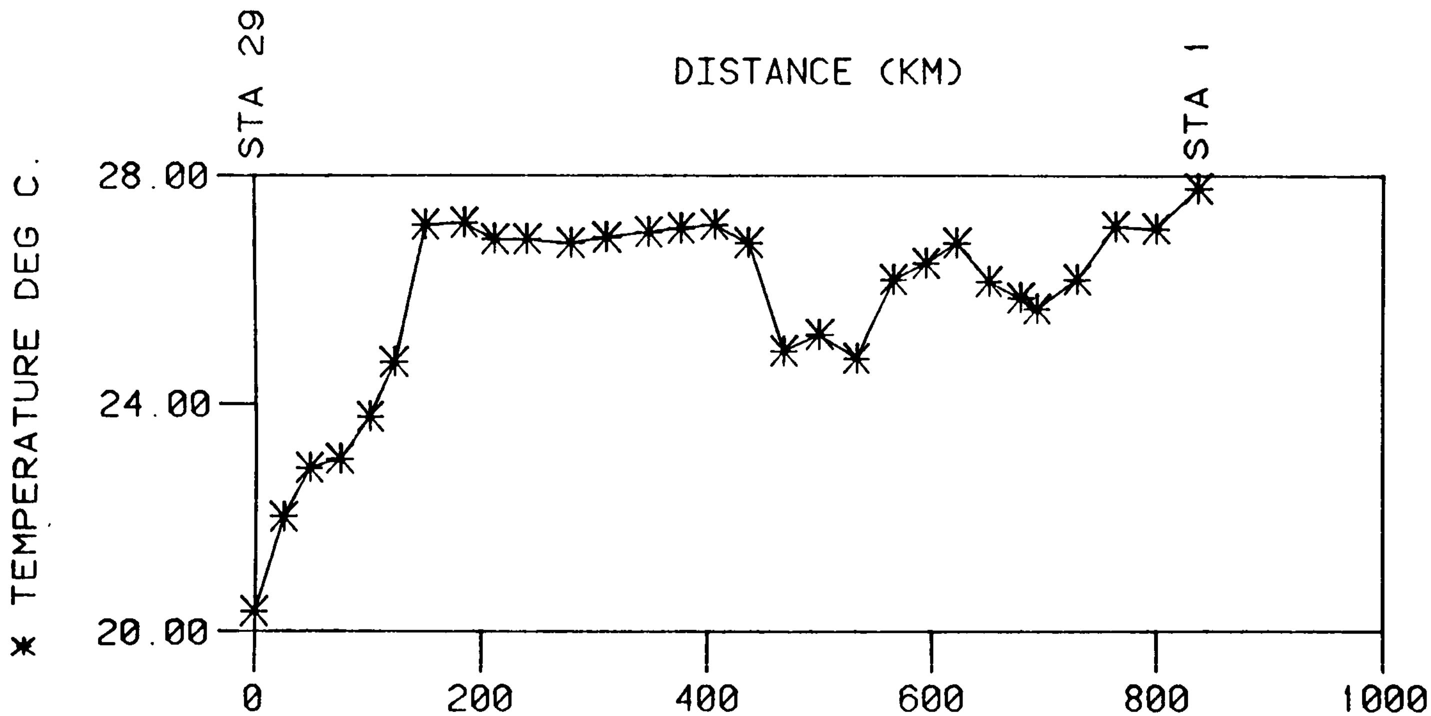


PARAMETERS AT SURFACE NORDIC WASA CRUISE 83-07

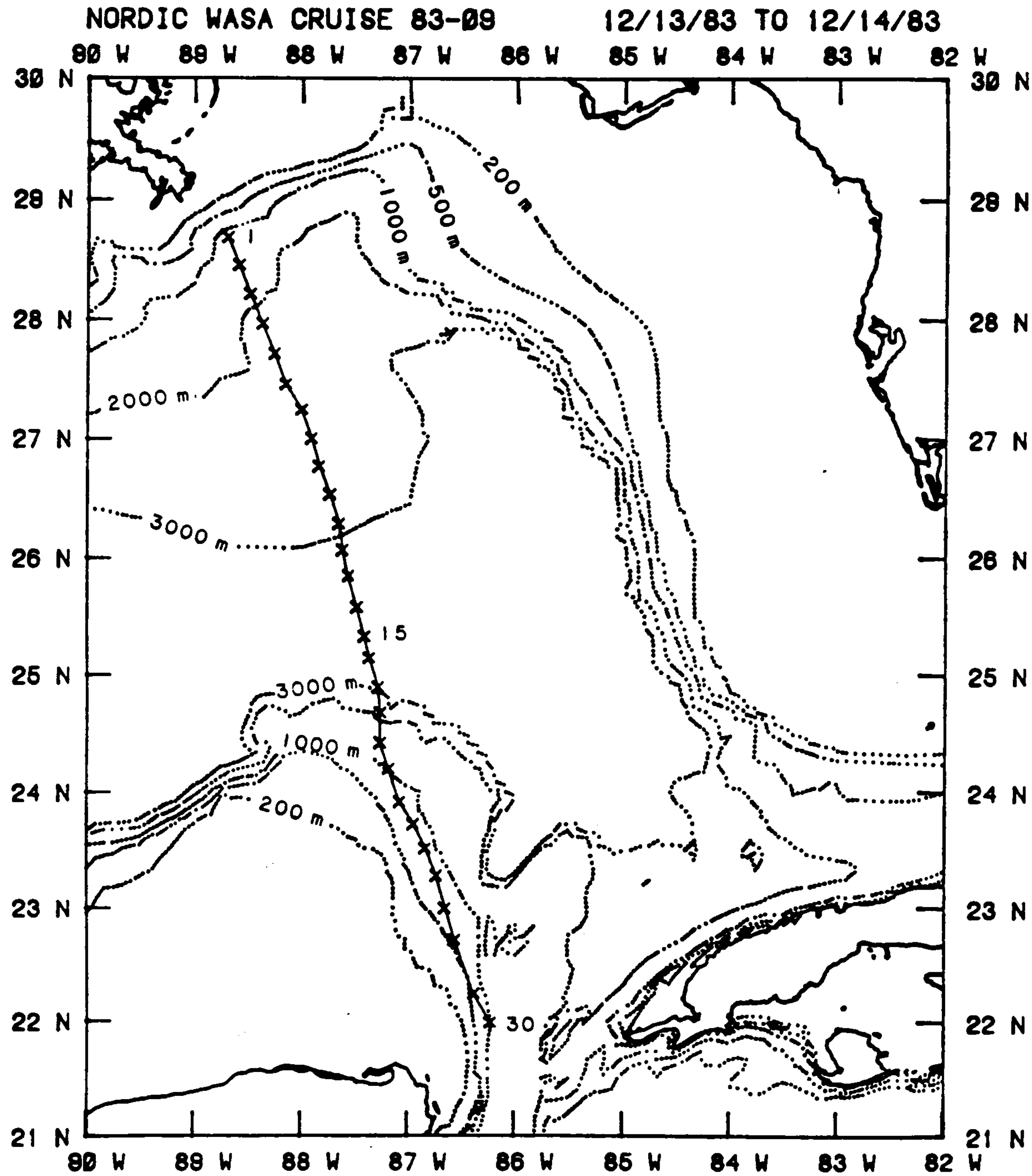

NORDIC WASA CRUISE 83-Ø8
12/11/83 TO 12/12/83
9Ø W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
3Ø N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
29
15
1

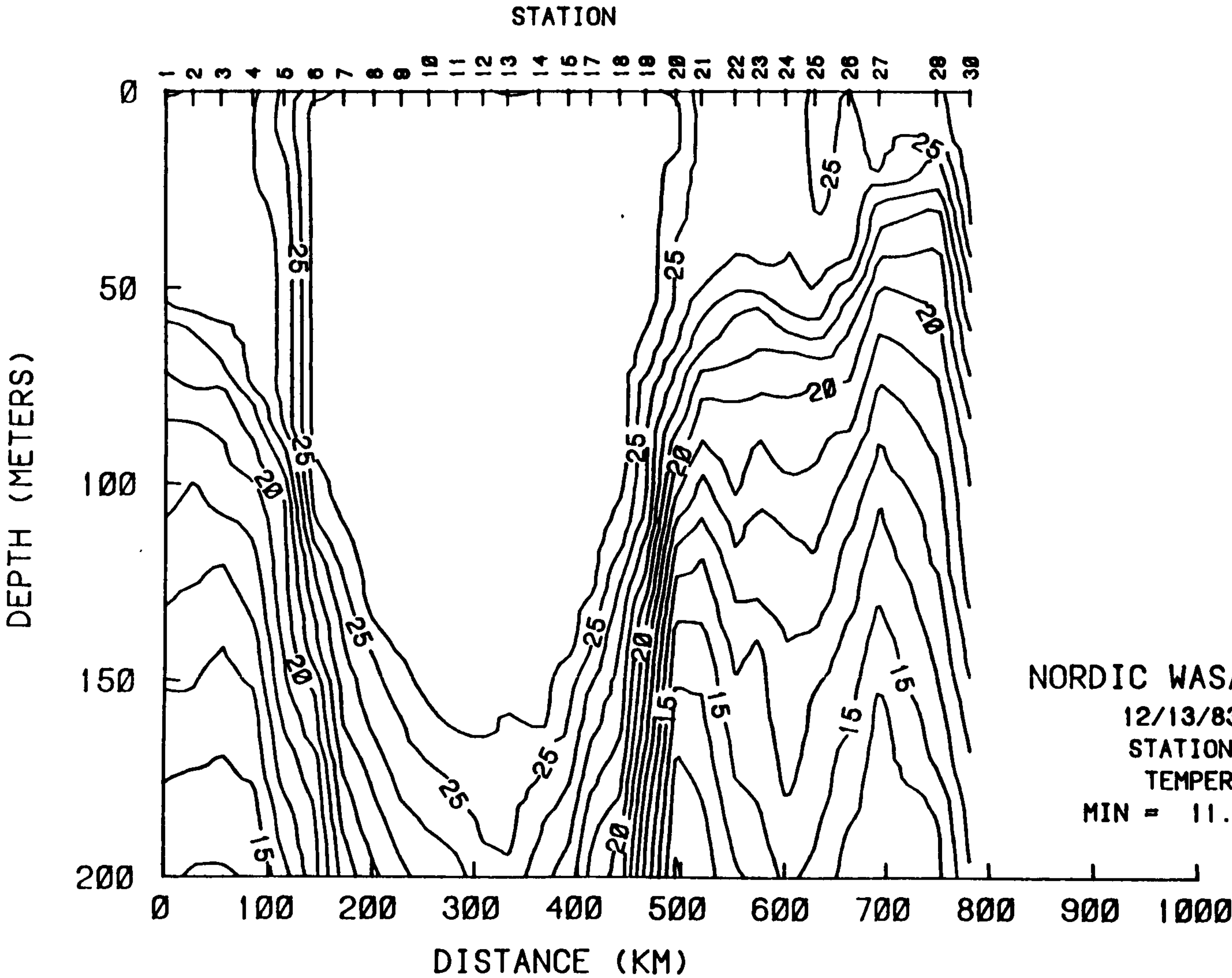

STATION
29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
50
100
150
200
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)
25
20
15
NORDIC WASA CRUISE 83-08
12/11/83 TO 12/12/83
STATIONS 1 TO 29
TEMPERATURE DEG C
MIN = 13.76 MAX = 27.94


STATION
29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0 100 200 300 400 500 600 700 800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
10
NORDIC WASA CRUISE 83-08
12/11/83 TO 12/12/83
STATIONS 1 TO 29
TEMPERATURE DEG C
MIN = 5.61 MAX = 27.84



PARAMETERS AT SURFACE NORDIC WASA CRUISE 83-08


NORDIC WASA CRUISE 83-09
12/13/83 TO 12/14/83
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
15
30



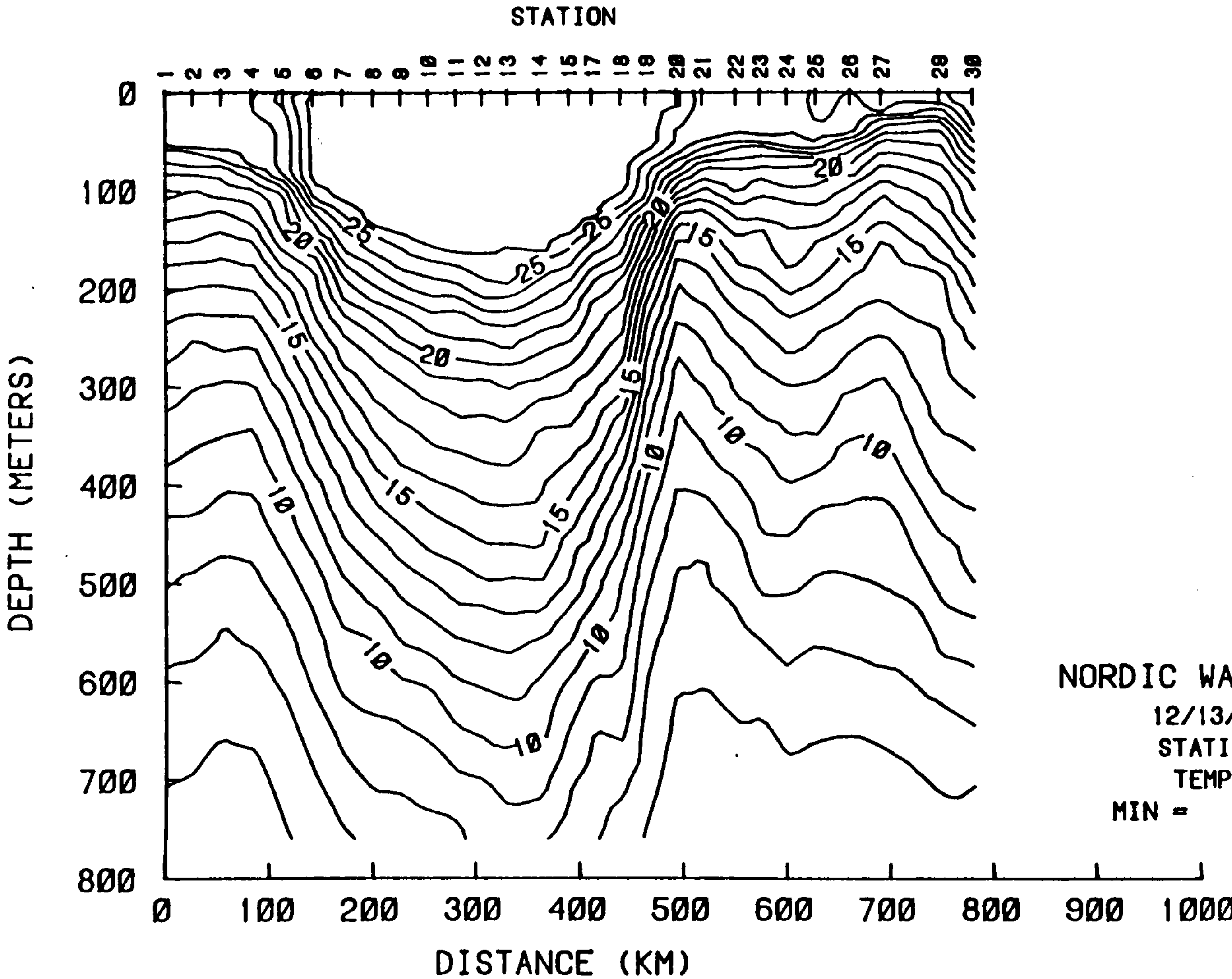
NORDIC WASA CRUISE 83-09

12/13/83 TO 12/14/83

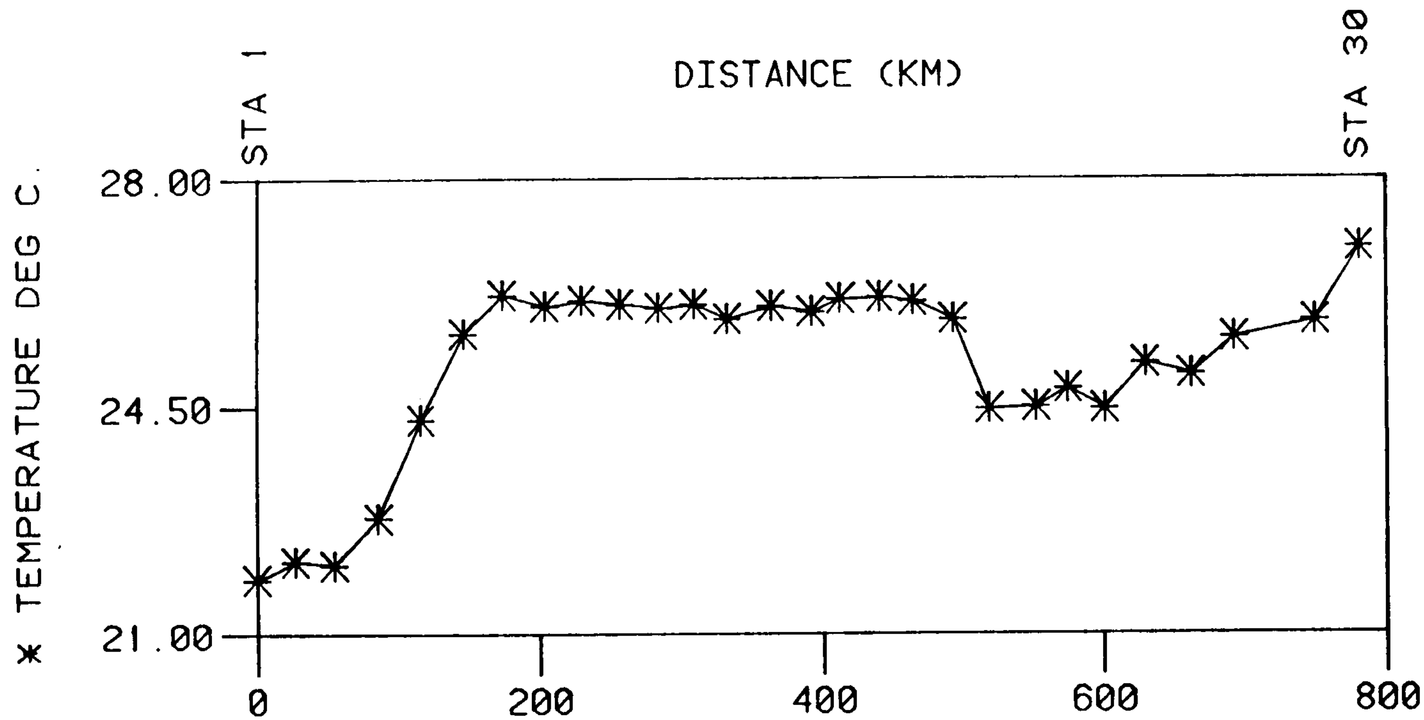
STATIONS 1 TO 30

TEMPERATURE DEG C

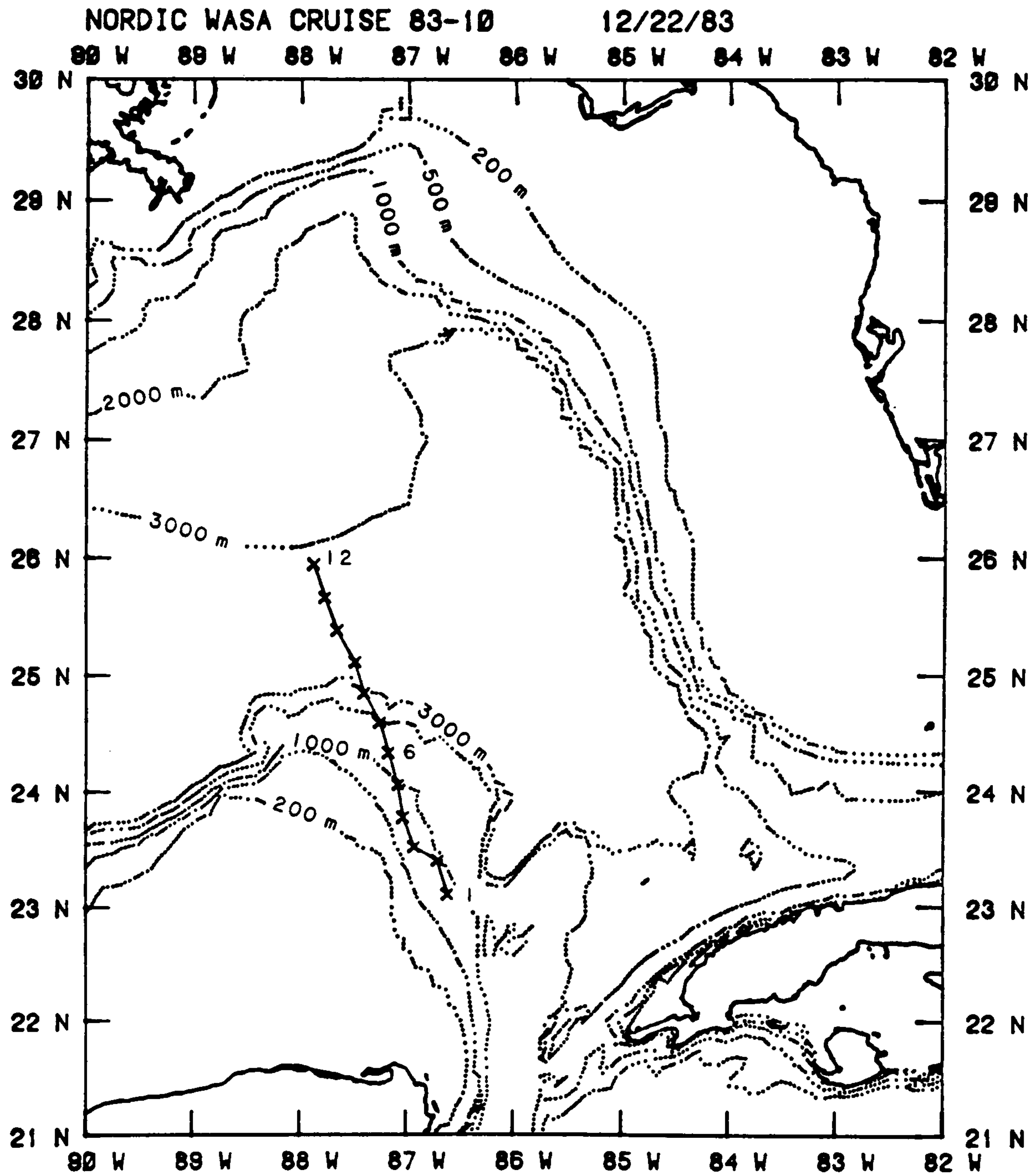
MIN = 11.90 MAX = 26.93

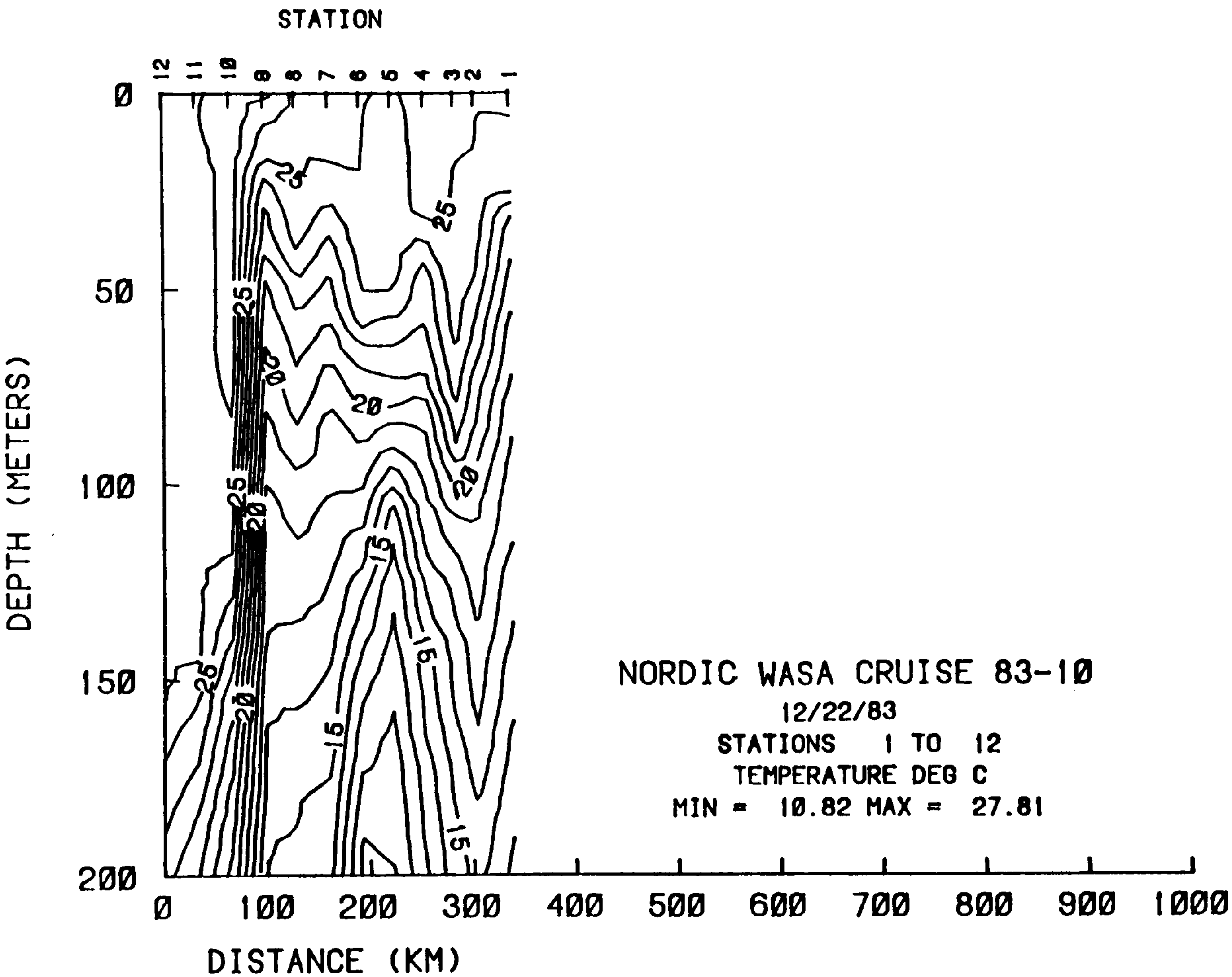


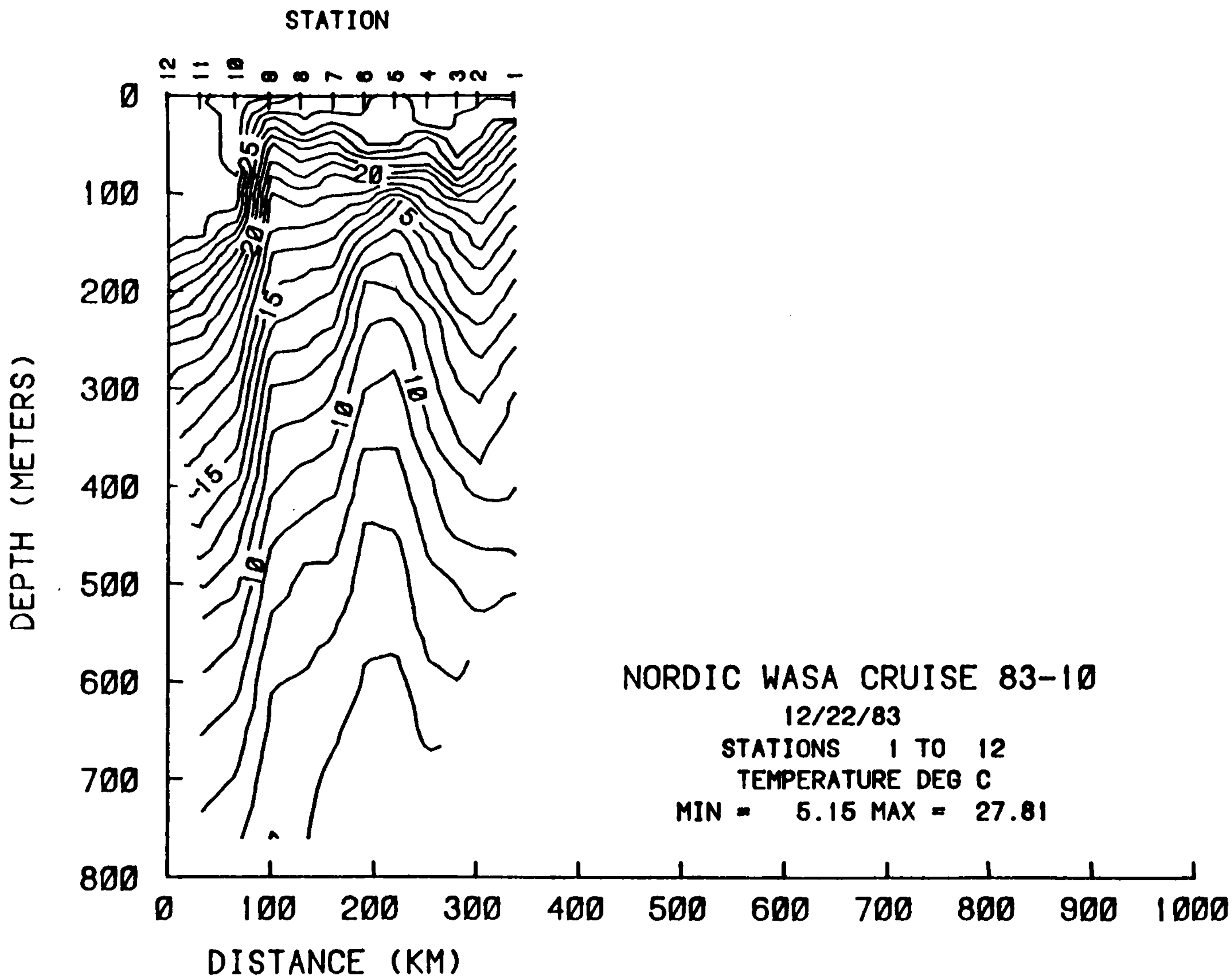
NORDIC WASA CRUISE 83-09
12/13/83 TO 12/14/83
STATIONS 1 TO 30
TEMPERATURE DEG C
MIN = 5.20 MAX = 26.93

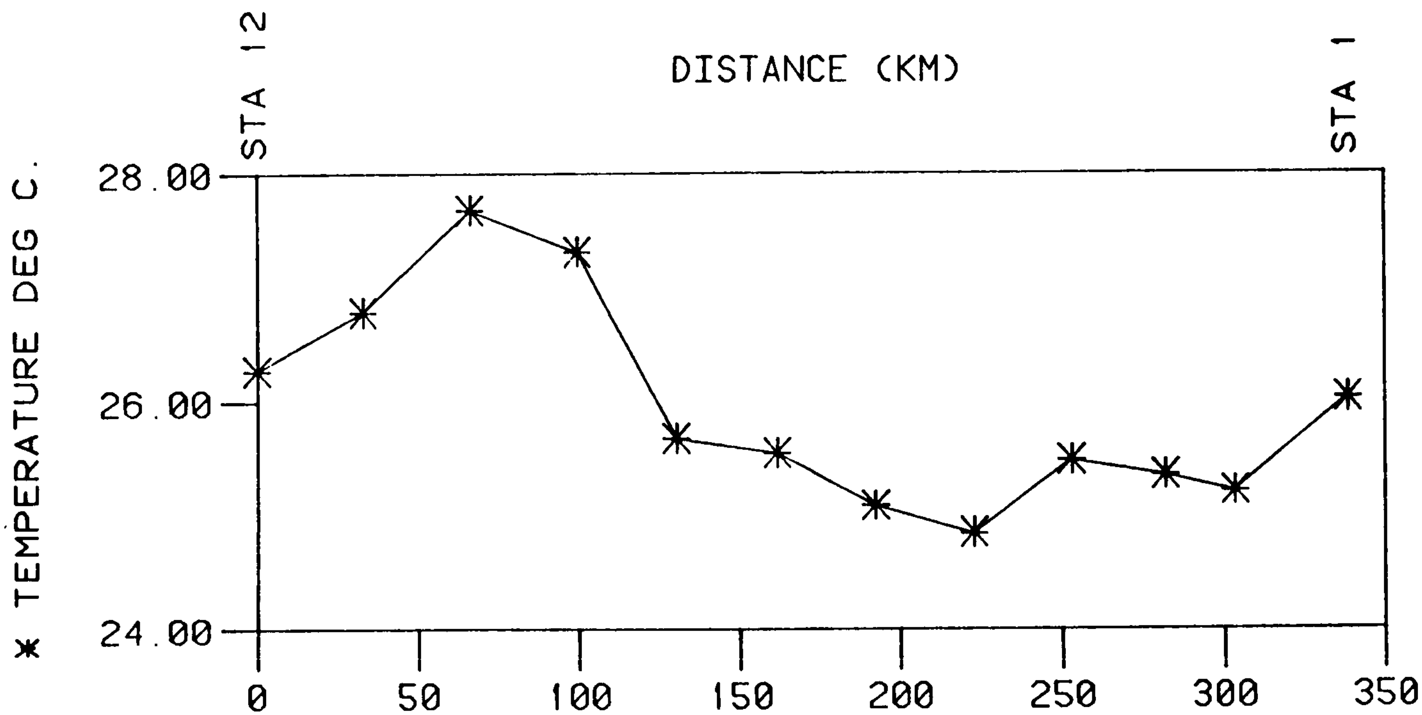


PARAMETERS AT SURFACE NORDIC WASA CRUISE 83-09

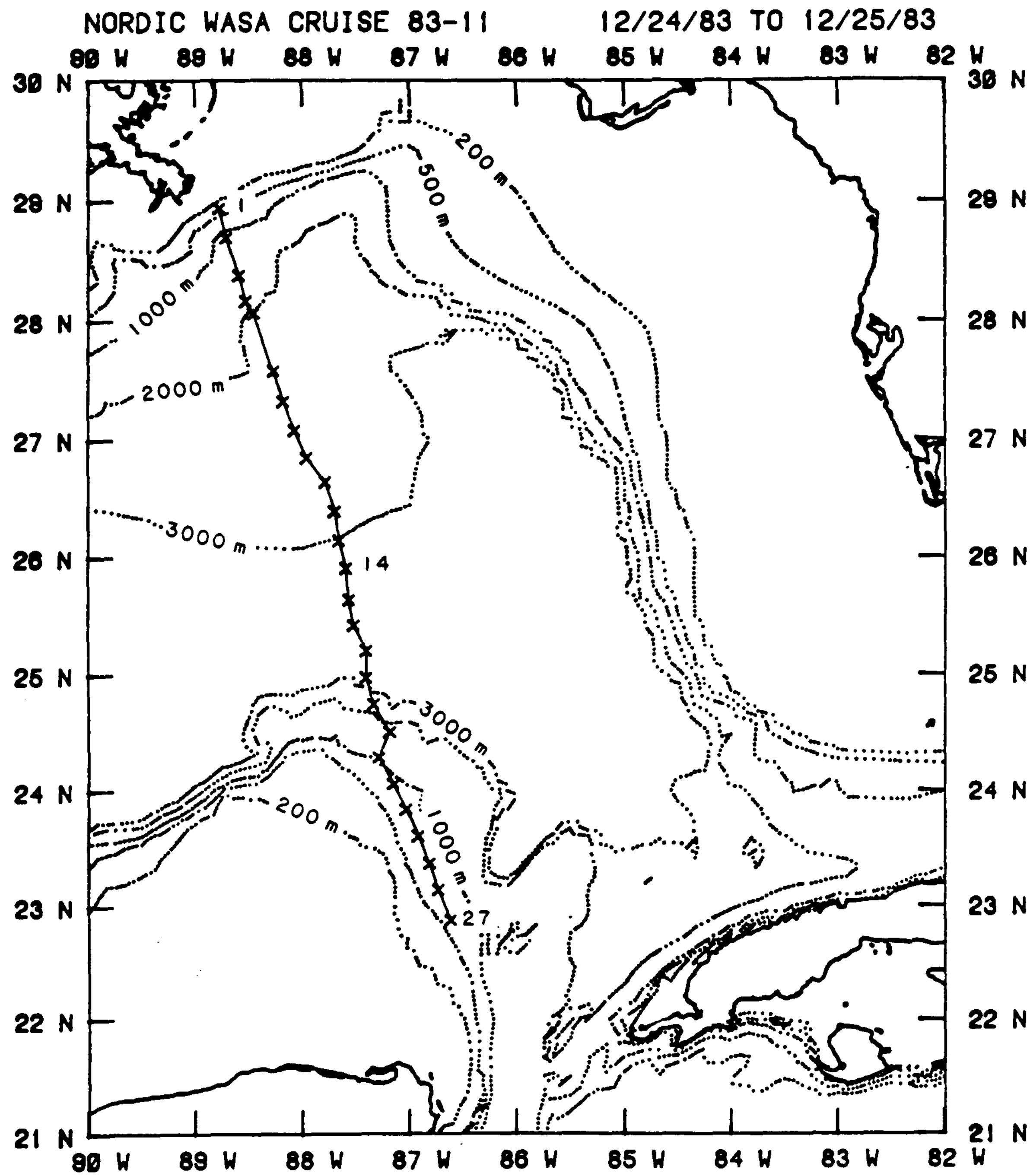

NORDIC WASA CRUISE 83-10 12/22/83
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
12
3000 m
1000 m
6
200 m
1

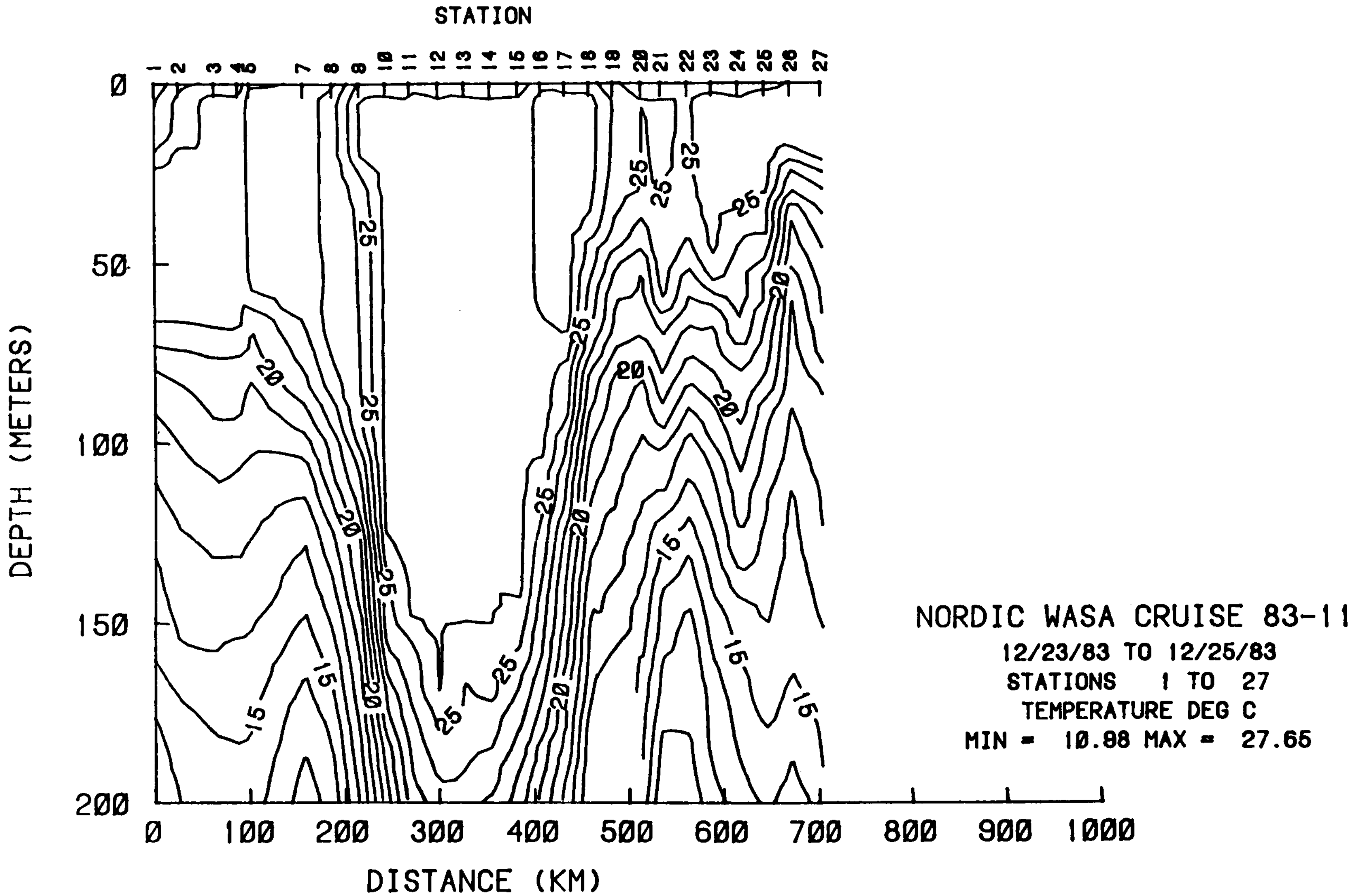

STATION
12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
NORDIC WASA CRUISE 83-10
12/22/83
STATIONS 1 TO 12
TEMPERATURE DEG C
MIN = 10.82 MAX = 27.81

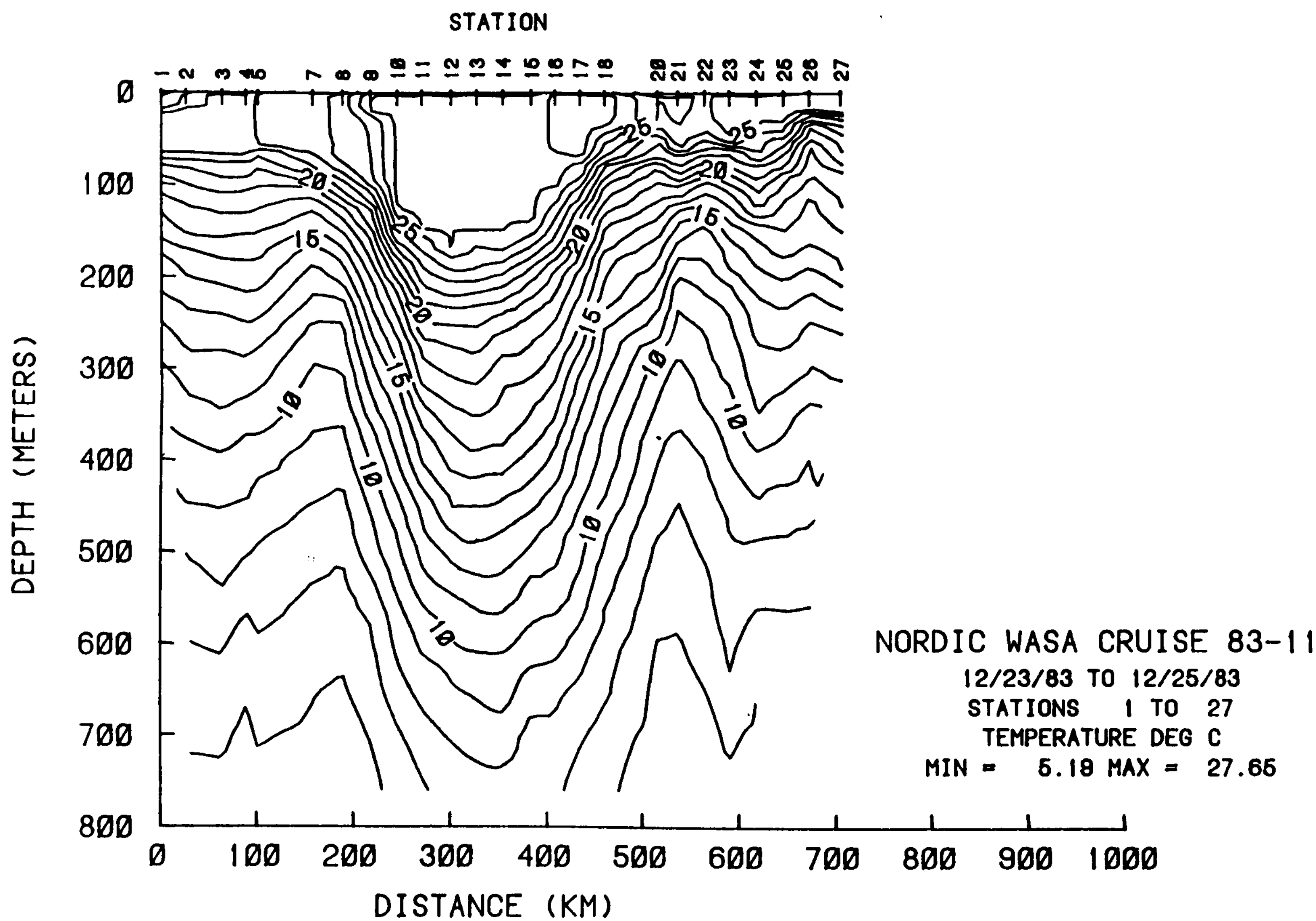

STATION
12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
20
15
15
15
10
10
10
10
NORDIC WASA CRUISE 83-10
12/22/83
STATIONS 1 TO 12
TEMPERATURE DEG C
MIN = 5.15 MAX = 27.81



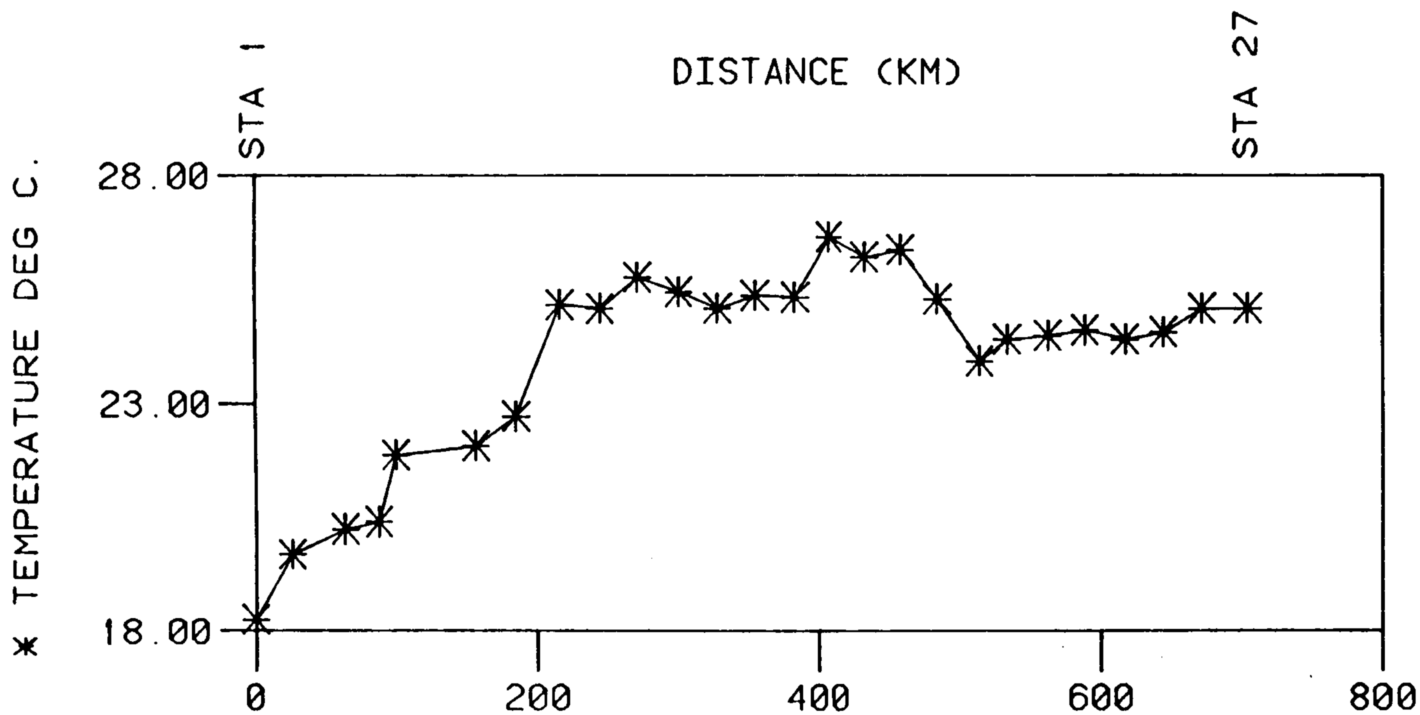
PARAMETERS AT SURFACE NORDIC WASA CRUISE 83-10


NORDIC WASA CRUISE 83-11 12/24/83 TO 12/25/83
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
200 m
1000 m
1
14
27

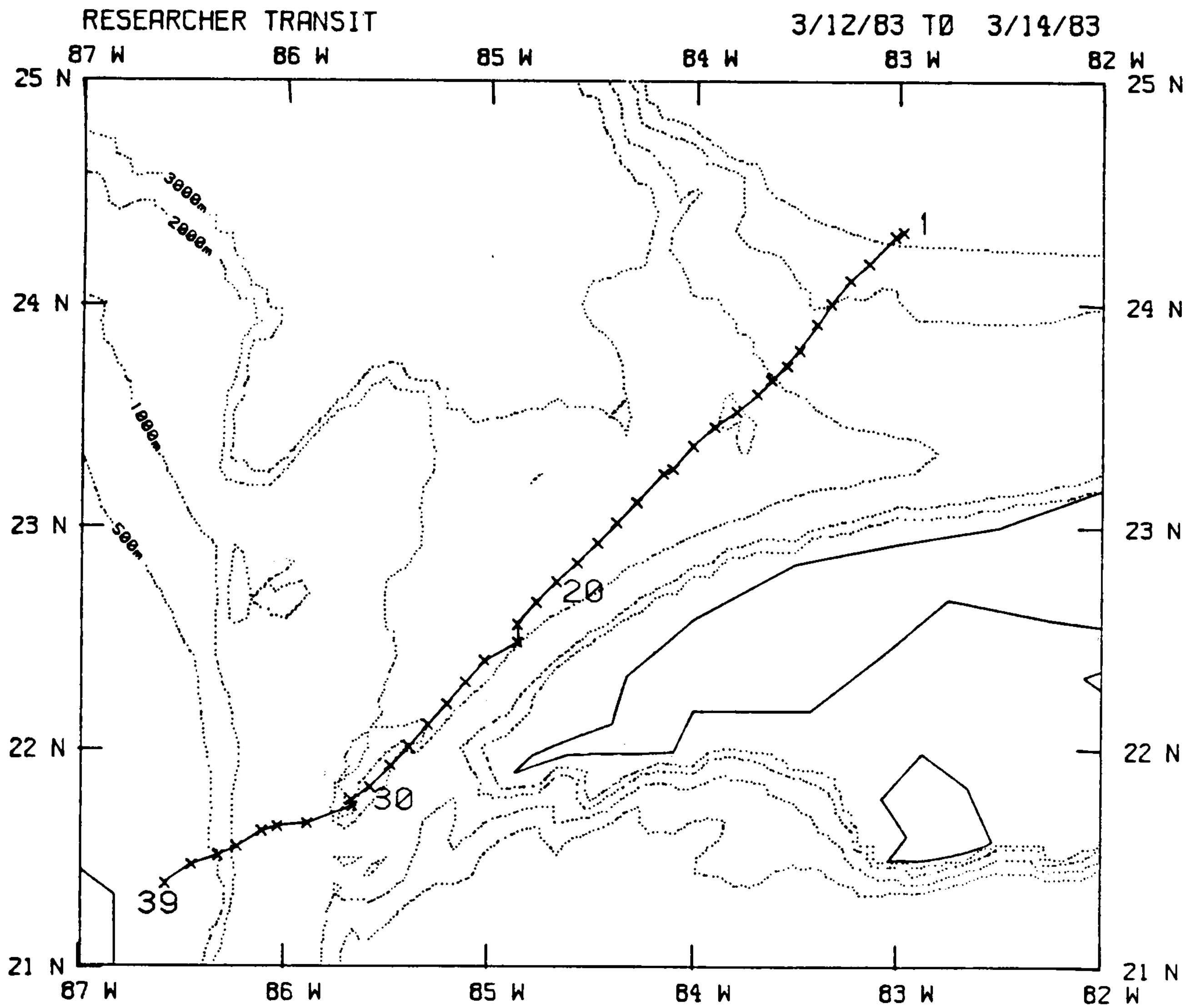

STATION
1 2 3 4 5 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
NORDIC WASA CRUISE 83-11
12/23/83 TO 12/25/83
STATIONS 1 TO 27
TEMPERATURE DEG C
MIN = 10.88 MAX = 27.65



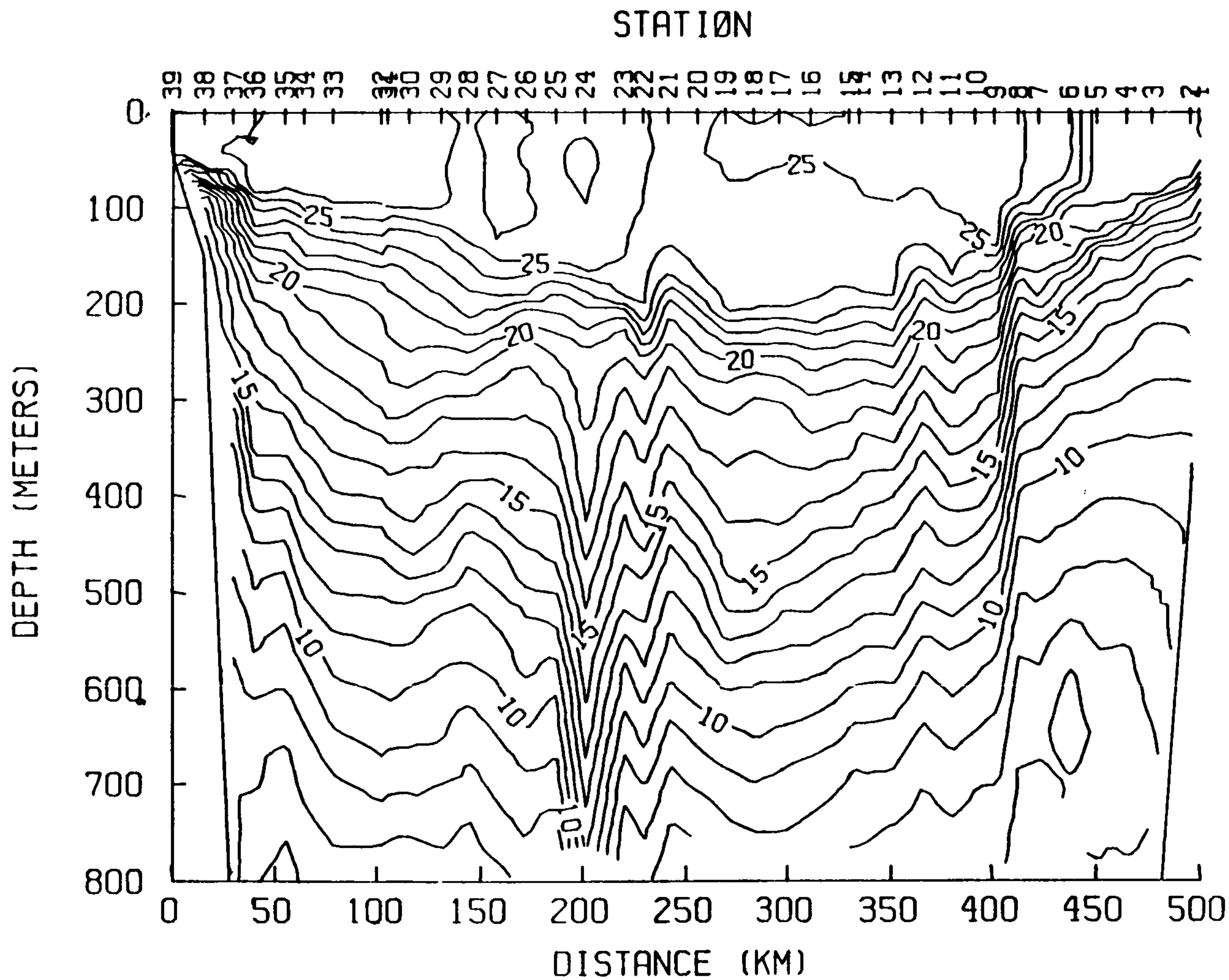
STATION
DEPTH (METERS)
DISTANCE (KM)
NORDIC WASA CRUISE 83-11
12/23/83 TO 12/25/83
STATIONS 1 TO 27
TEMPERATURE DEG C
MIN = 5.19 MAX = 27.65



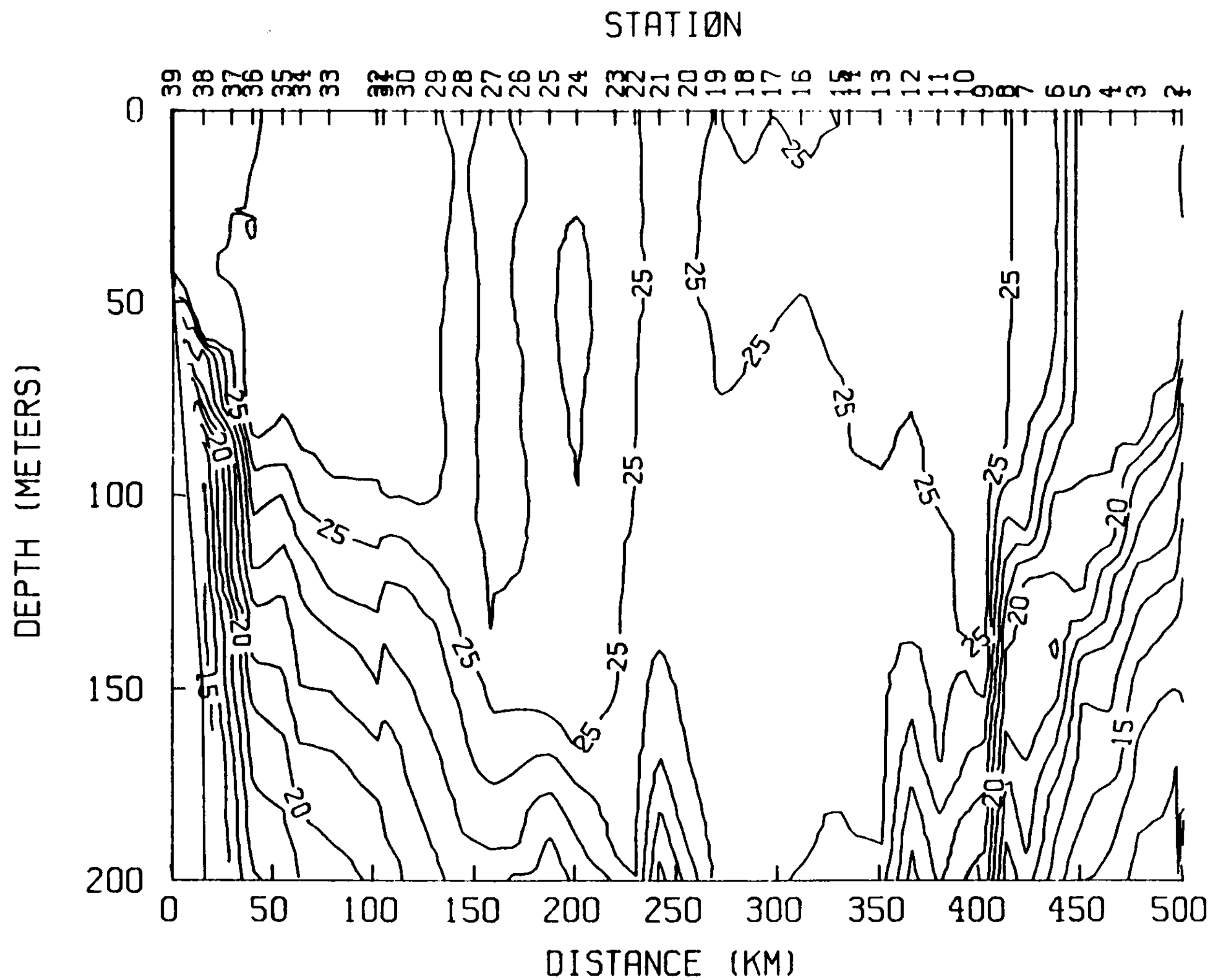
PARAMETERS AT SURFACE NORDIC WASA CRUISE 83-11

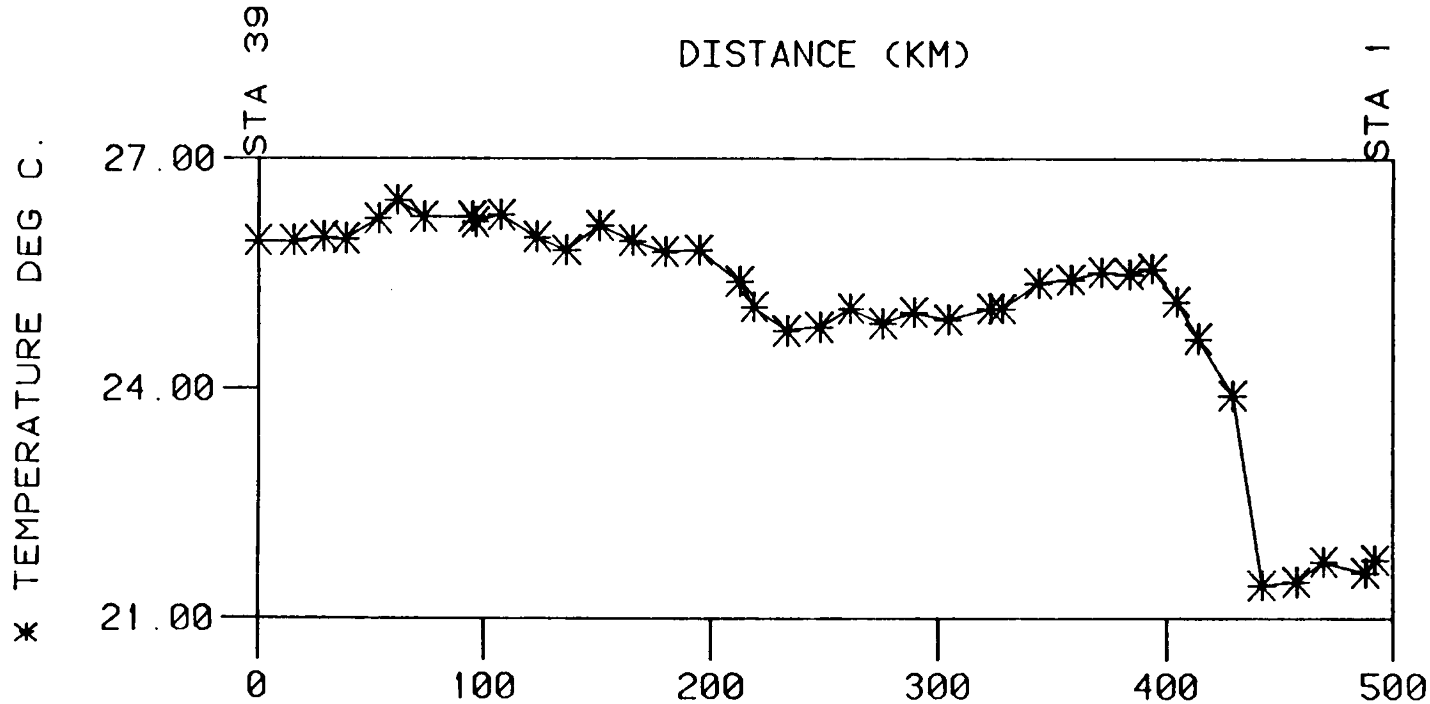

RESEARCHER TRANSIT
3/12/83 TØ 3/14/83
87 W
86 W
85 W
84 W
83 W
82 W
25 N
24 N
23 N
22 N
21 N
3000m
2000m
1000m
500m
1
20
30
39

MIN - 5.24 MHX = 26.85

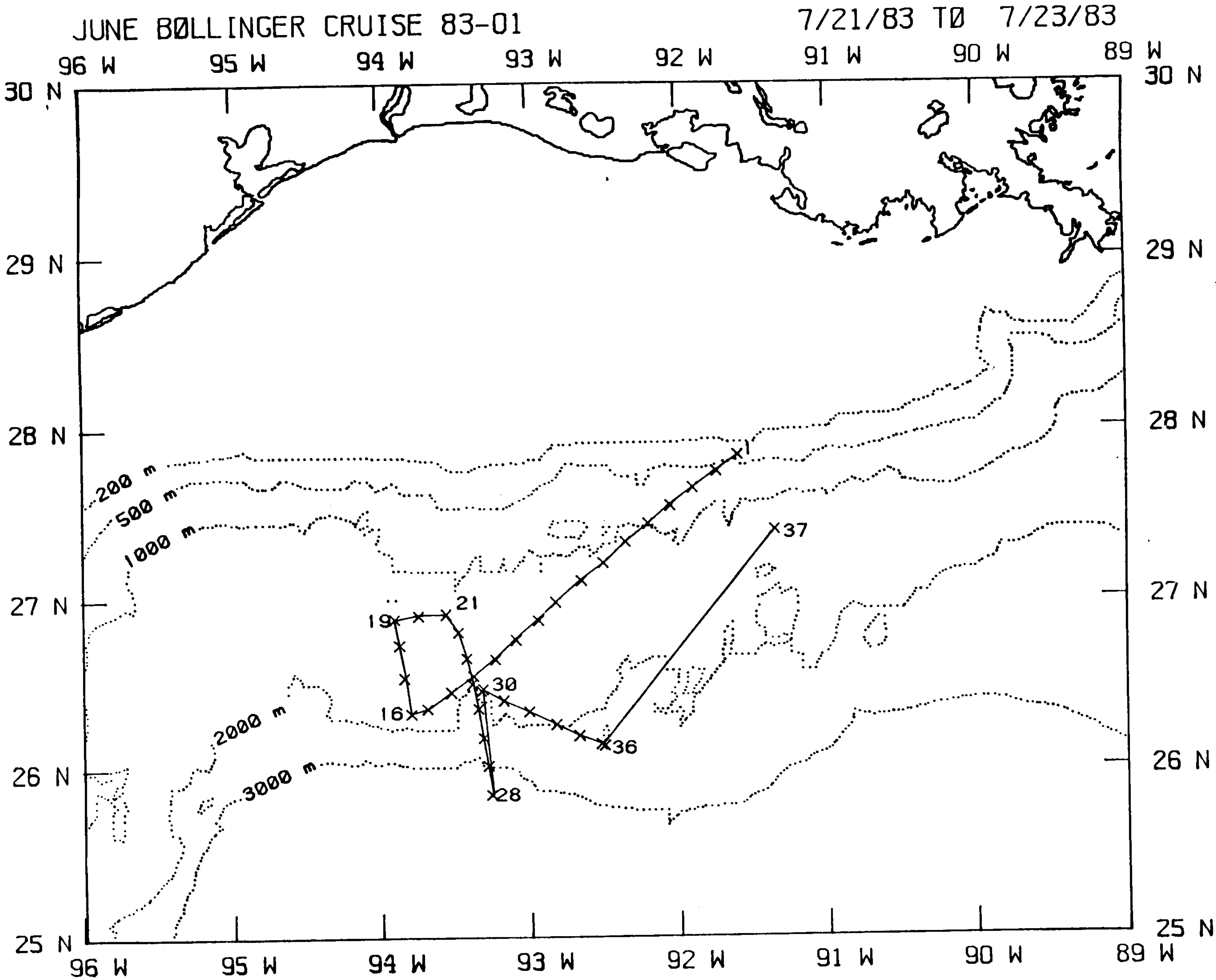


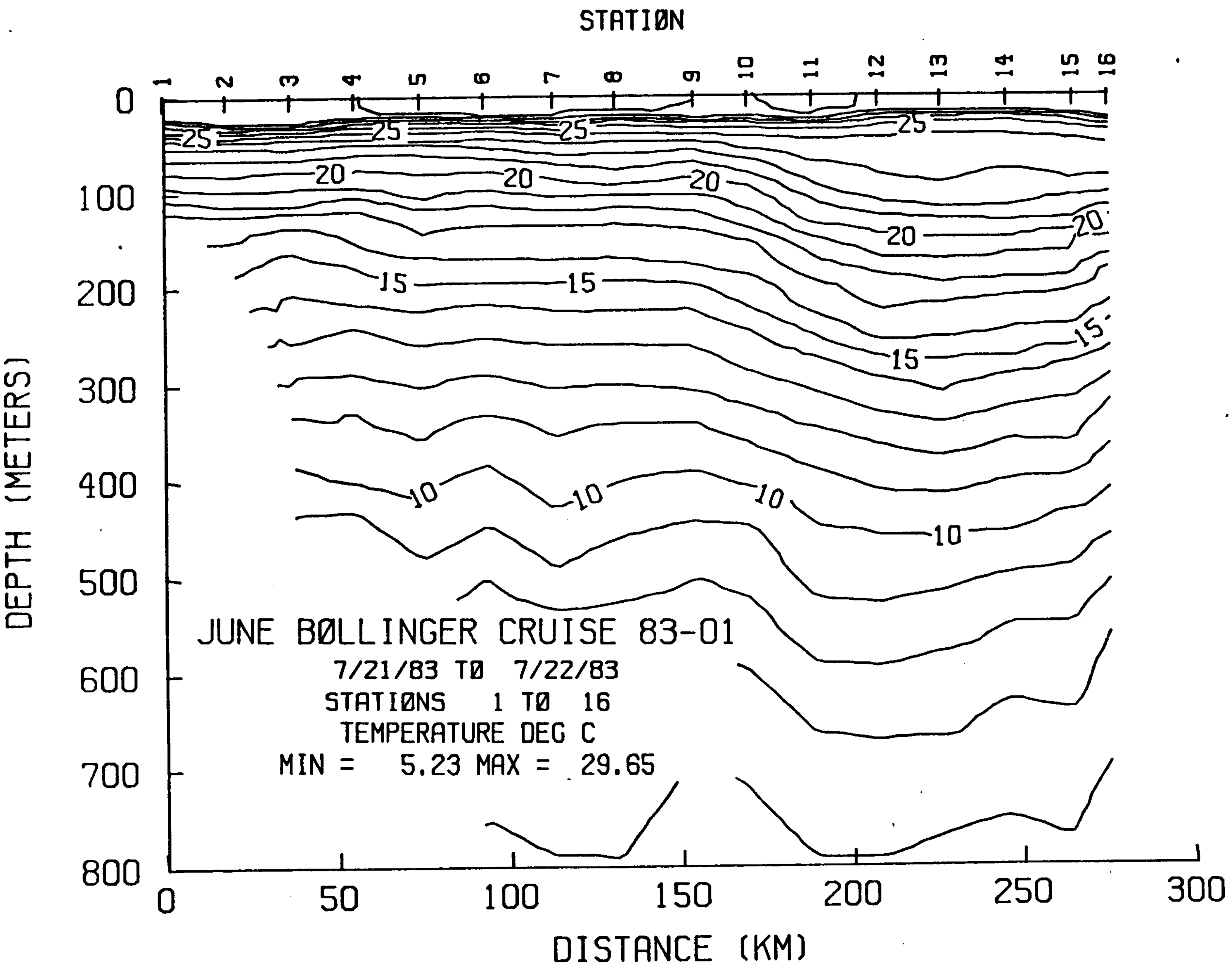
RESEARCHER TRANSIT
3/12/83 TØ 3/14/83
STATIØNS 1 TØ 39
TEMPERATURE DEG C
MIN = 12.93 MAX = 26.85

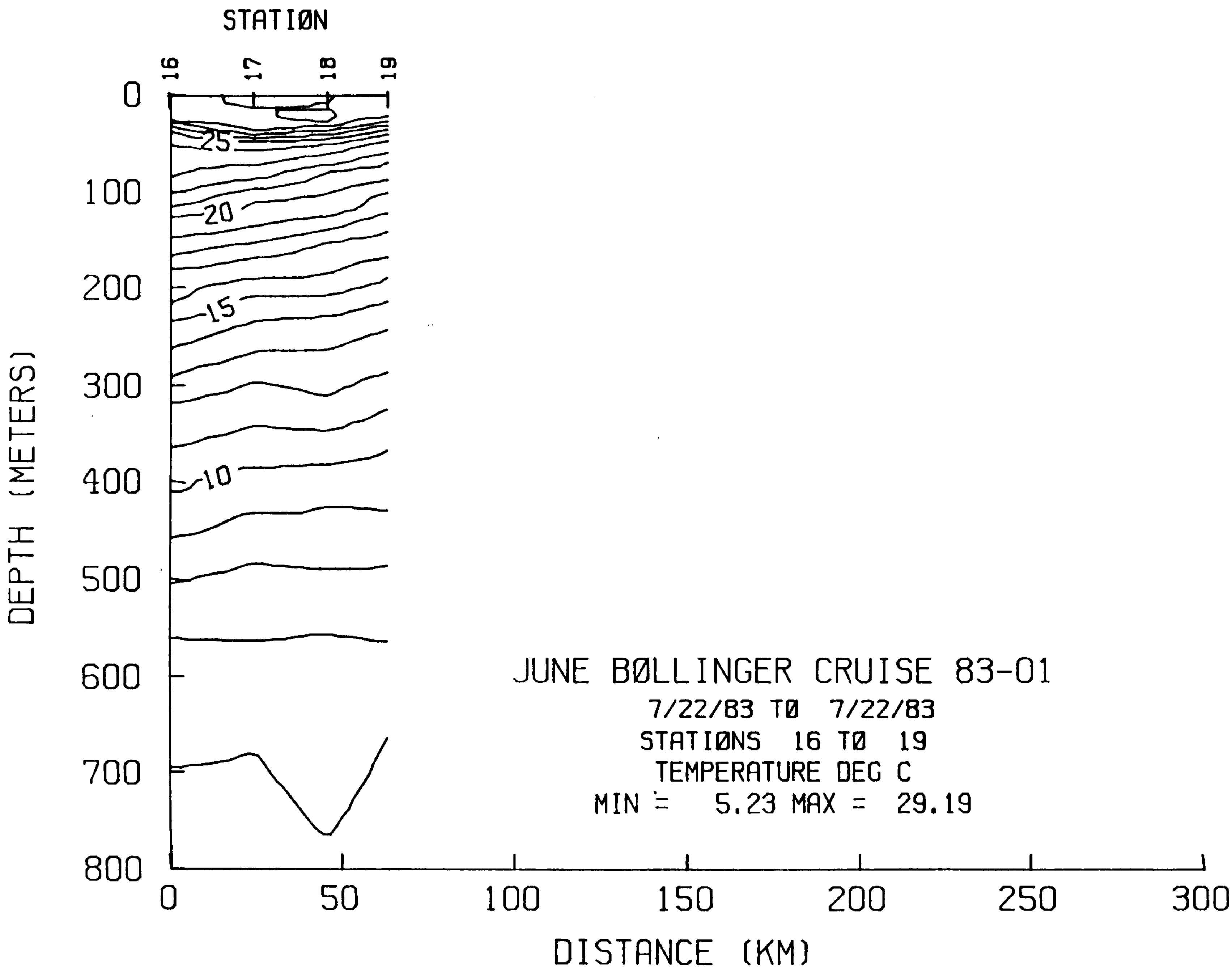




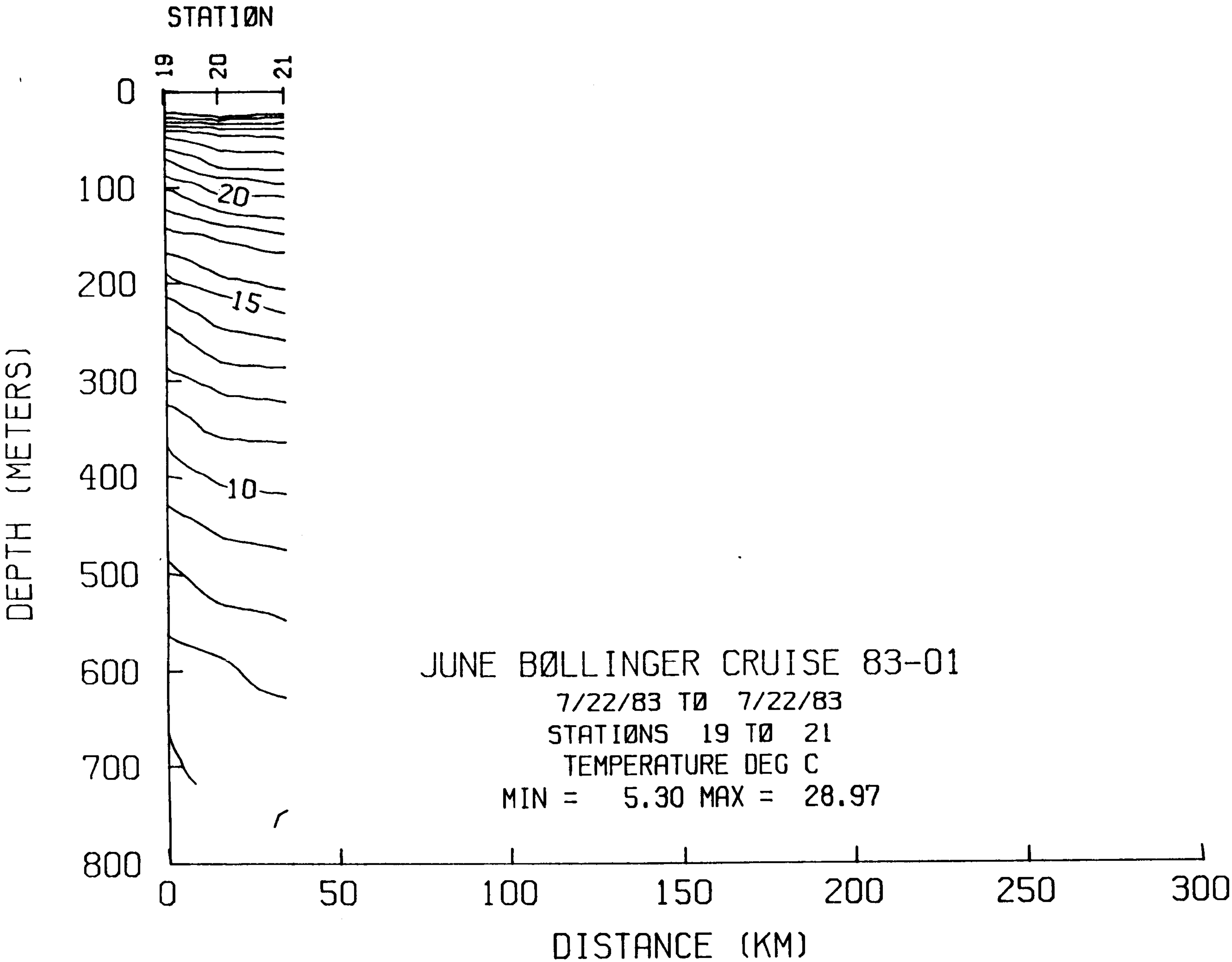
PARAMETERS AT SURFACE RESEARCHER TRANSIT

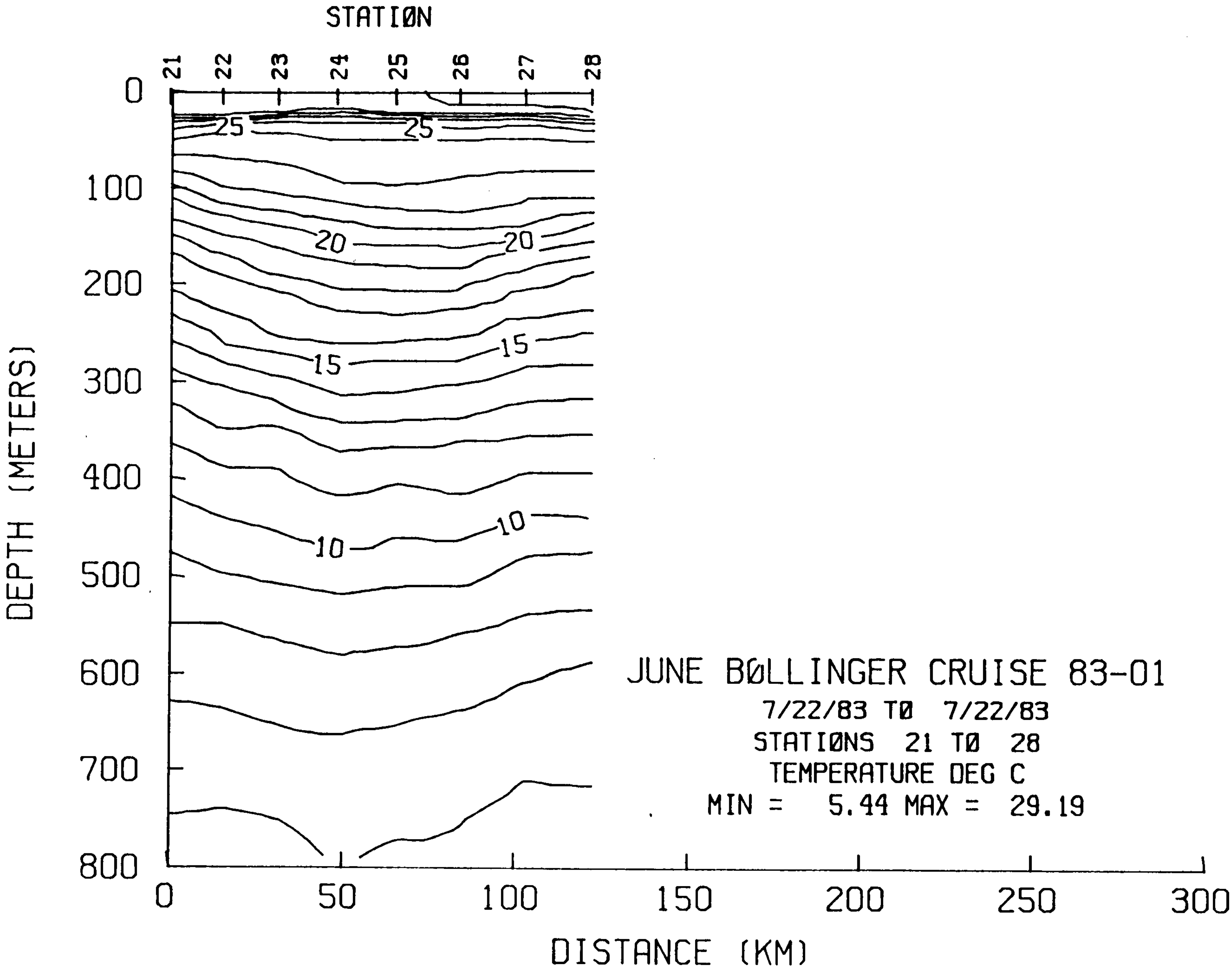

JUNE BØLLINGER CRUISE 83-01
7/21/83 TØ 7/23/83
96 W
95 W
94 W
93 W
92 W
91 W
90 W
89 W
30 N
29 N
28 N
27 N
26 N
25 N
200 m
500 m
1000 m
2000 m
3000 m
1
16
19
21
28
30
36
37

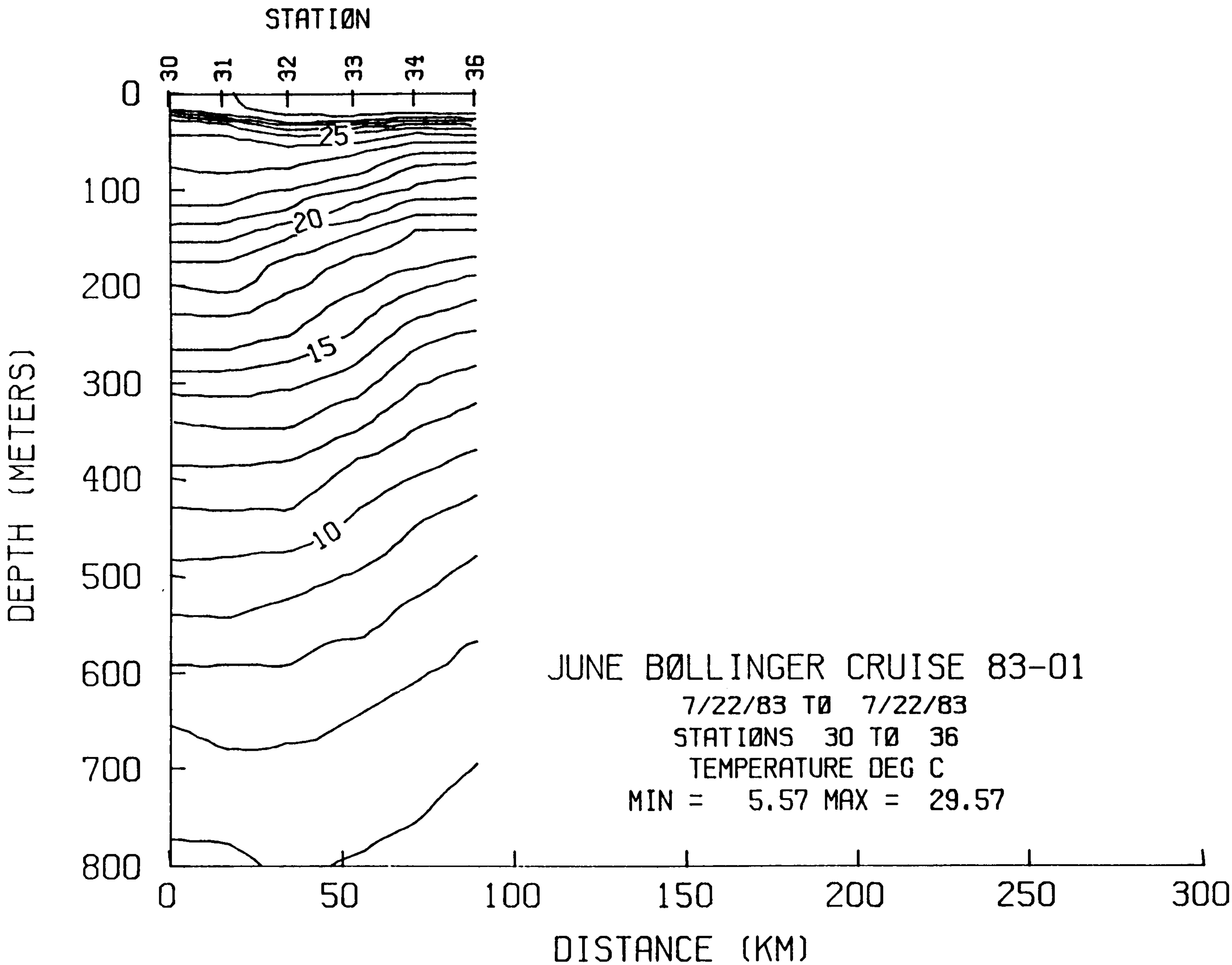

STATIØN
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
25
20
15
10
JUNE BØLLINGER CRUISE 83-01
7/21/83 TØ 7/22/83
STATIØNS 1 TØ 16
TEMPERATURE DEG C
MIN = 5.23 MAX = 29.65
0 50 100 150 200 250 300
DISTANCE (KM)

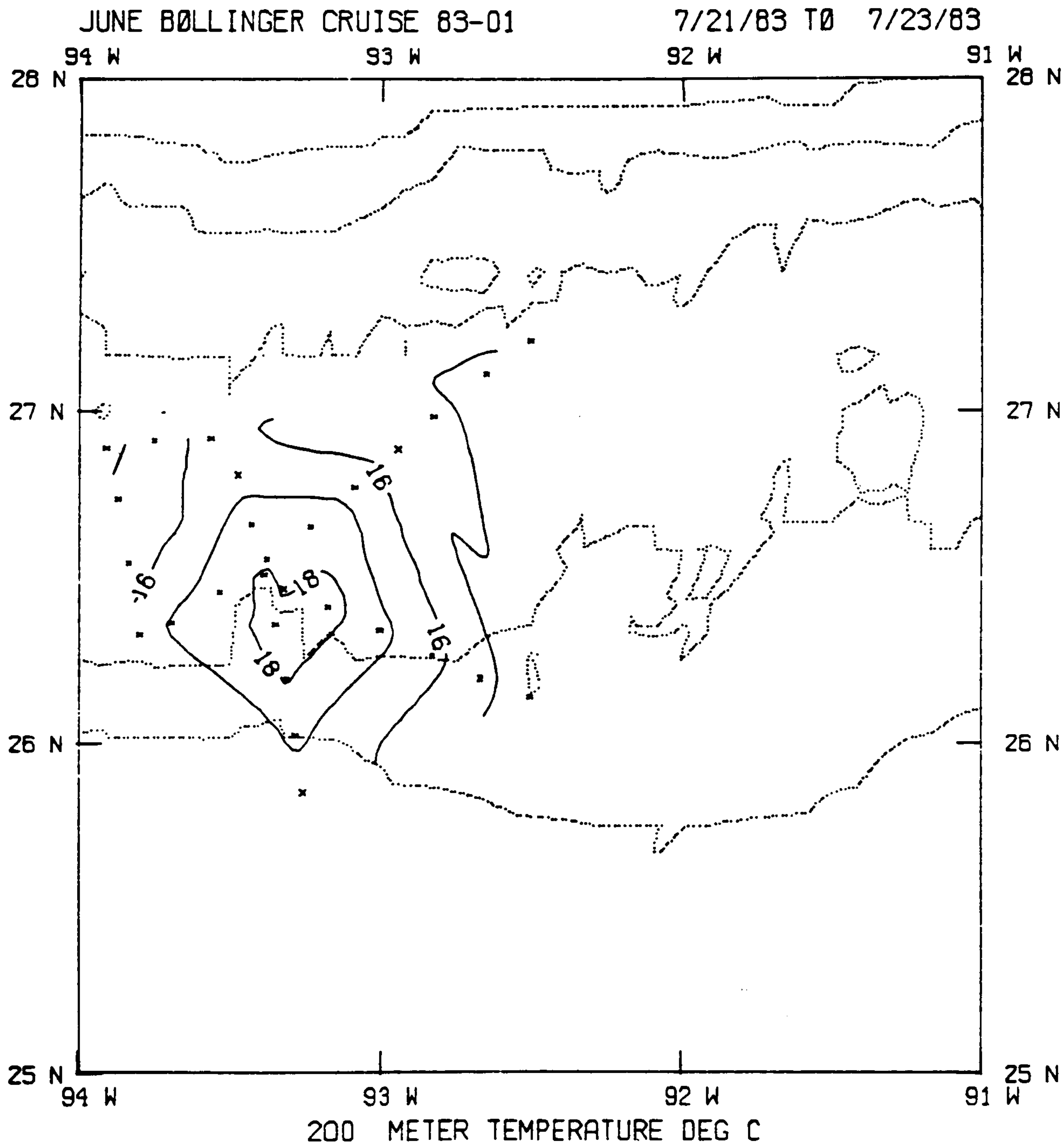


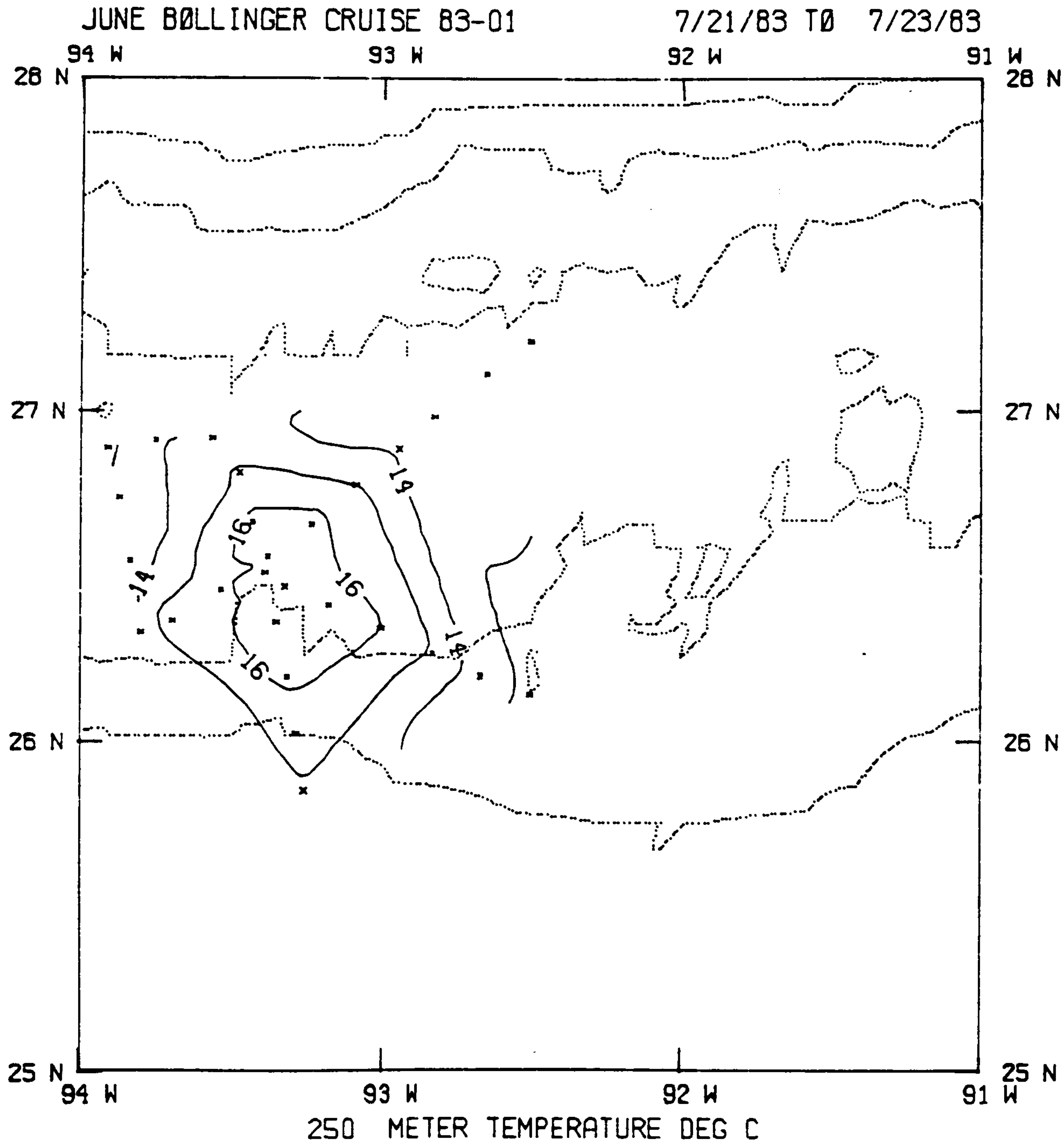
STATIØN
16
17
18
19
25
20
15
10
0
100
200
300
400
500
600
700
800
DEPTH (METERS)
0
50
100
150
200
250
300
DISTANCE (KM)
JUNE BØLLINGER CRUISE 83-01
7/22/83 TØ 7/22/83
STATIØNS 16 TØ 19
TEMPERATURE DEG C
MIN = 5.23 MAX = 29.19

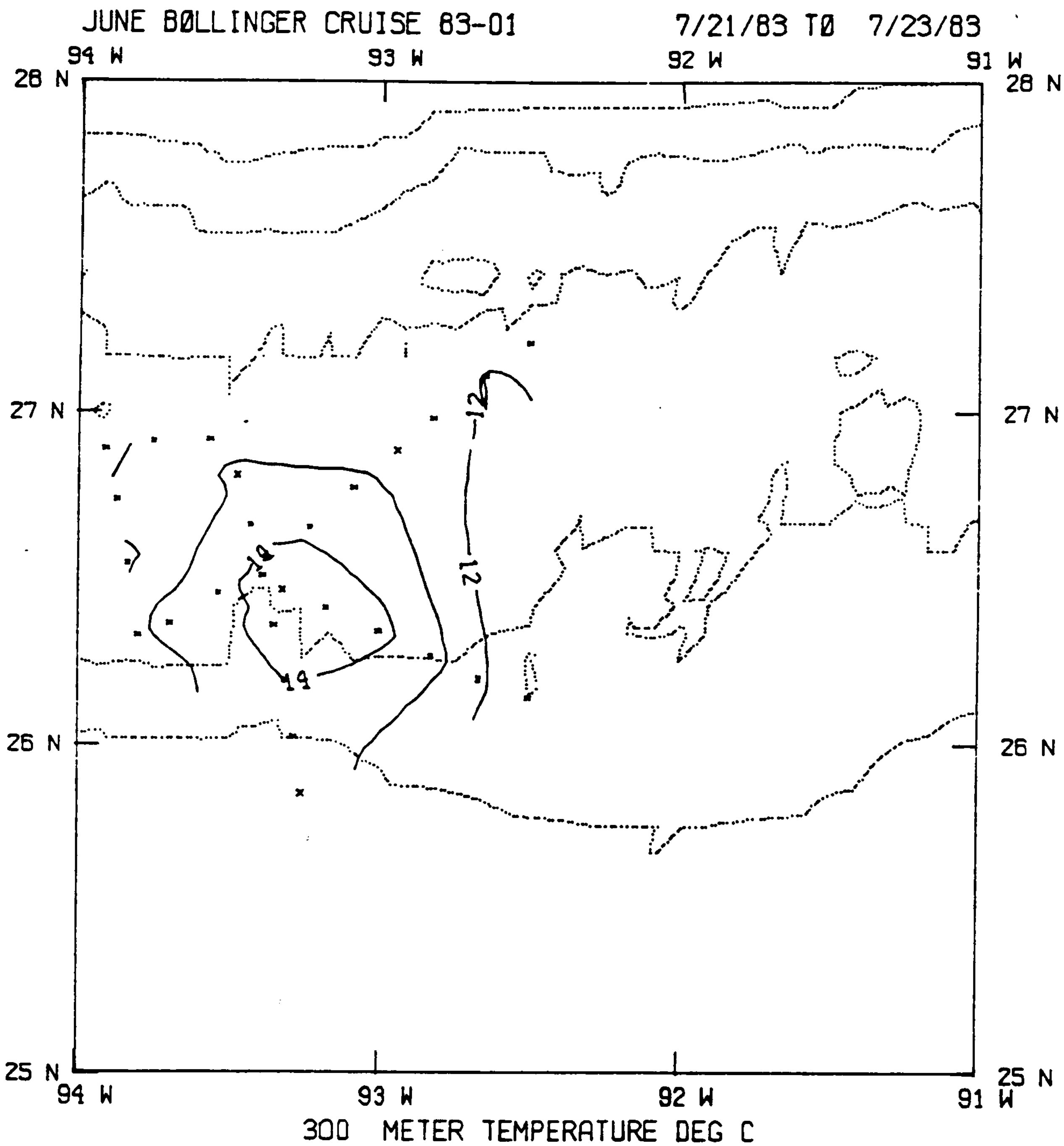

STATIØN
19
20
21
0
100
200
300
400
500
600
700
800
DEPTH (METERS)
20
15
10
JUNE BØLLINGER CRUISE 83-01
7/22/83 TØ 7/22/83
STATIØNS 19 TØ 21
TEMPERATURE DEG C
MIN = 5.30 MAX = 28.97
0
50
100
150
200
250
300
DISTANCE (KM)


STATIØN
21 22 23 24 25 26 27 28
25
20
15
10
DEPTH (METERS)
0 100 200 300 400 500 600 700 800
0 50 100 150 200 250 300
DISTANCE (KM)
JUNE BØLLINGER CRUISE 83-01
7/22/83 TØ 7/22/83
STATIØNS 21 TØ 28
TEMPERATURE DEG C
MIN = 5.44 MAX = 29.19

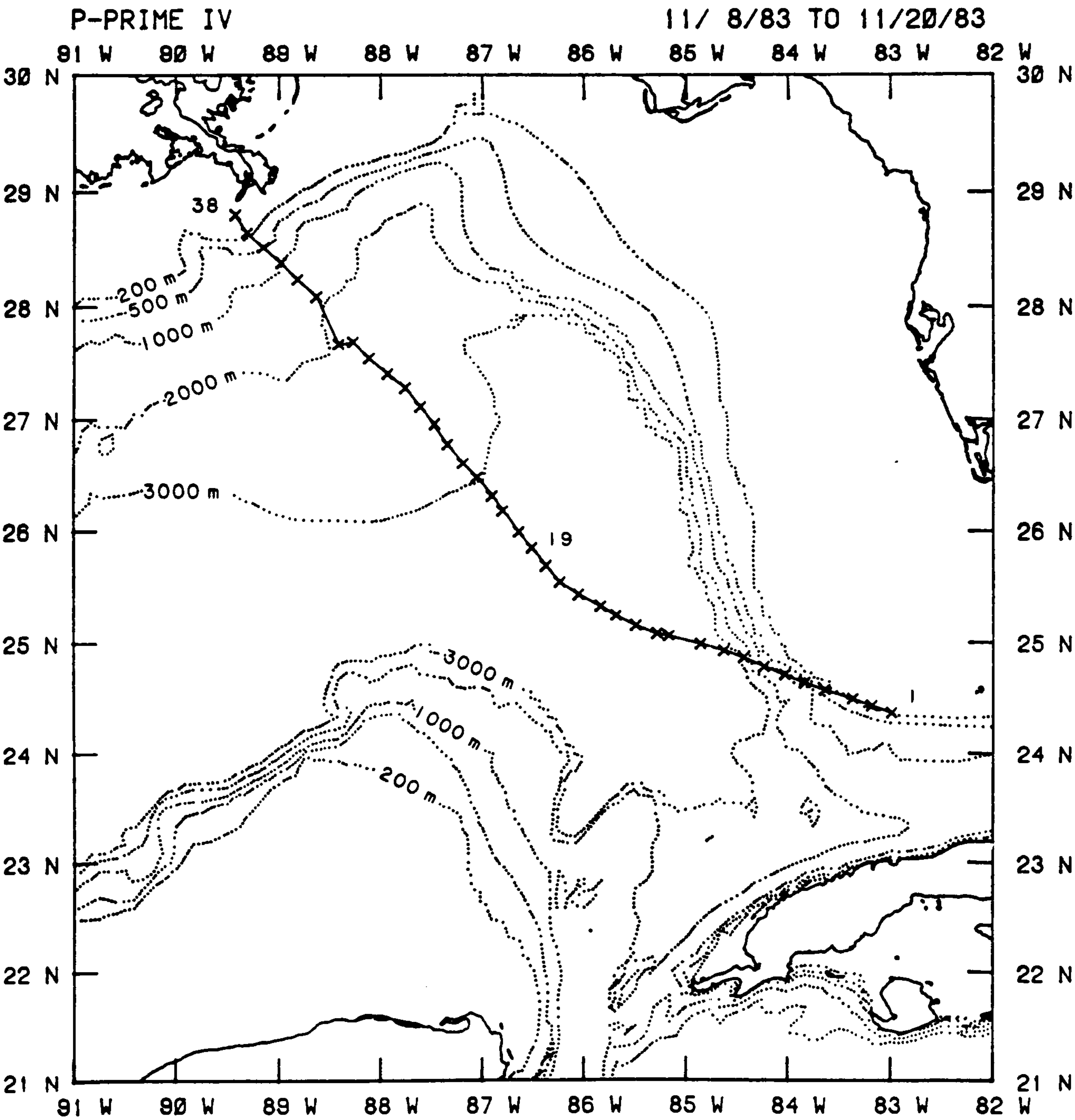

STATIØN
30 31 32 33 34 36
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
25
20
15
10
JUNE BØLLINGER CRUISE 83-01
7/22/83 TØ 7/22/83
STATIØNS 30 TØ 36
TEMPERATURE DEG C
MIN = 5.57 MAX = 29.57
0
50
100
150
200
250
300
DISTANCE (KM)


JUNE BØLLINGER CRUISE 83-01
7/21/83 TØ 7/23/83
94 W
93 W
92 W
91 W
28 N
27 N
26 N
25 N
16
18
200 METER TEMPERATURE DEG C

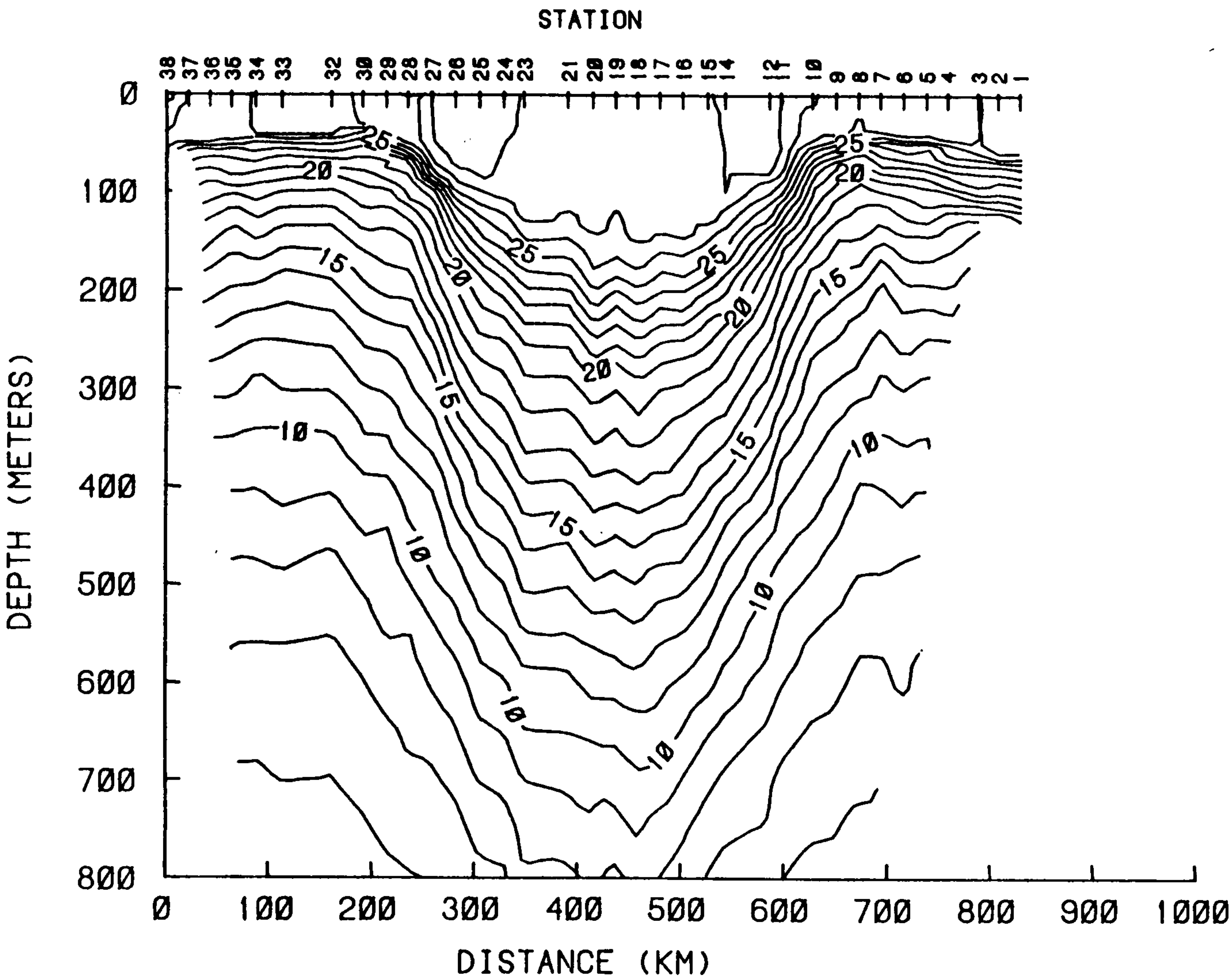

JUNE BØLLINGER CRUISE 83-01
7/21/83 TØ 7/23/83
94 W
93 W
92 W
91 W
28 N
27 N
26 N
25 N
14
16
16
16
14
14
250 METER TEMPERATURE DEG C



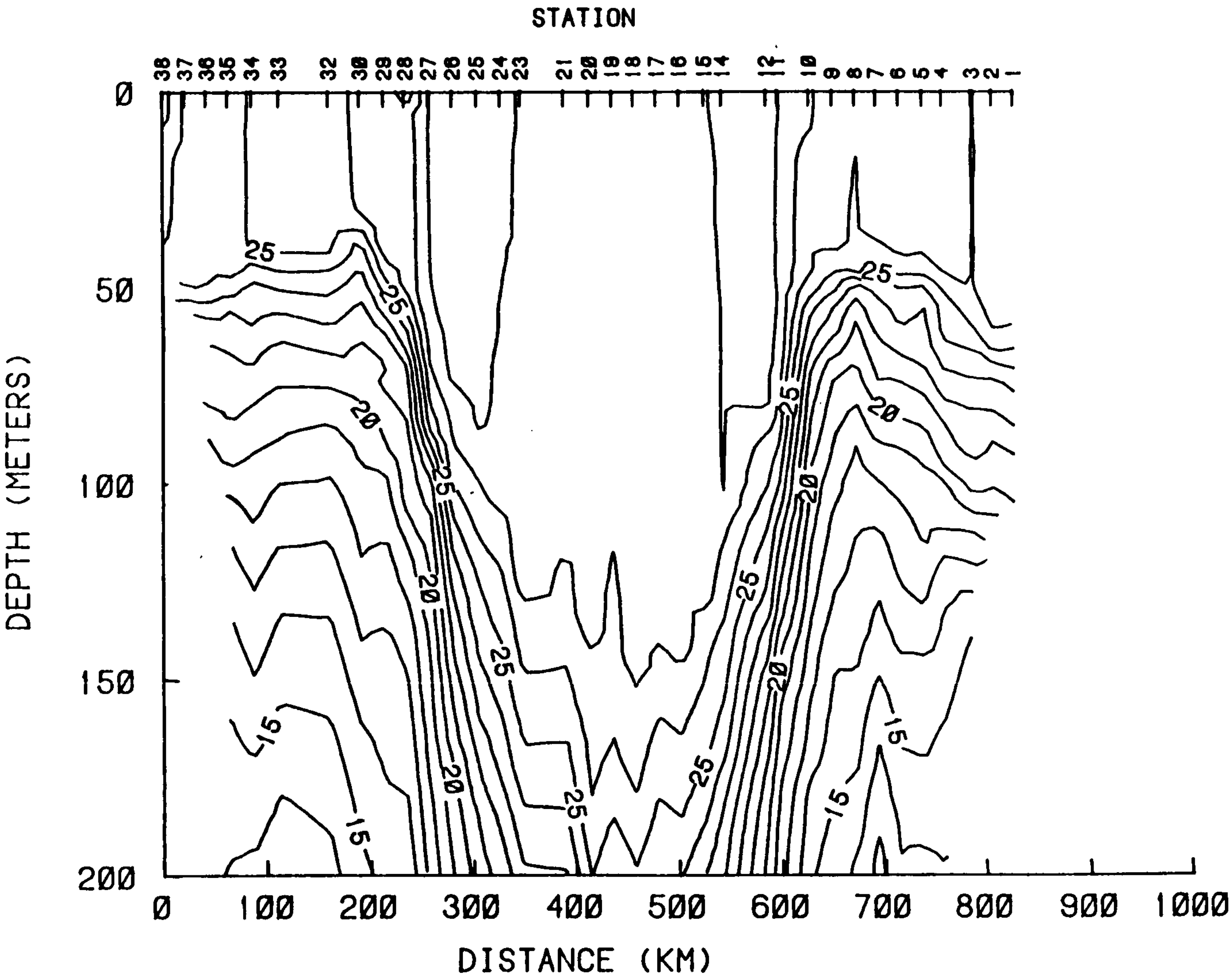
JUNE BØLLINGER CRUISE 83-01
7/21/83 TØ 7/23/83
94 W
93 W
92 W
91 W
28 N
27 N
26 N
25 N
12
12
12
10
14
300 METER TEMPERATURE DEG C



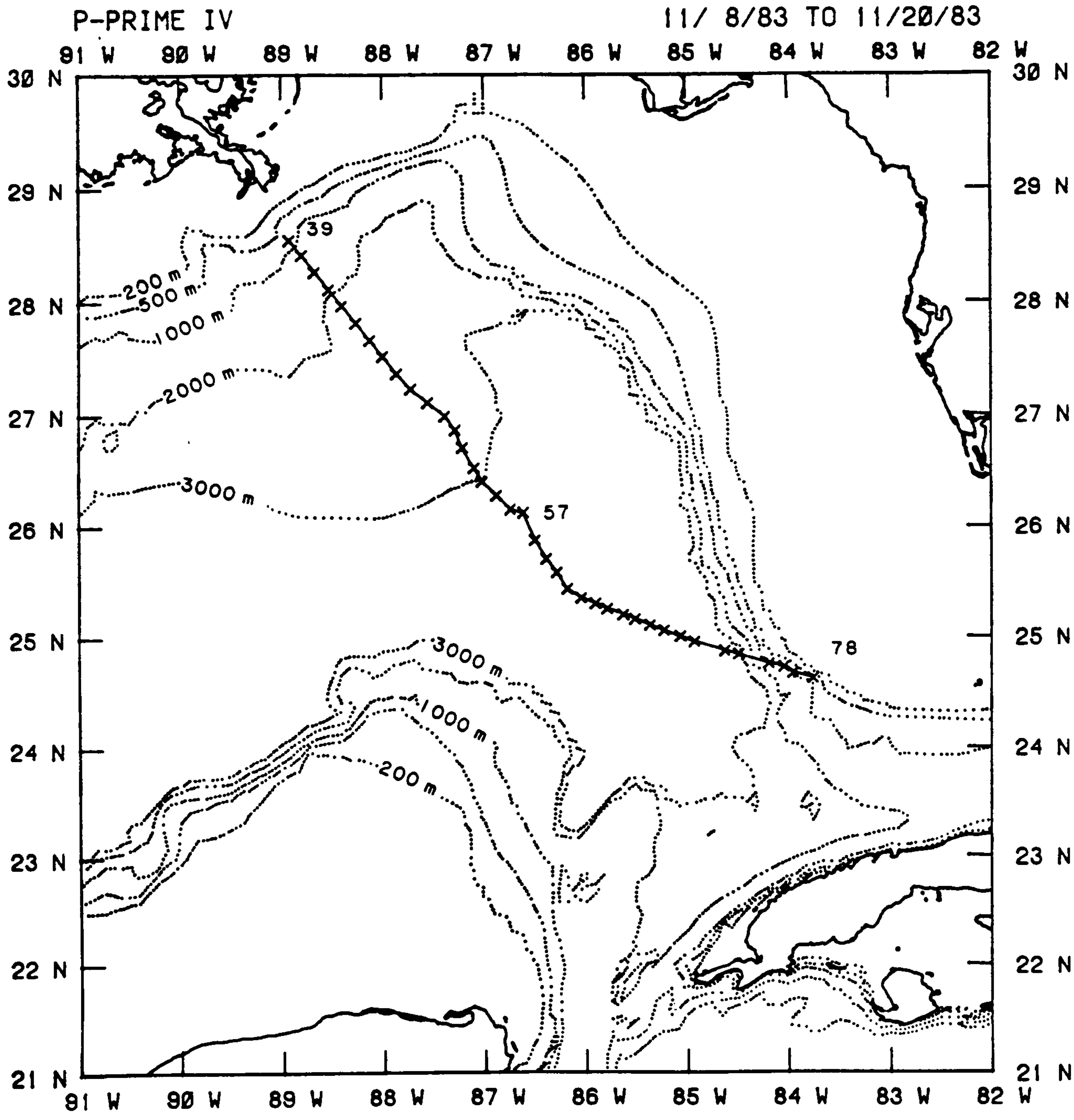
P-PRIME IV
11/ 8/83 TO 11/20/83
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
38
19
1
200 m
500 m
1000 m
2000 m
3000 m



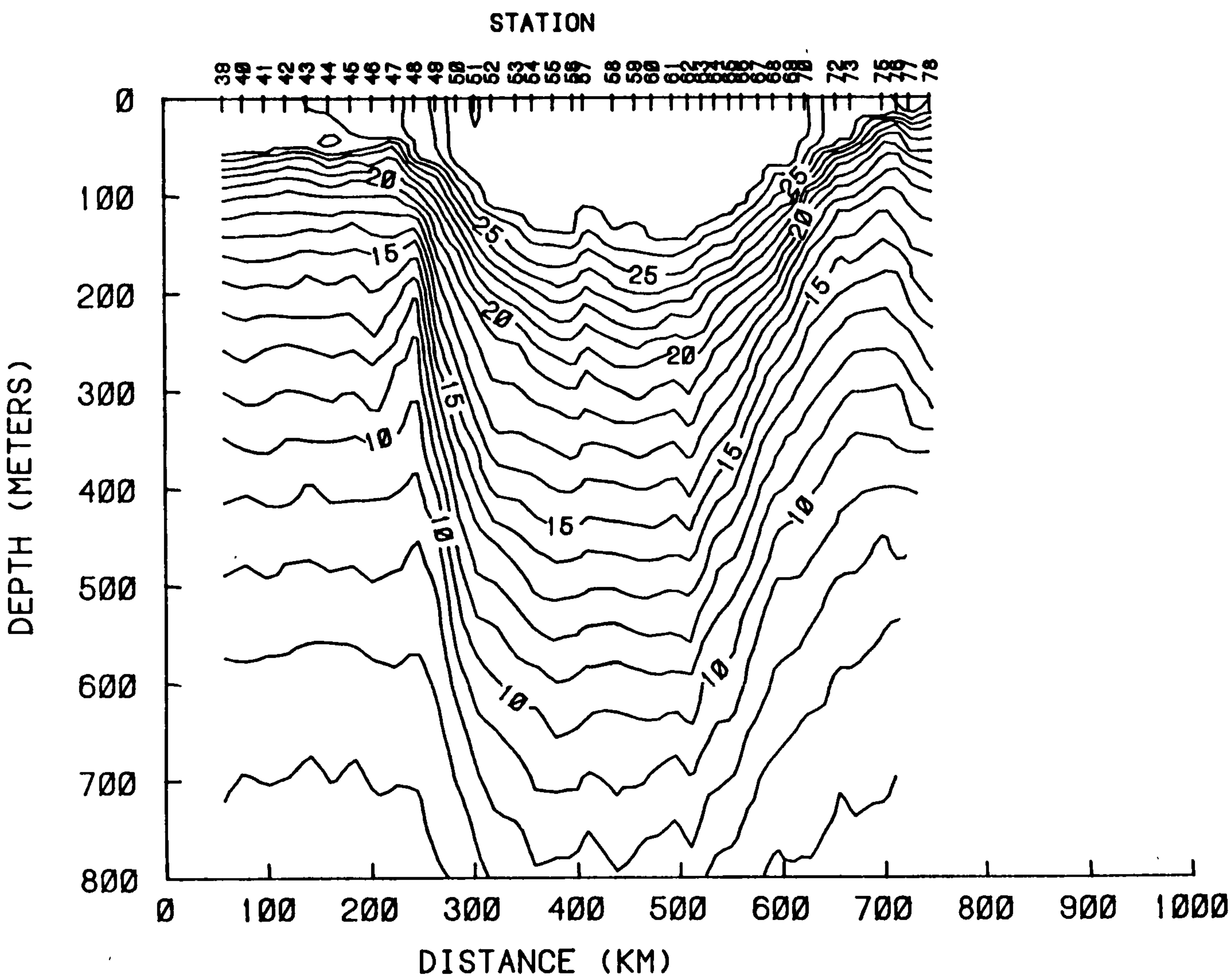
P-PRIME IV
11/ 8/83 TO 11/10/83
STATIONS 1 TO 38
TEMPERATURE DEG C
MIN = 5.39 MAX = 28.43



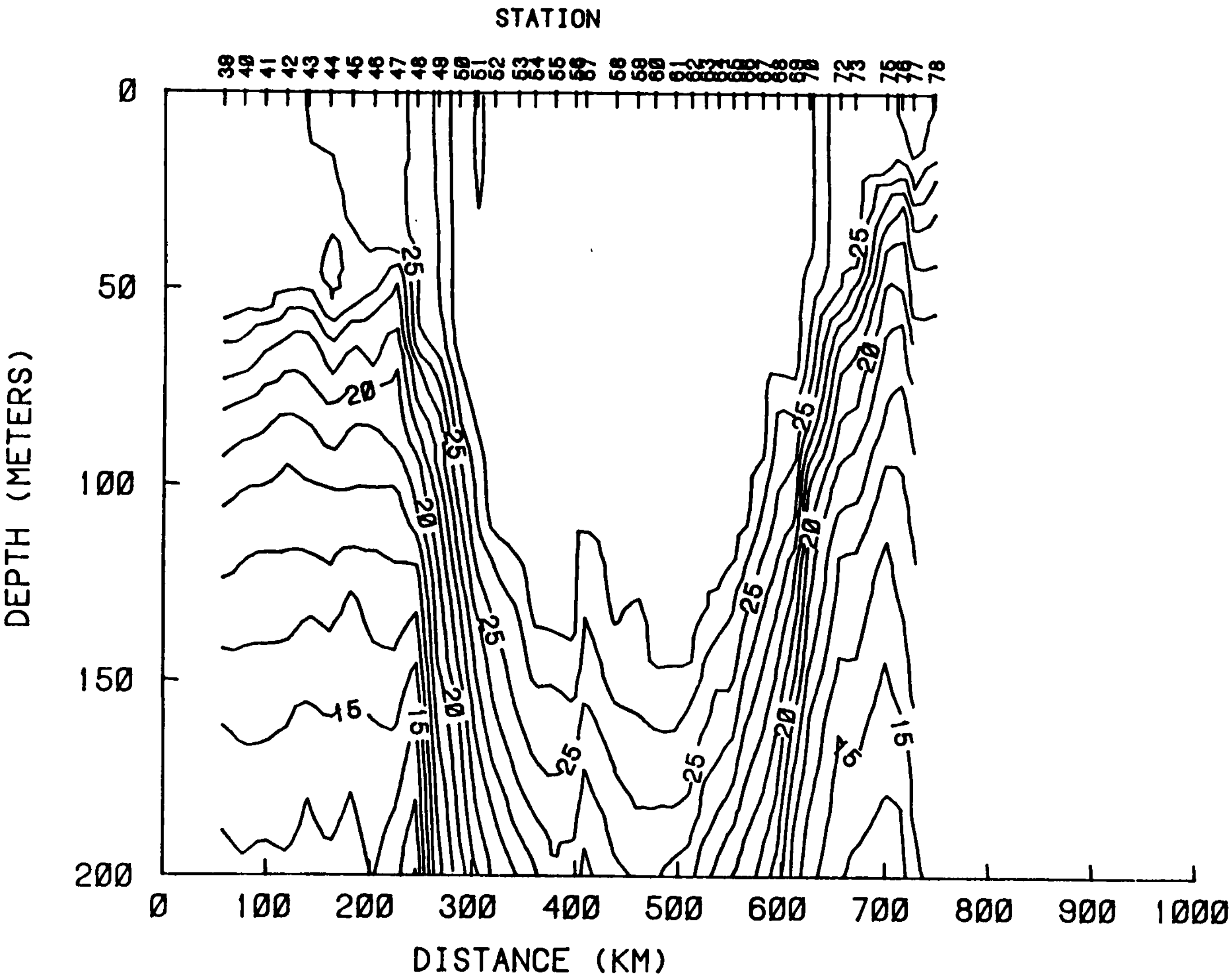
P-PRIME IV
11/ 8/83 TO 11/10/83
STATIONS 1 TO 38
TEMPERATURE DEG C
MIN = 12.71 MAX = 28.43



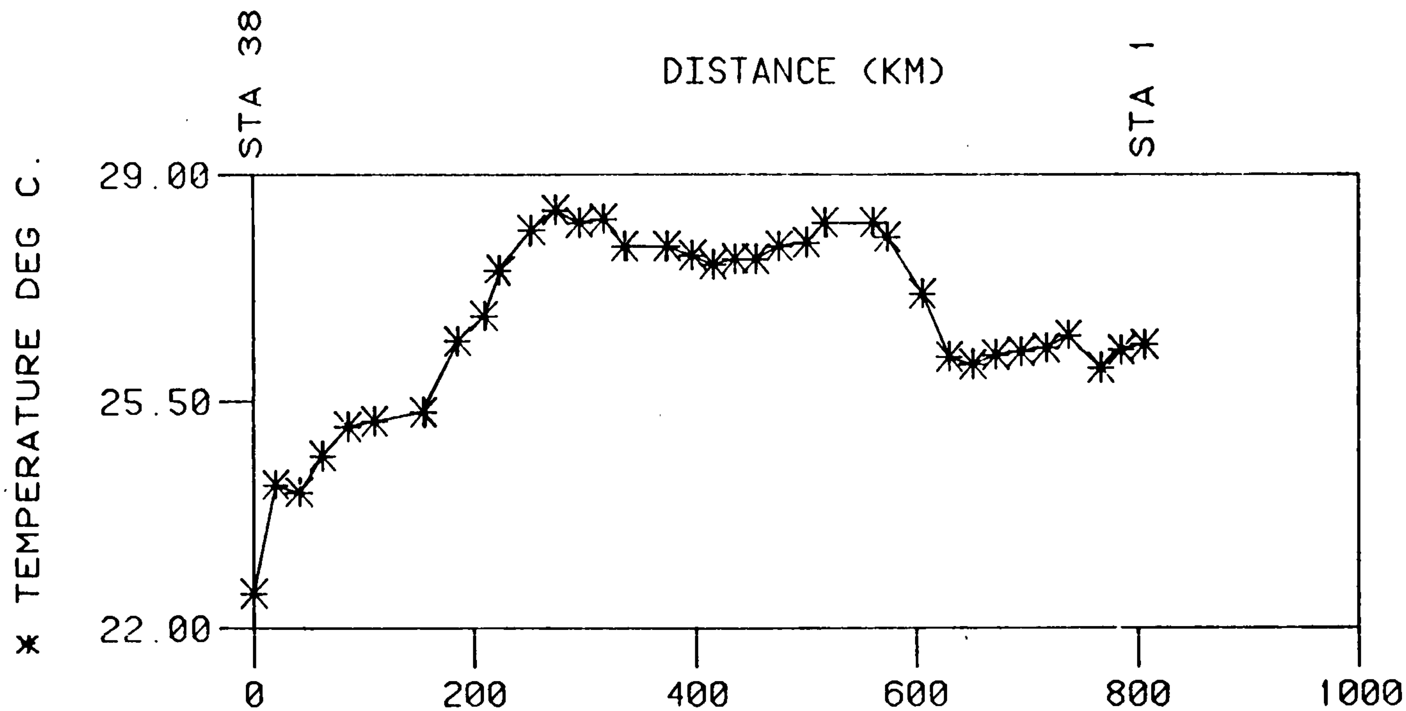
P-PRIME IV
11/ 8/83 TO 11/20/83
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
39
57
78
200 m
500 m
1000 m
2000 m
3000 m



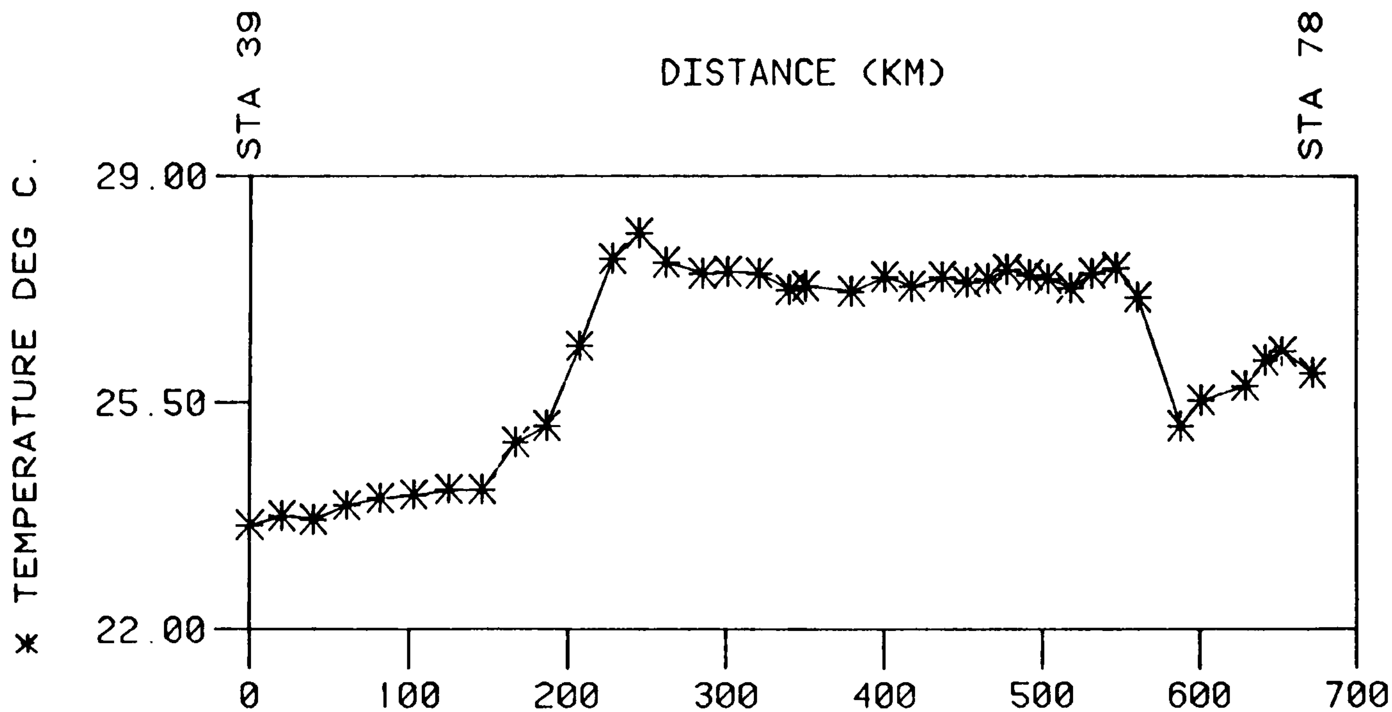
P-PRIME IV
11/18/83 TO 11/20/83
STATIONS 39 TO 78
TEMPERATURE DEG C
MIN = 5.30 MAX = 28.13



P-PRIME IV
11/18/83 TO 11/20/83
STATIONS 39 TO 78
TEMPERATURE DEG C
MIN = 11.93 MAX = 28.13

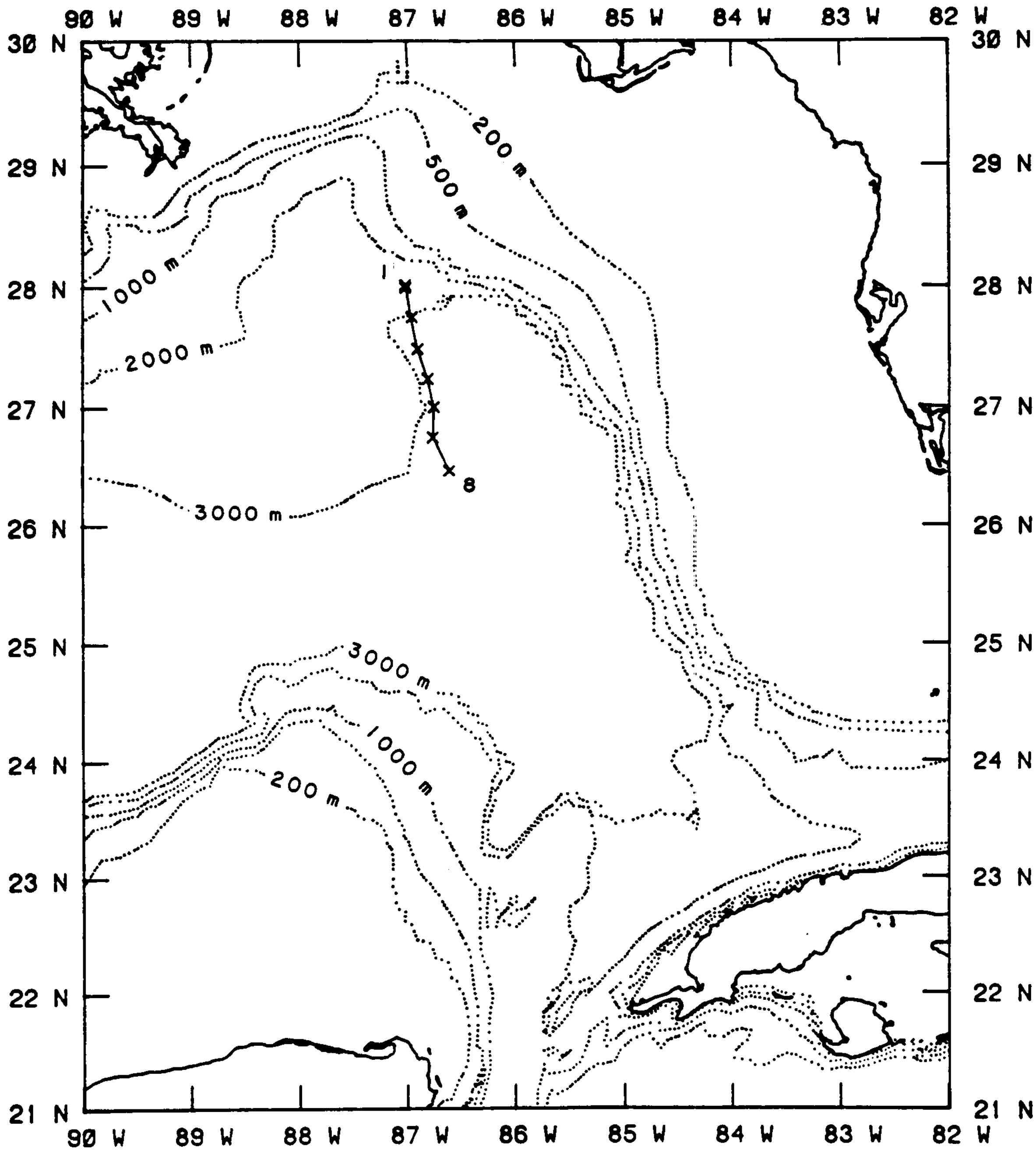


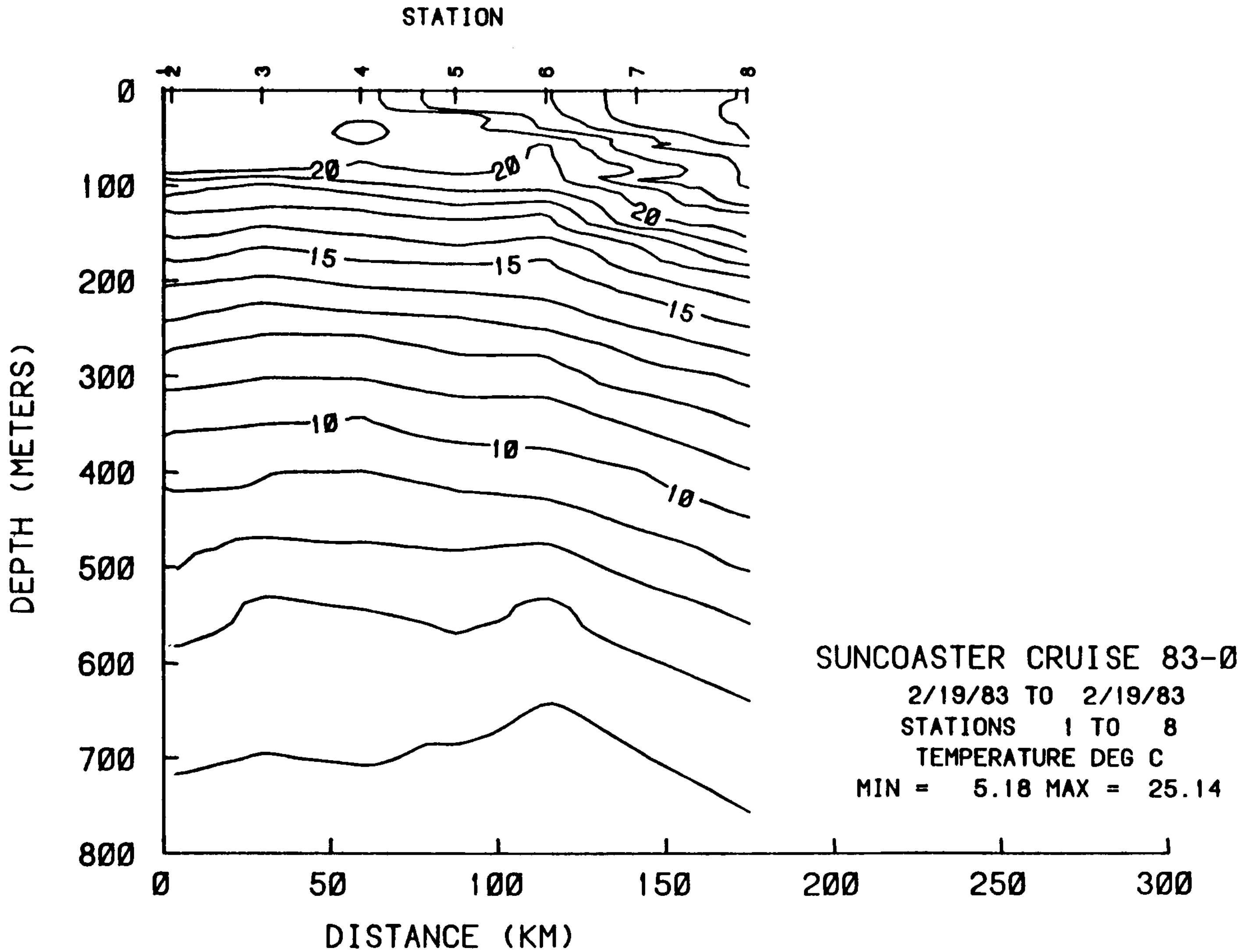
PARAMETERS AT SURFACE P-PRIME IV

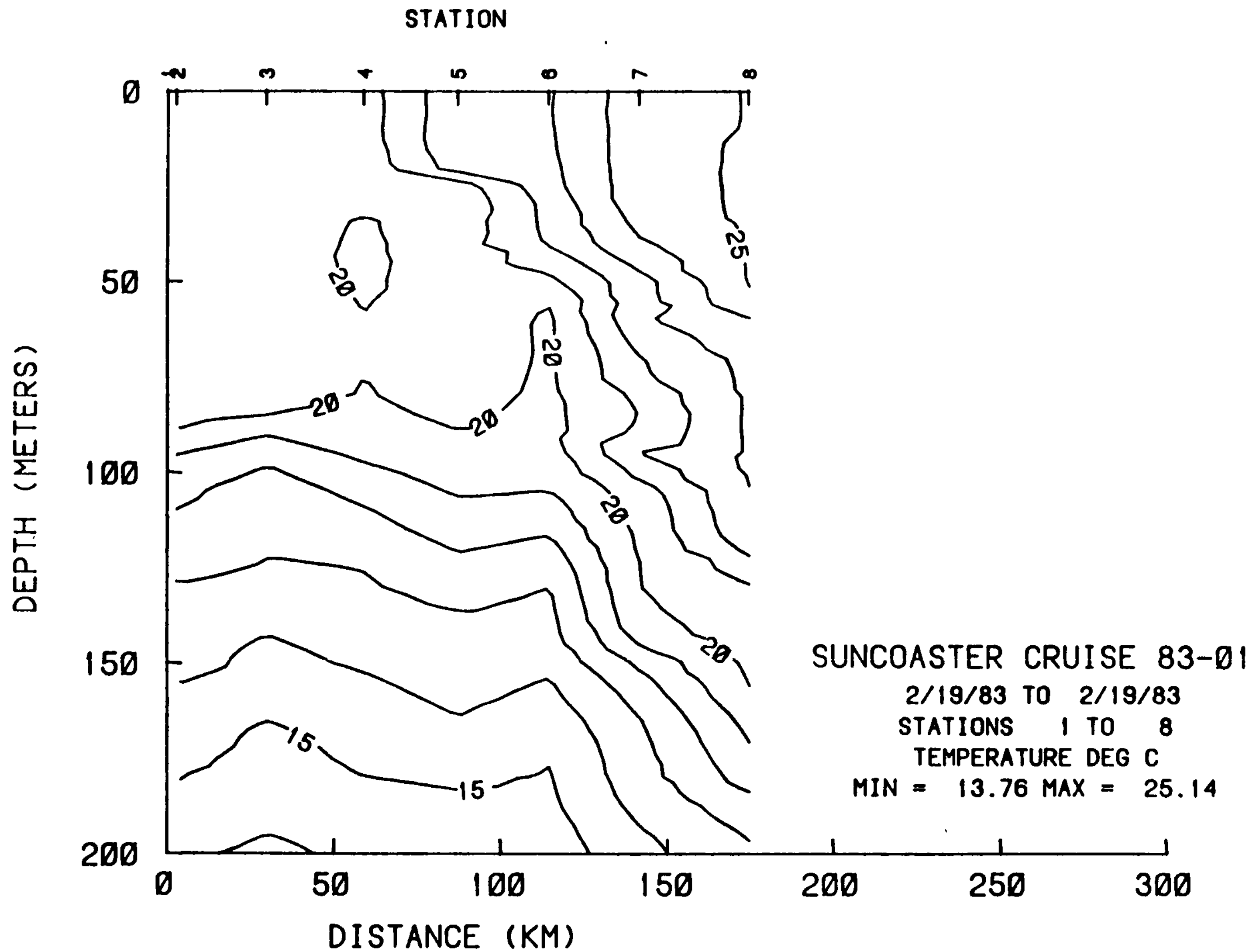


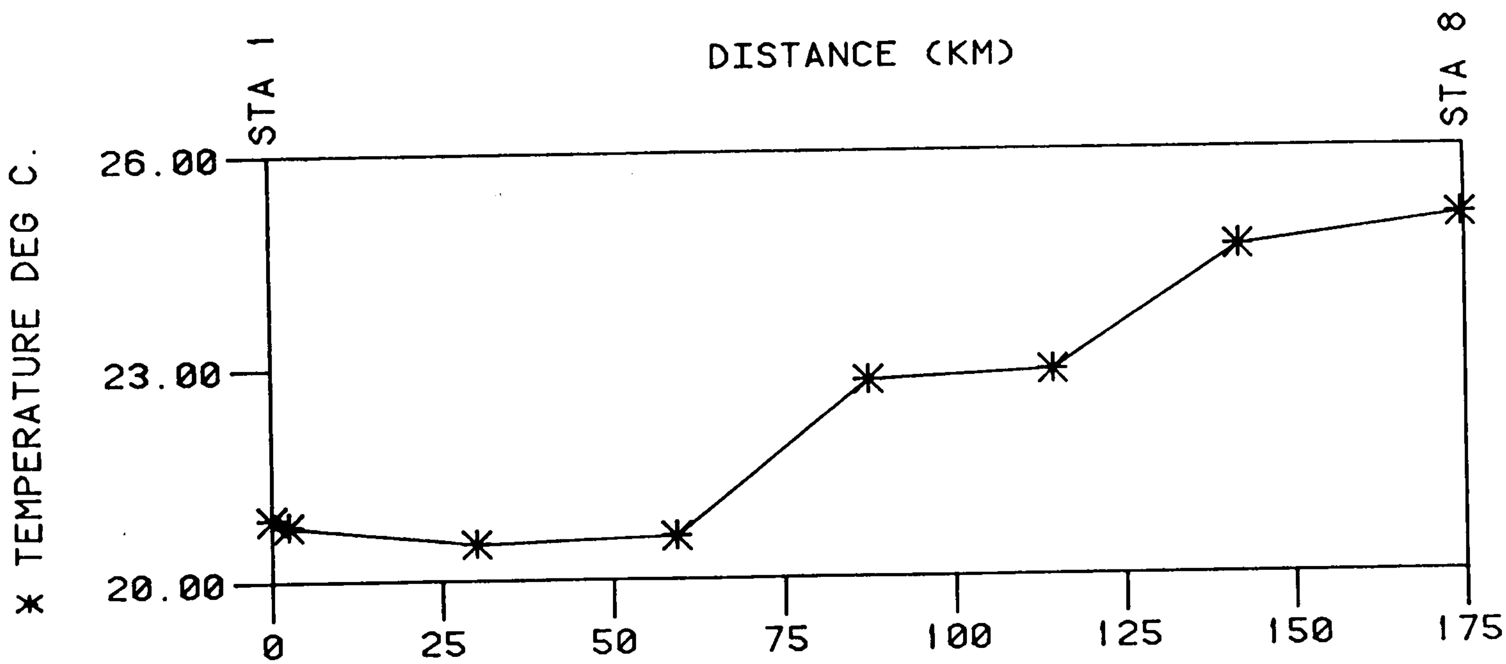
PARAMETERS AT SURFACE P-PRIME IV

SUNCOASTER CRUISE 83-01 2/19/83 TO 2/19/83

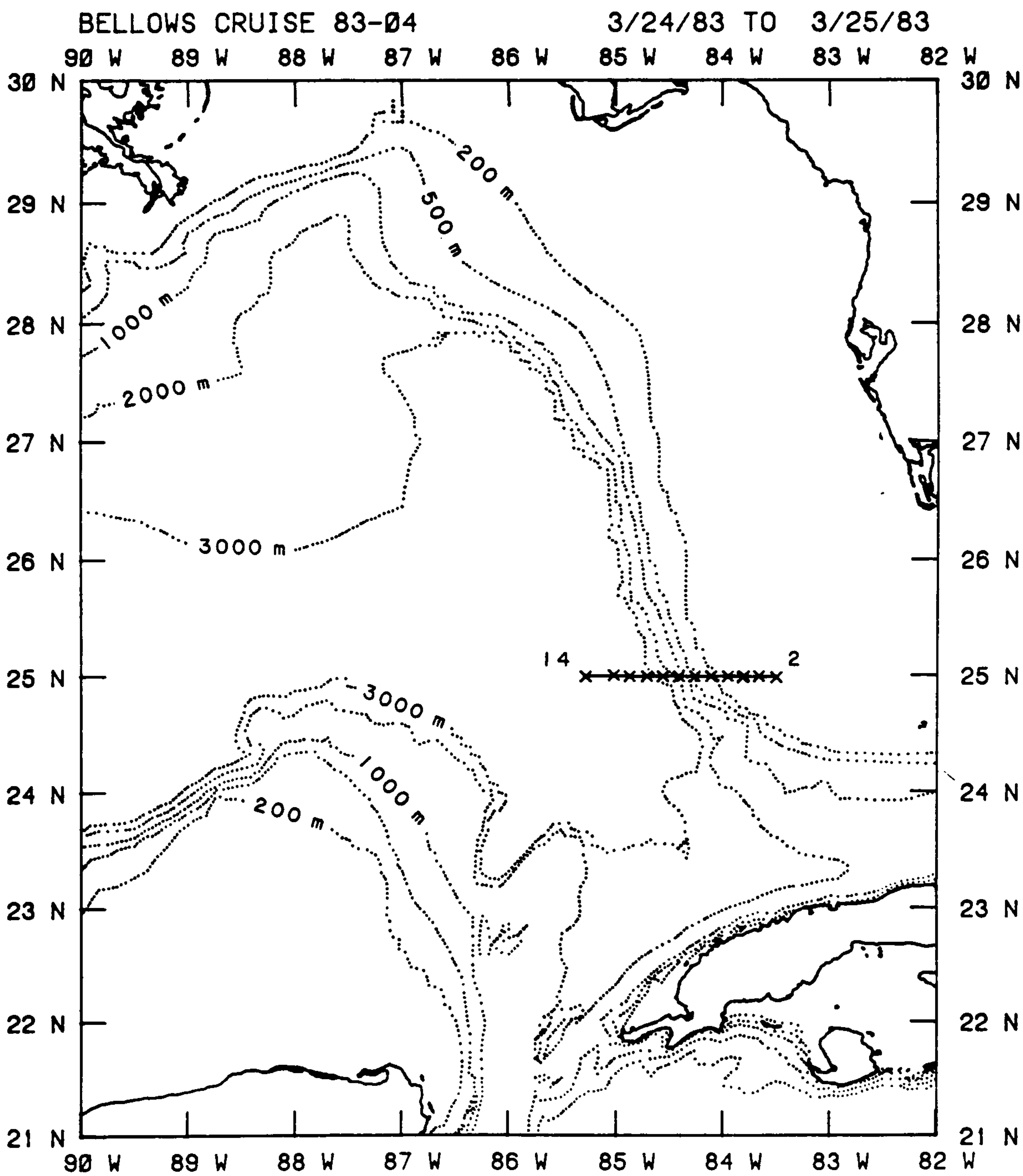


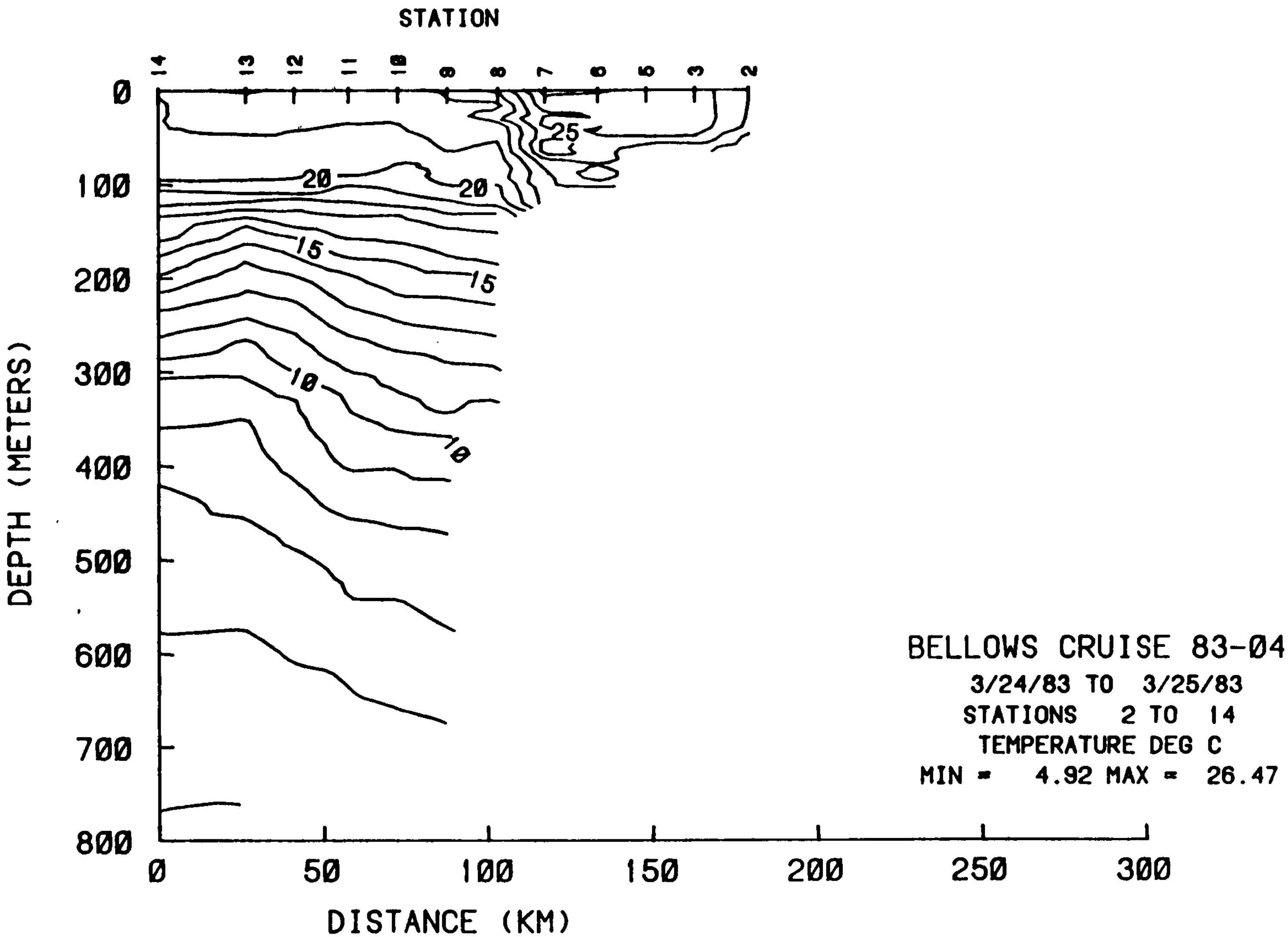

STATION
2
3
4
5
6
7
8
20
20
20
15
15
15
10
10
10
0
100
200
300
400
500
600
700
800
DEPTH (METERS)
0
50
100
150
200
250
300
DISTANCE (KM)
SUNCOASTER CRUISE 83-01
2/19/83 TO 2/19/83
STATIONS 1 TO 8
TEMPERATURE DEG C
MIN = 5.18 MAX = 25.14

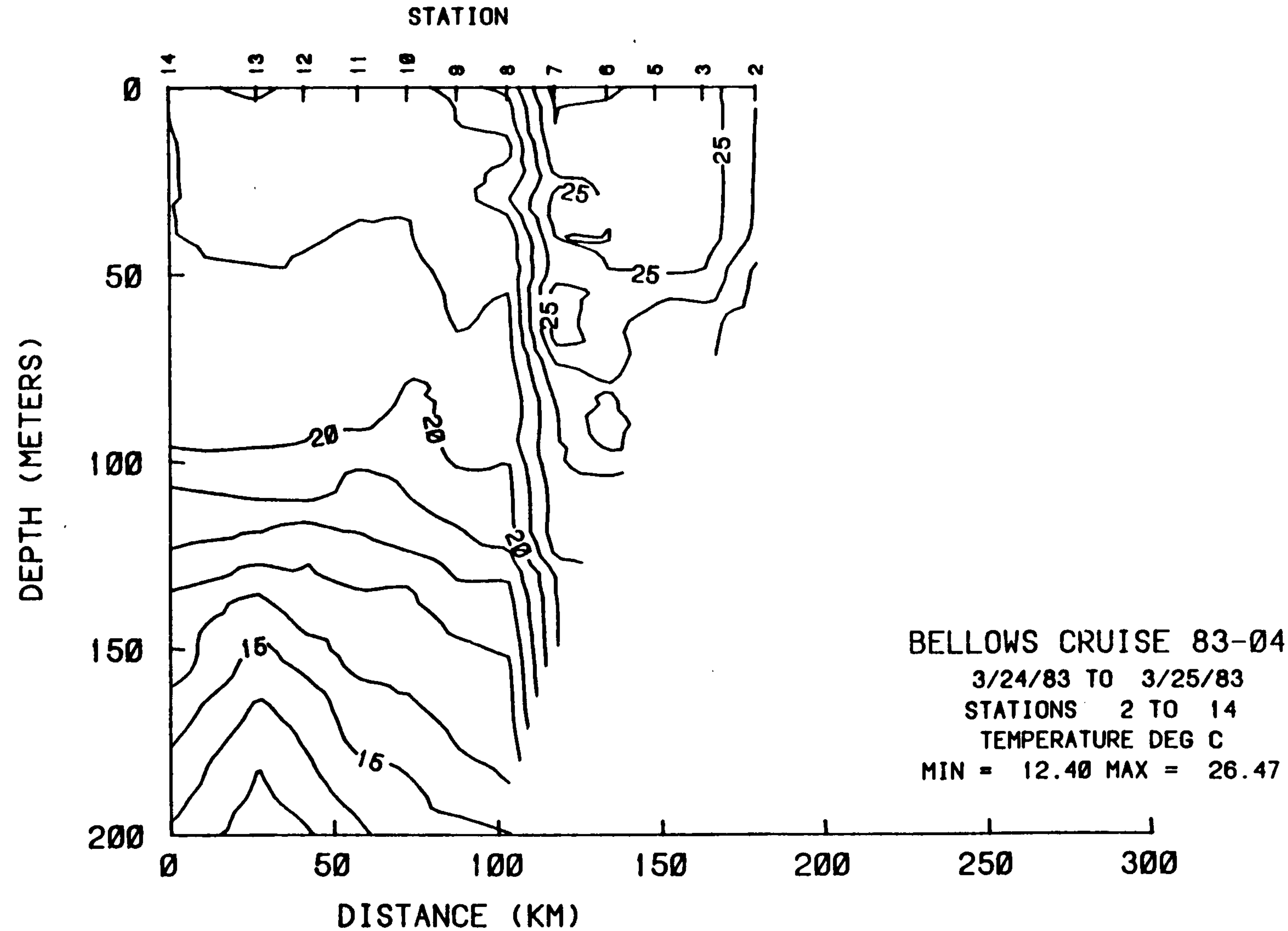

STATION
2
3
4
5
6
7
8
DEPTH (METERS)
Ø
5Ø
1ØØ
15Ø
2ØØ
2Ø
2Ø
2Ø
2Ø
2Ø
2Ø
25
15
15
Ø
5Ø
1ØØ
15Ø
2ØØ
25Ø
3ØØ
DISTANCE (KM)
SUNCOASTER CRUISE 83-Ø1
2/19/83 TO 2/19/83
STATIONS 1 TO 8
TEMPERATURE DEG C
MIN = 13.76 MAX = 25.14

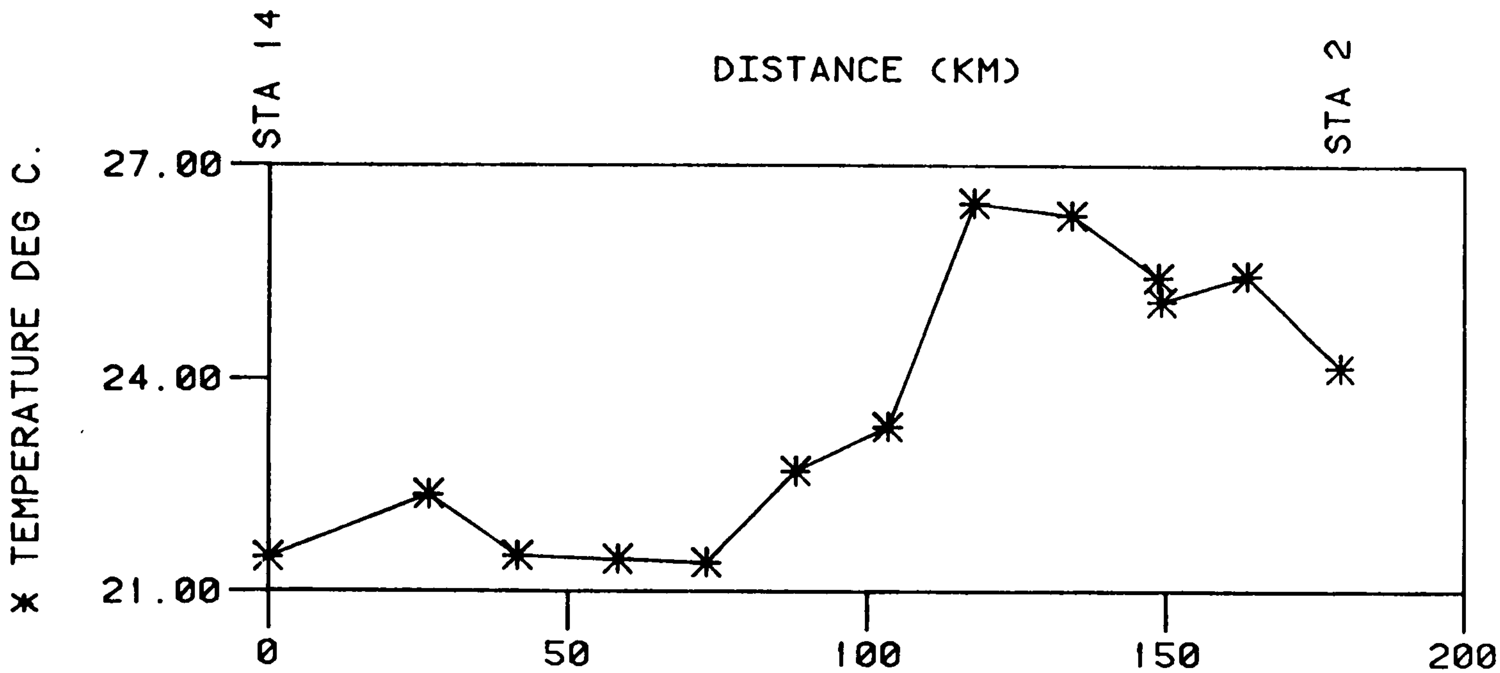


PARAMETERS AT SURFACE SUNCOASTER CRUISE 83-01

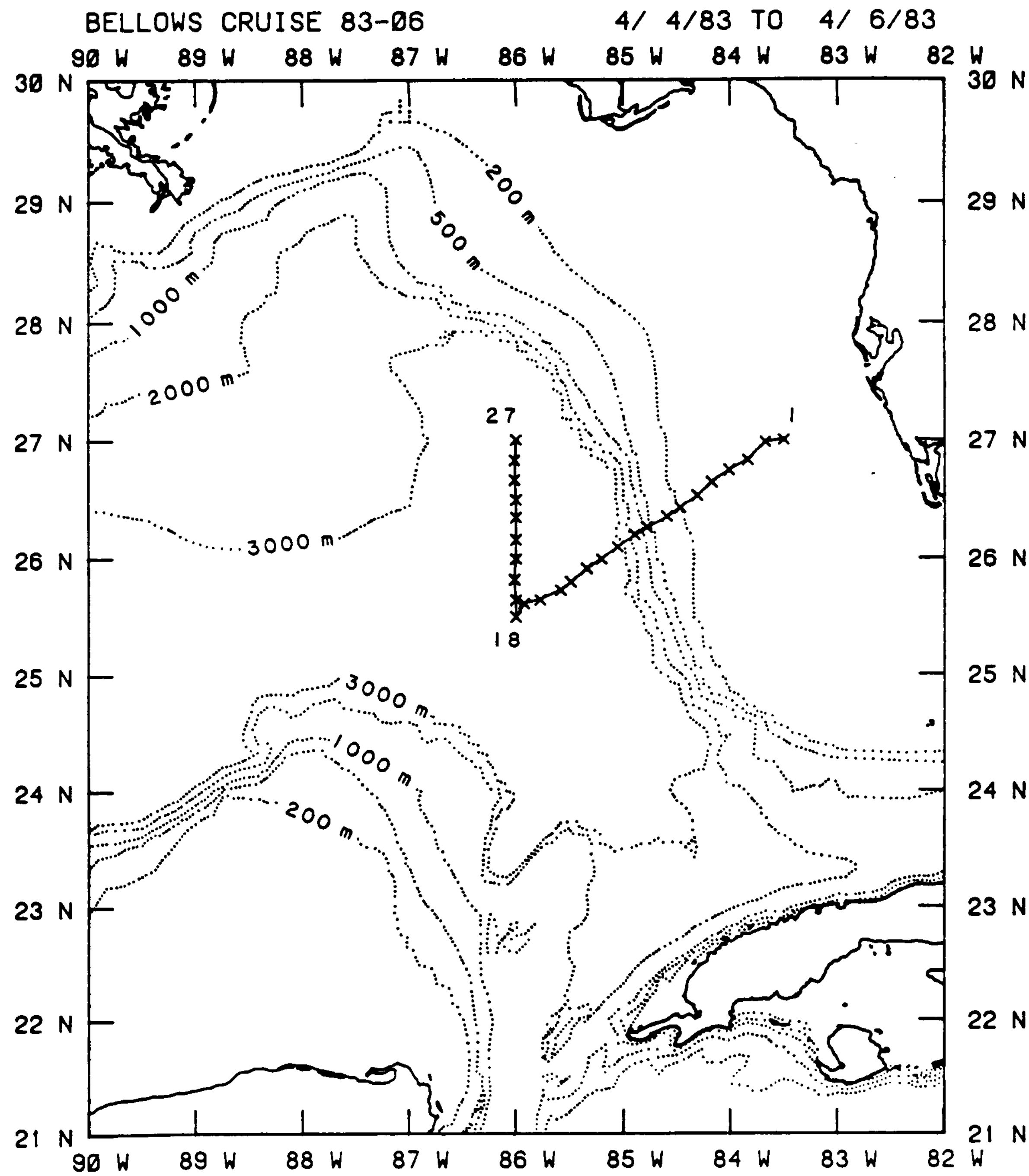

BELLOWS CRUISE 83-04
3/24/83 TO 3/25/83
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
1000 m
200 m
14
2


STATION
14 13 12 11 10 9 8 7 6 5 3 2
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 50 100 150 200 250 300
25
20
20
15
15
10
10
BELLOWS CRUISE 83-04
3/24/83 TO 3/25/83
STATIONS 2 TO 14
TEMPERATURE DEG C
MIN = 4.92 MAX = 26.47

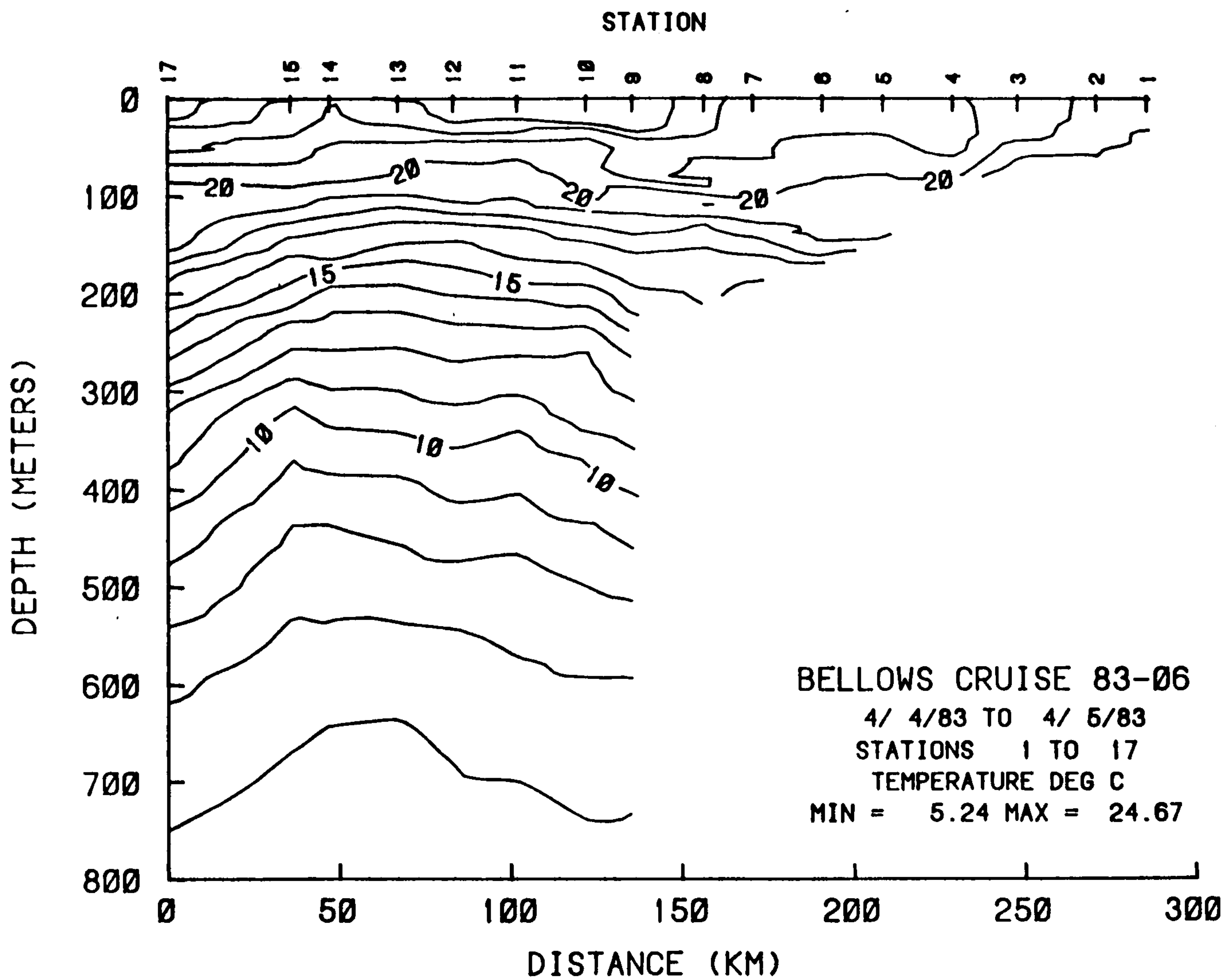

STATION
14 13 12 11 10 9 8 7 6 5 3 2
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 50 100 150 200 250 300
25
25
25
25
20
20
20
15
15
BELLOWS CRUISE 83-04
3/24/83 TO 3/25/83
STATIONS 2 TO 14
TEMPERATURE DEG C
MIN = 12.40 MAX = 26.47

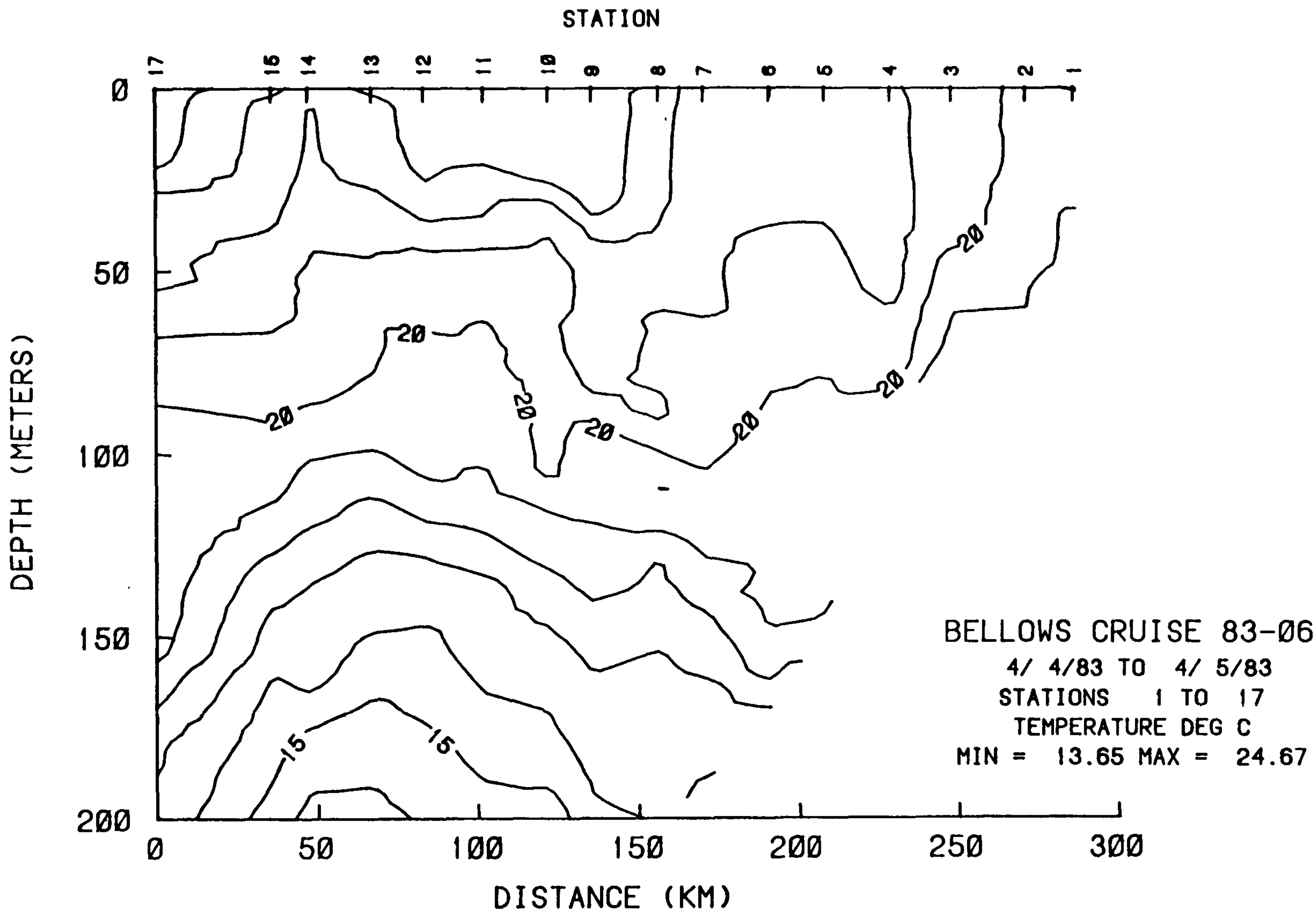


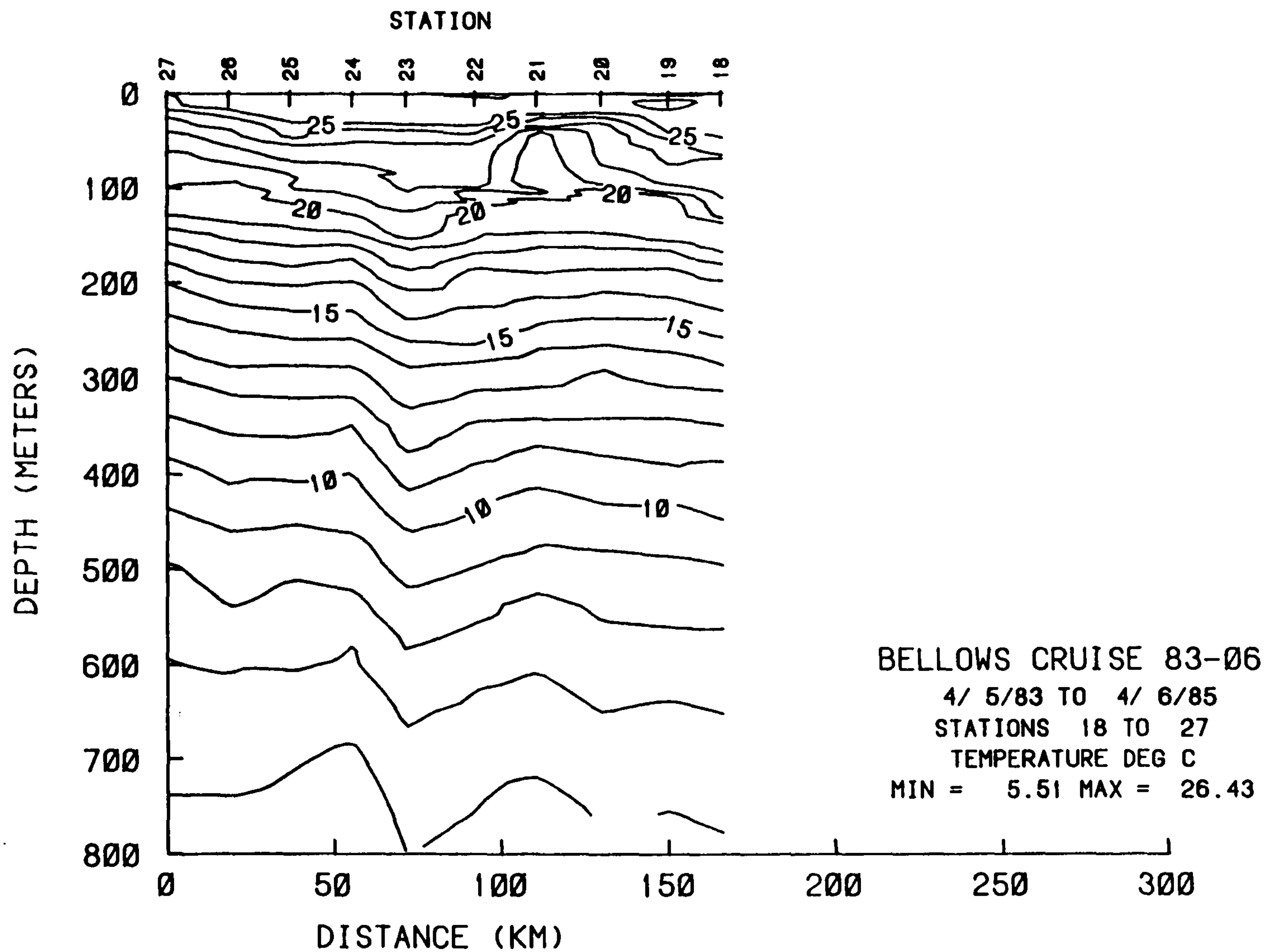
PARAMETERS AT SURFACE BELLOWS CRUISE 83-04

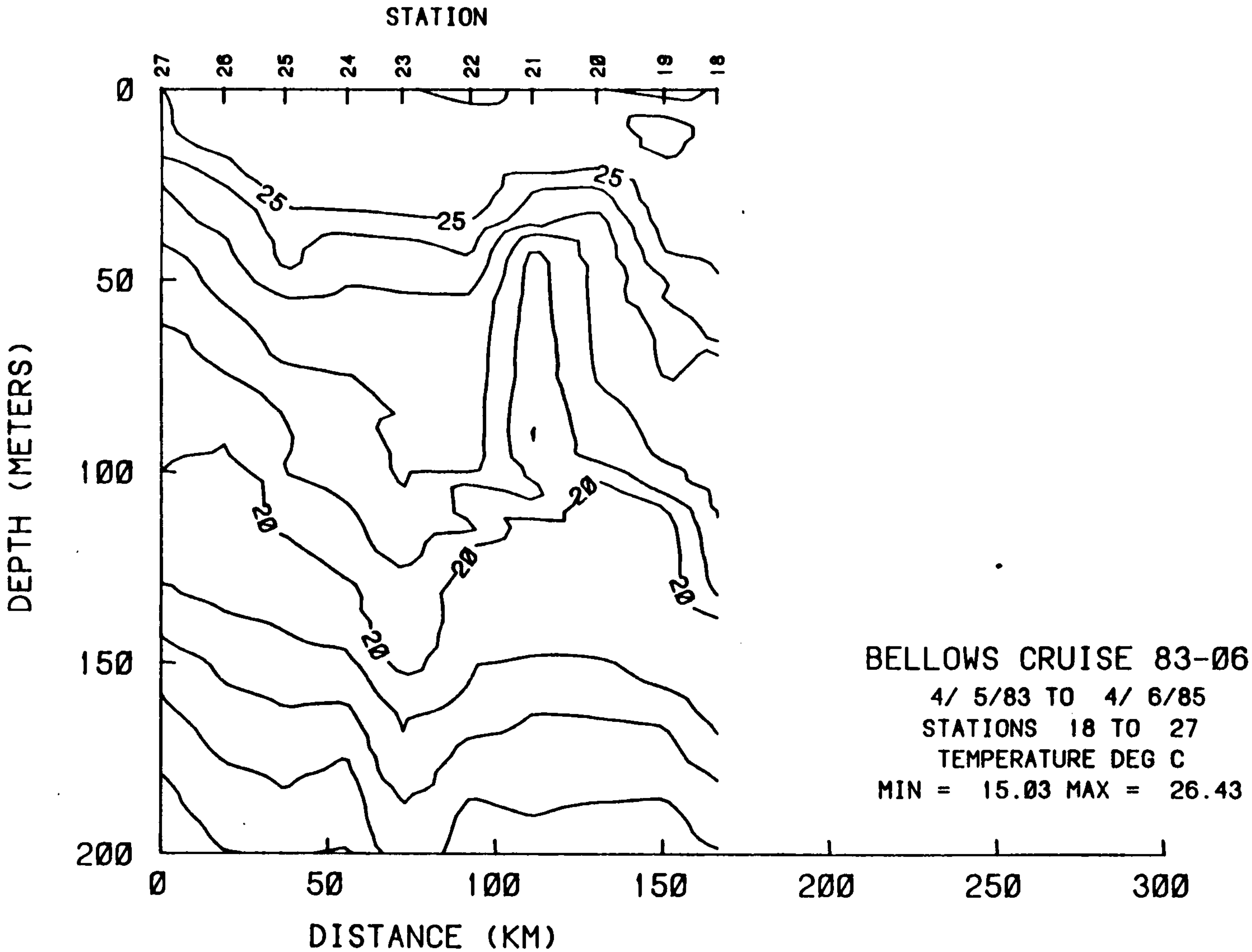


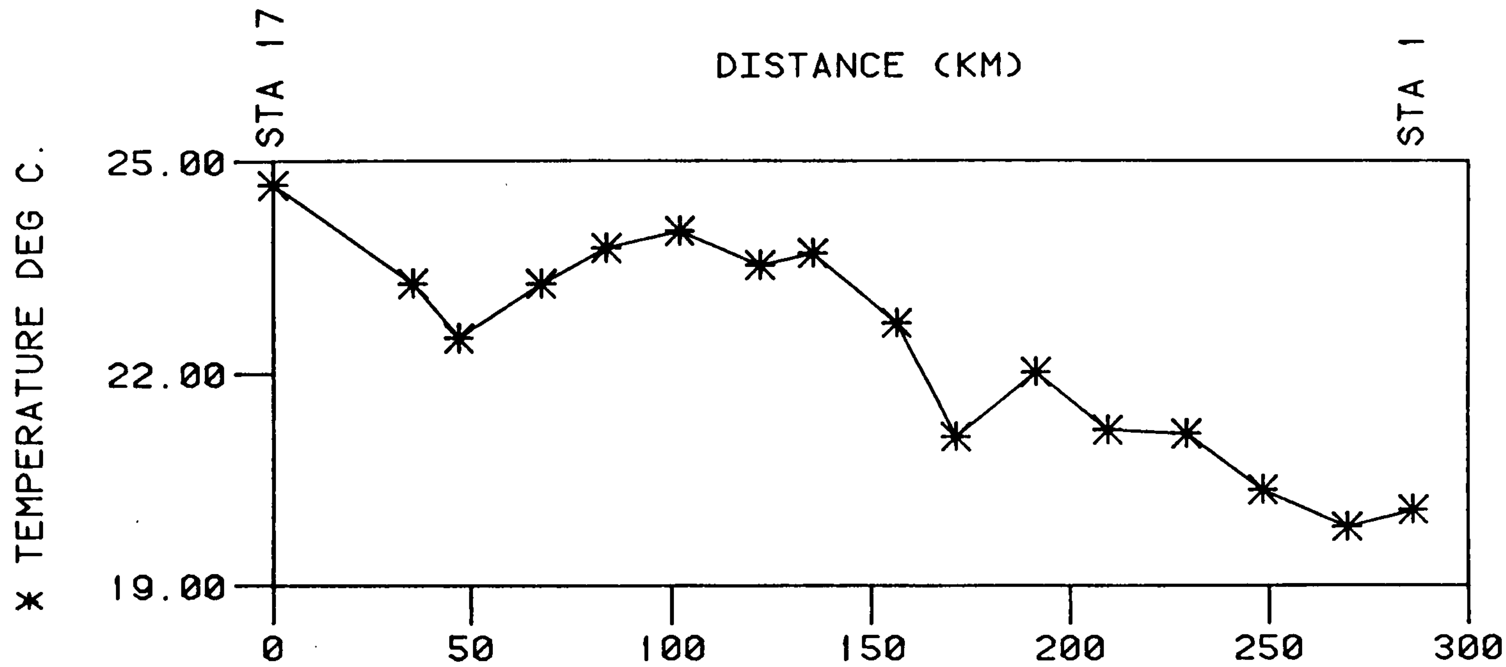
BELLOWS CRUISE 83-06
4/ 4/83 TO 4/ 6/83
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
27
1
18
3000 m
1000 m
200 m


STATION
17 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0 100 200 300 400 500 600 700 800
DISTANCE (KM)
0 50 100 150 200 250 300
20
15
10
BELLOWS CRUISE 83-06
4/ 4/83 TO 4/ 5/83
STATIONS 1 TO 17
TEMPERATURE DEG C
MIN = 5.24 MAX = 24.67

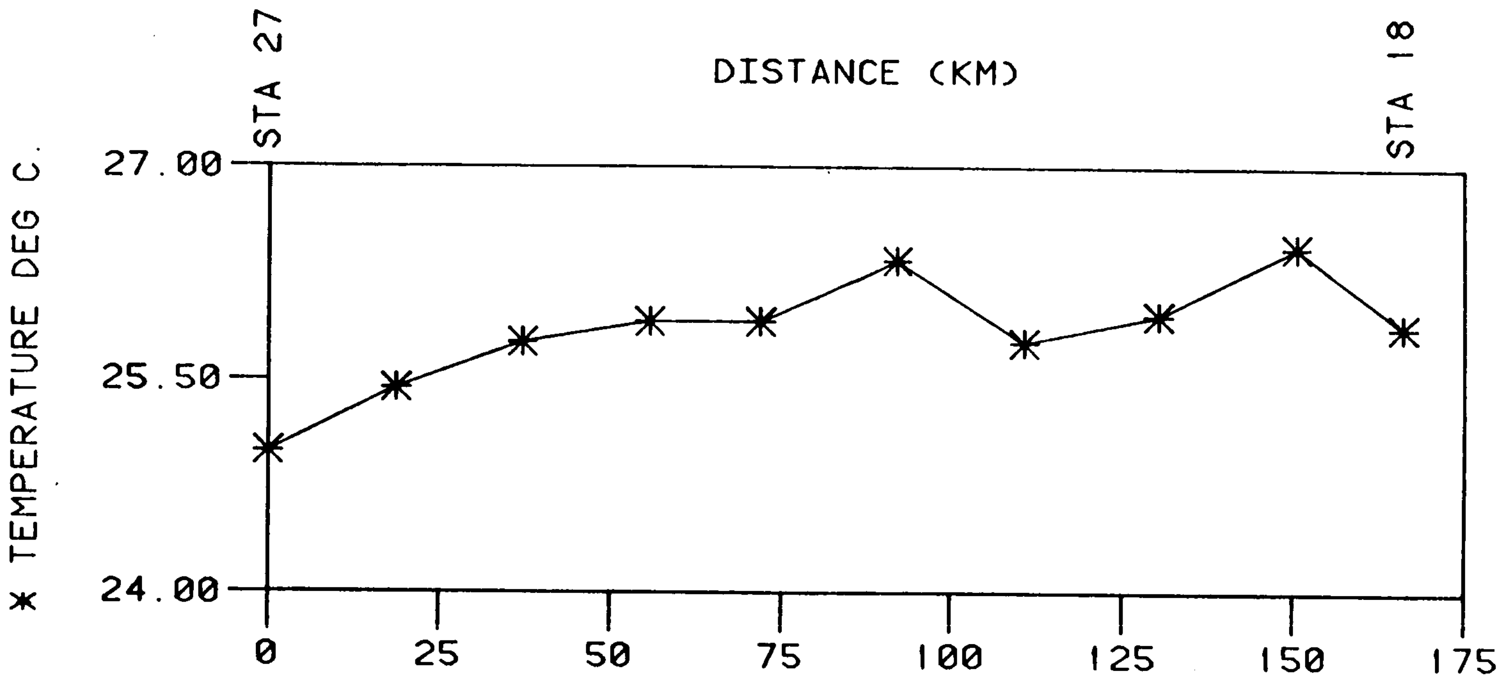

STATION
17 16 14 13 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 50 100 150 200 250 300
20
15
BELLOWS CRUISE 83-06
4/ 4/83 TO 4/ 5/83
STATIONS 1 TO 17
TEMPERATURE DEG C
MIN = 13.65 MAX = 24.67


STATION
27 26 25 24 23 22 21 20 19 18
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 50 100 150 200 250 300
25
20
15
10
BELLOWS CRUISE 83-06
4/ 5/83 TO 4/ 6/85
STATIONS 18 TO 27
TEMPERATURE DEG C
MIN = 5.51 MAX = 26.43

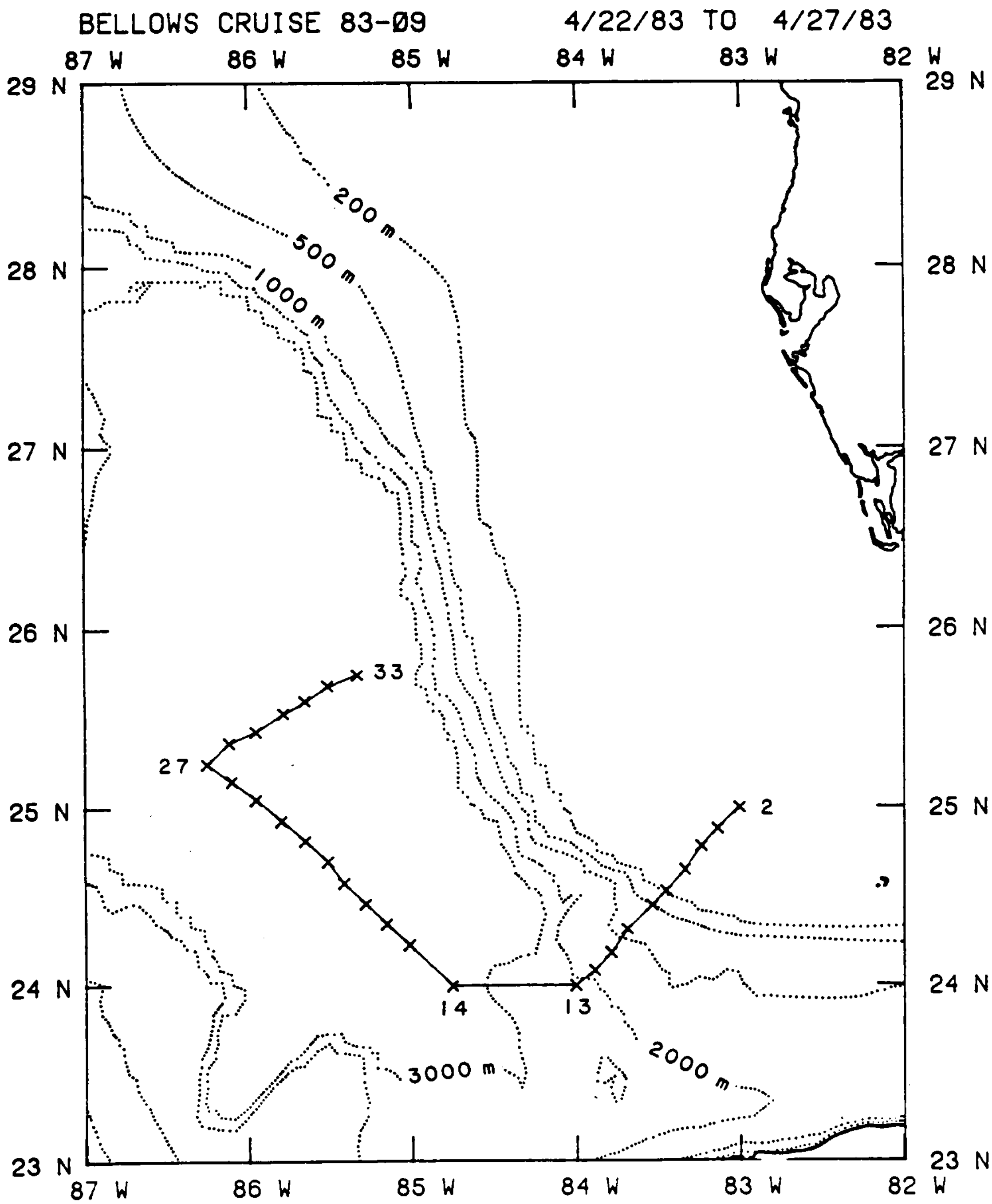

STATION
27 26 25 24 23 22 21 20 19 18
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 50 100 150 200 250 300
25
20
BELLOWS CRUISE 83-06
4/ 5/83 TO 4/ 6/85
STATIONS 18 TO 27
TEMPERATURE DEG C
MIN = 15.03 MAX = 26.43

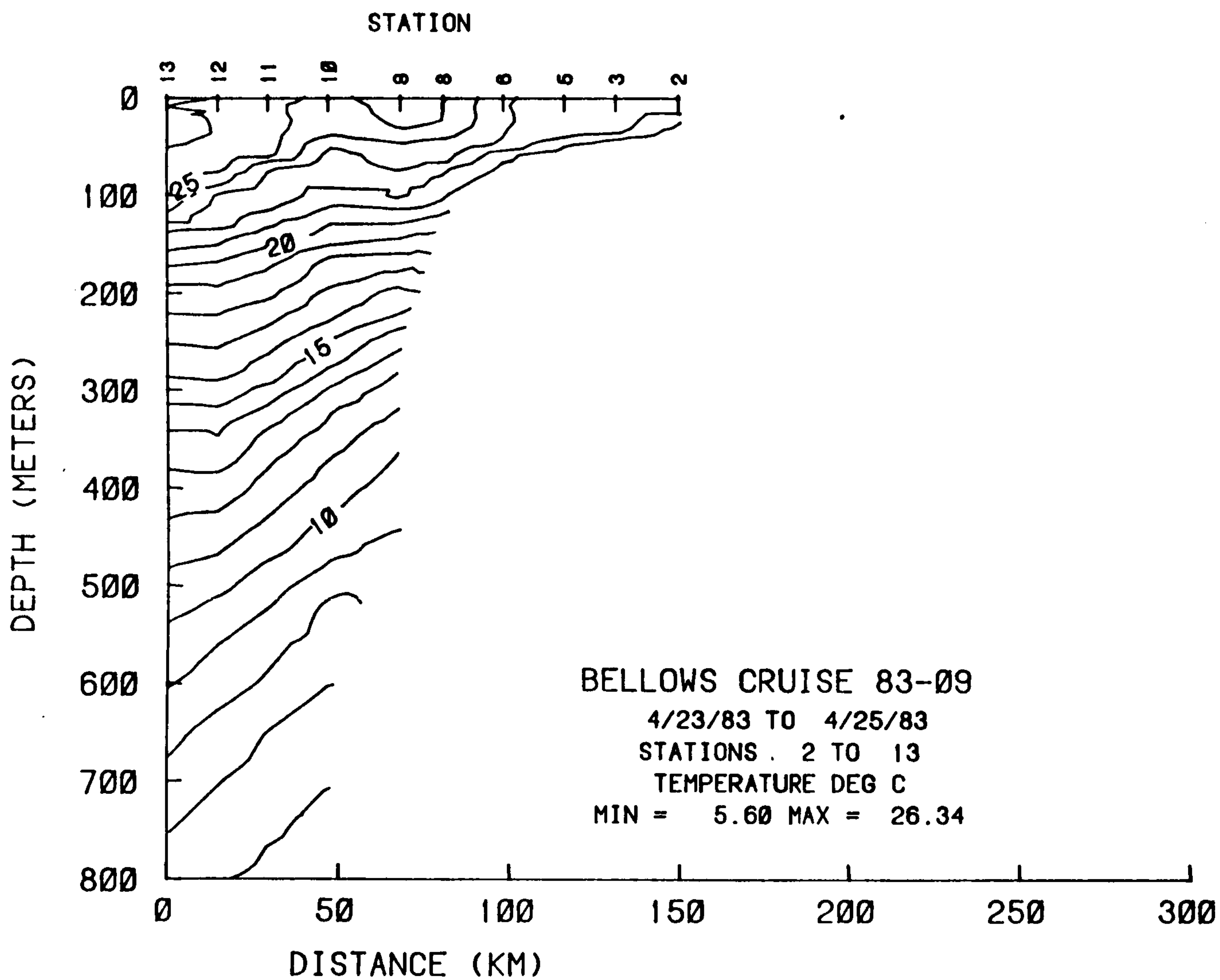


PARAMETERS AT SURFACE BELLOWS CRUISE 83-06

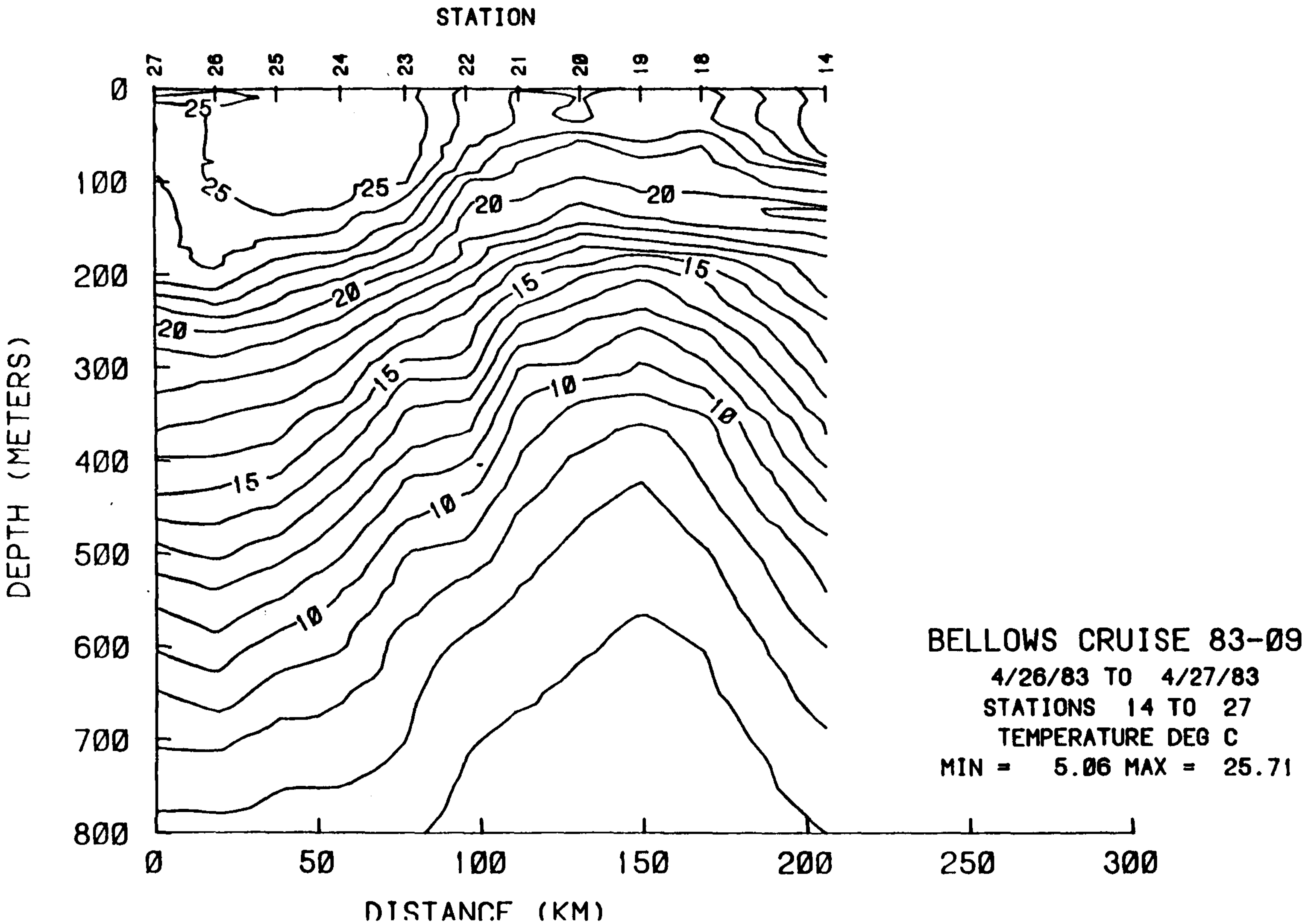


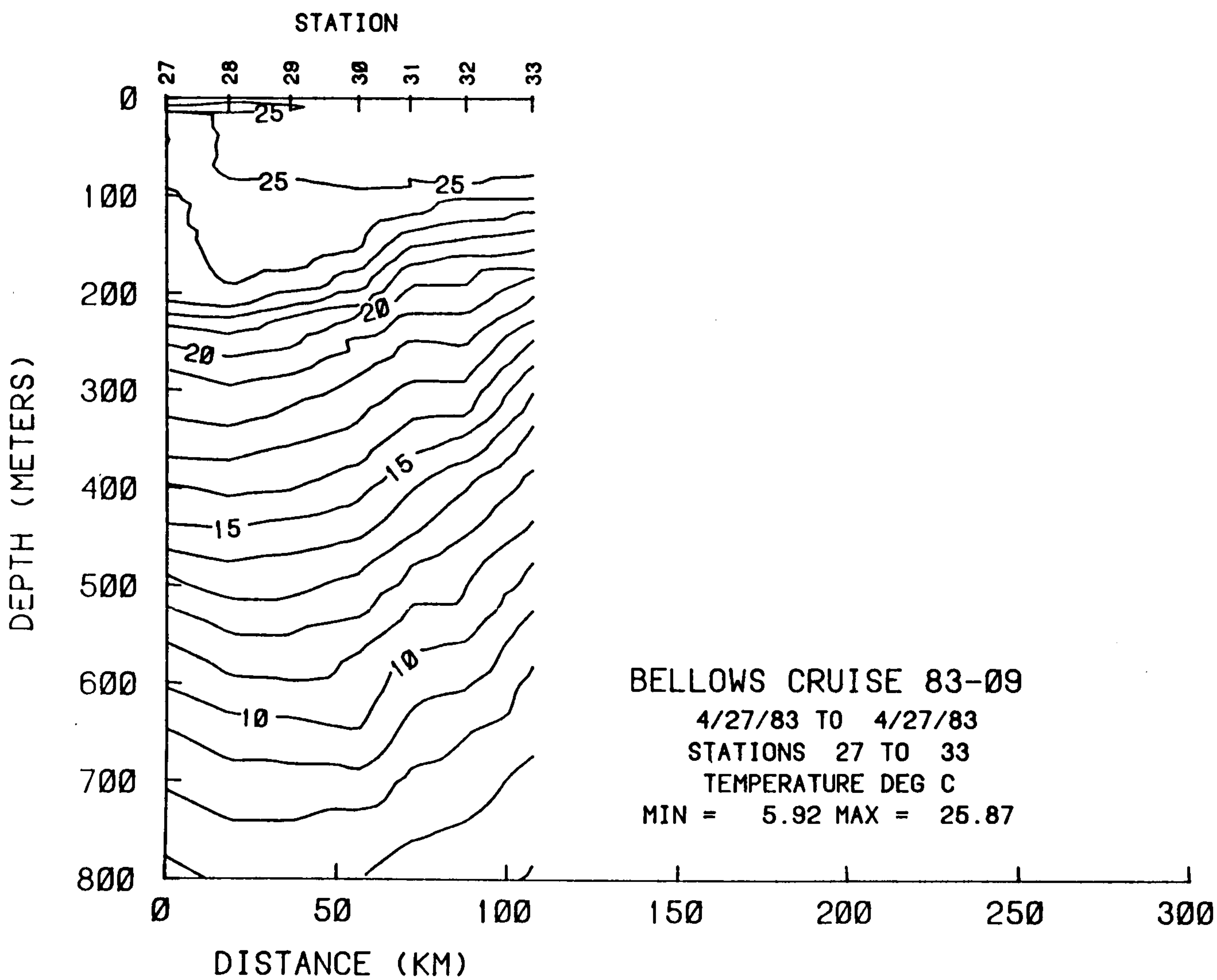
PARAMETERS AT SURFACE BELLOWS CRUISE 83-06

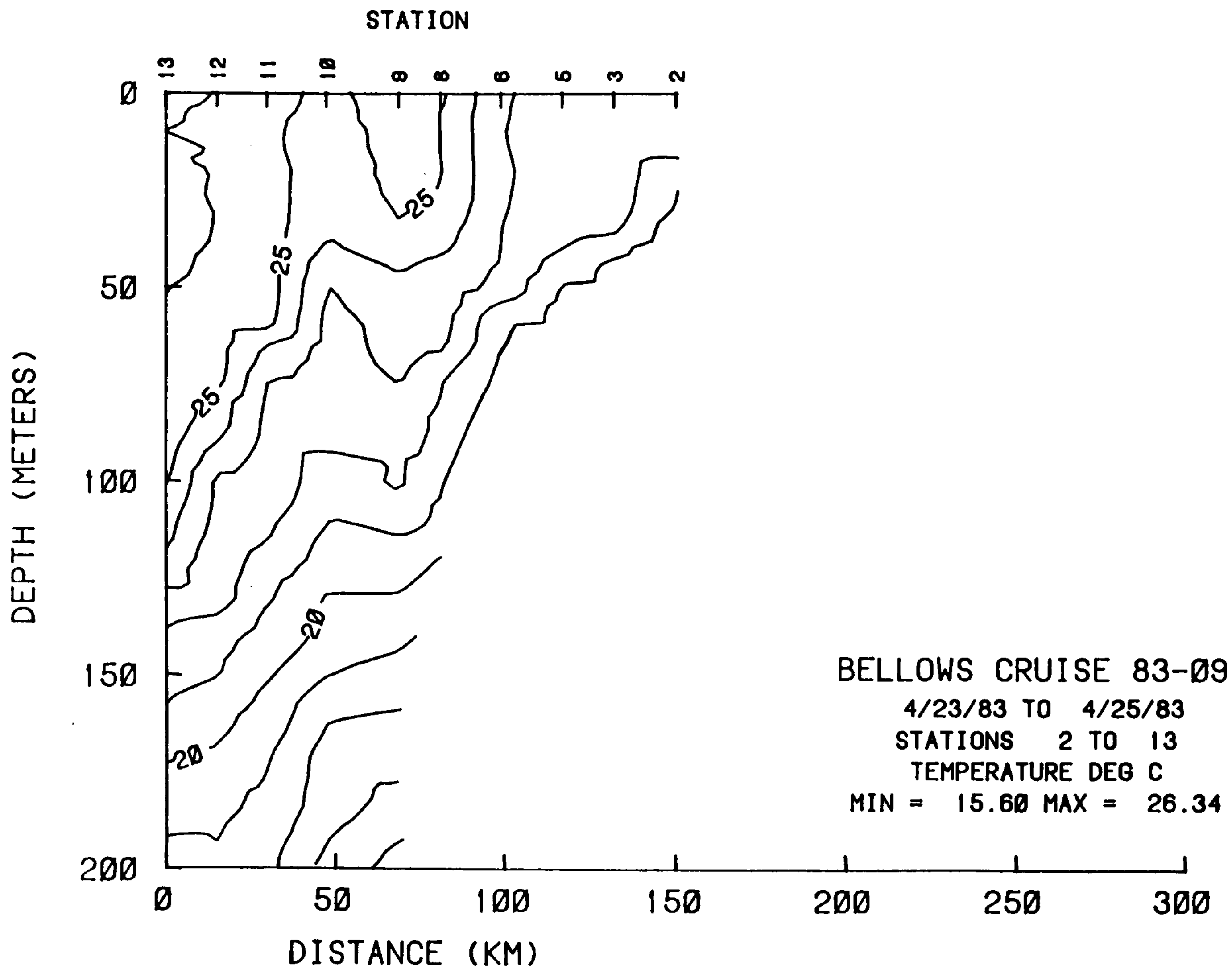

BELLOWS CRUISE 83-Ø9 4/22/83 TO 4/27/83
87 W
86 W
85 W
84 W
83 W
82 W
29 N
28 N
27 N
26 N
25 N
24 N
23 N
200 m
500 m
1000 m
2000 m
3000 m
33
27
2
14
13

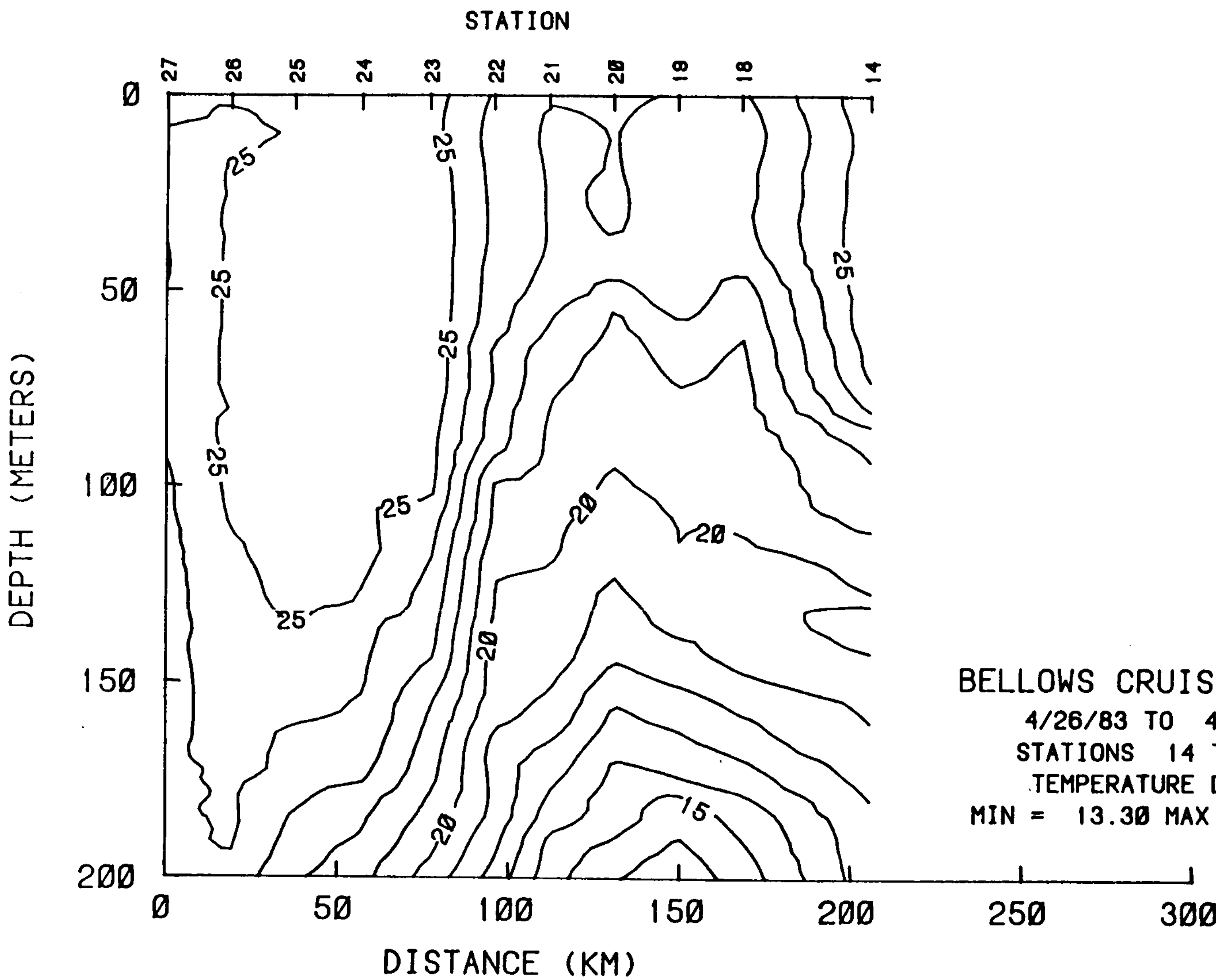


STATION
13
12
11
10
2
0
100
200
300
400
500
600
700
800
DEPTH (METERS)
25
20
15
10
0
50
100
150
200
250
300
DISTANCE (KM)
BELLOWS CRUISE 83-09
4/23/83 TO 4/25/83
STATIONS 2 TO 13
TEMPERATURE DEG C
MIN = 5.60 MAX = 26.34

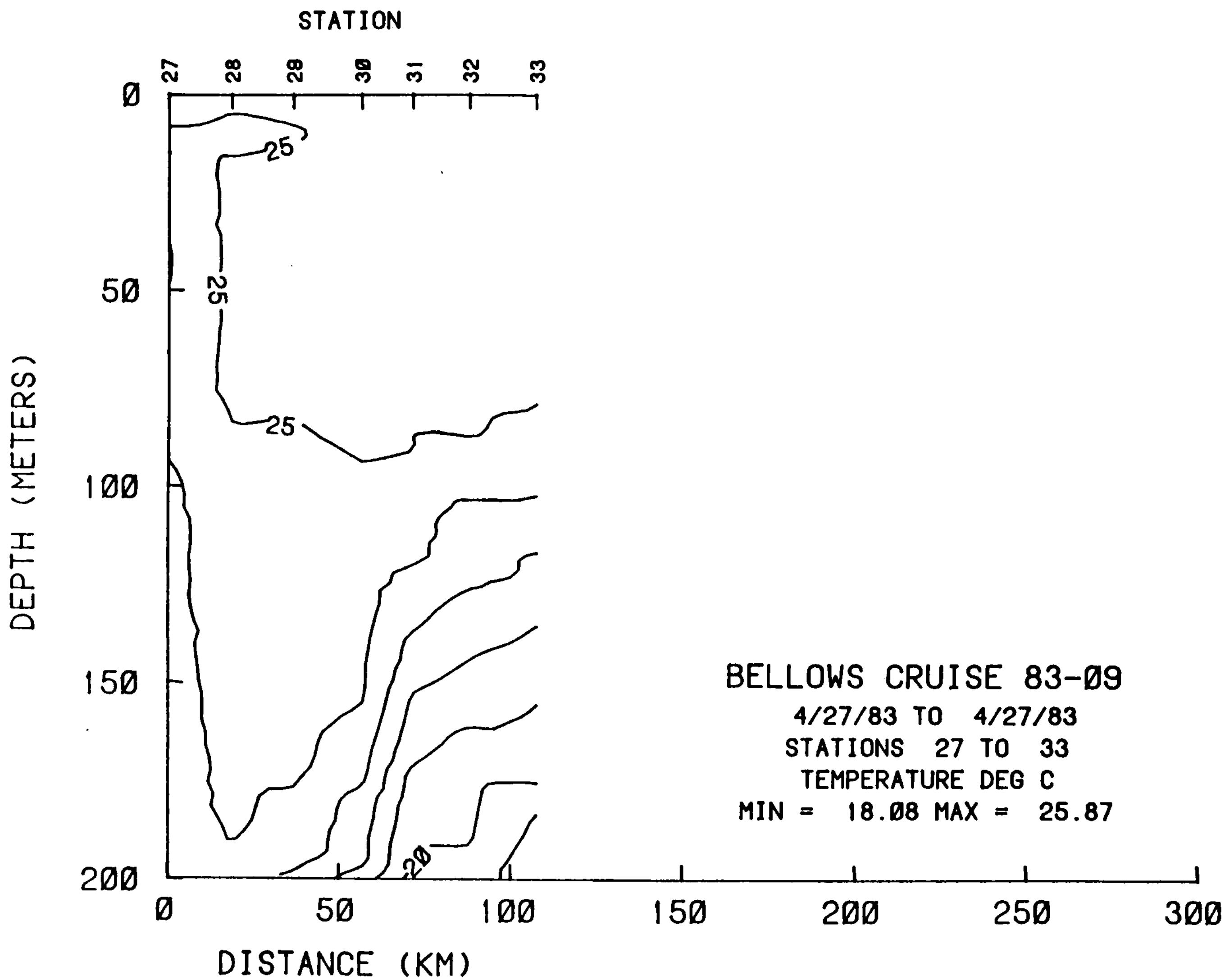

STATION
27 26 25 24 23 22 21 20 19 18 14
DEPTH (METERS)
DISTANCE (KM)
0 100 200 300 400 500 600 700 800
0 50 100 150 200 250 300
25
20
15
10
BELLOWS CRUISE 83-09
4/26/83 TO 4/27/83
STATIONS 14 TO 27
TEMPERATURE DEG C
MIN = 5.06 MAX = 25.71

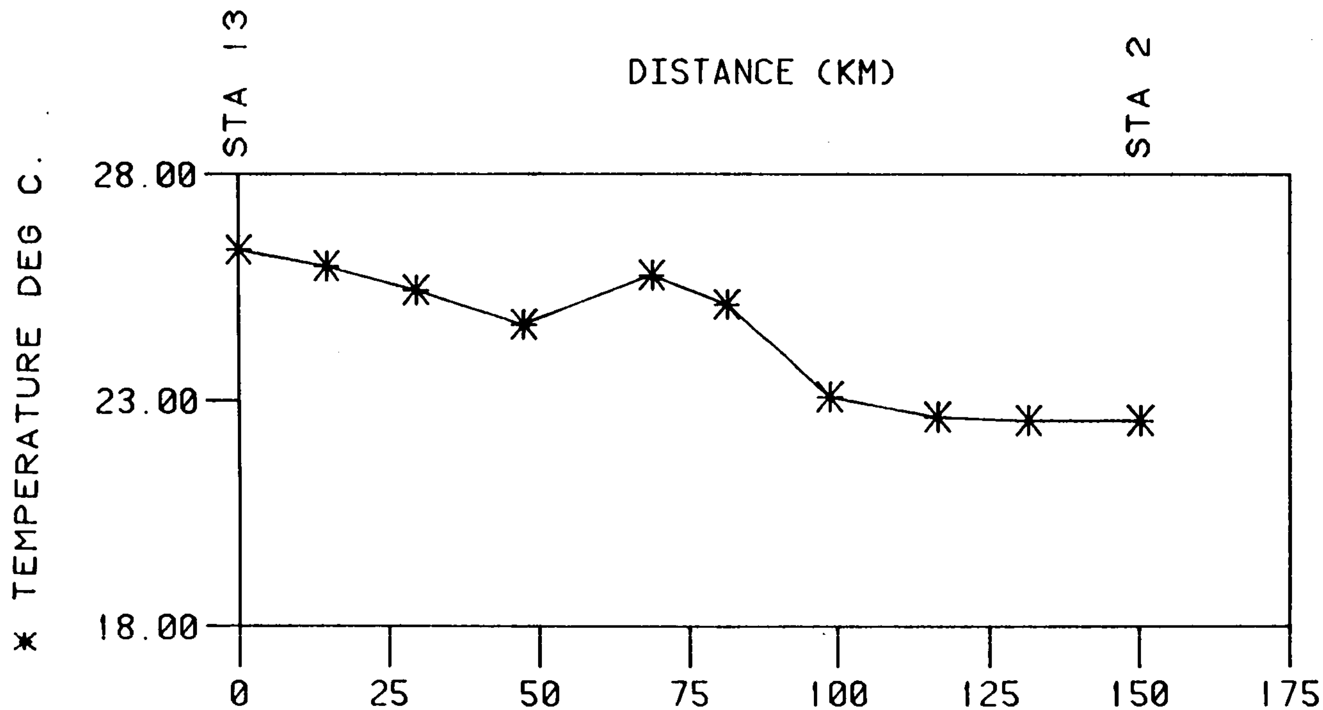

STATION
27
28
29
30
31
32
33
25
25
25
20
20
15
15
10
10
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
0
50
100
150
200
250
300
DISTANCE (KM)
BELLOWS CRUISE 83-09
4/27/83 TO 4/27/83
STATIONS 27 TO 33
TEMPERATURE DEG C
MIN = 5.92 MAX = 25.87


STATION
DEPTH (METERS)
DISTANCE (KM)
BELLOWS CRUISE 83-09
4/23/83 TO 4/25/83
STATIONS 2 TO 13
TEMPERATURE DEG C
MIN = 15.60 MAX = 26.34

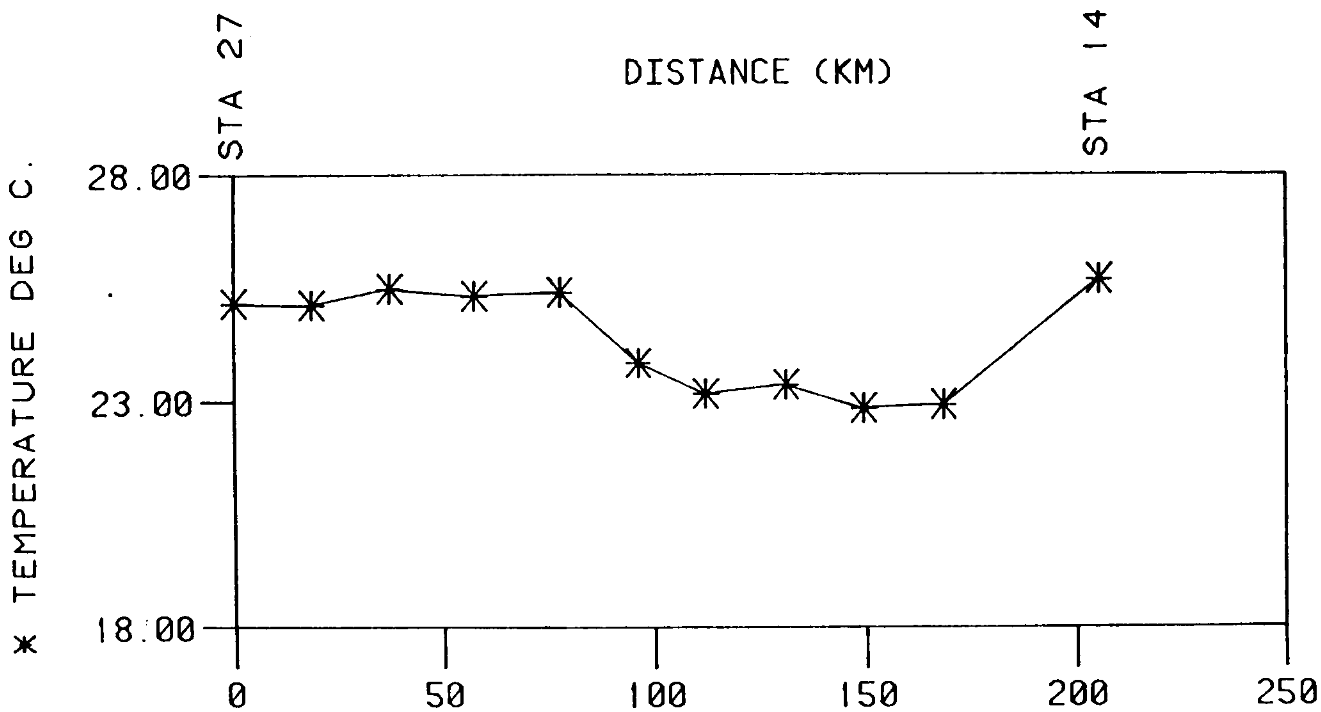


BELLOWS CRUISE 83-09
4/26/83 TO 4/27/83
STATIONS 14 TO 27
TEMPERATURE DEG C
MIN = 13.30 MAX = 25.71

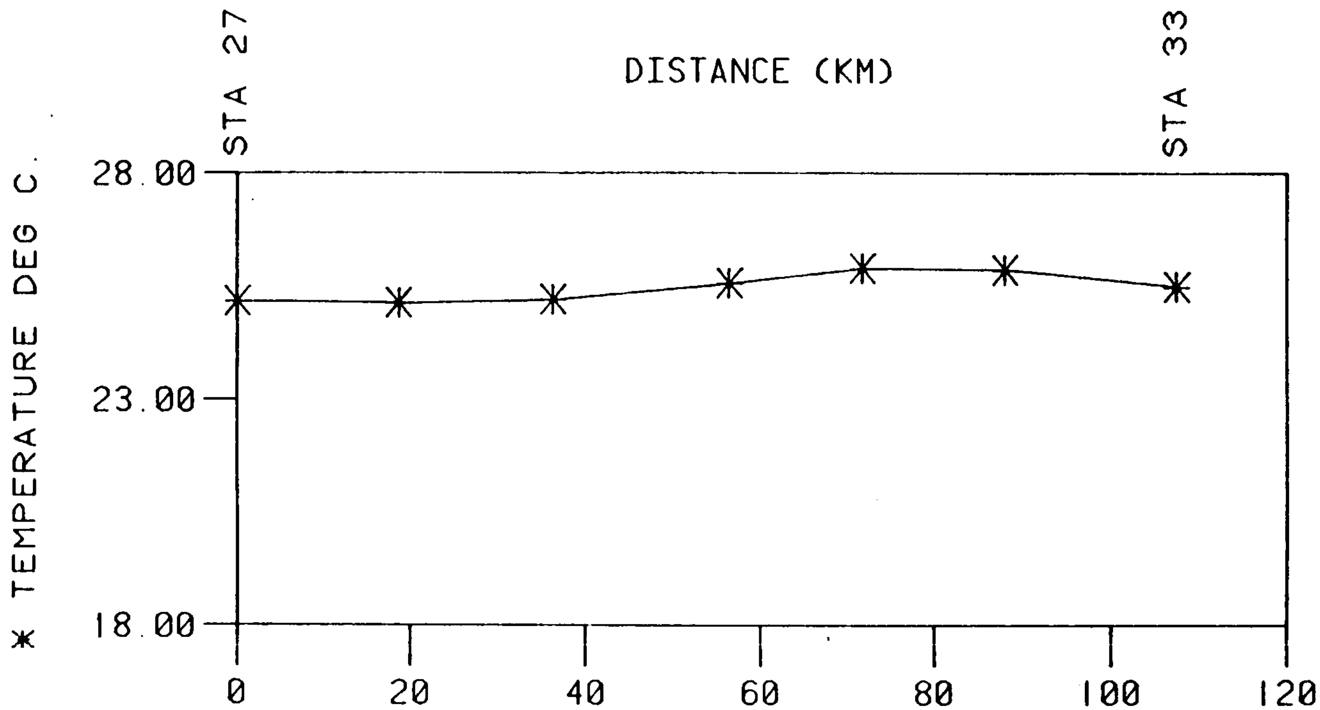

STATION
27 28 29 30 31 32 33
25
25
25
20
DEPTH (METERS)
0 50 100 150 200
DISTANCE (KM)
0 50 100 150 200 250 300
BELLOWS CRUISE 83-09
4/27/83 TO 4/27/83
STATIONS 27 TO 33
TEMPERATURE DEG C
MIN = 18.08 MAX = 25.87



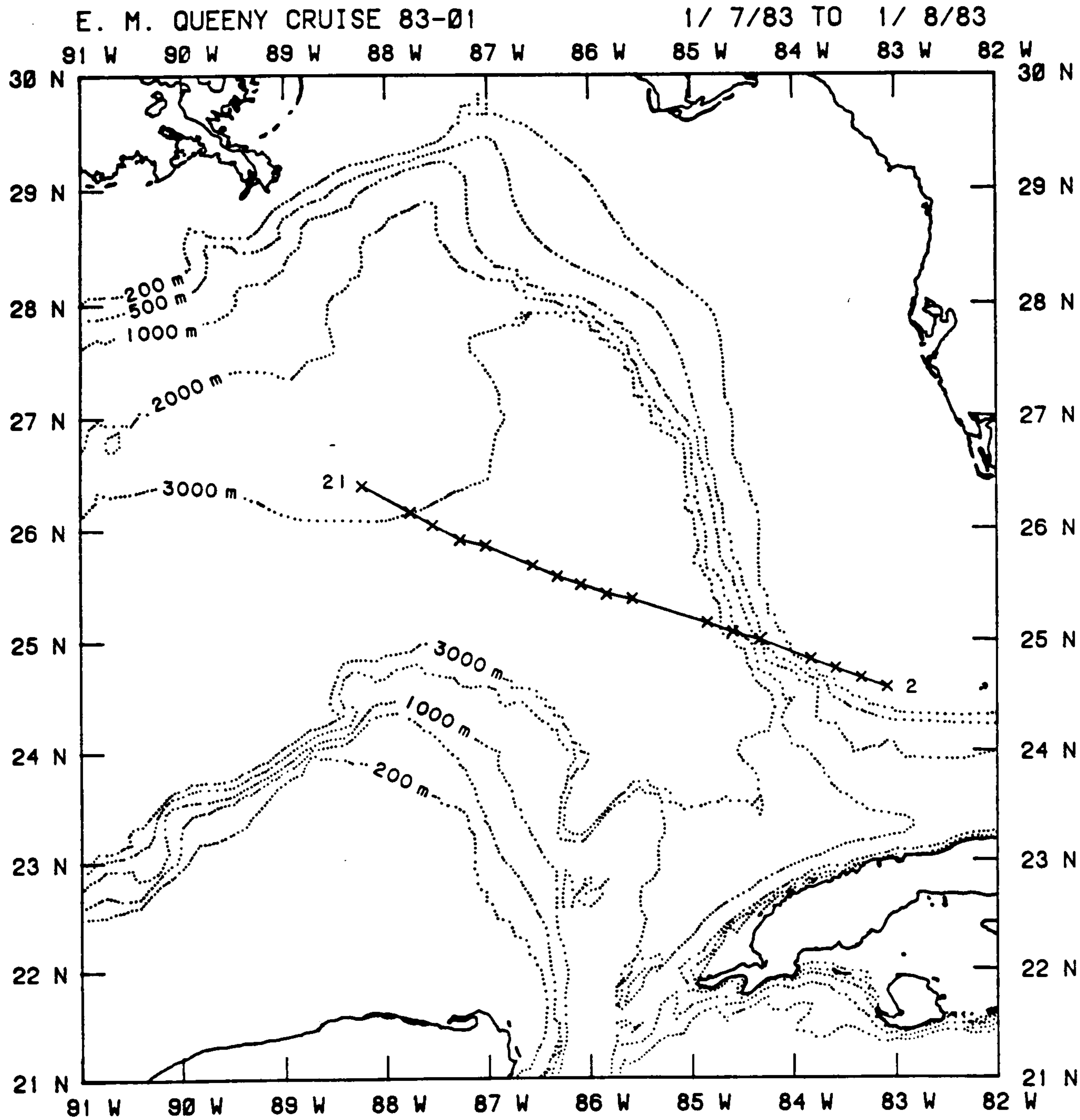
PARAMETERS AT SURFACE BELLOWS CRUISE 83-09

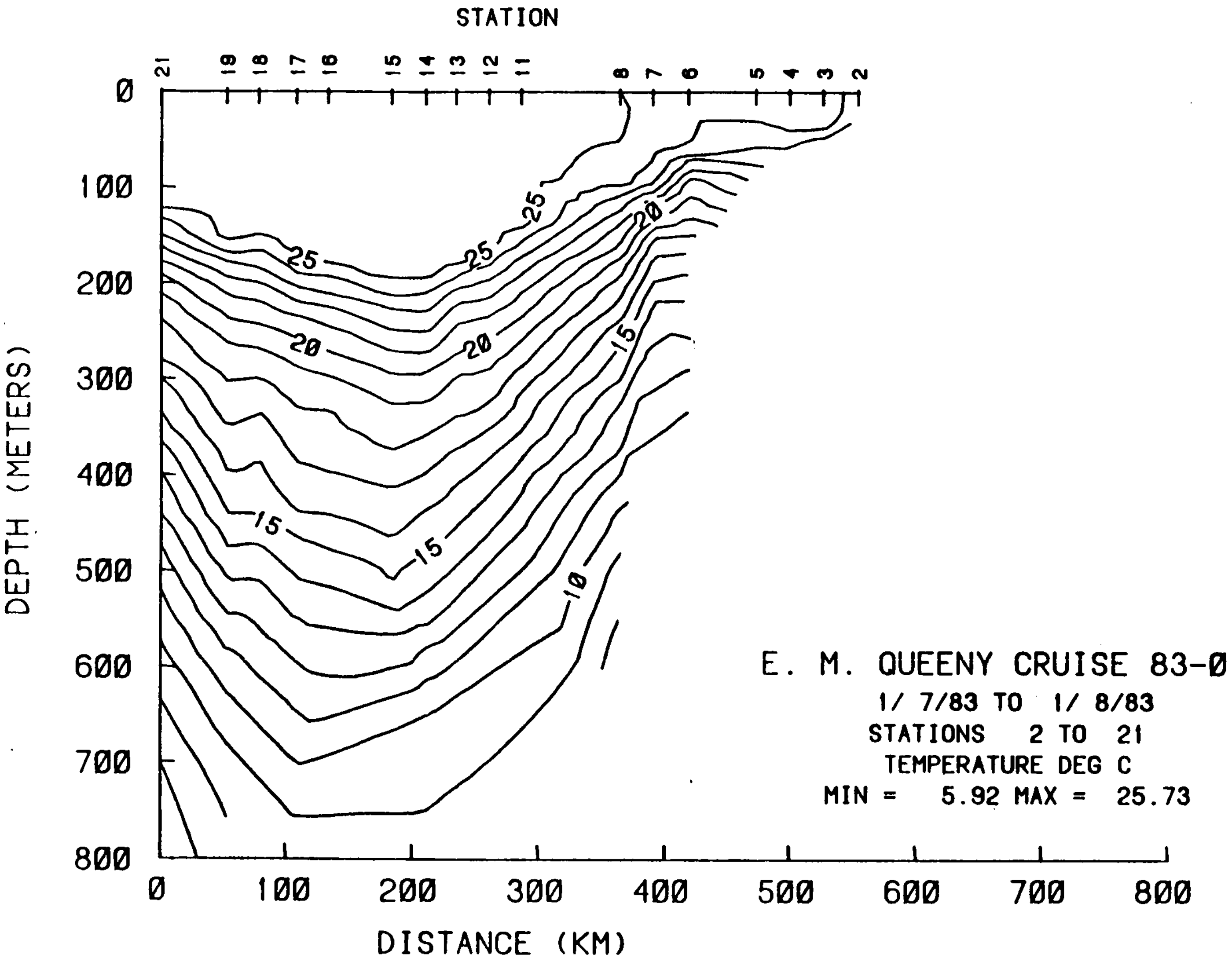


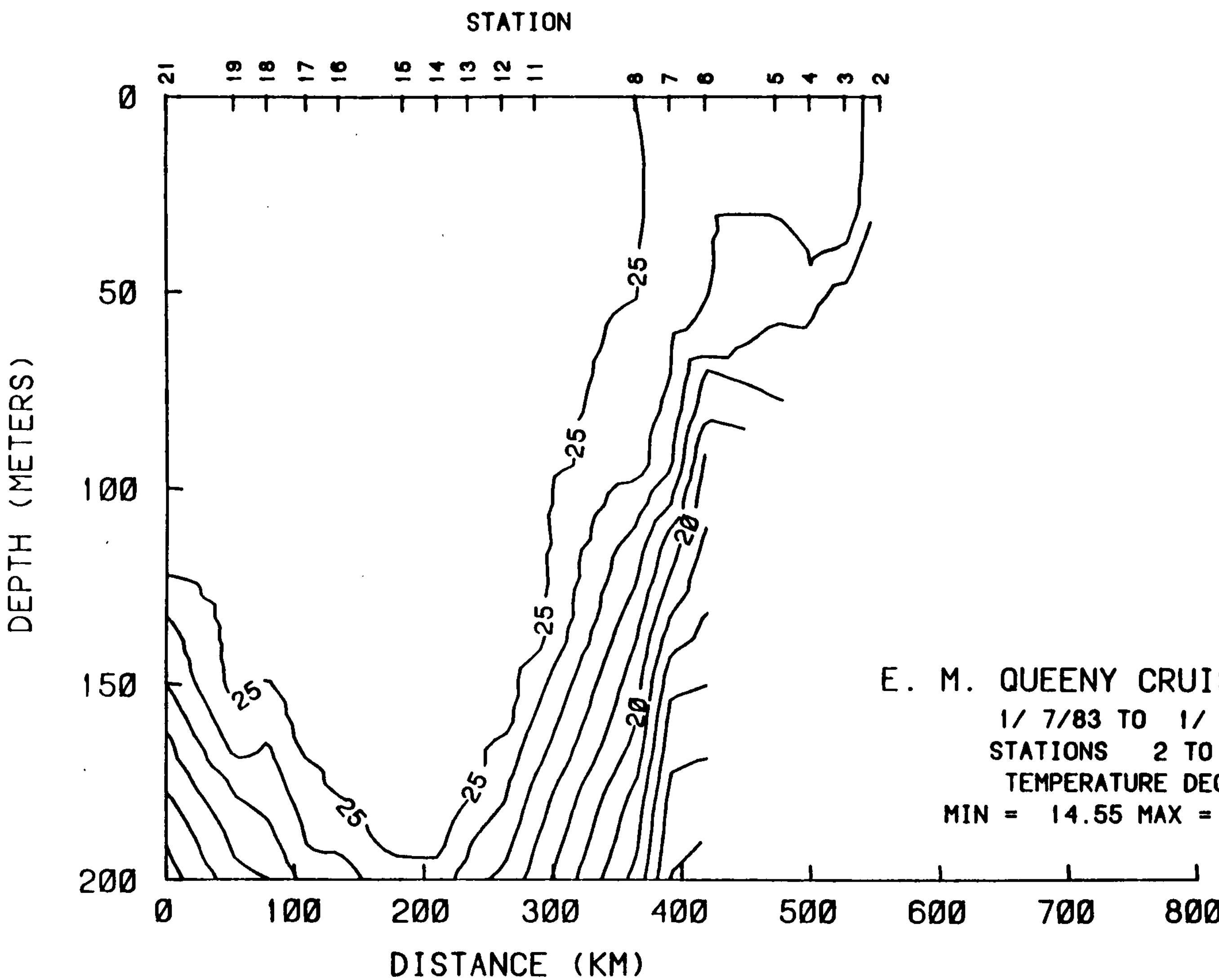
PARAMETERS AT SURFACE BELLOWS CRUISE 83-09



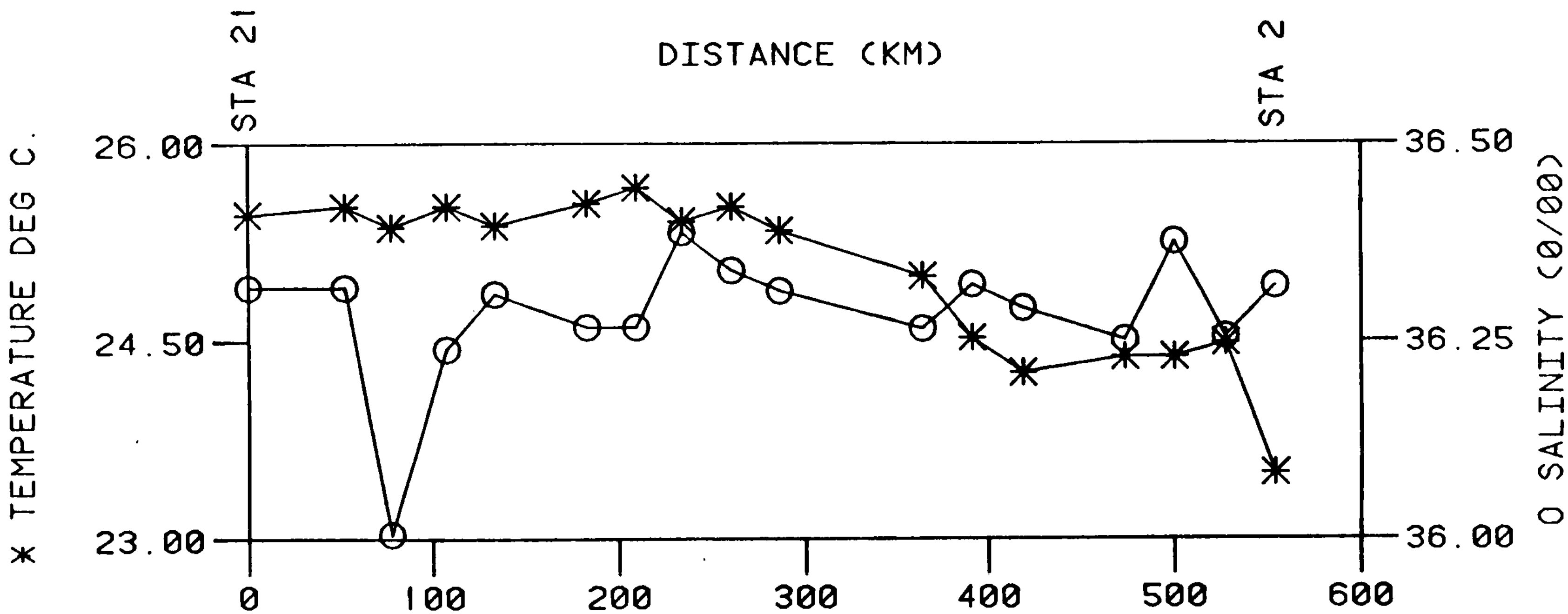
PARAMETERS AT SURFACE BELLOWS CRUISE 83-09


E. M. QUEENY CRUISE 83-Ø1
1/ 7/83 TO 1/ 8/83
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
21
2
3000 m
1000 m
200 m


STATION
21 19 18 17 16 15 14 13 12 11 8 7 6 5 4 3 2
DEPTH (METERS)
0 100 200 300 400 500 600 700 800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800
25 25 25 25 20 20 20 15 15 15 10
E. M. QUEENY CRUISE 83-01
1/ 7/83 TO 1/ 8/83
STATIONS 2 TO 21
TEMPERATURE DEG C
MIN = 5.92 MAX = 25.73

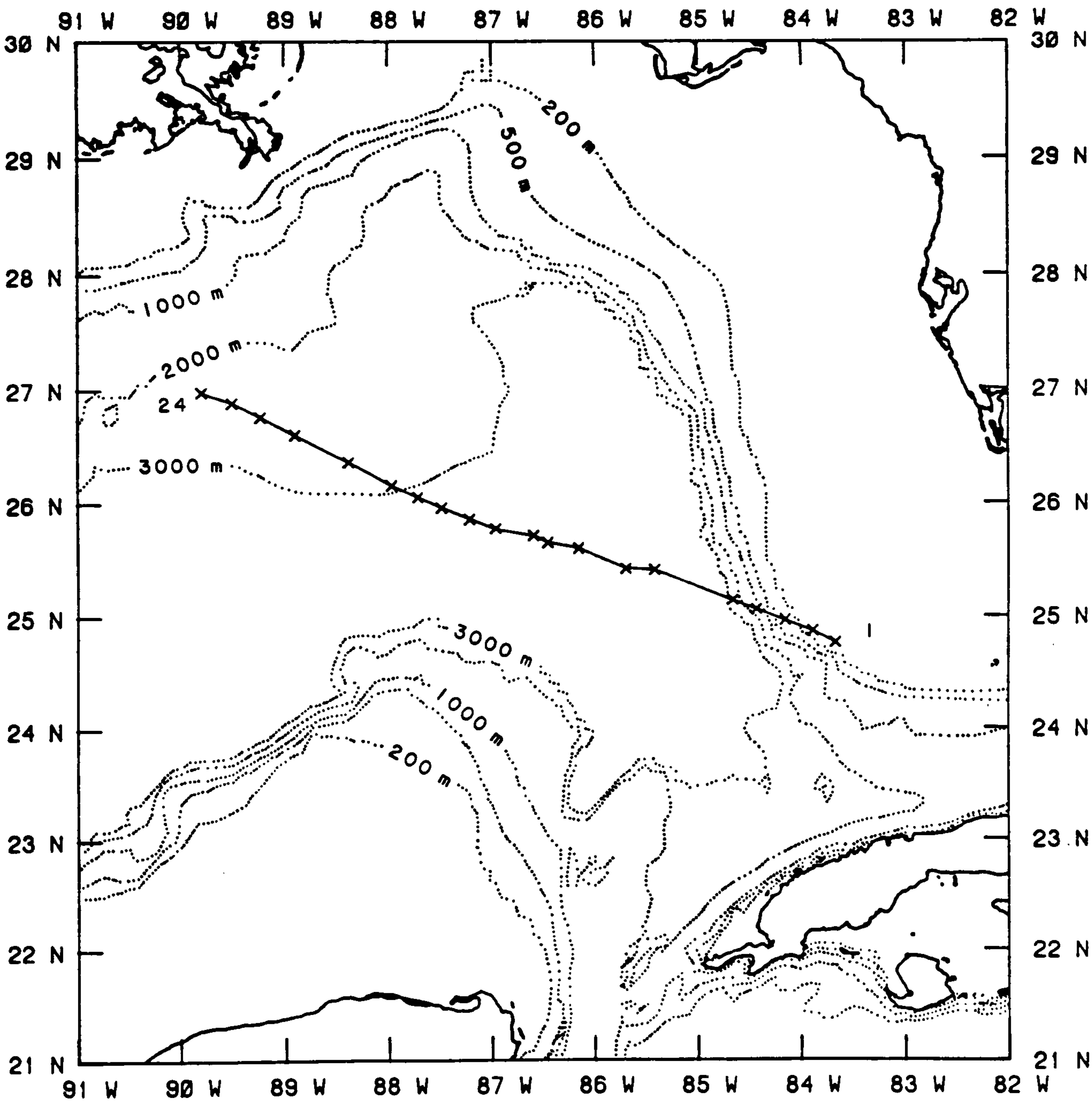


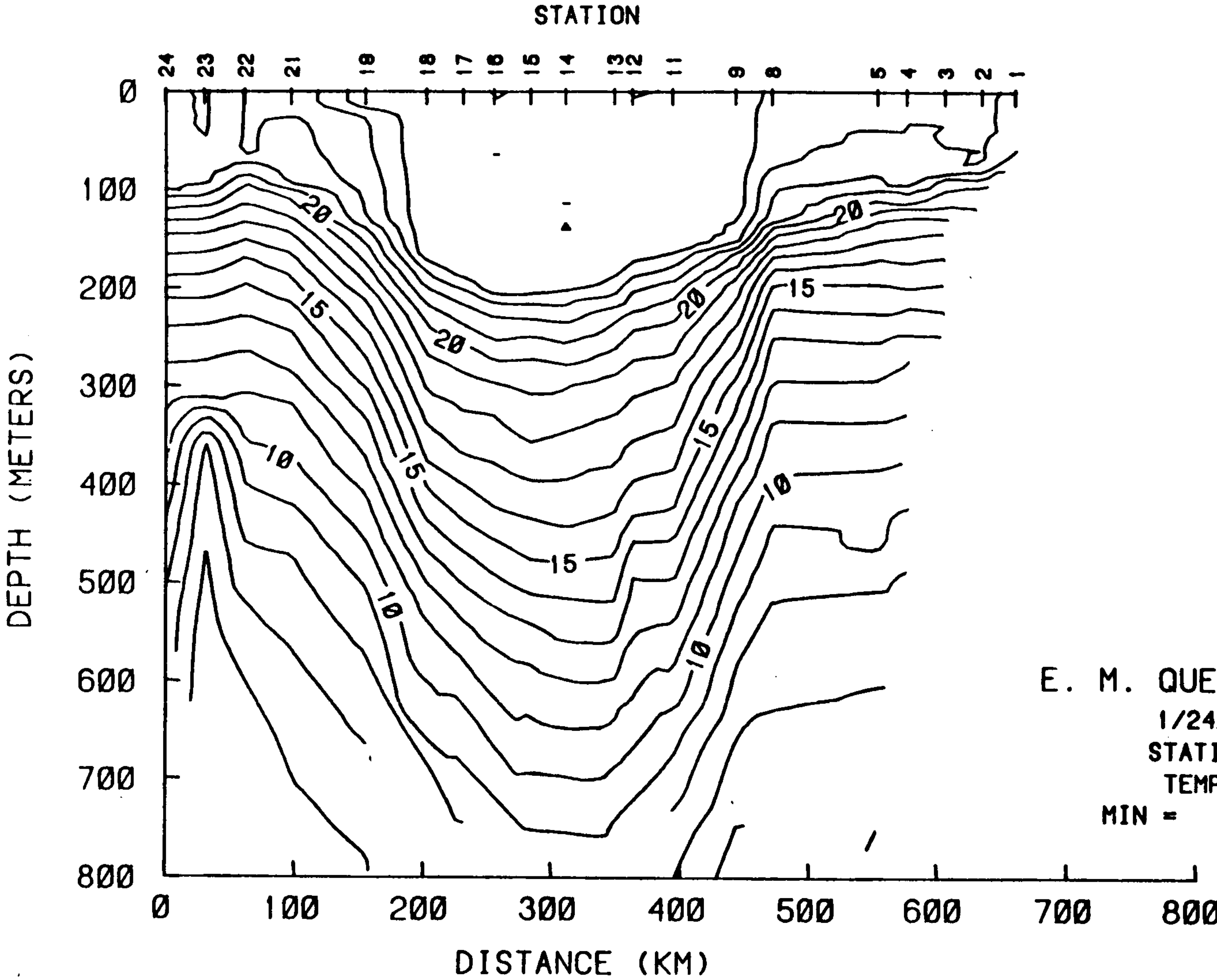
E. M. QUEENY CRUISE 83-01
1/ 7/83 TO 1/ 8/83
STATIONS 2 TO 21
TEMPERATURE DEG C
MIN = 14.55 MAX = 25.73



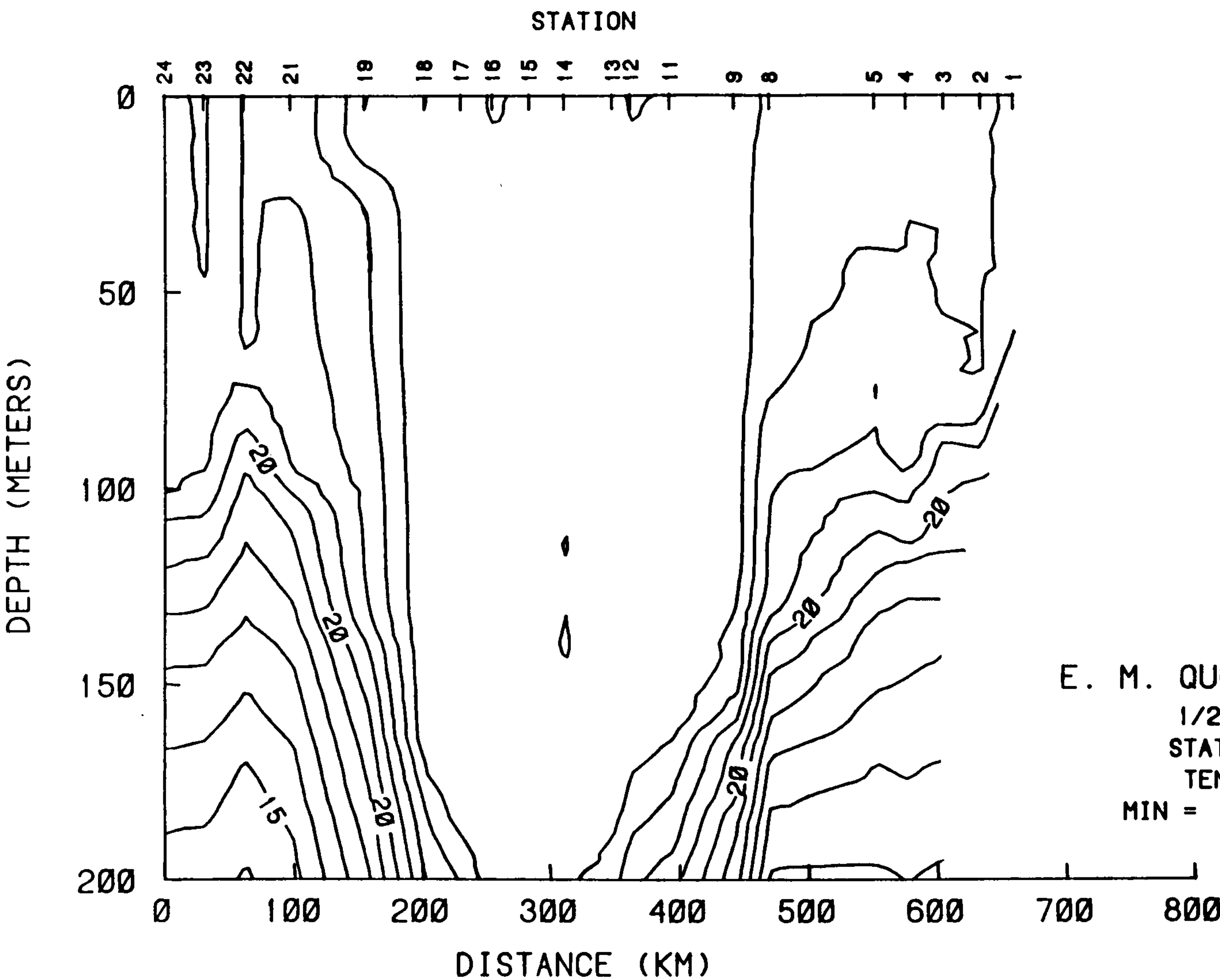
PARAMETERS AT SURFACE E. M. QUEENY CRUISE 83-01

E. M. QUEENY CRUISE 83-Ø2 1/24/83 TO 1/25/83

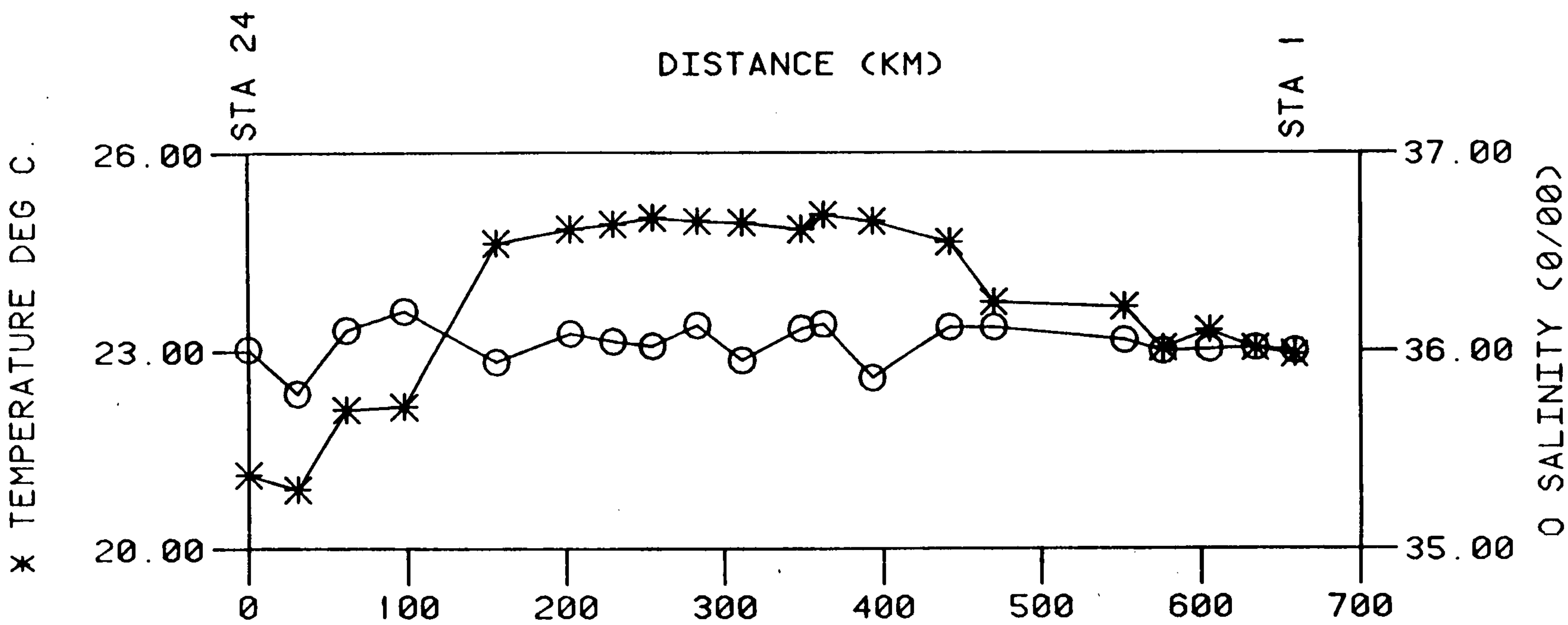




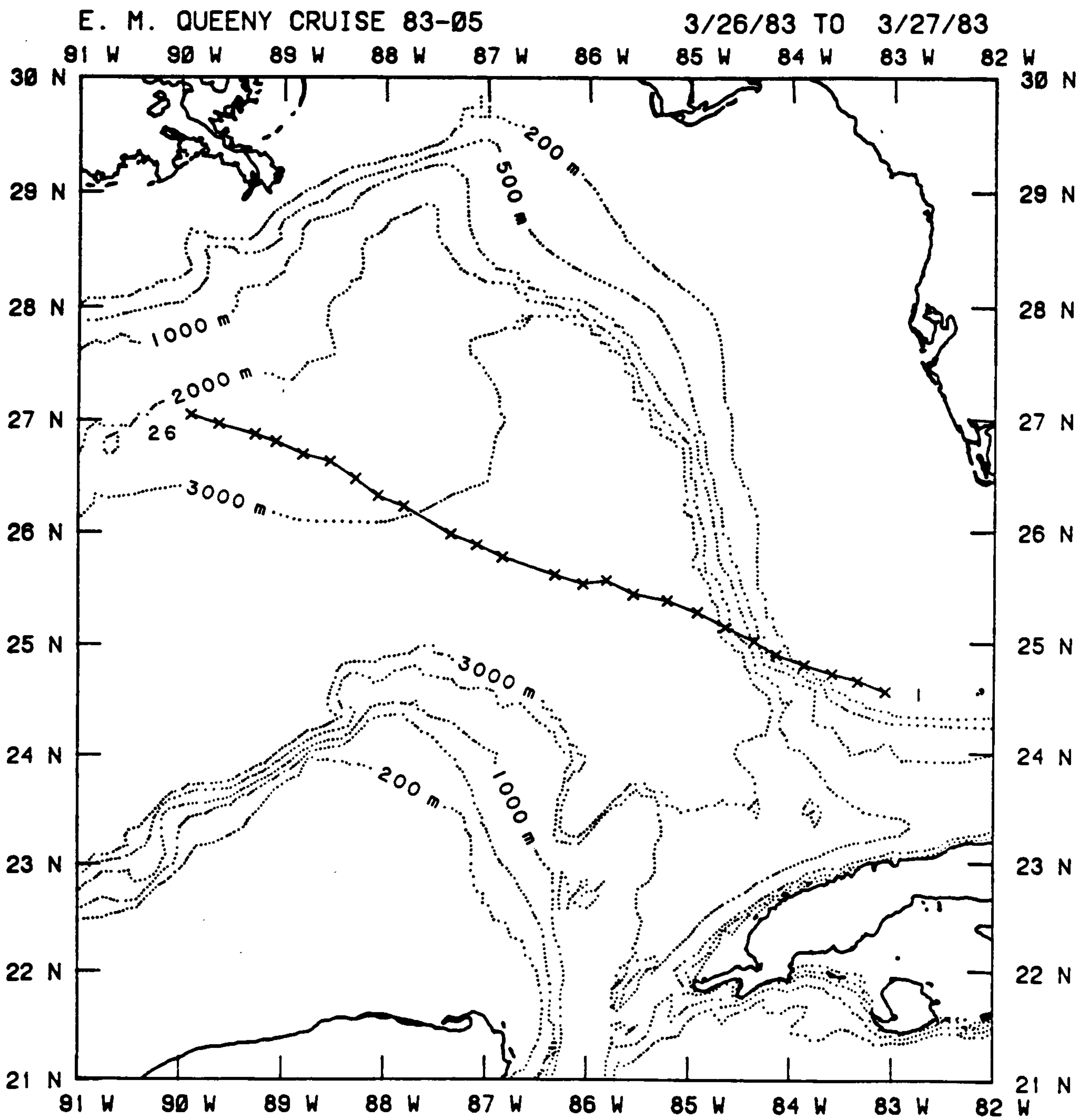
E. M. QUEENY CRUISE 83-Ø2
1/24/83 TO 1/25/83
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 4.99 MAX = 25.Ø6

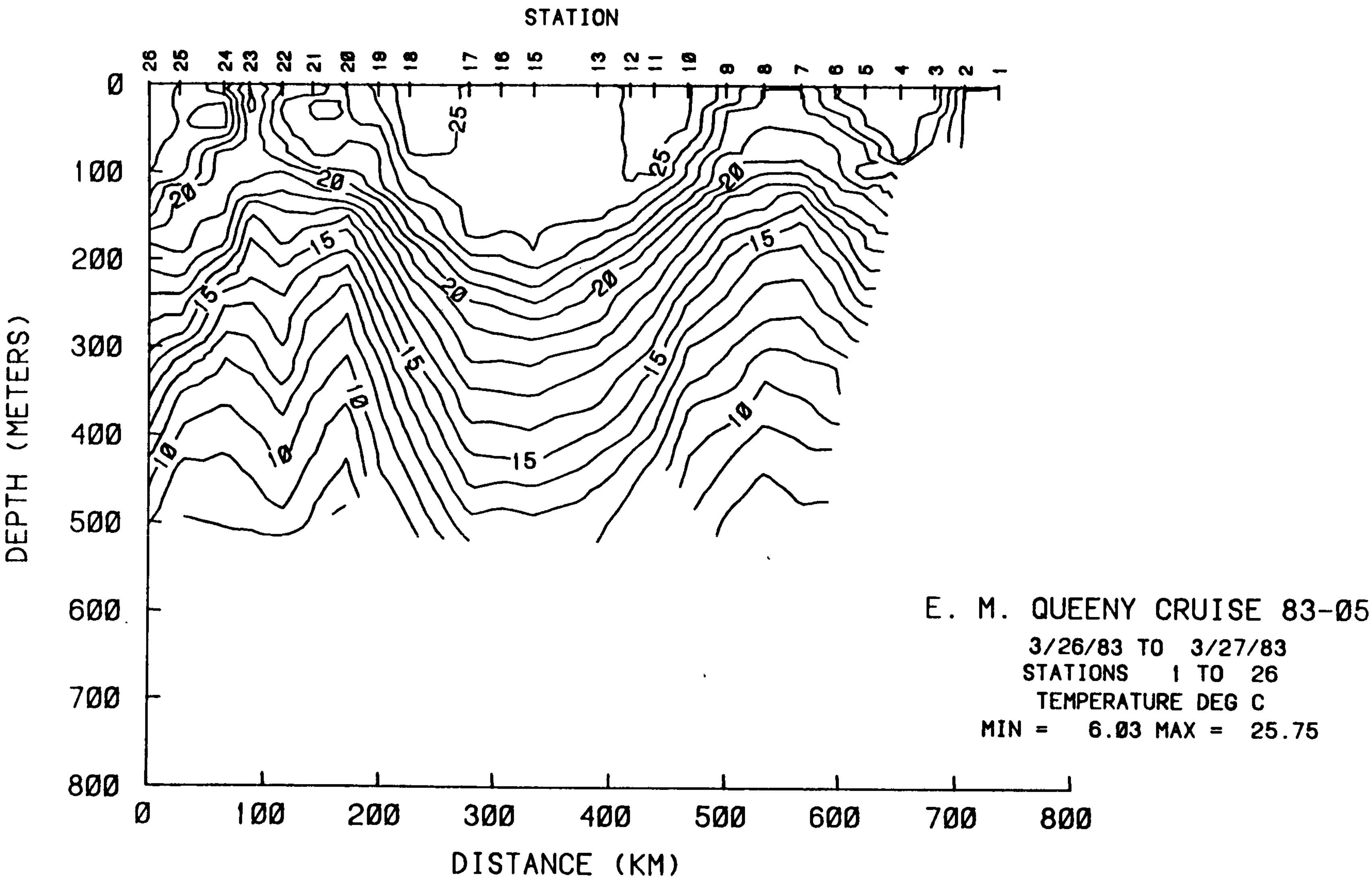


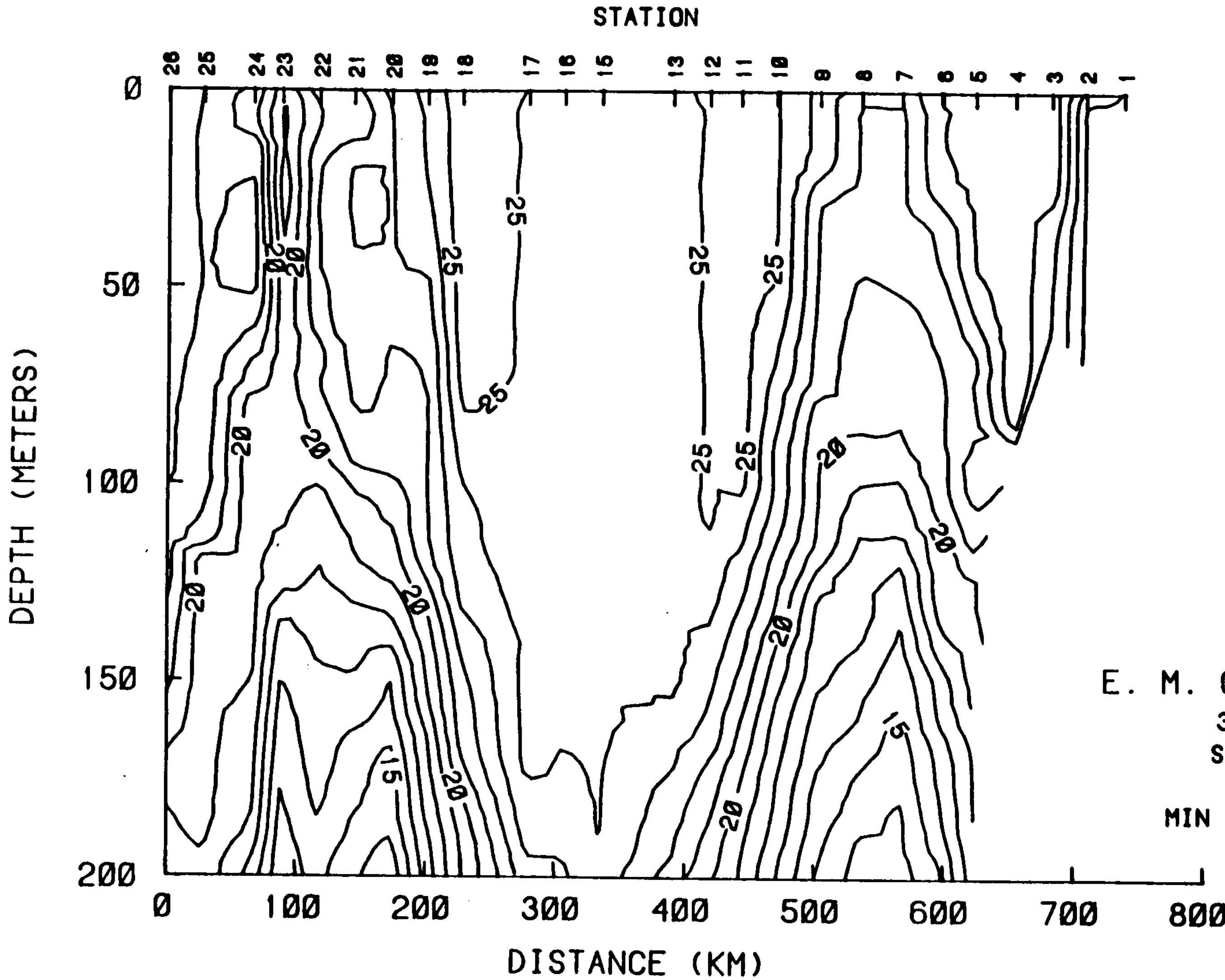
E. M. QUEENY CRUISE 83-02
1/24/83 TO 1/25/83
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 13.89 MAX = 25.06



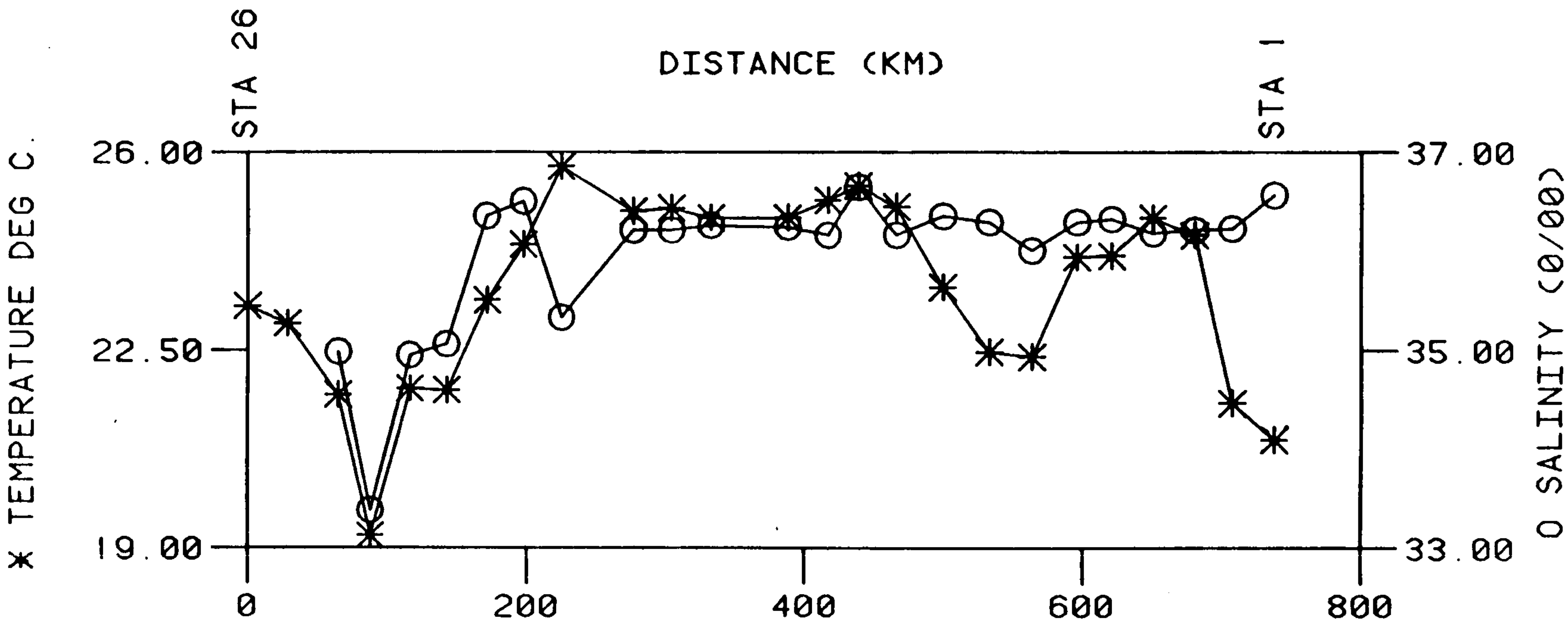
PARAMETERS AT SURFACE E. M. QUEENY CRUISE 83-02


E. M. QUEENY CRUISE 83-Ø5
3/26/83 TO 3/27/83
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
26
3000 m
3000 m
200 m
1000 m

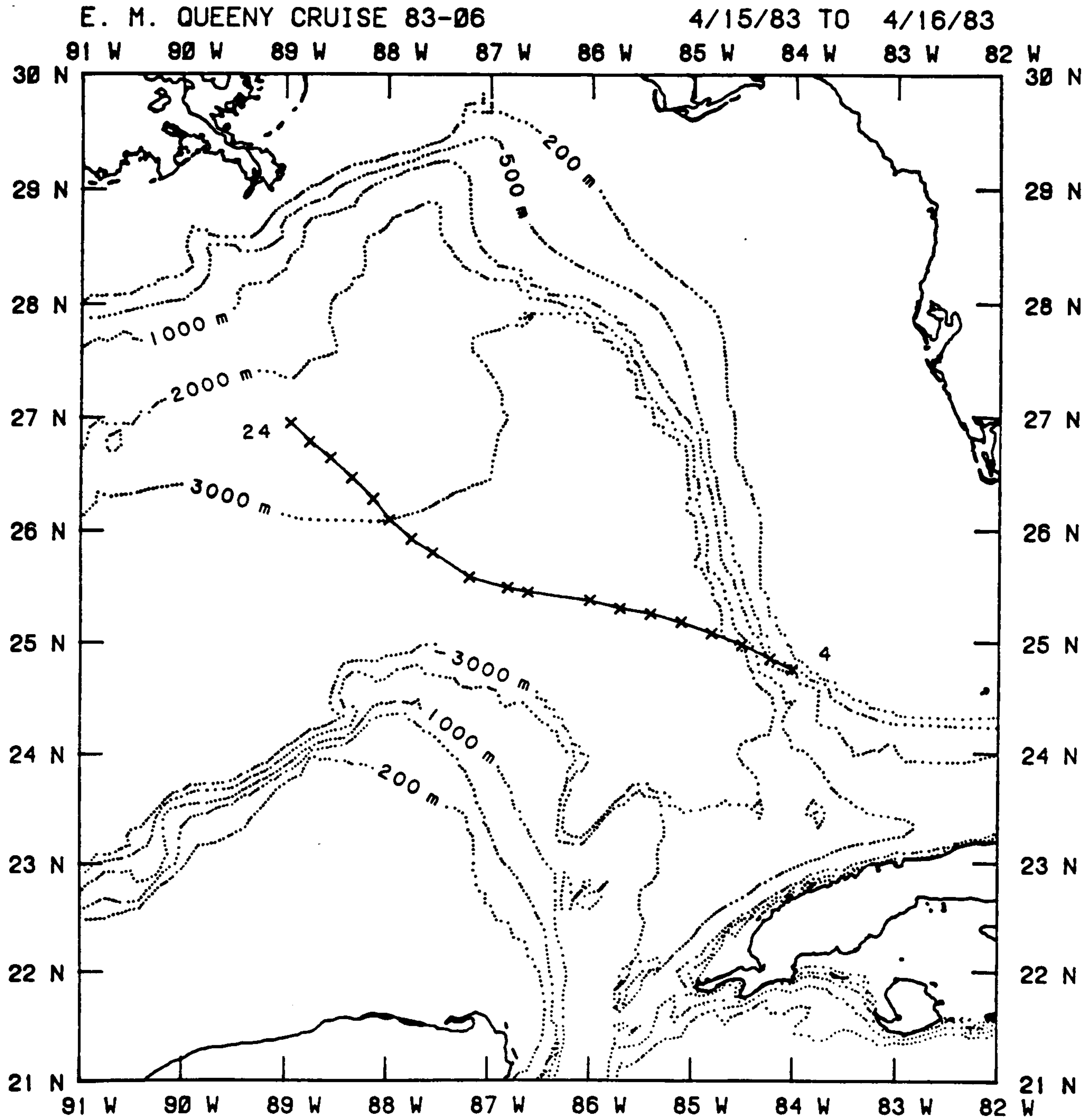

STATION
26 25 24 23 22 21 20 19 18 17 16 15 13 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
0 100 200 300 400 500 600 700 800
DISTANCE (KM)
25
20
15
10
E. M. QUEENY CRUISE 83-05
3/26/83 TO 3/27/83
STATIONS 1 TO 26
TEMPERATURE DEG C
MIN = 6.03 MAX = 25.75



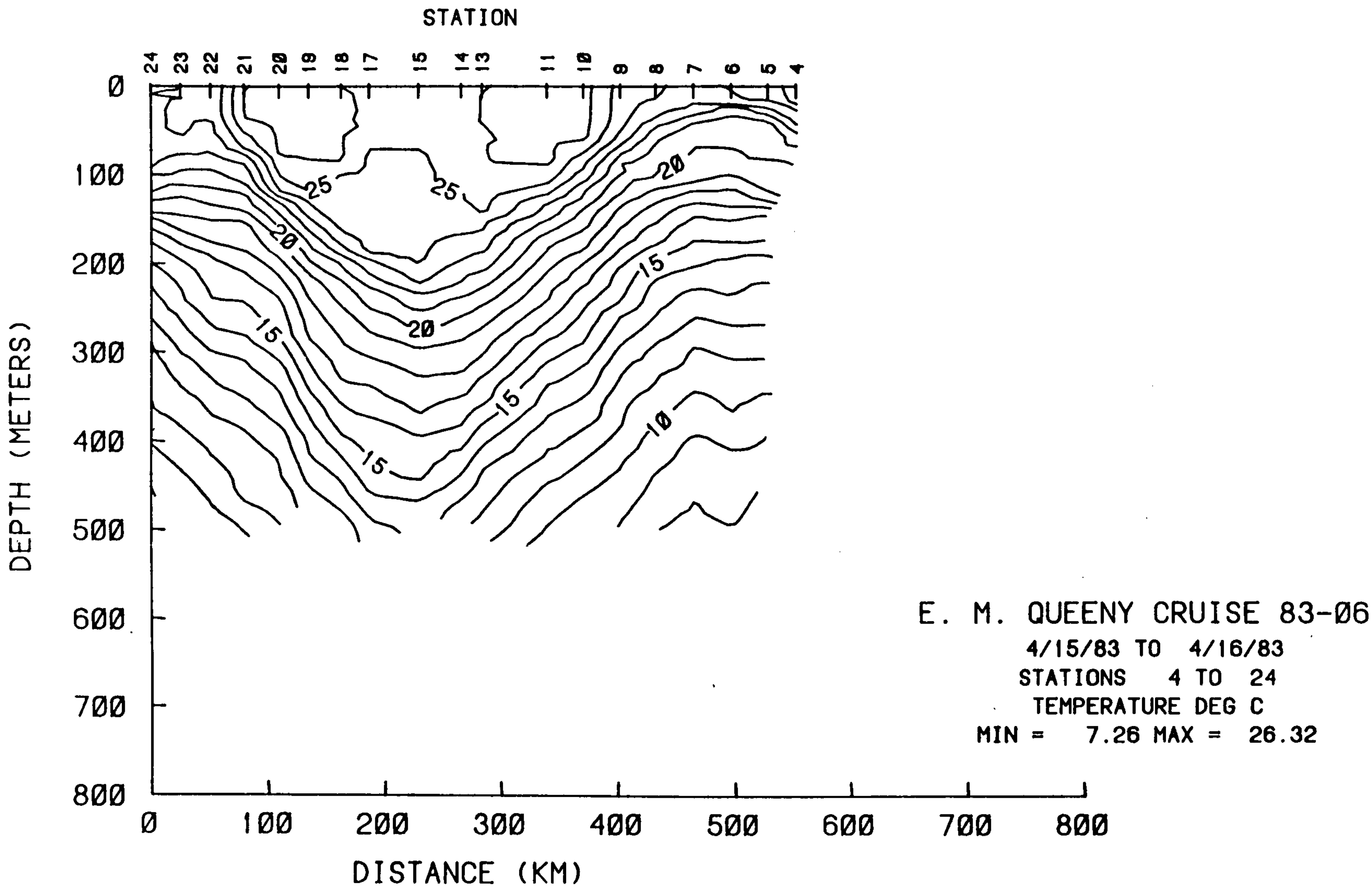
E. M. QUEENY CRUISE 83-05
3/26/83 TO 3/27/83
STATIONS 1 TO 26
TEMPERATURE DEG C
MIN = 13.18 MAX = 25.75

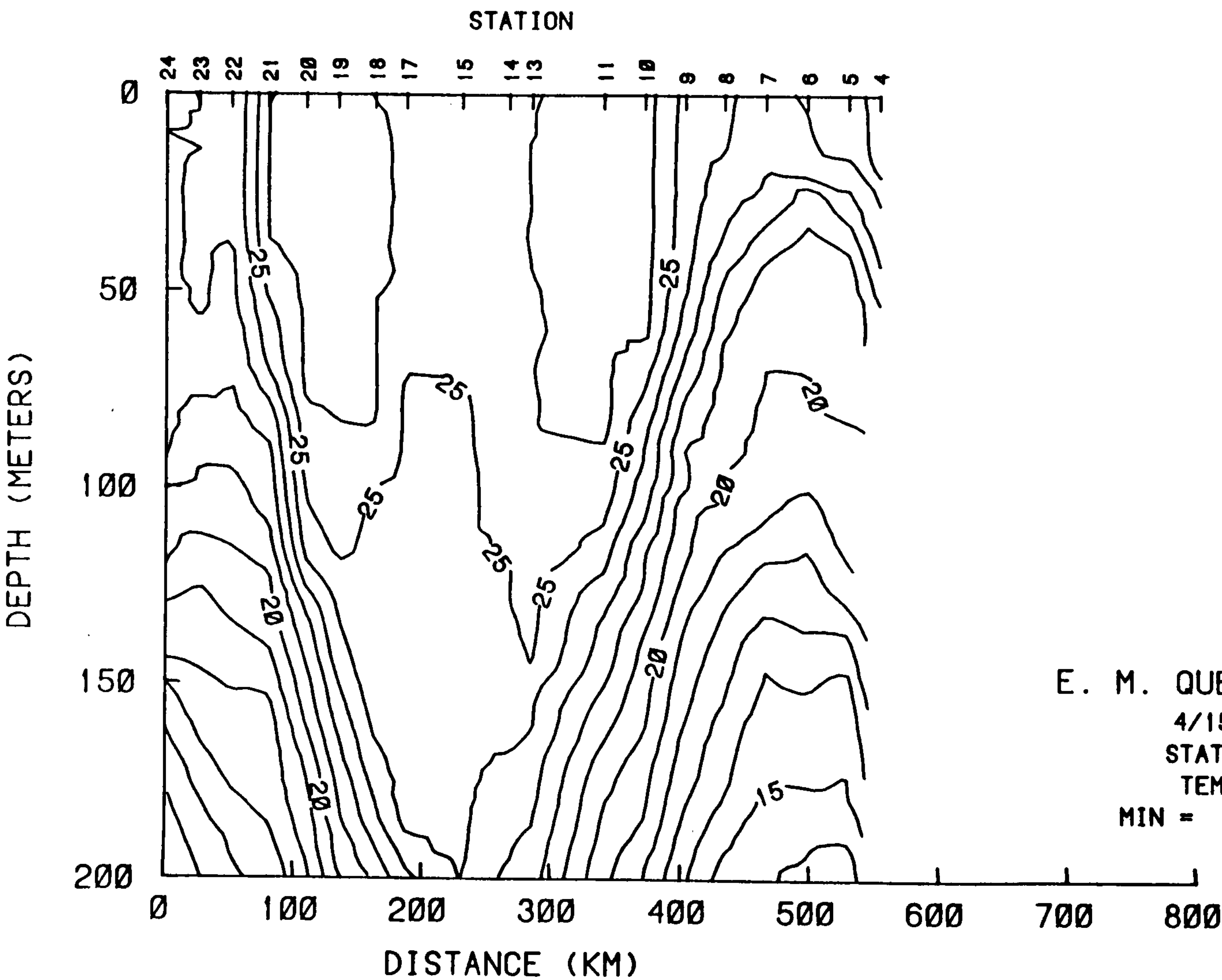


PARAMETERS AT SURFACE E. M. QUEENY CRUISE 83-05

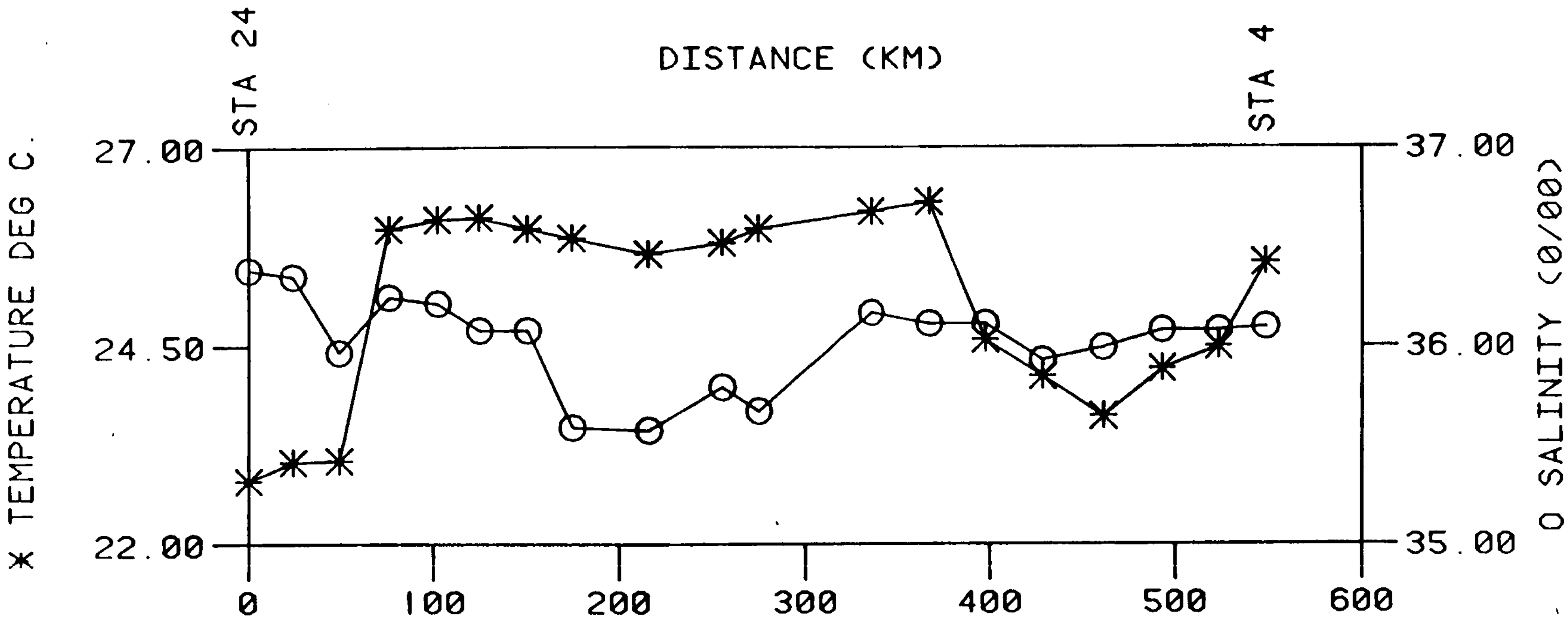


E. M. QUEENY CRUISE 83-06
4/15/83 TO 4/16/83
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
24
4
3000 m
1000 m
200 m

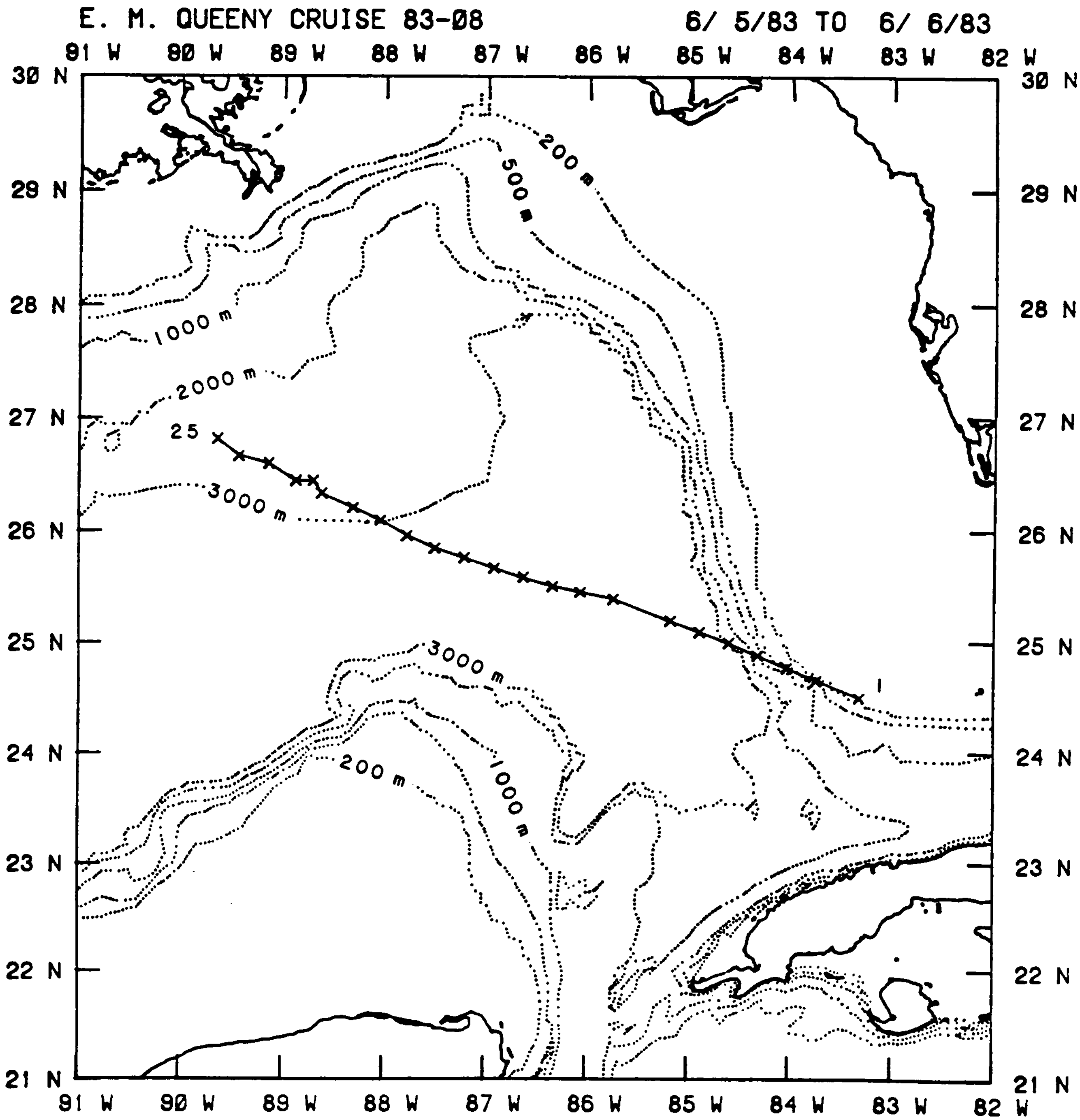

STATION
24 23 22 21 20 19 18 17 15 14 13 11 10 9 8 7 6 5 4
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800
25
20
15
10
E. M. QUEENY CRUISE 83-06
4/15/83 TO 4/16/83
STATIONS 4 TO 24
TEMPERATURE DEG C
MIN = 7.26 MAX = 26.32



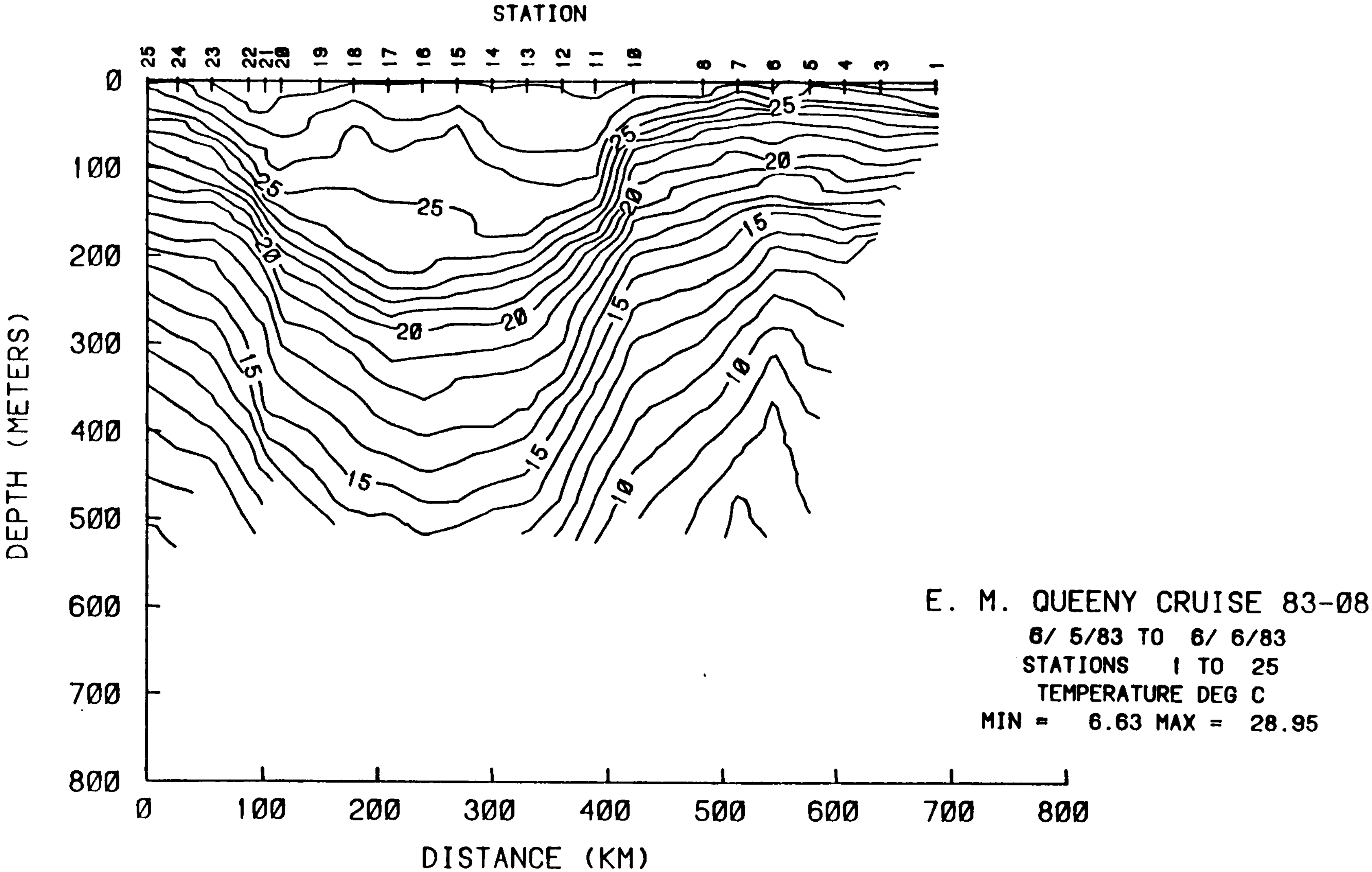
E. M. QUEENY CRUISE 83-06
4/15/83 TO 4/16/83
STATIONS 4 TO 24
TEMPERATURE DEG C
MIN = 13.42 MAX = 26.32

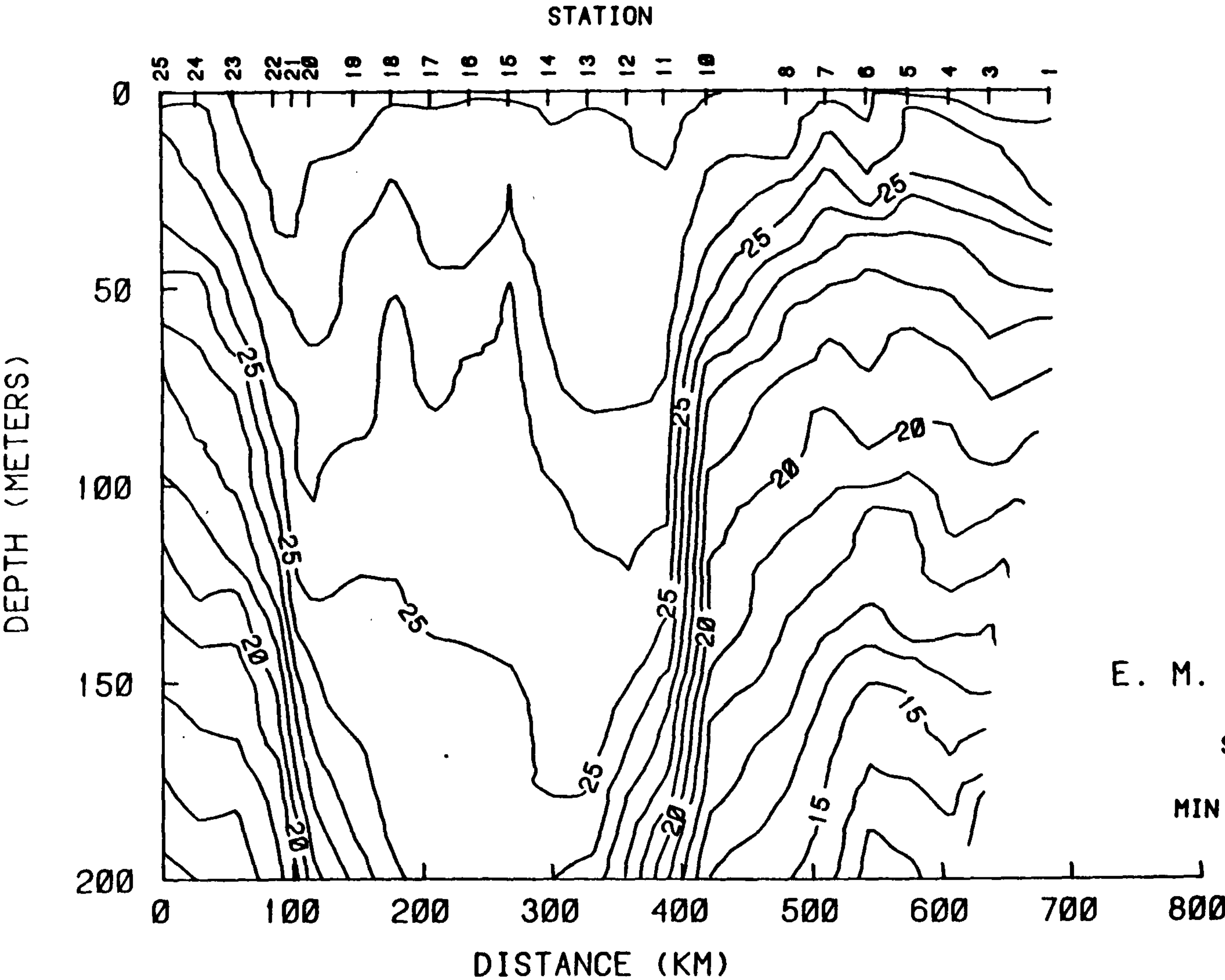


PARAMETERS AT SURFACE E. M. QUEENY CRUISE 83-06

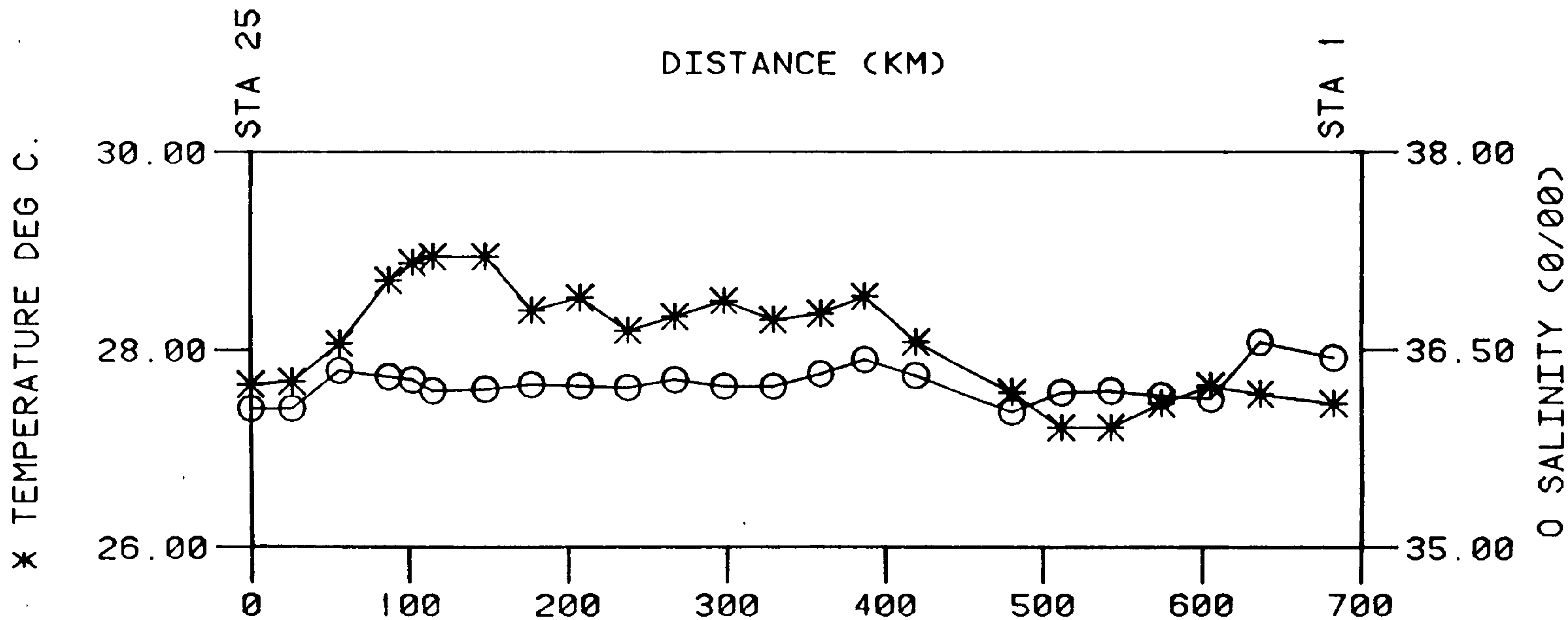


E. M. QUEENY CRUISE 83-Ø8
6/ 5/83 TO 6/ 6/83
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
25
1

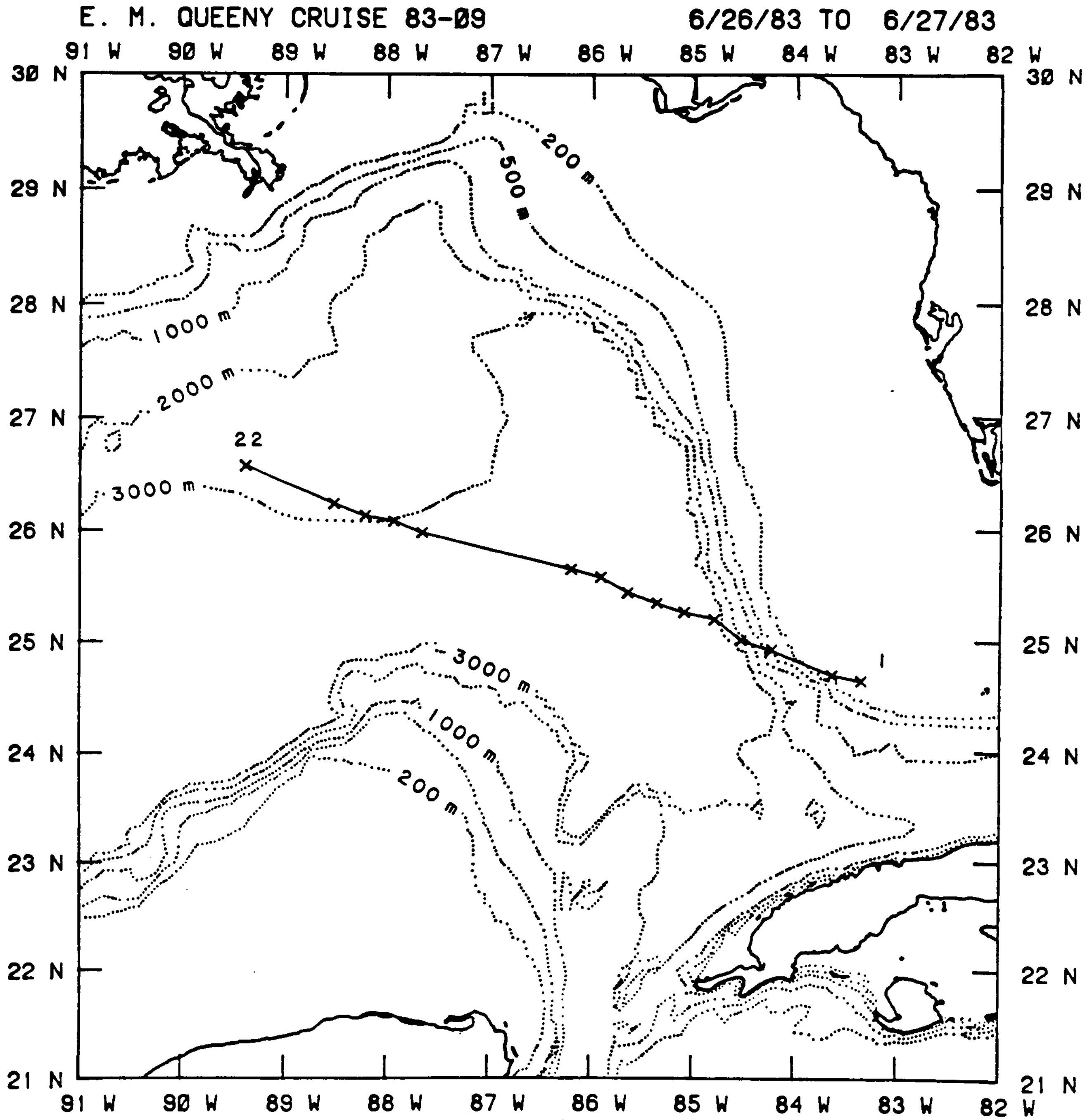

STATION
25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 8 7 6 5 4 3 1
DEPTH (METERS)
DISTANCE (KM)
25
20
15
10
E. M. QUEENY CRUISE 83-08
6/ 5/83 TO 6/ 6/83
STATIONS 1 TO 25
TEMPERATURE DEG C
MIN = 6.63 MAX = 28.95



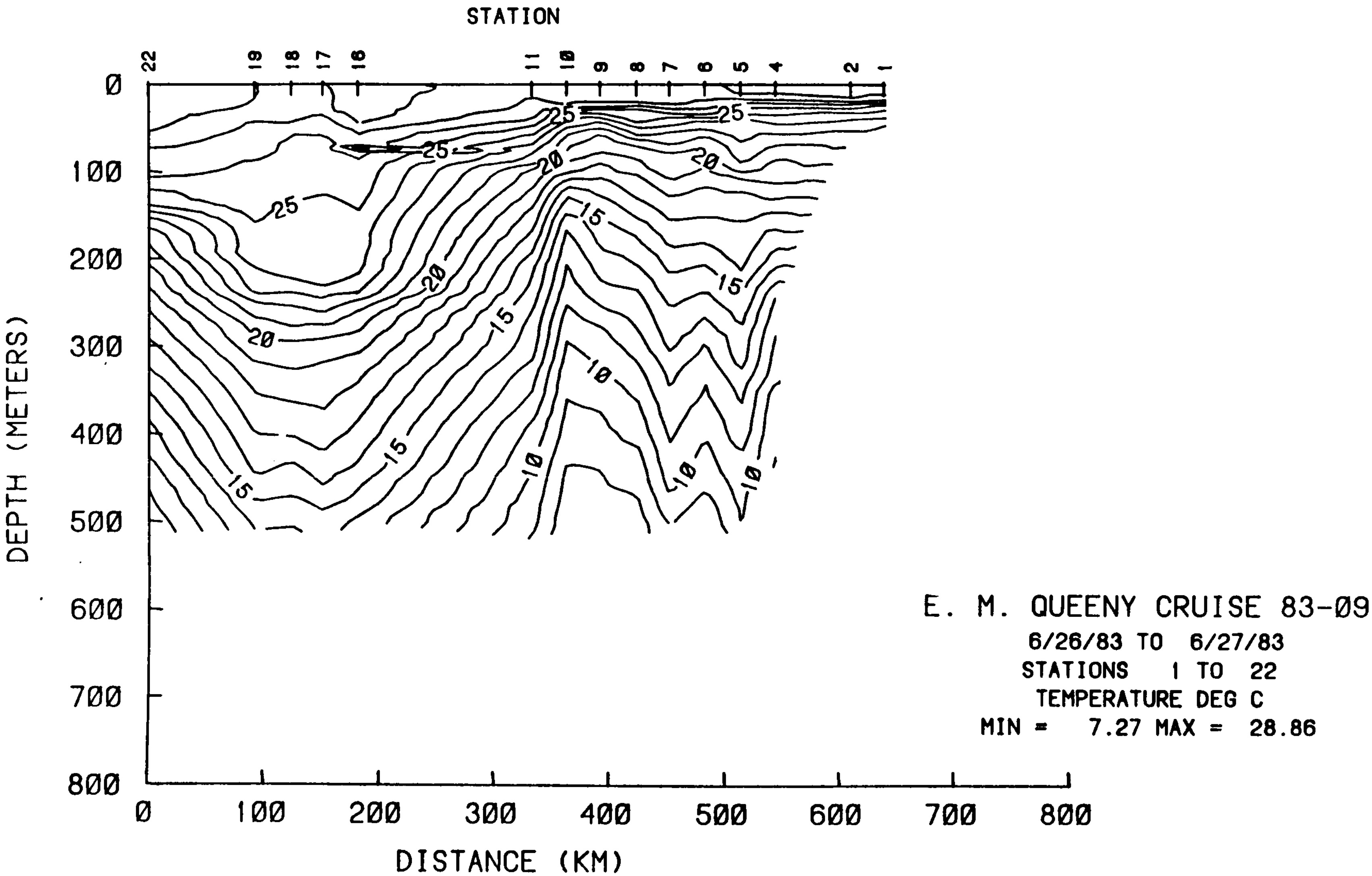
E. M. QUEENY CRUISE 83-08
6/ 5/83 TO 6/ 6/83
STATIONS 1 TO 25
TEMPERATURE DEG C
MIN = 12.40 MAX = 28.95

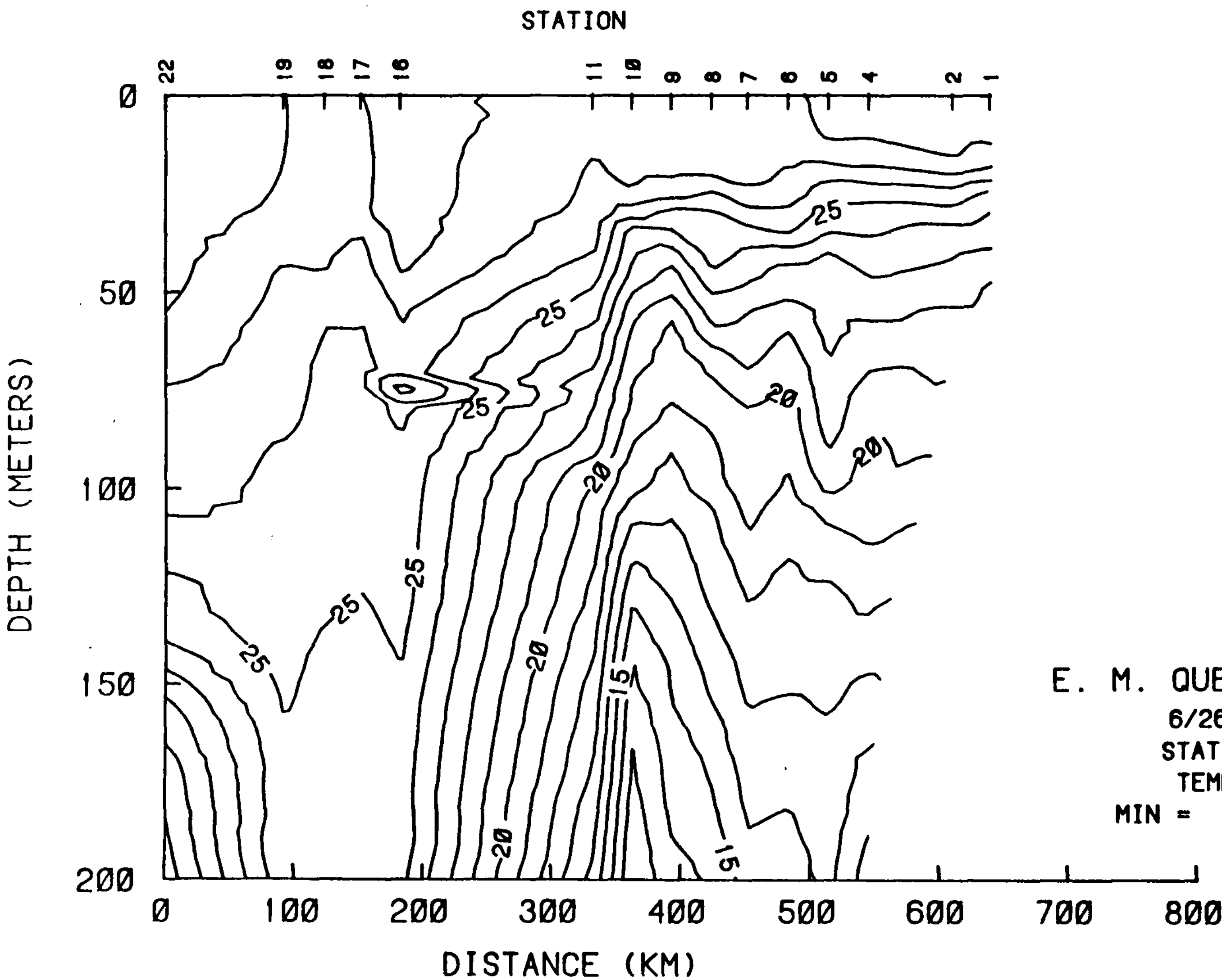


PARAMETERS AT SURFACE E. M. QUEENY CRUISE 83-08

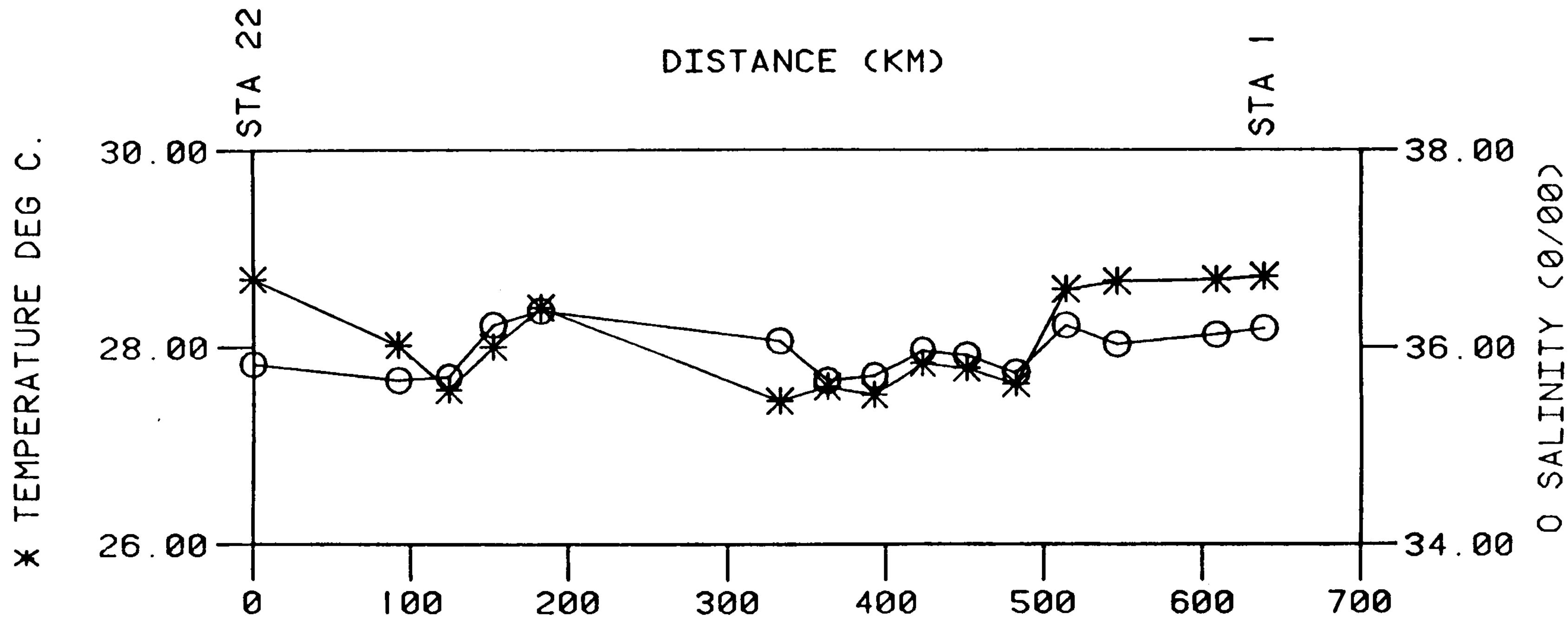


E. M. QUEENY CRUISE 83-09
6/26/83 TO 6/27/83
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
22
1
3000 m
1000 m
200 m

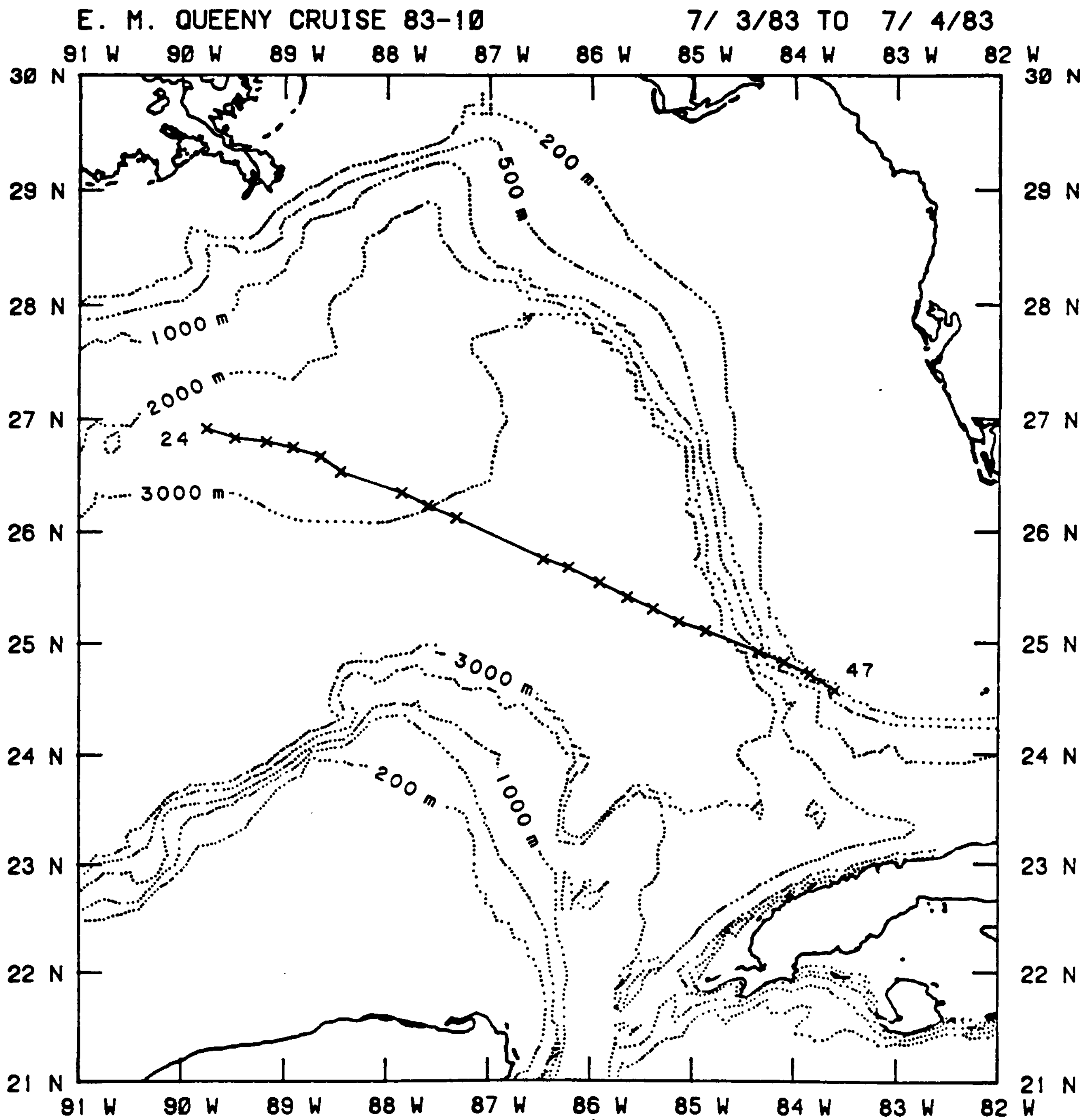

STATION
22 19 18 17 16 11 10 9 8 7 6 5 4 2 1
DEPTH (METERS)
DISTANCE (KM)
E. M. QUEENY CRUISE 83-09
6/26/83 TO 6/27/83
STATIONS 1 TO 22
TEMPERATURE DEG C
MIN = 7.27 MAX = 28.86

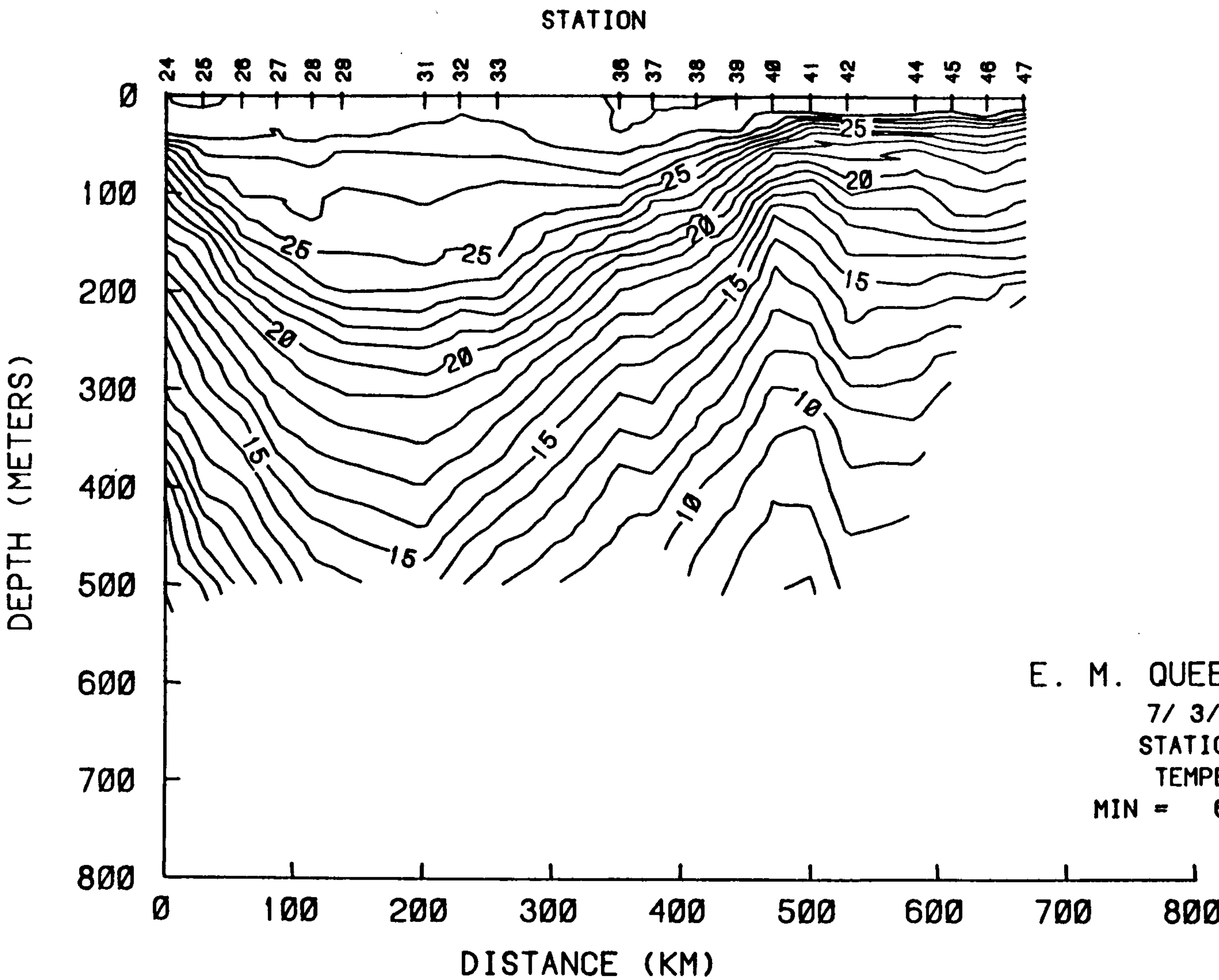


E. M. QUEENY CRUISE 83-09
6/26/83 TO 6/27/83
STATIONS 1 TO 22
TEMPERATURE DEG C
MIN = 12.17 MAX = 28.86



PARAMETERS AT SURFACE E. M. QUEENY CRUISE 83-09


E. M. QUEENY CRUISE 83-10
7/ 3/83 TO 7/ 4/83
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
24
47
3000 m
200 m
1000 m



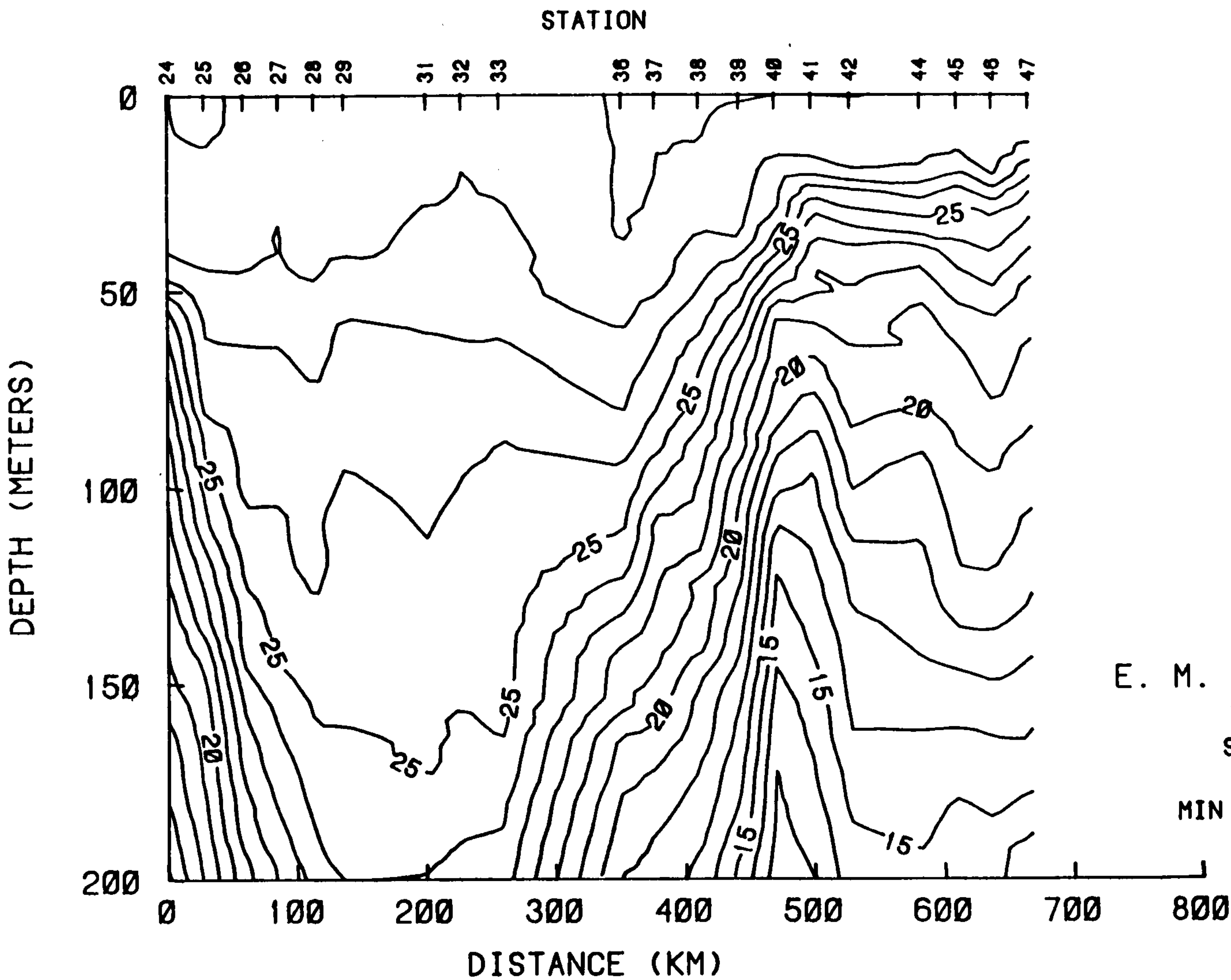
E. M. QUEENY CRUISE 83-10

7/ 3/83 TO 7/ 4/83

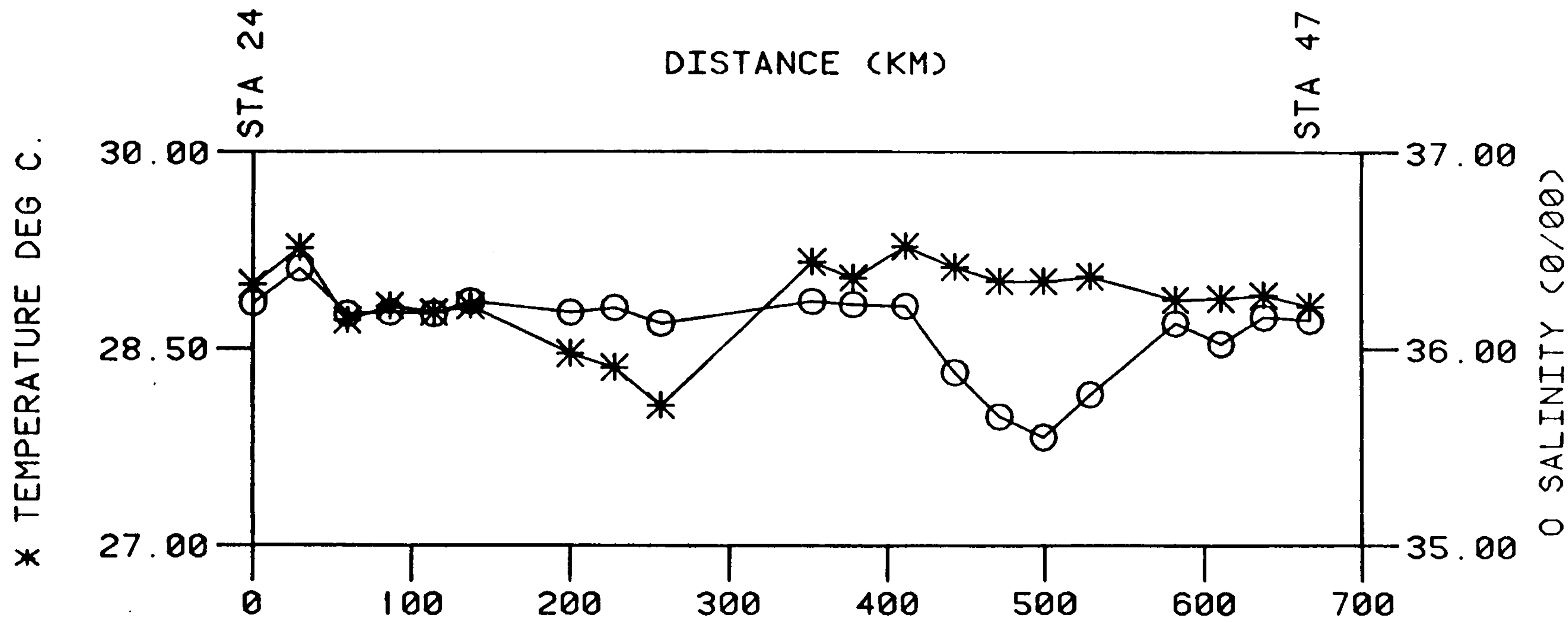
STATIONS 24 TO 47

TEMPERATURE DEG C

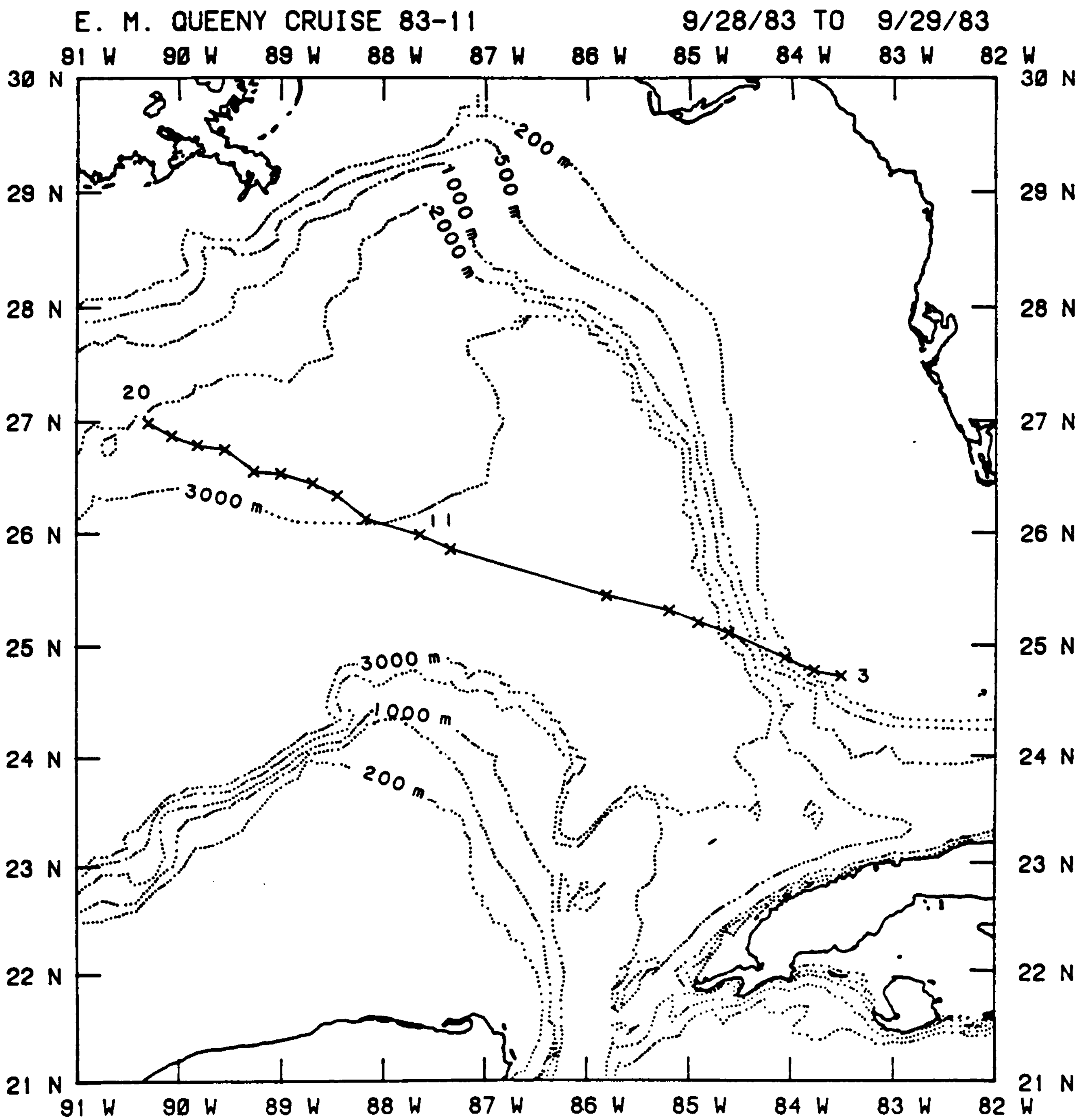
MIN = 6.76 MAX = 29.27

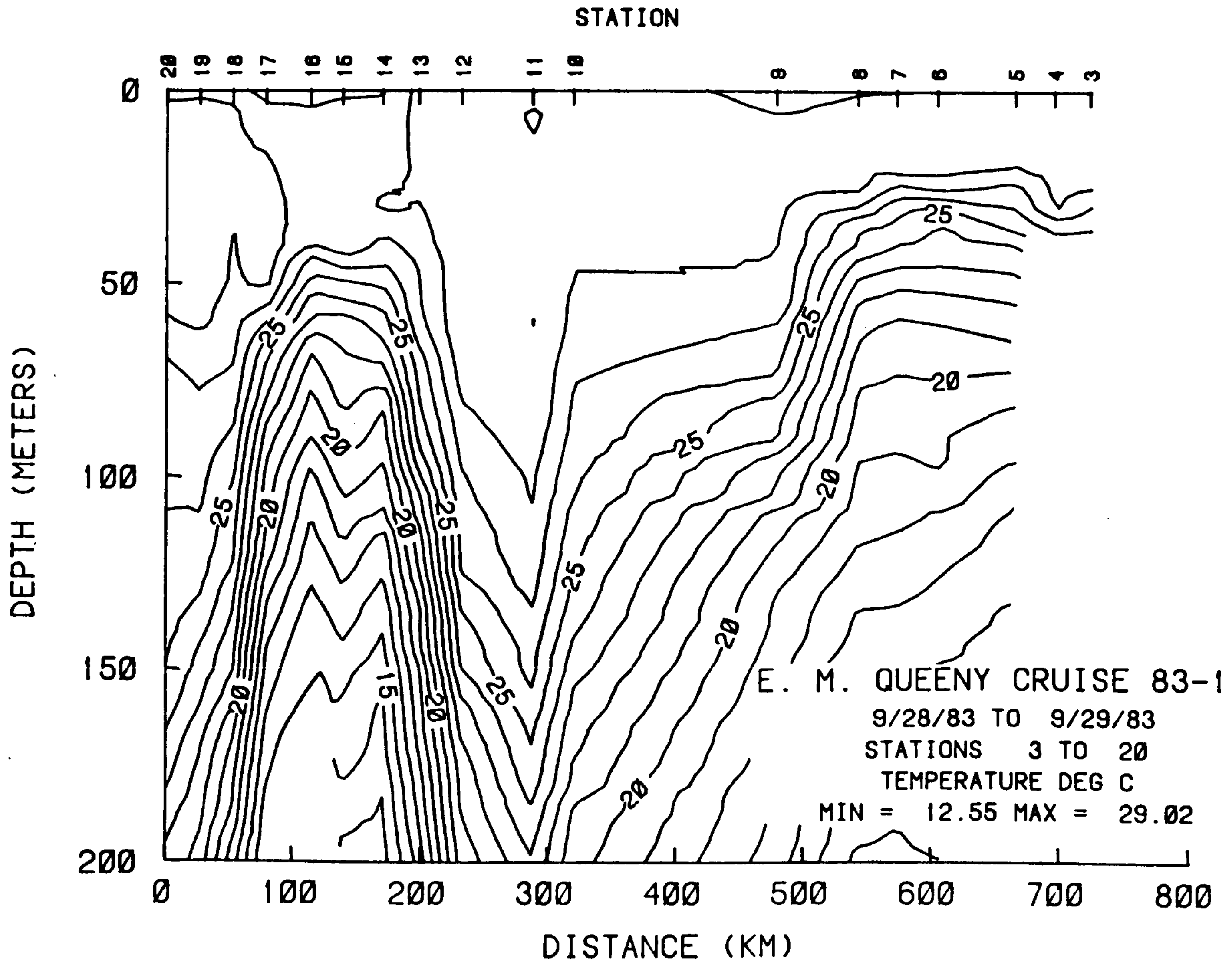


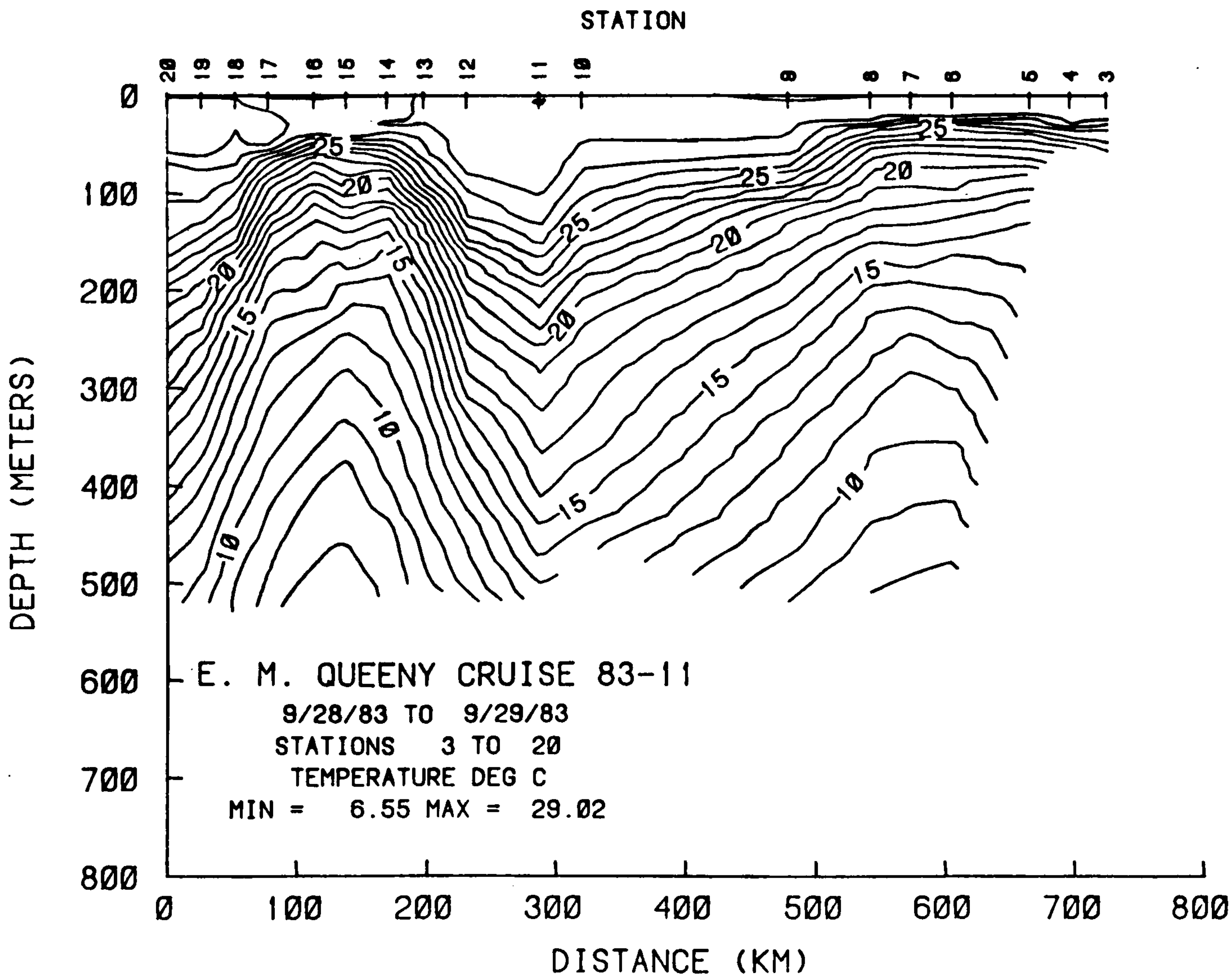
E. M. QUEENY CRUISE 83-10
7/ 3/83 TO 7/ 4/83
STATIONS 24 TO 47
TEMPERATURE DEG C
MIN = 12.43 MAX = 29.27

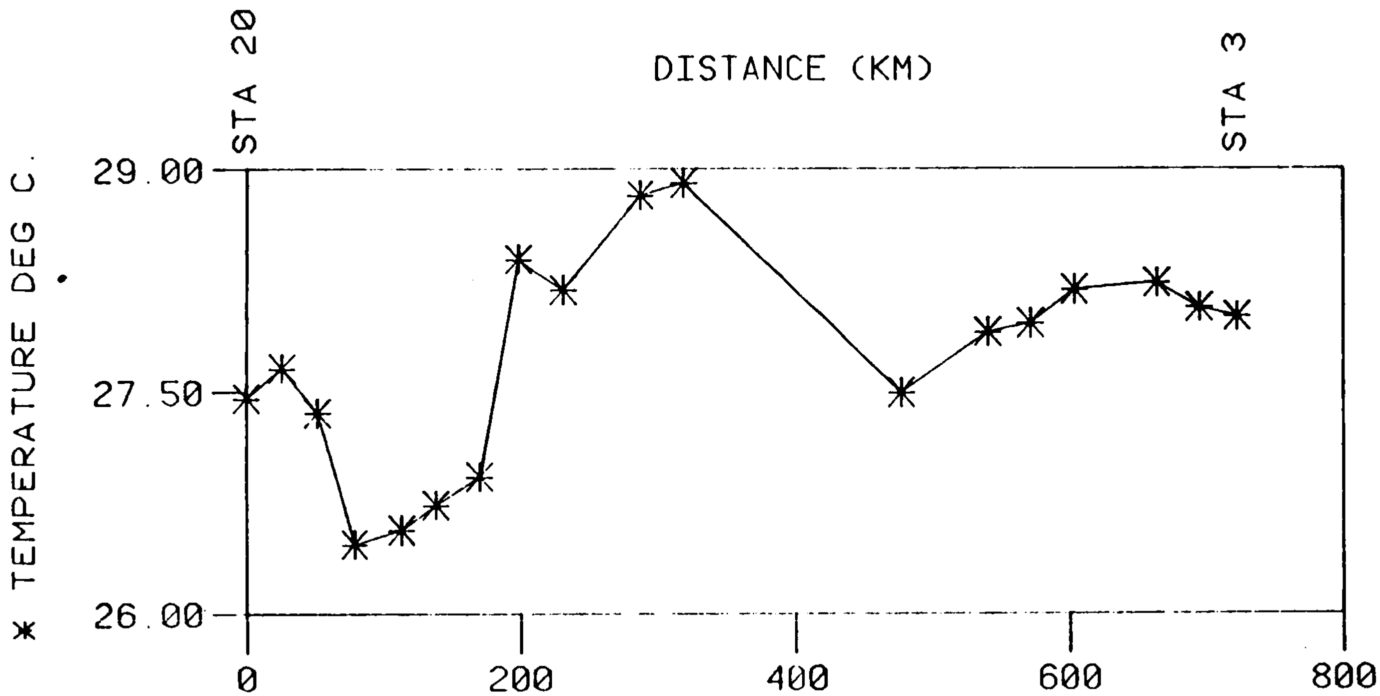


PARAMETERS AT SURFACE E. M. QUEENY CRUISE 83-10

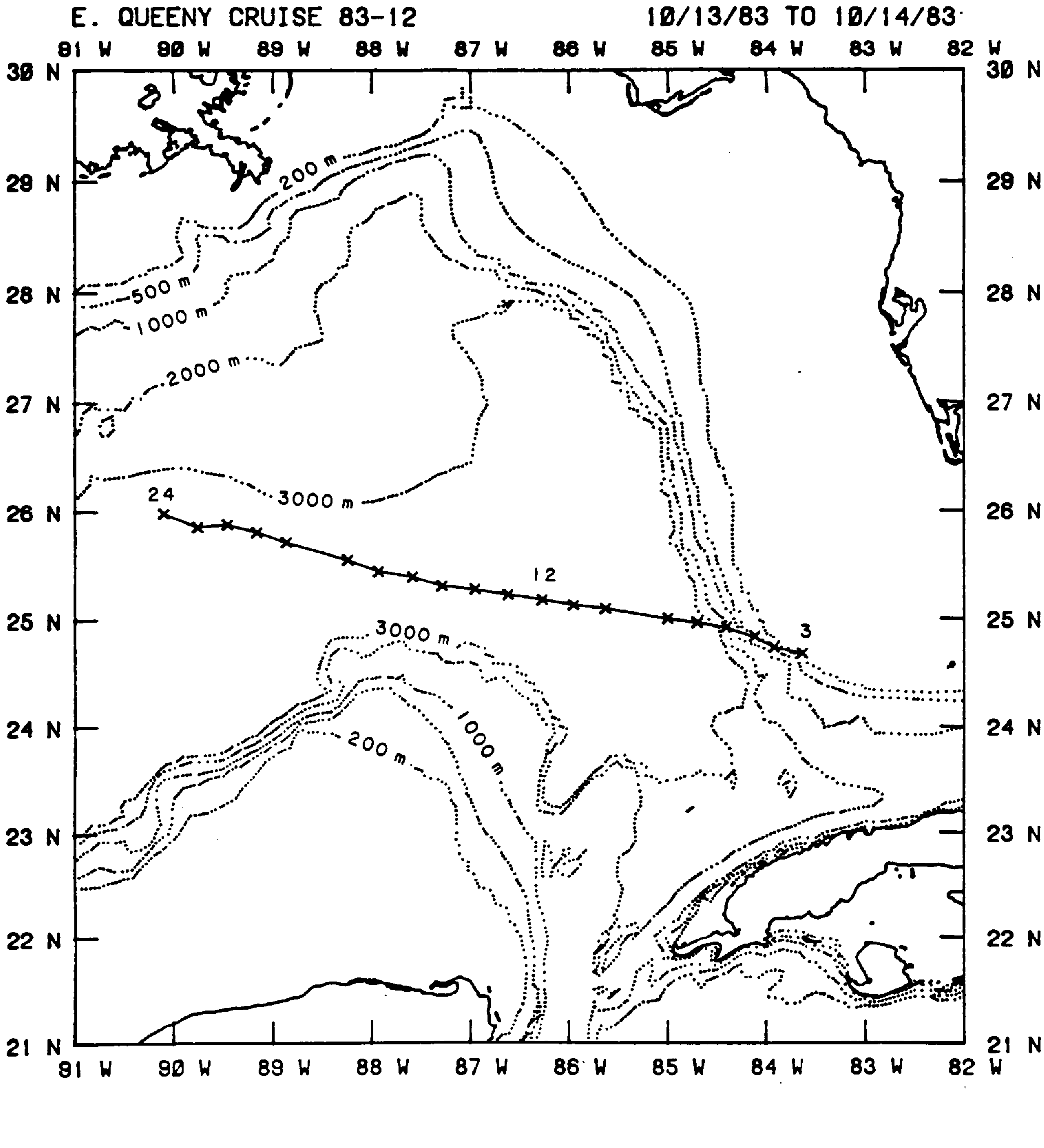

E. M. QUEENY CRUISE 83-11
9/28/83 TO 9/29/83
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
20
11
3
3000 m
1000 m
200 m

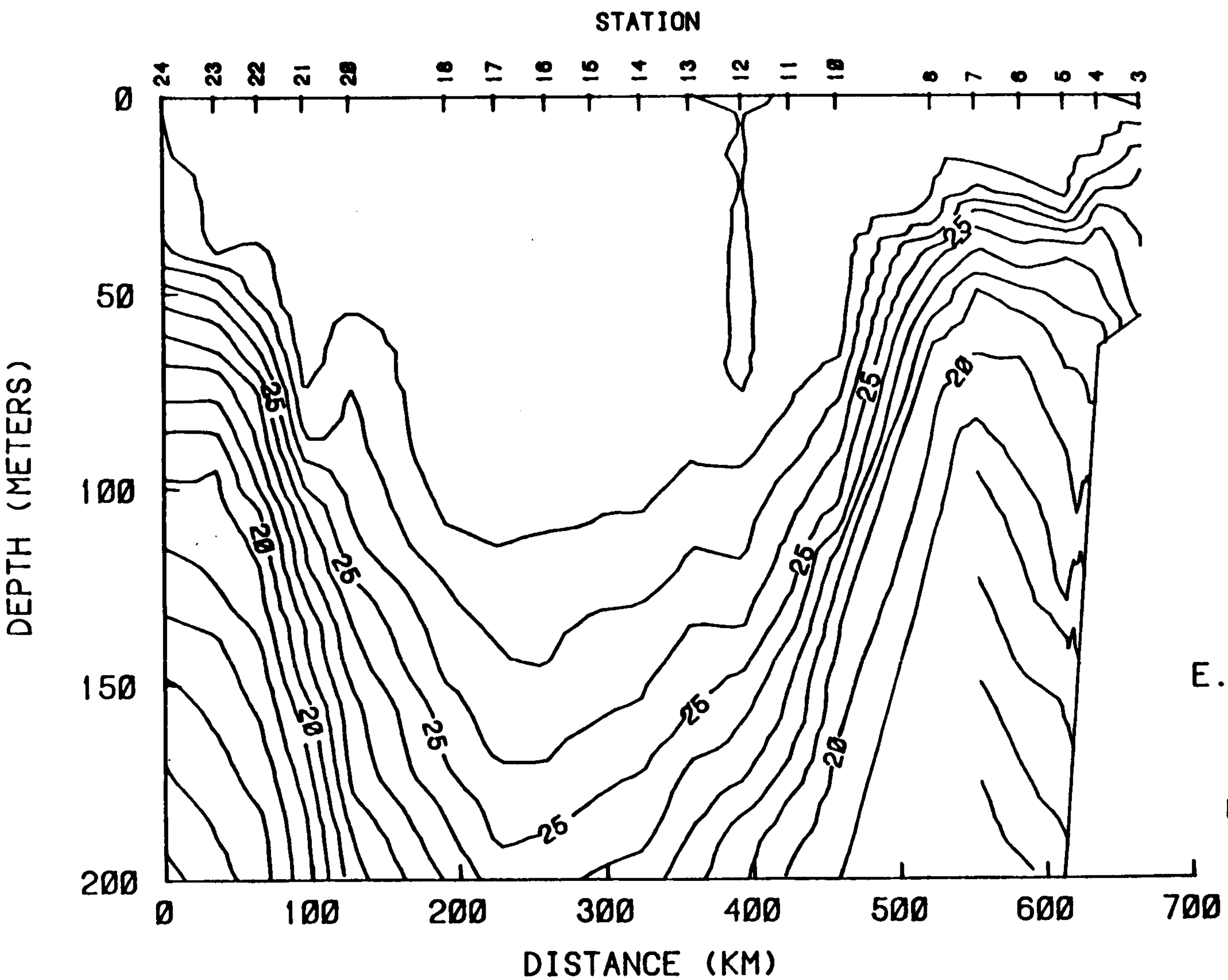

STATION
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800
25
20
15
E. M. QUEENY CRUISE 83-11
9/28/83 TO 9/29/83
STATIONS 3 TO 20
TEMPERATURE DEG C
MIN = 12.55 MAX = 29.02


STATION
20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3
DEPTH (METERS)
DISTANCE (KM)
E. M. QUEENY CRUISE 83-11
9/28/83 TO 9/29/83
STATIONS 3 TO 20
TEMPERATURE DEG C
MIN = 6.55 MAX = 29.02



PARAMETERS AT SURFACE E. M. QUEENY CRUISE 83-11


E. QUEENY CRUISE 83-12
10/13/83 TO 10/14/83
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
24
12
3



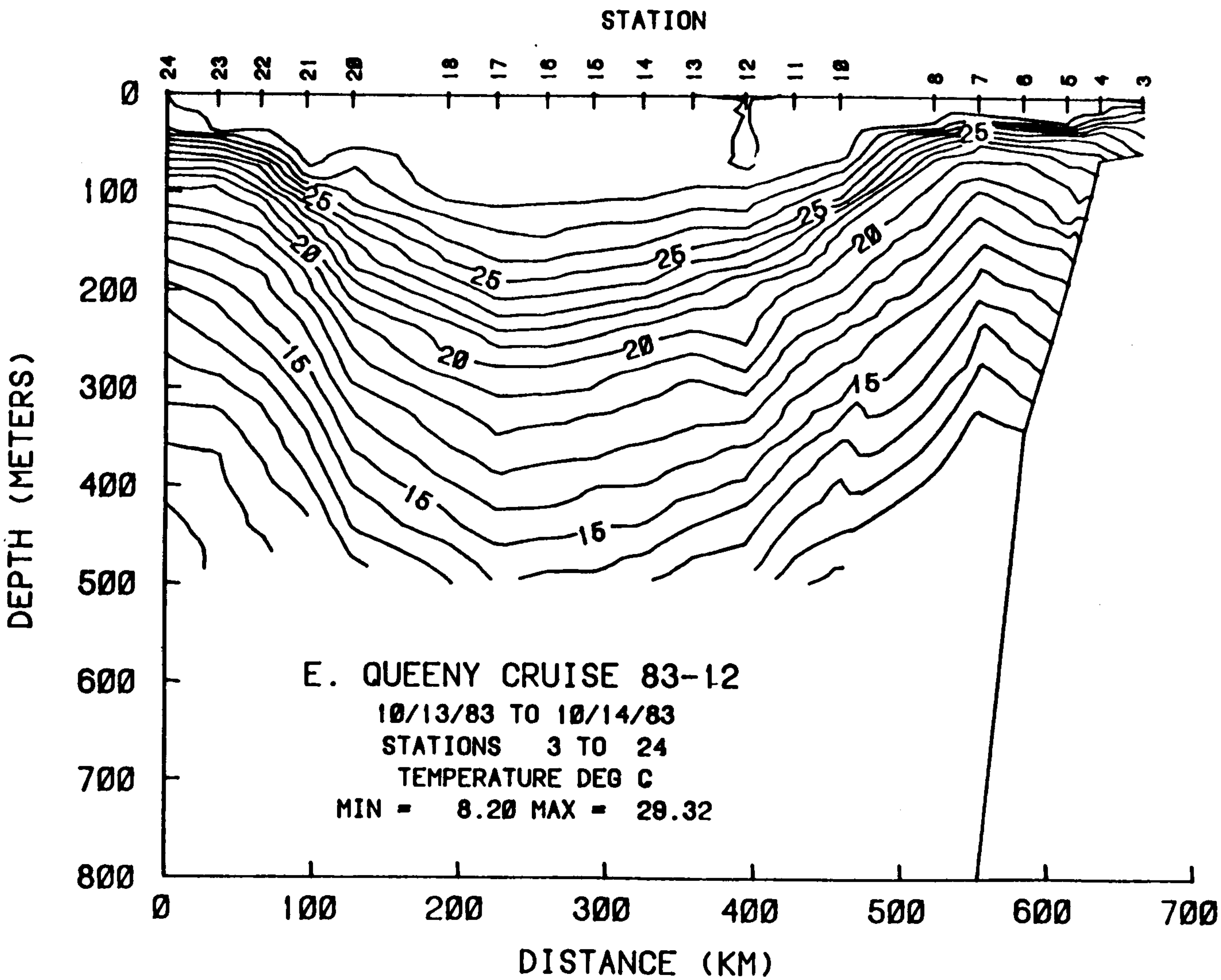
E. QUEENY CRUISE 83-12

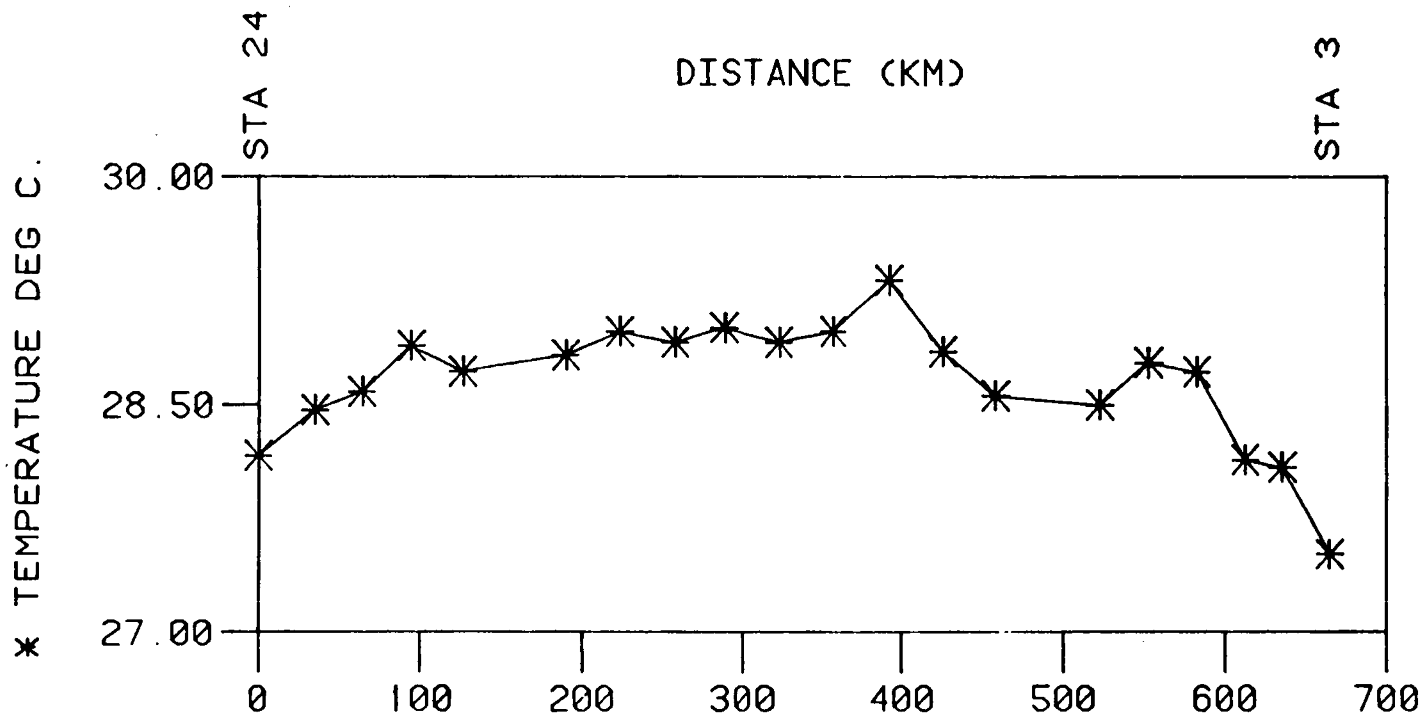
10/13/83 TO 10/14/83

STATIONS 3 TO 24

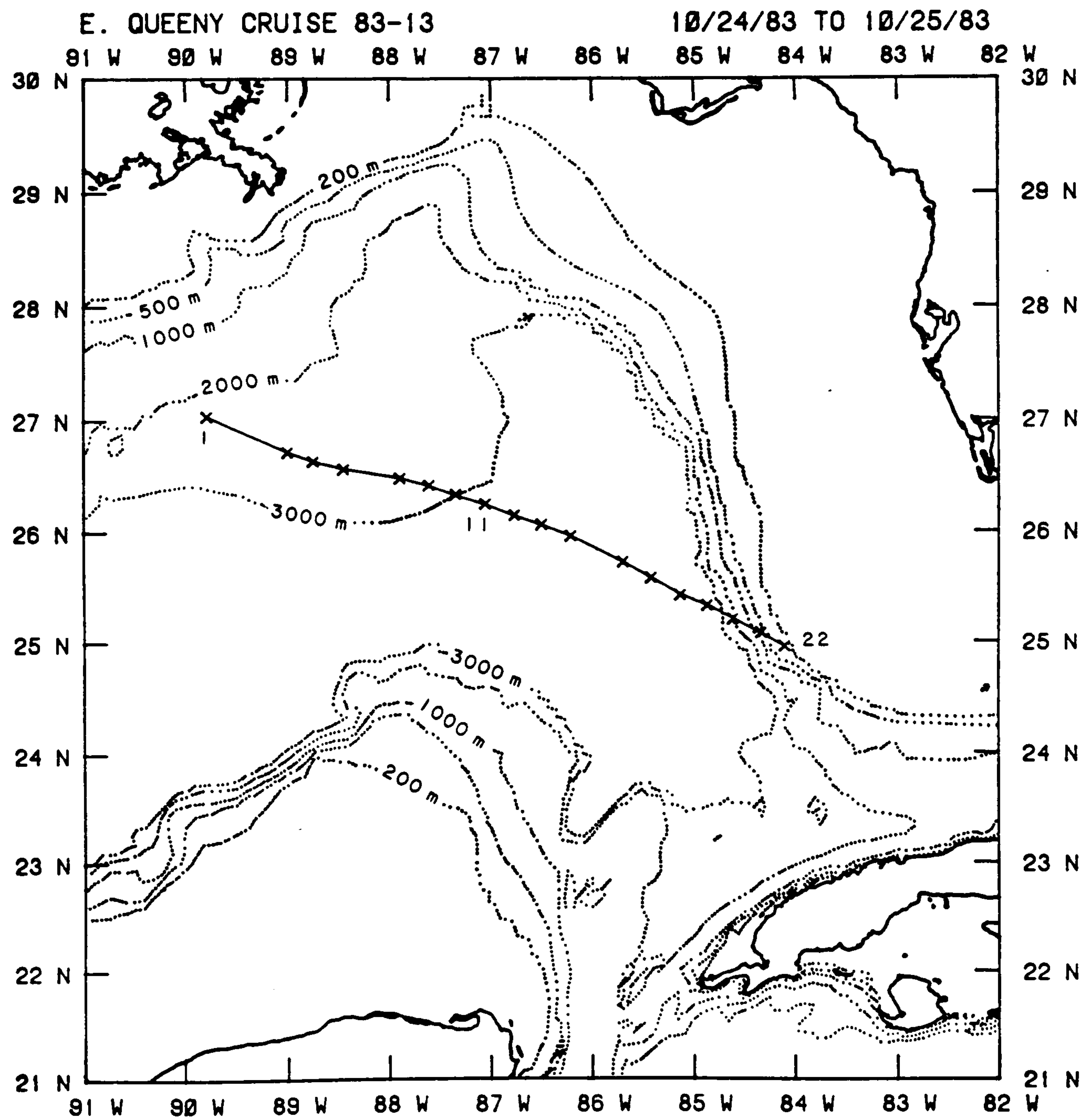
TEMPERATURE DEG C

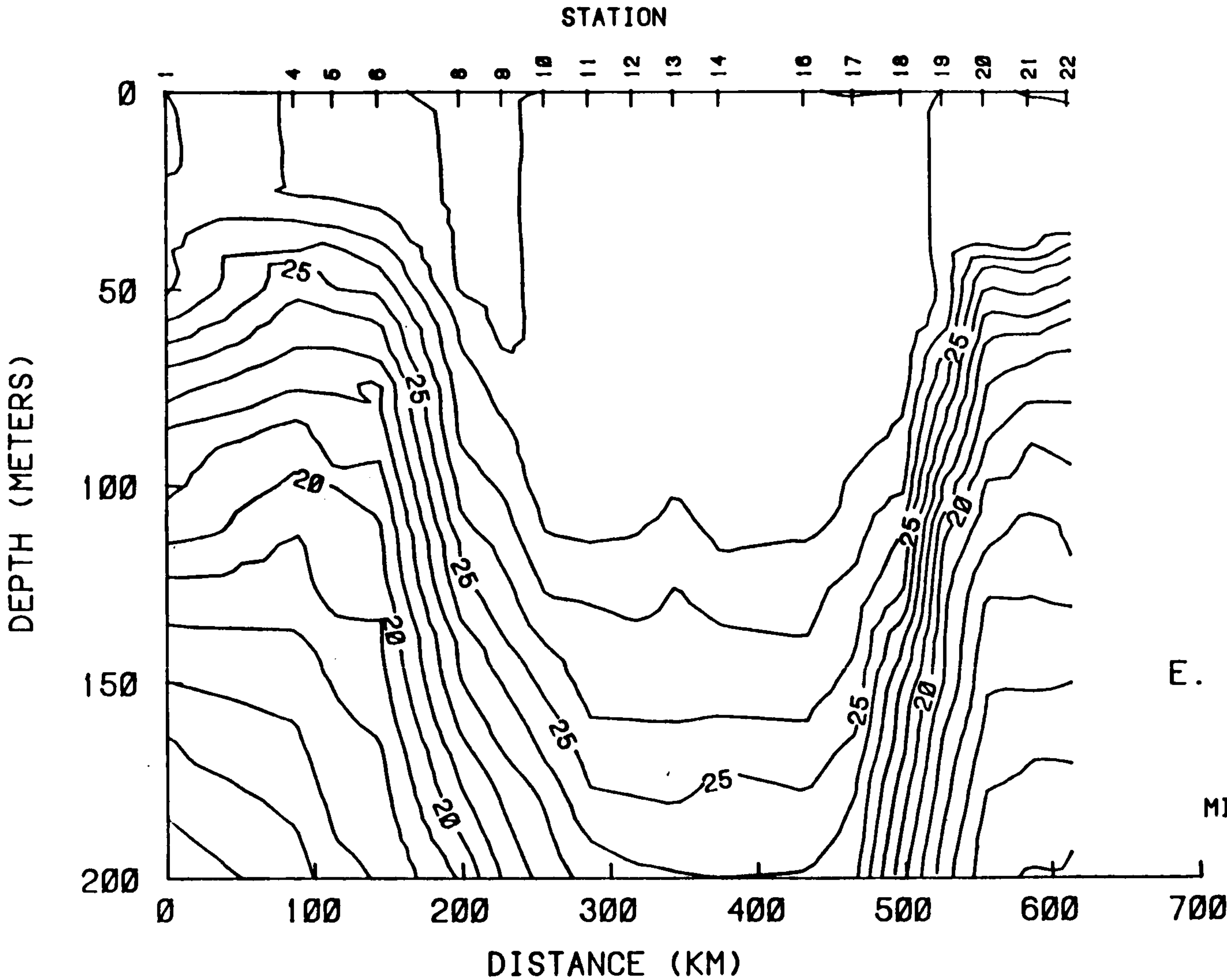
MIN = 13.70 MAX = 29.32


STATION
24 23 22 21 20 18 17 16 15 14 13 12 11 10 8 7 6 5 4 3
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700
25
20
15
E. QUEENY CRUISE 83-12
10/13/83 TO 10/14/83
STATIONS 3 TO 24
TEMPERATURE DEG C
MIN = 8.20 MAX = 28.32

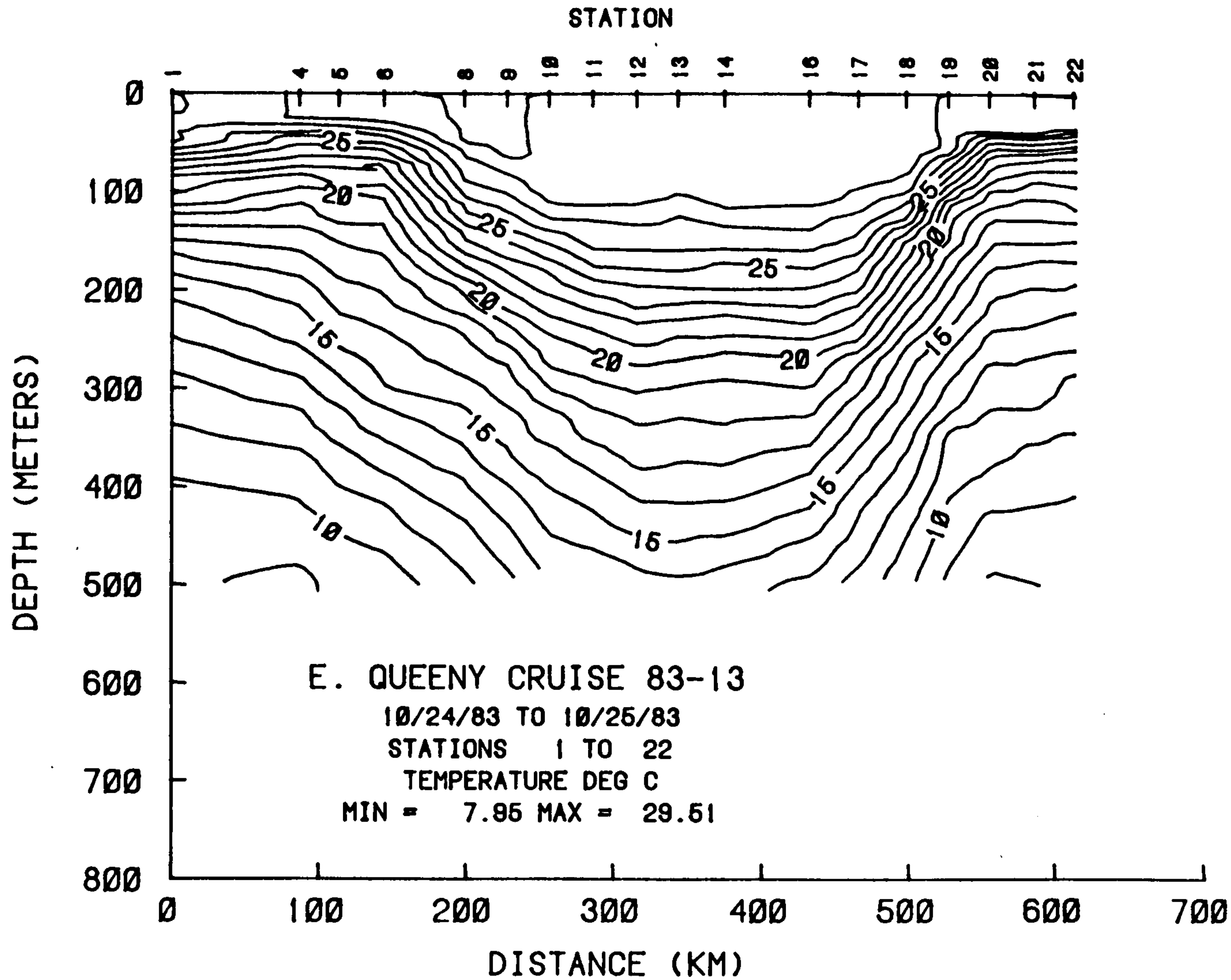


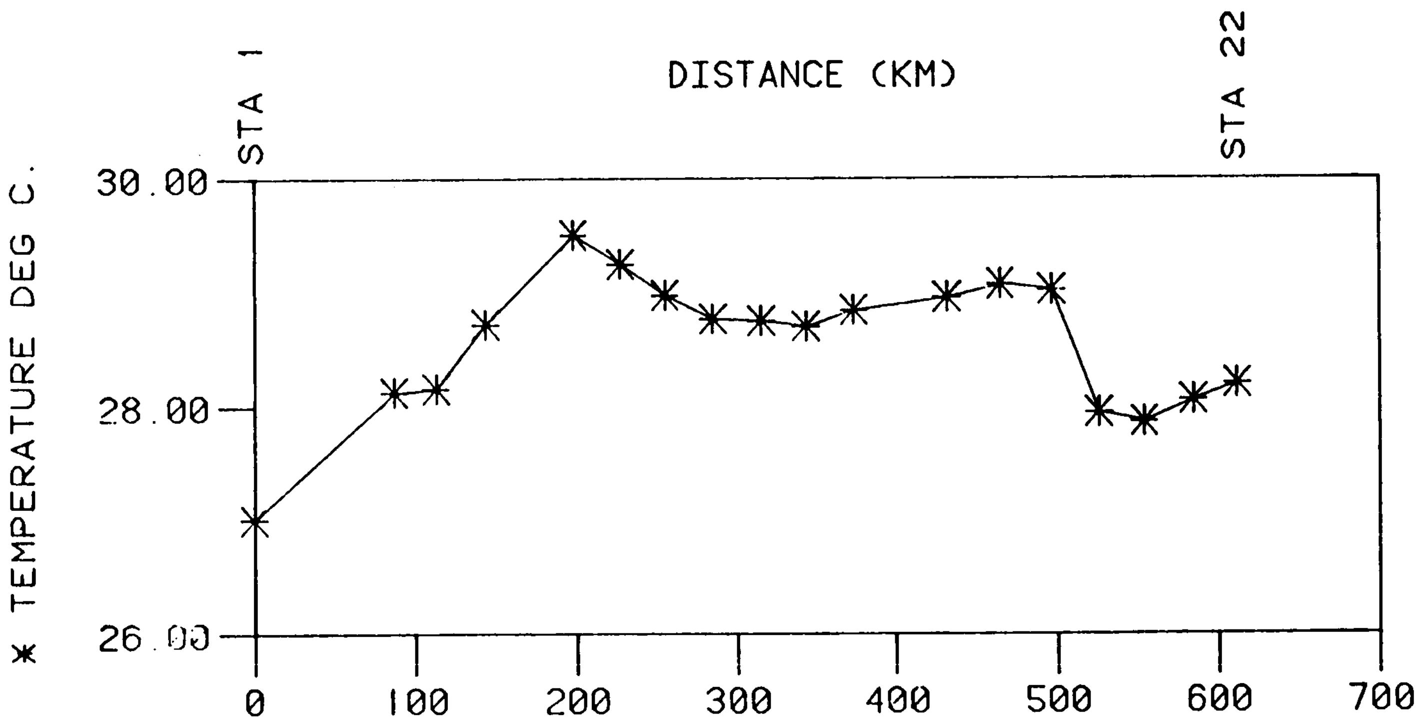
PARAMETERS AT SURFACE E. QUEENY CRUISE 83-12


E. QUEENY CRUISE 83-13
10/24/83 TO 10/25/83
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
1000 m
200 m
1
11
22

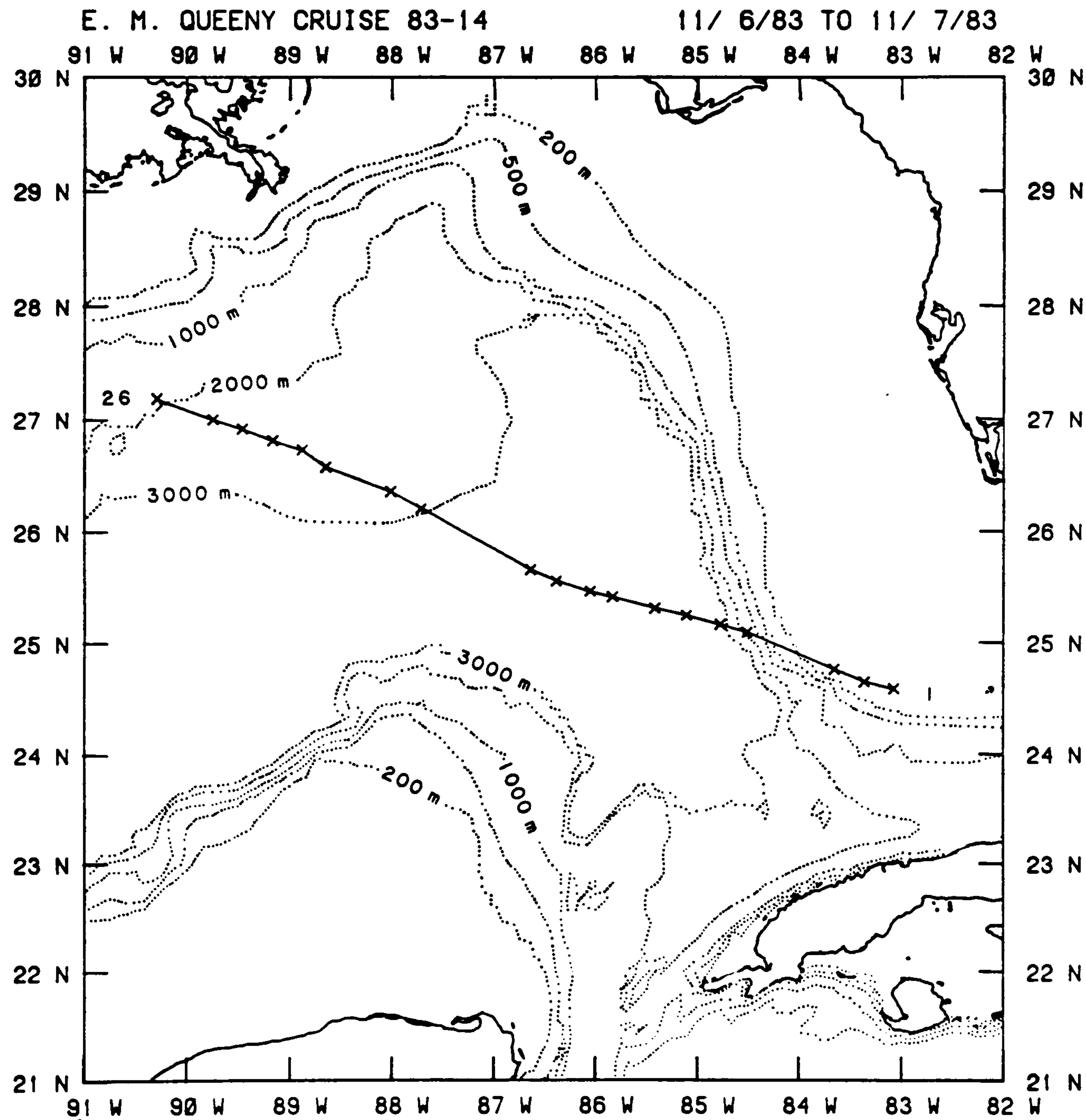


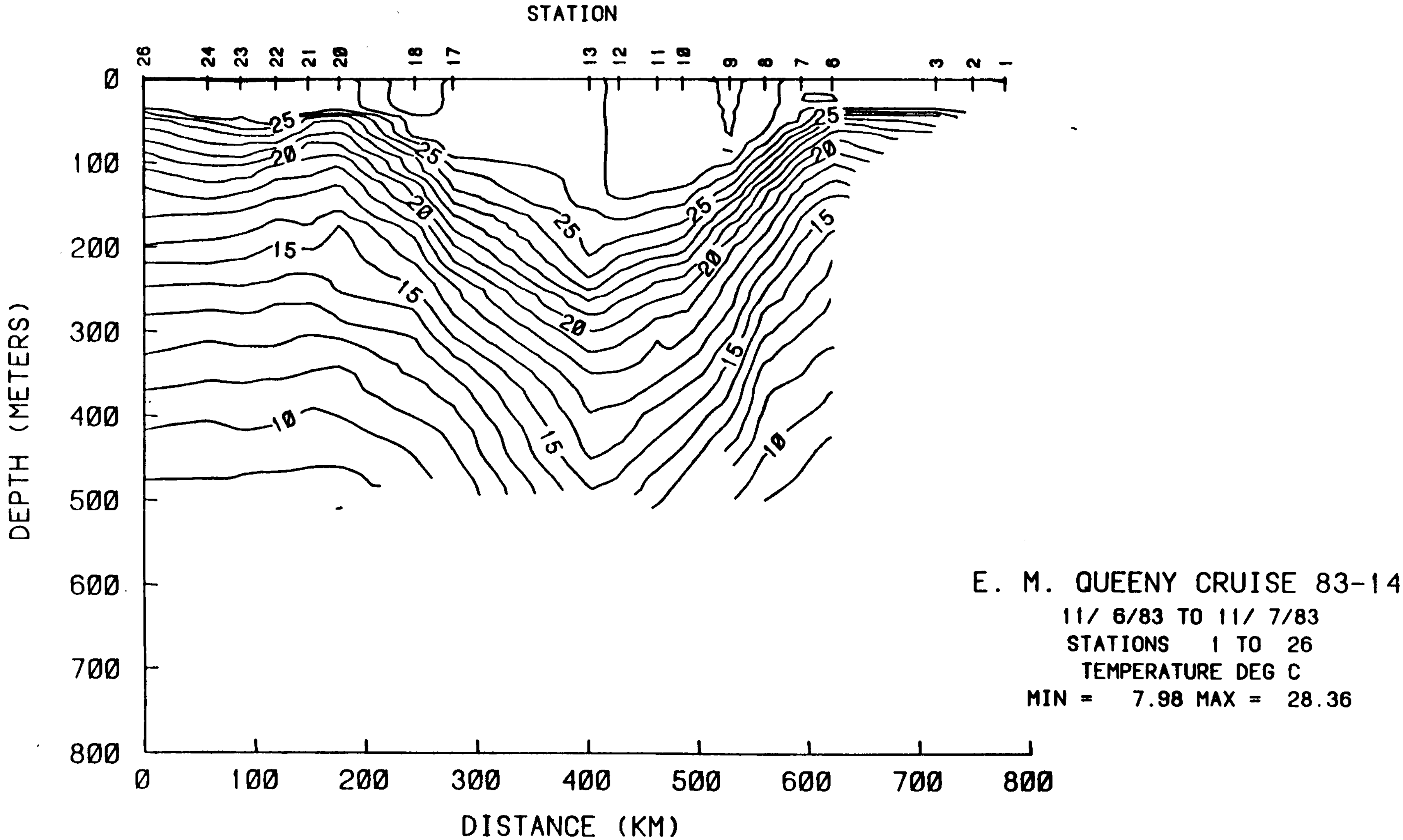
E. QUEENY CRUISE 83-13
10/24/83 TO 10/25/83
STATIONS 1 TO 22
TEMPERATURE DEG C
MIN = 13.88 MAX = 29.51

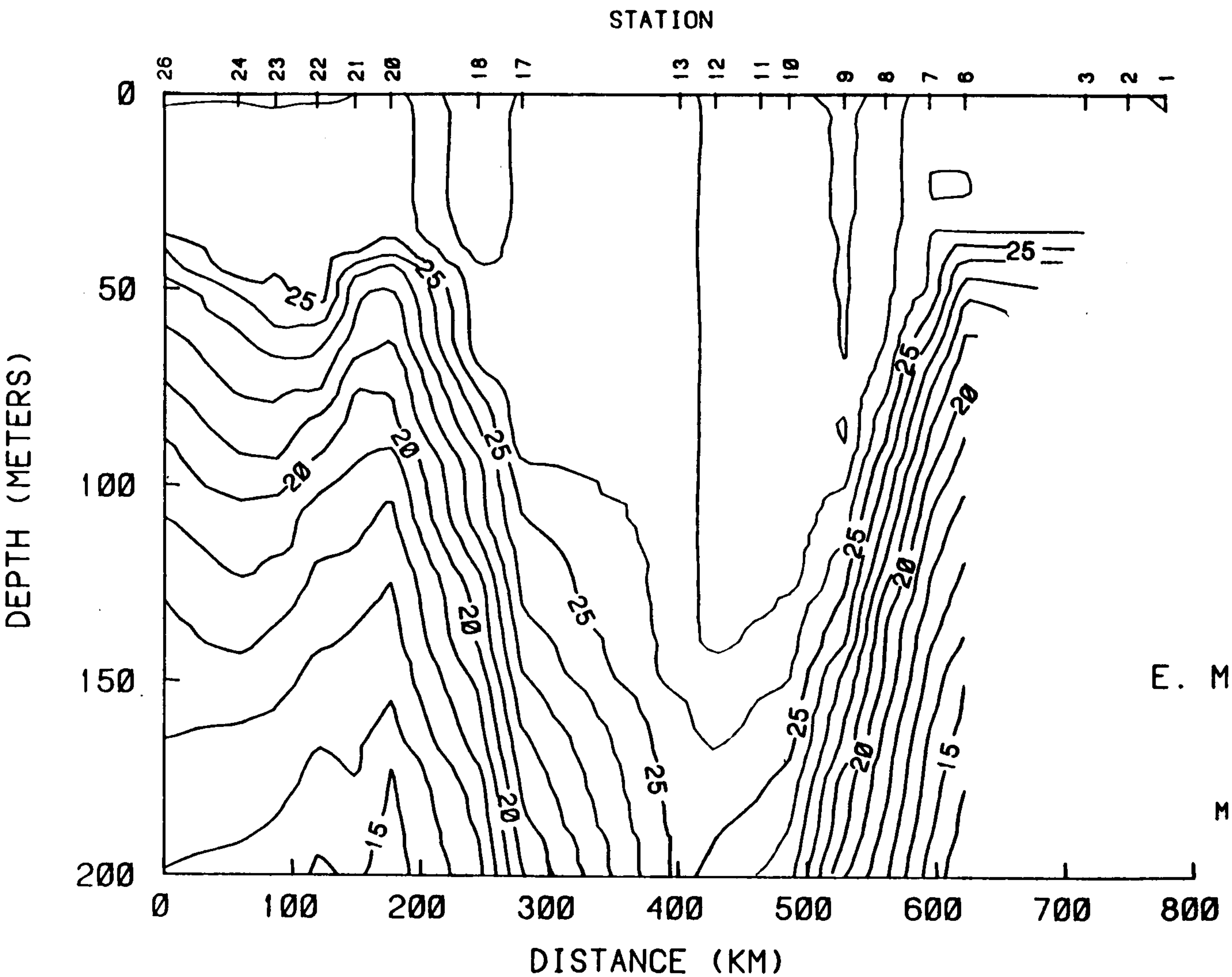

STATION
1
4
5
6
8
9
10
11
12
13
14
16
17
18
19
20
21
22
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0
100
200
300
400
500
600
700
25
20
15
10
E. QUEENY CRUISE 83-13
10/24/83 TO 10/25/83
STATIONS 1 TO 22
TEMPERATURE DEG C
MIN = 7.95 MAX = 29.51



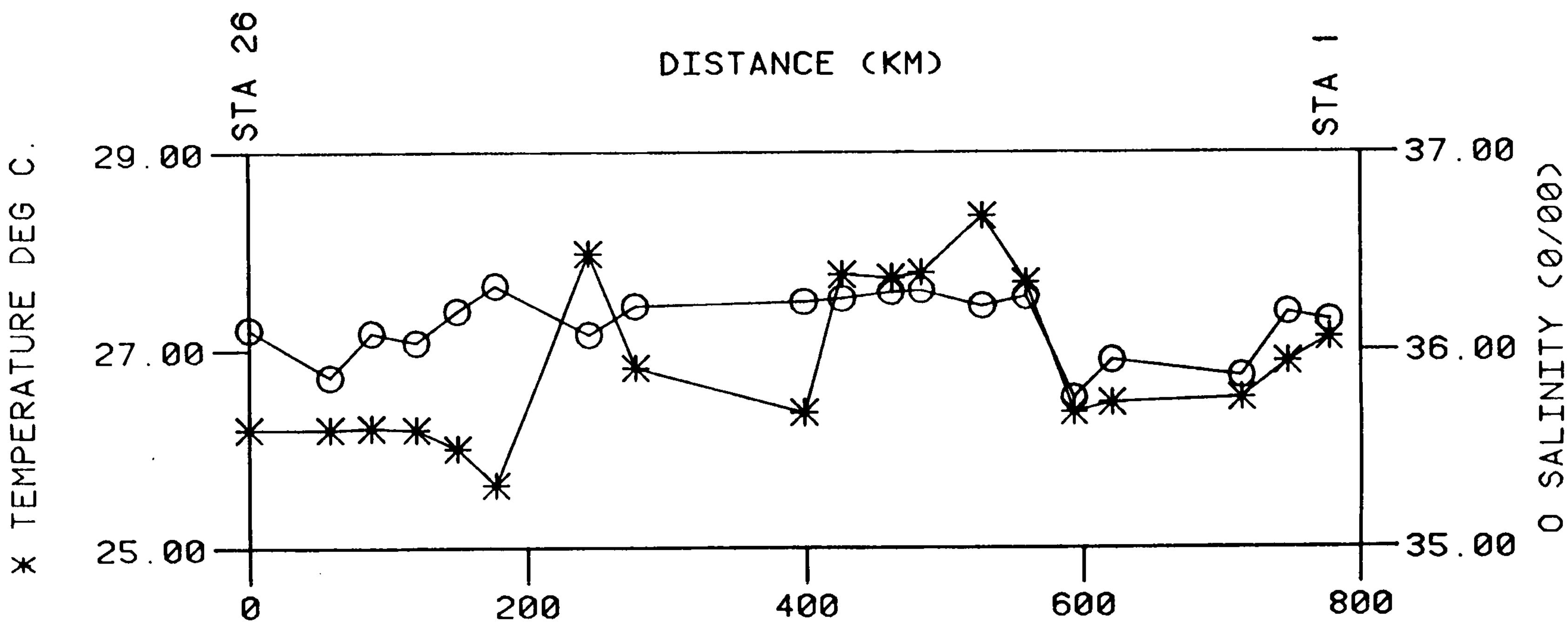
PARAMETERS AT SURFACE E. QUEENY CRUISE 83-13


E. M. QUEENY CRUISE 83-14
11/ 6/83 TO 11/ 7/83
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
26
1
3000 m
200 m
1000 m


STATION
26 24 23 22 21 20 18 17 13 12 11 10 9 8 7 6 3 2 1
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800
25
20
15
10
E. M. QUEENY CRUISE 83-14
11/ 6/83 TO 11/ 7/83
STATIONS 1 TO 26
TEMPERATURE DEG C
MIN = 7.98 MAX = 28.36

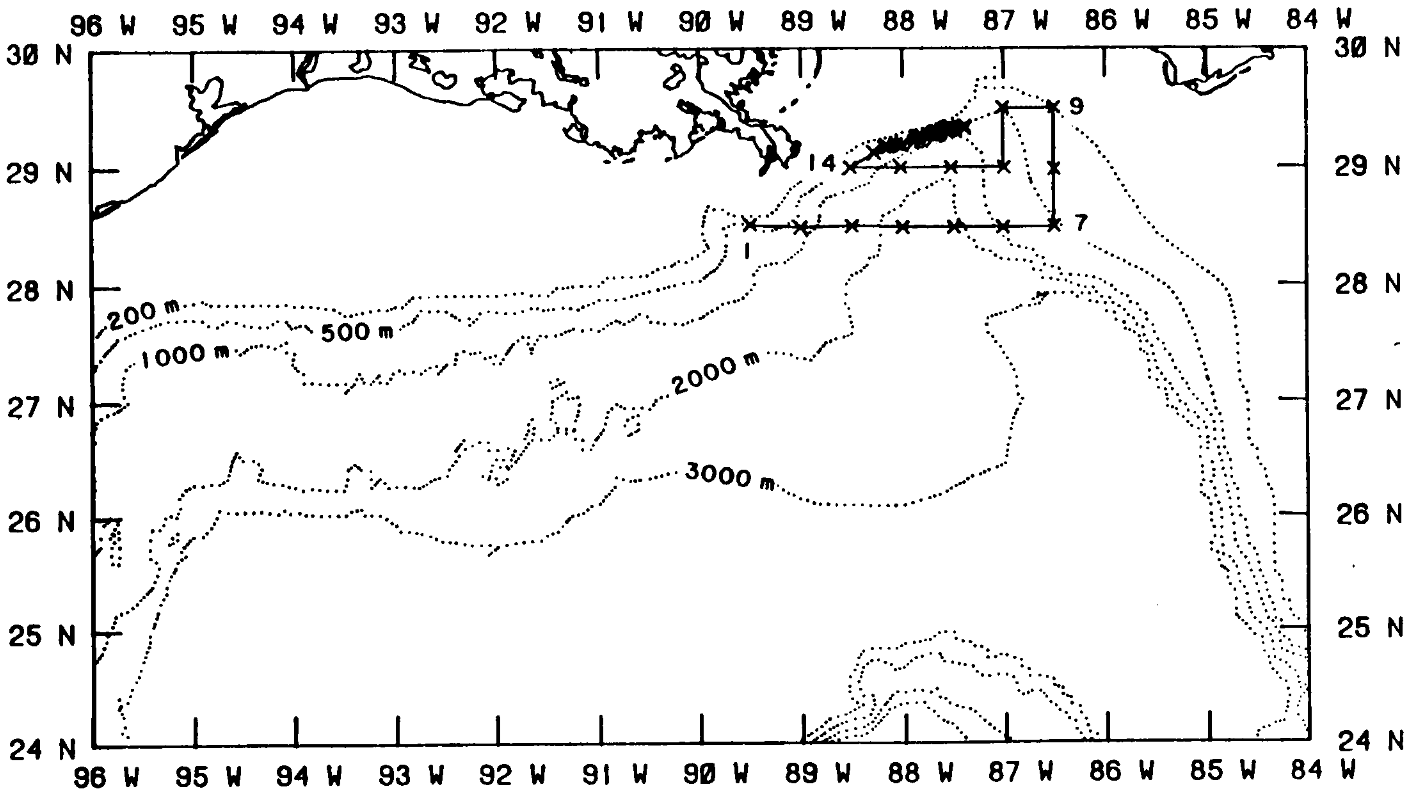


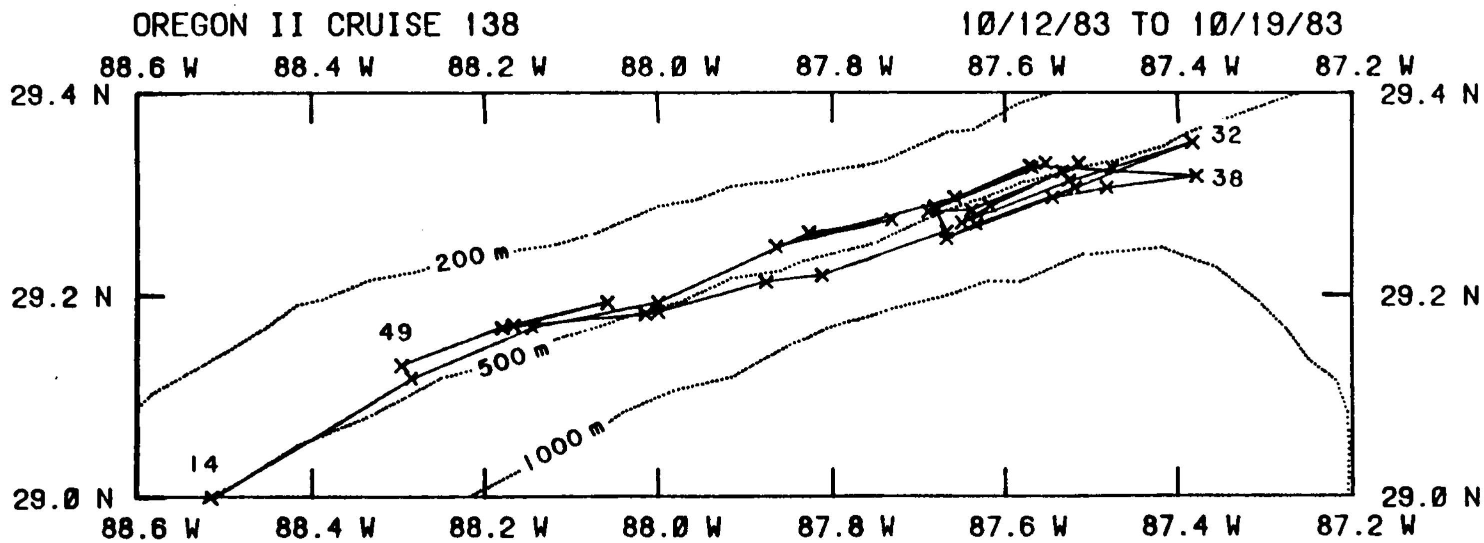
E. M. QUEENY CRUISE 83-14
11/ 6/83 TO 11/ 7/83
STATIONS 1 TO 26
TEMPERATURE DEG C
MIN = 13.23 MAX = 28.36

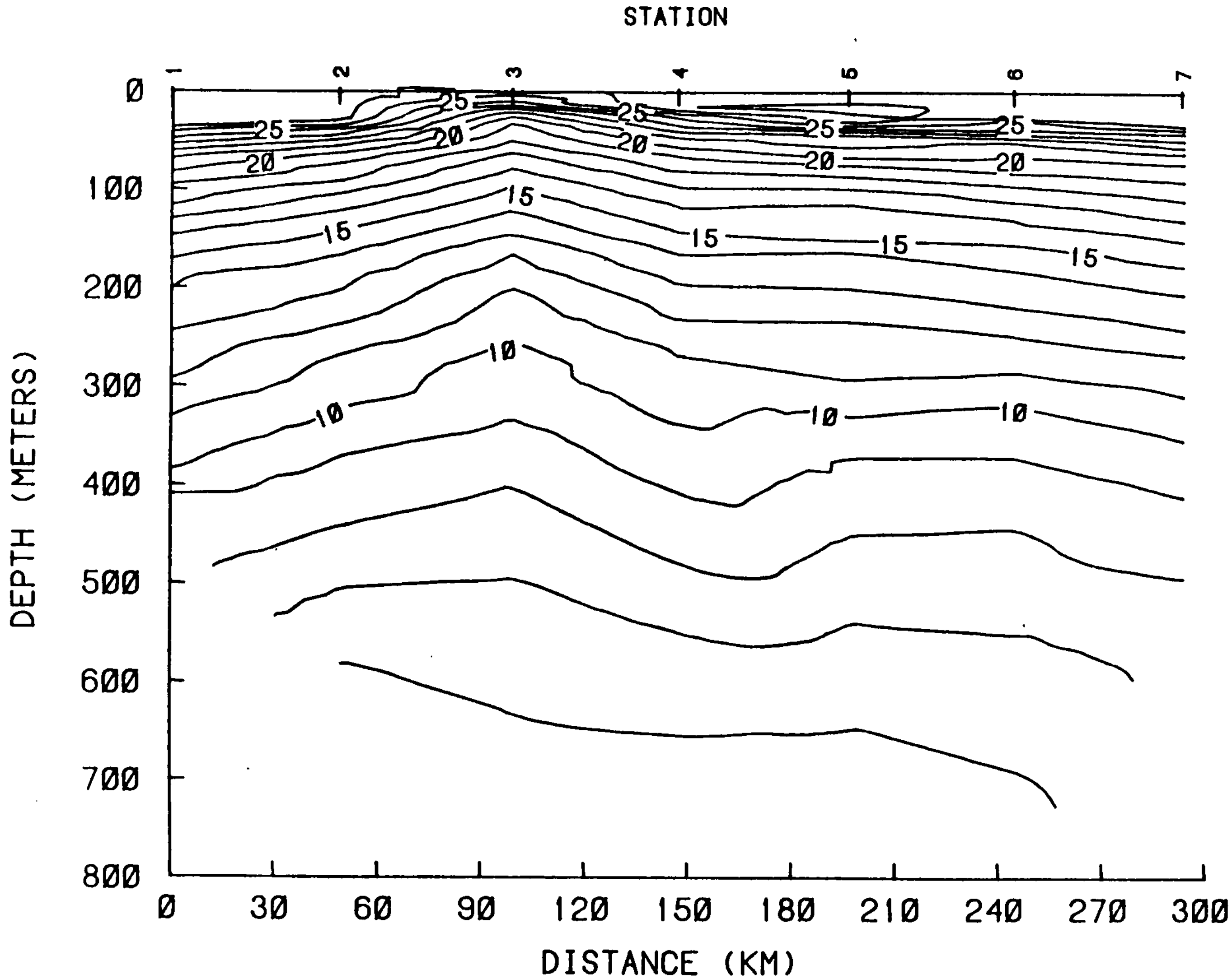


PARAMETERS AT SURFACE E. M. QUEENY CRUISE 83-14

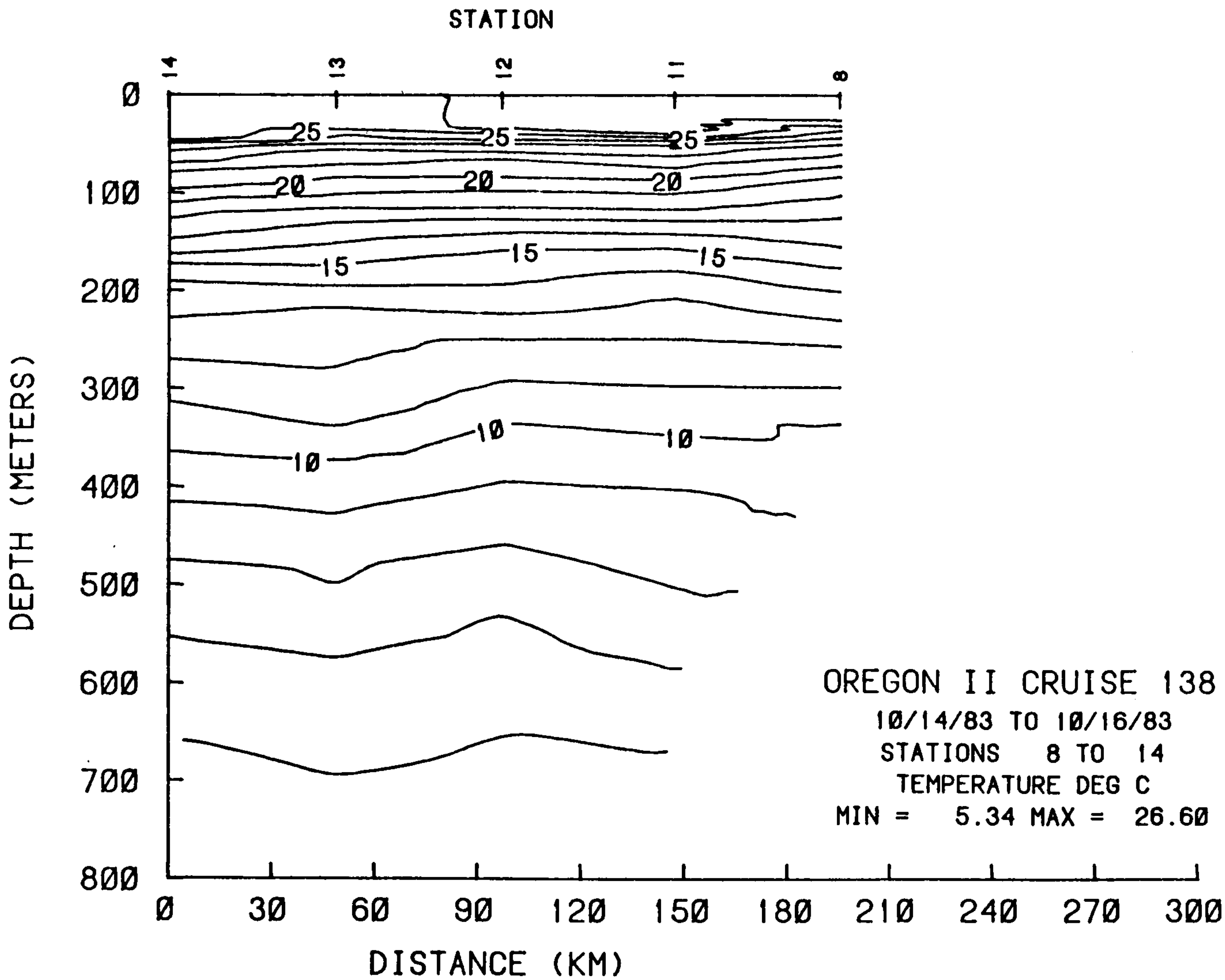
OREGON II CRUISE 138 10/12/83 TO 10/19/83

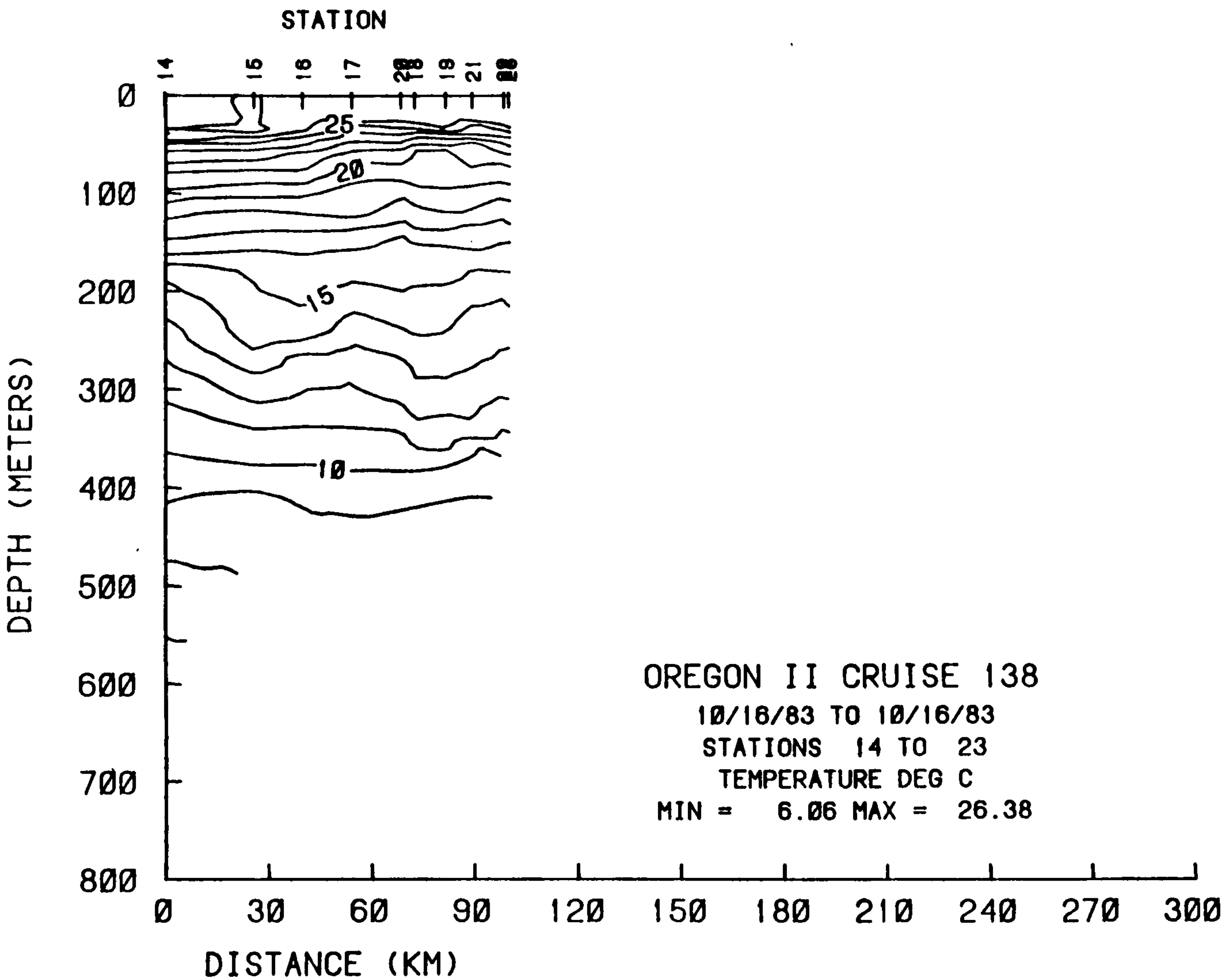


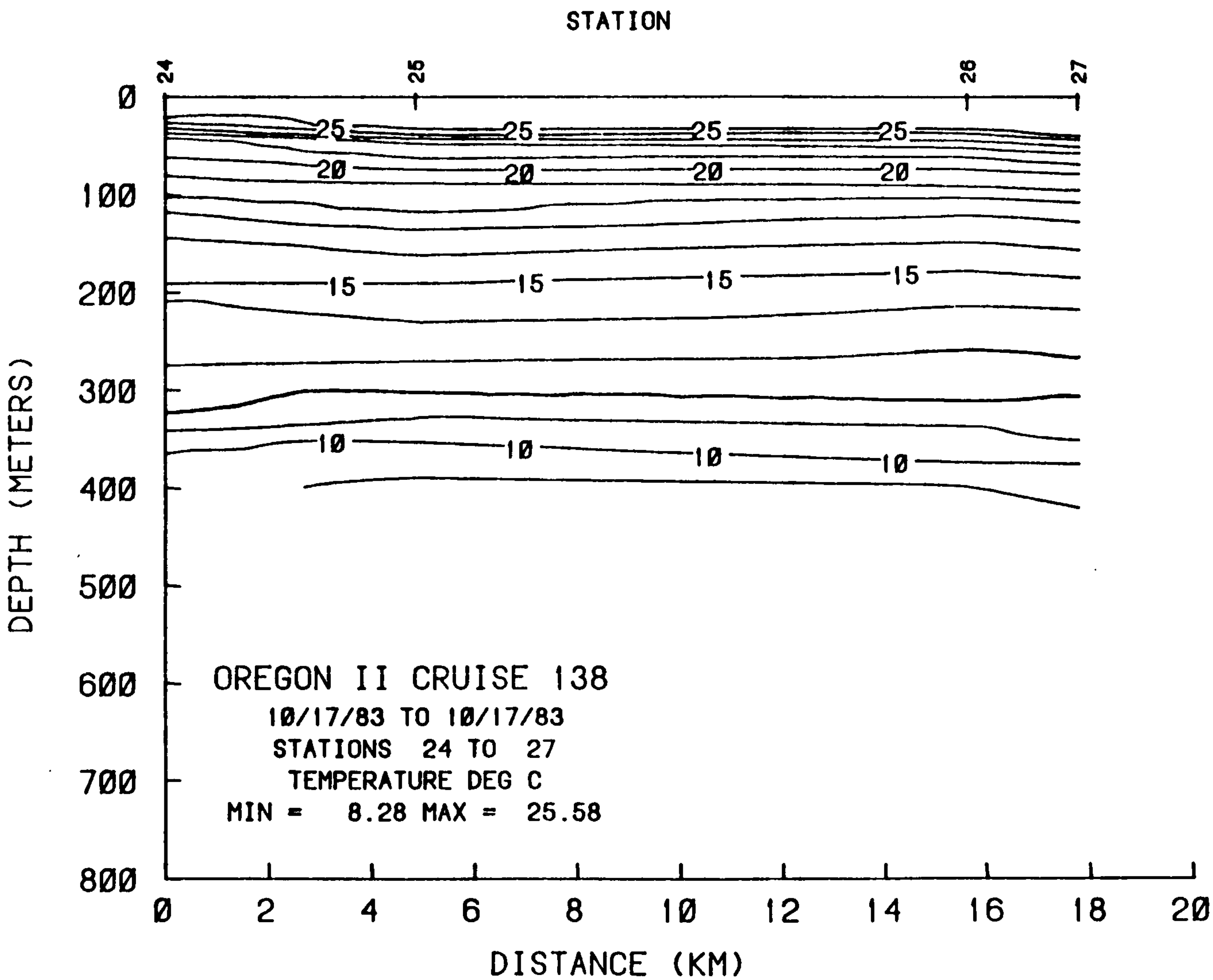

OREGON II CRUISE 138
10/12/83 TO 10/19/83
88.6 W
88.4 W
88.2 W
88.0 W
87.8 W
87.6 W
87.4 W
87.2 W
29.4 N
29.2 N
29.0 N
200 m
500 m
1000 m
14
49
32
38

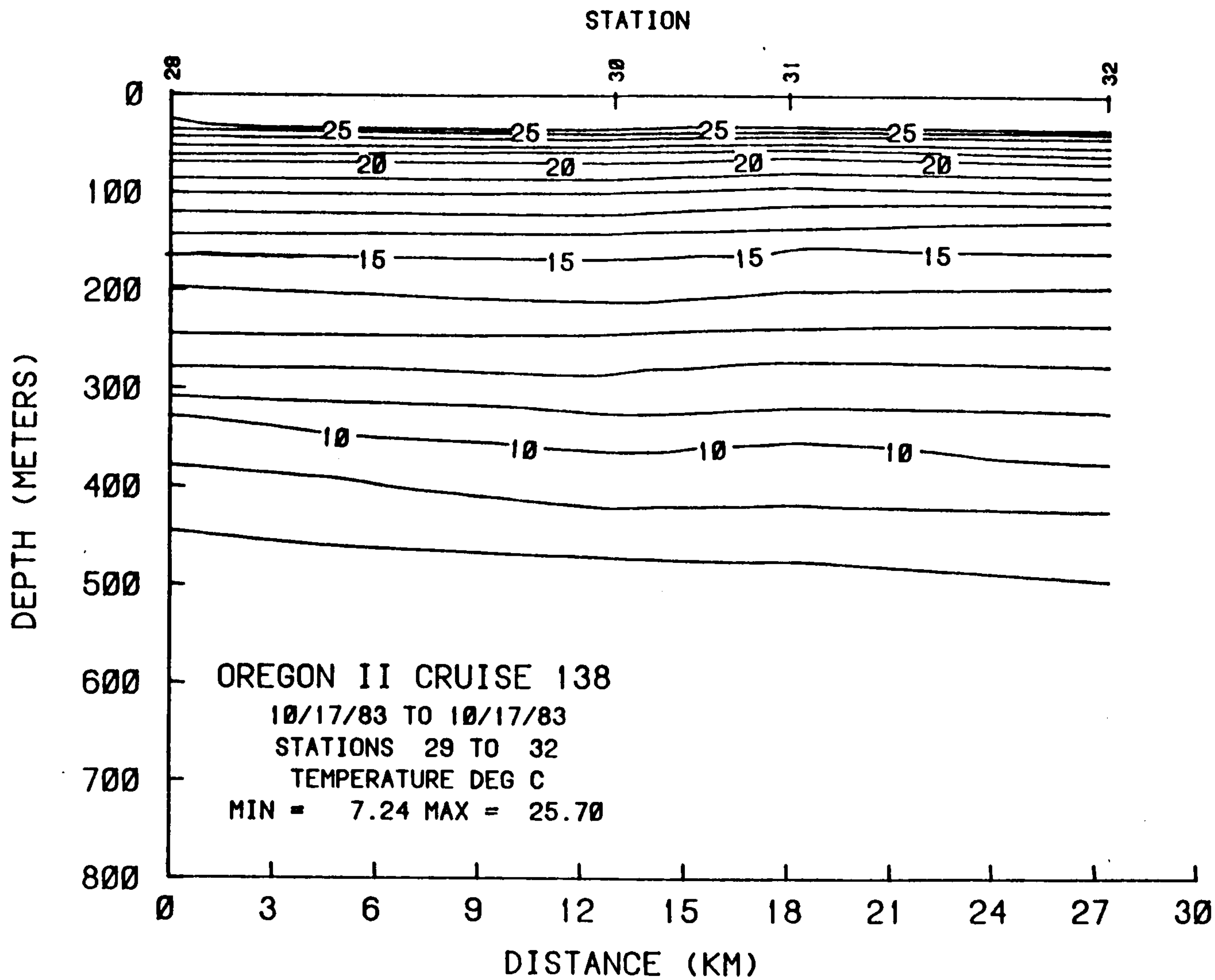


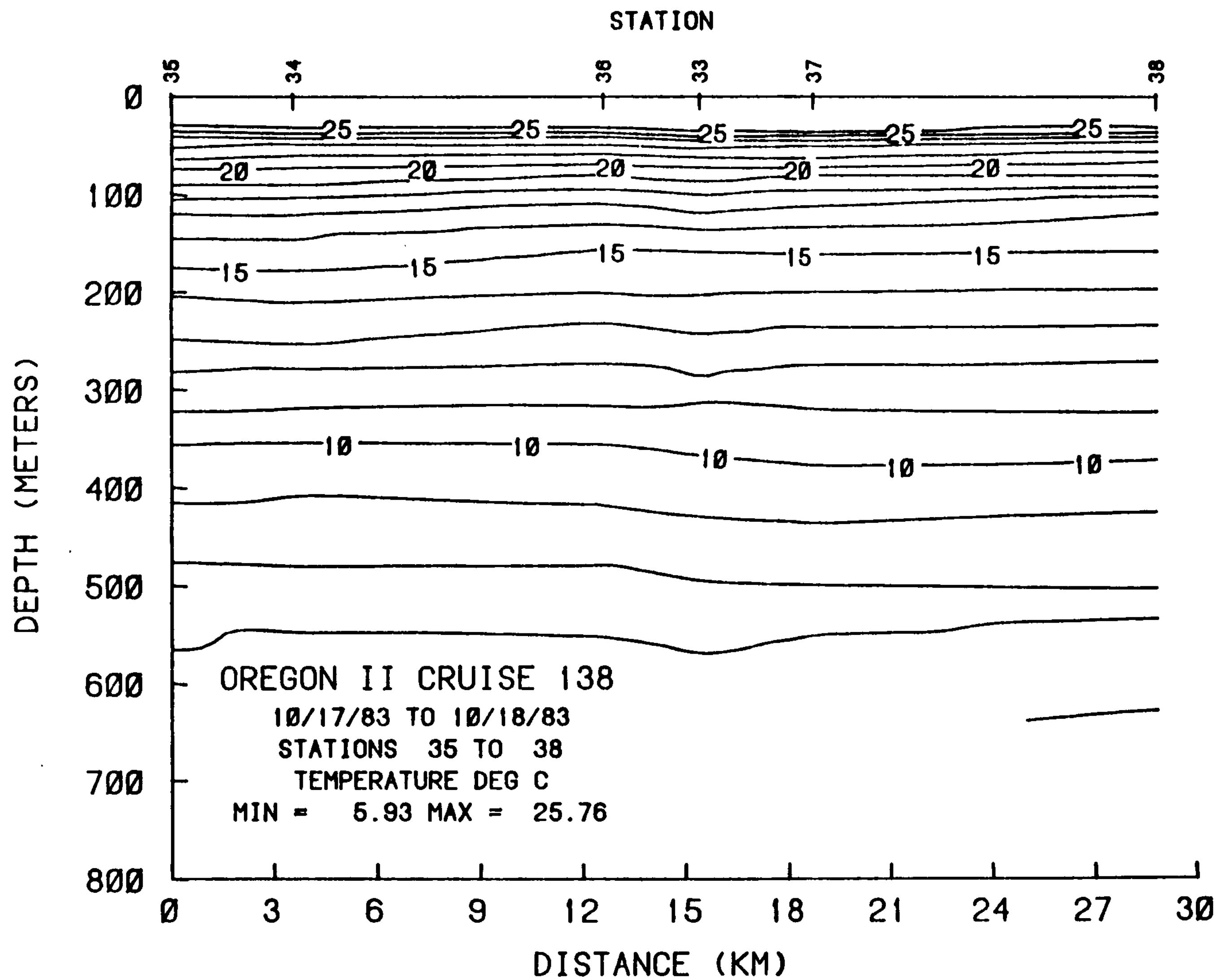
OREGON II CRUISE 138
10/12/83 TO 10/14/83
STATIONS 1 TO 7
TEMPERATURE DEG C
MIN = 5.11 MAX = 27.15

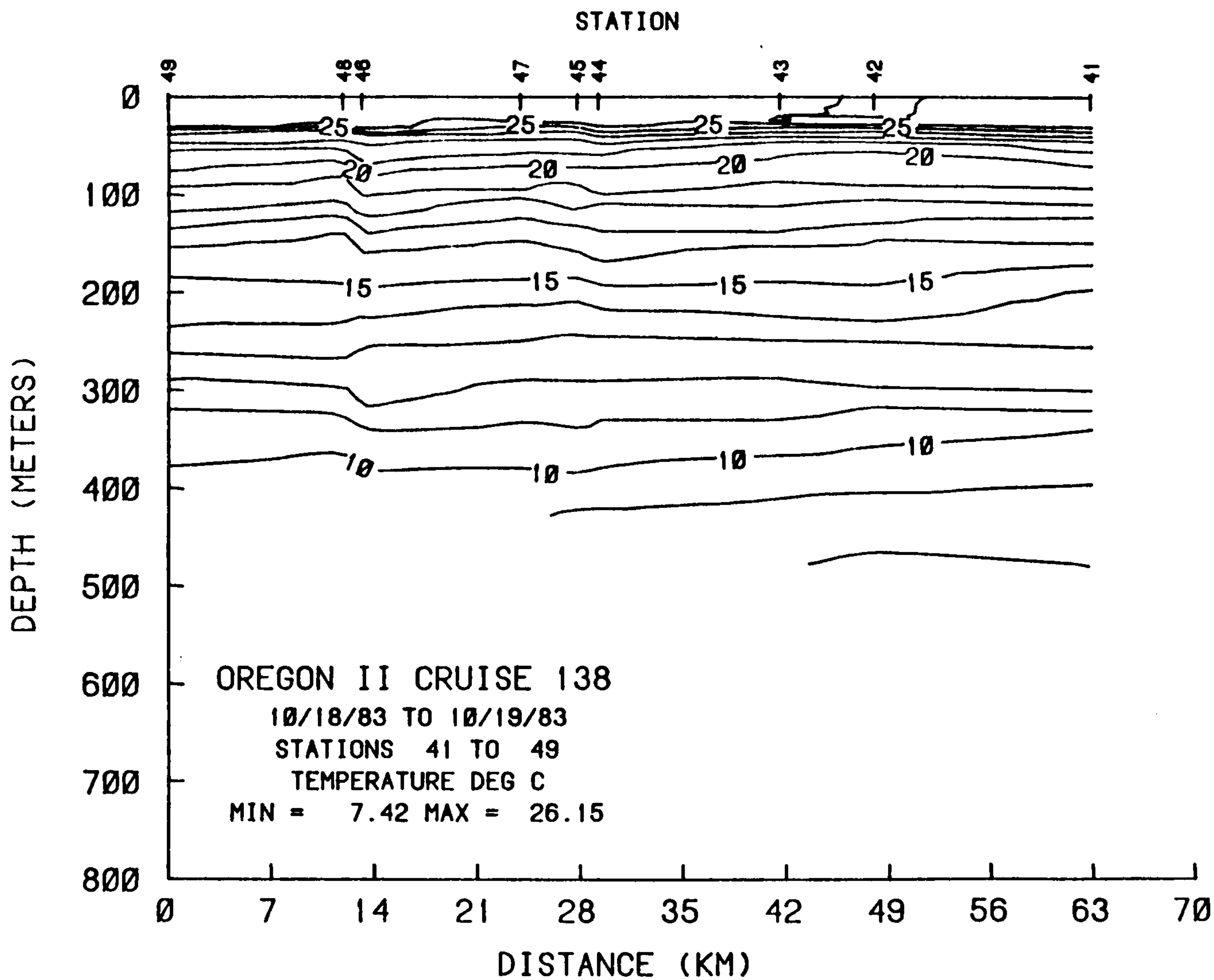

STATION
14
13
12
11
8
25
20
15
10
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0
30
60
90
120
150
180
210
240
270
300
OREGON II CRUISE 138
10/14/83 TO 10/16/83
STATIONS 8 TO 14
TEMPERATURE DEG C
MIN = 5.34 MAX = 26.60

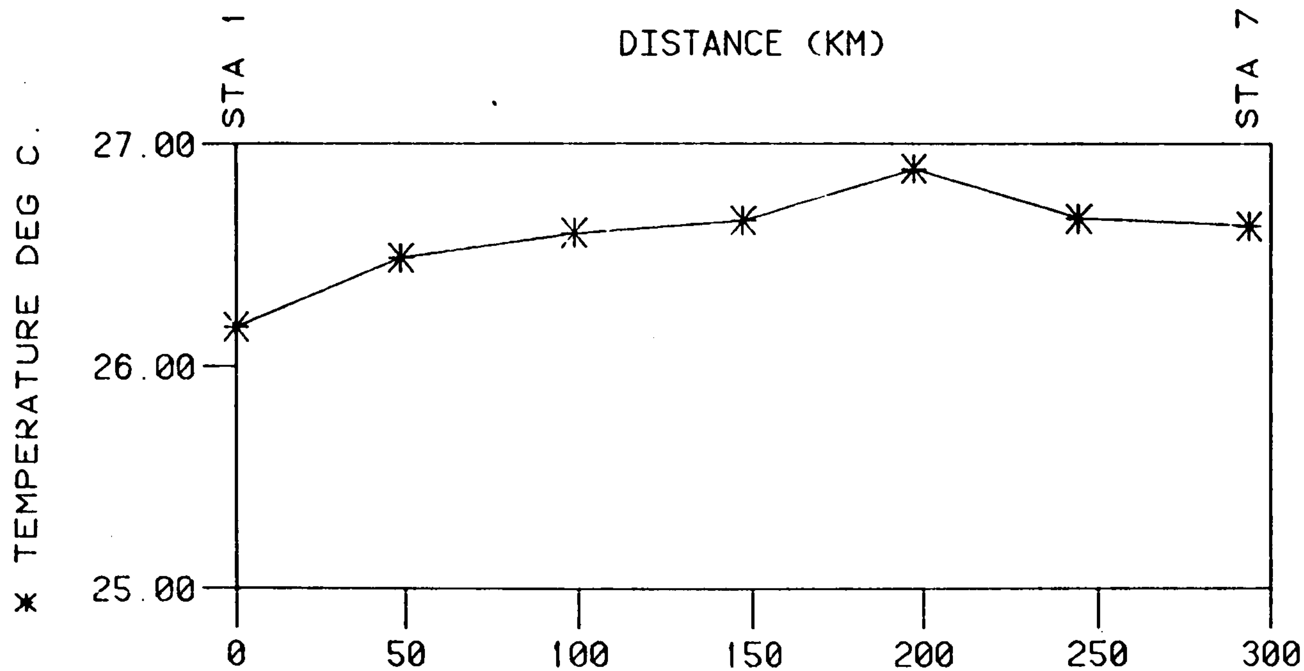

STATION
14
15
18
17
19
21
25
20
15
10
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
0
30
60
90
120
150
180
210
240
270
300
DISTANCE (KM)
OREGON II CRUISE 138
10/16/83 TO 10/16/83
STATIONS 14 TO 23
TEMPERATURE DEG C
MIN = 6.06 MAX = 26.38


STATION
24
25
26
27
0
100
200
300
400
500
600
700
800
DEPTH (METERS)
25
20
15
10
0
2
4
6
8
10
12
14
16
18
20
DISTANCE (KM)
OREGON II CRUISE 138
10/17/83 TO 10/17/83
STATIONS 24 TO 27
TEMPERATURE DEG C
MIN = 8.28 MAX = 25.58

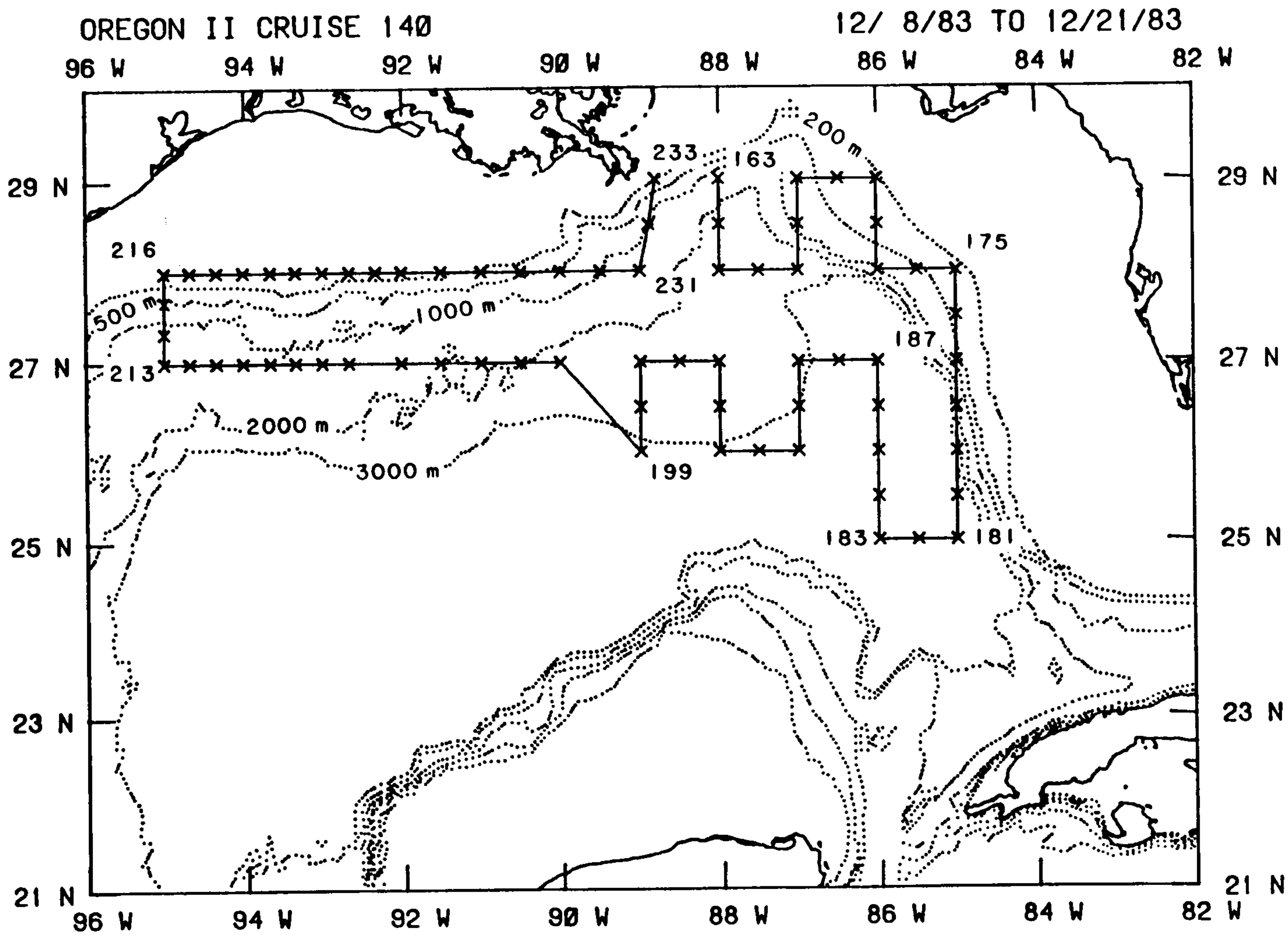

STATION
29
30
31
32
25
20
15
10
DEPTH (METERS)
Ø
100
200
300
400
500
600
700
800
DISTANCE (KM)
Ø
3
6
9
12
15
18
21
24
27
3Ø
OREGON II CRUISE 138
1Ø/17/83 TO 1Ø/17/83
STATIONS 29 TO 32
TEMPERATURE DEG C
MIN = 7.24 MAX = 25.7Ø


STATION
35
34
36
33
37
38
DEPTH (METERS)
DISTANCE (KM)
OREGON II CRUISE 138
10/17/83 TO 10/18/83
STATIONS 35 TO 38
TEMPERATURE DEG C
MIN = 5.93 MAX = 25.76

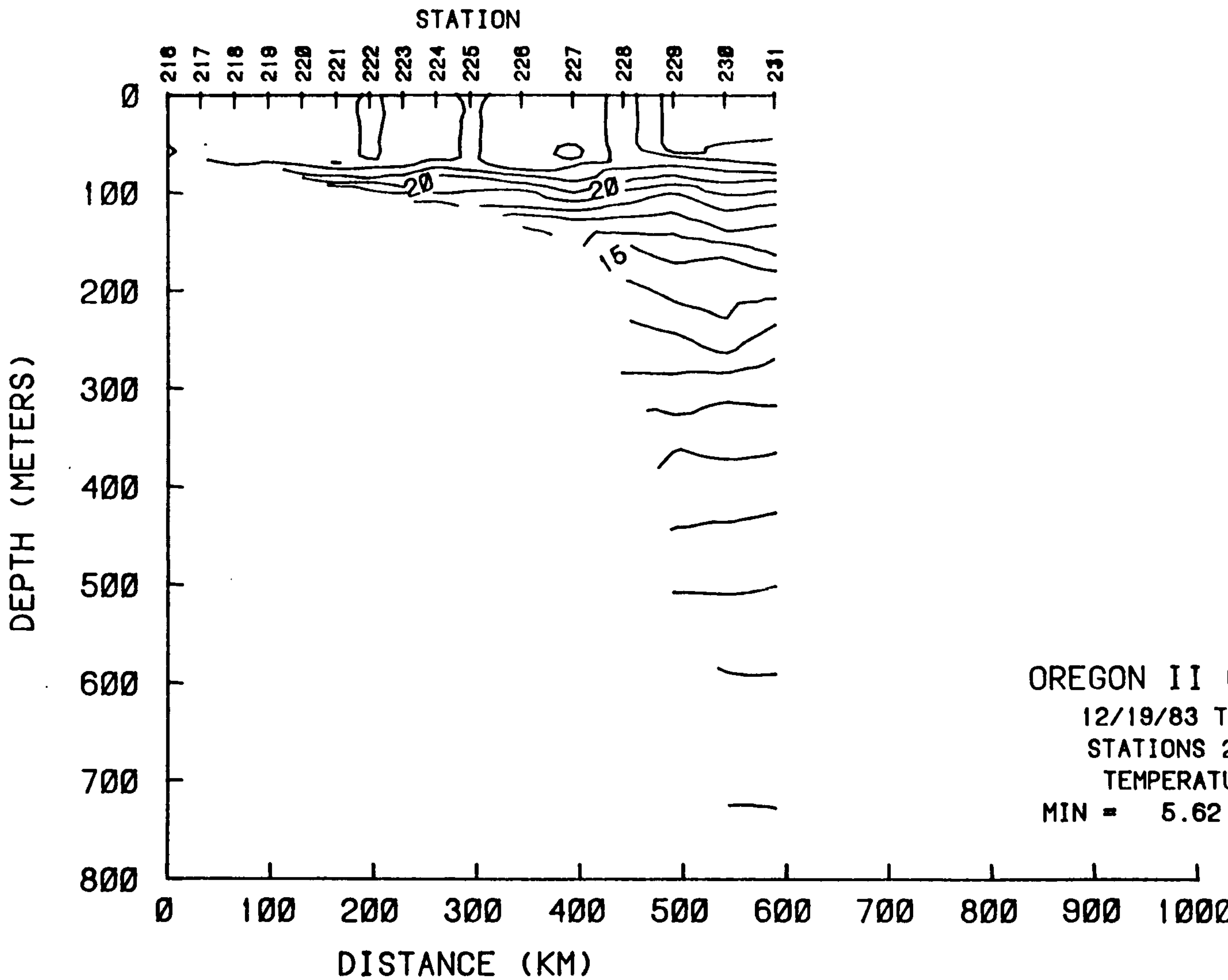

STATION
49 48 46 47 45 44 43 42 41
25
20
15
10
DEPTH (METERS)
Ø
100
200
300
400
500
600
700
800
OREGON II CRUISE 138
1Ø/18/83 TO 1Ø/19/83
STATIONS 41 TO 49
TEMPERATURE DEG C
MIN = 7.42 MAX = 26.15
Ø 7 14 21 28 35 42 49 56 63 7Ø
DISTANCE (KM)



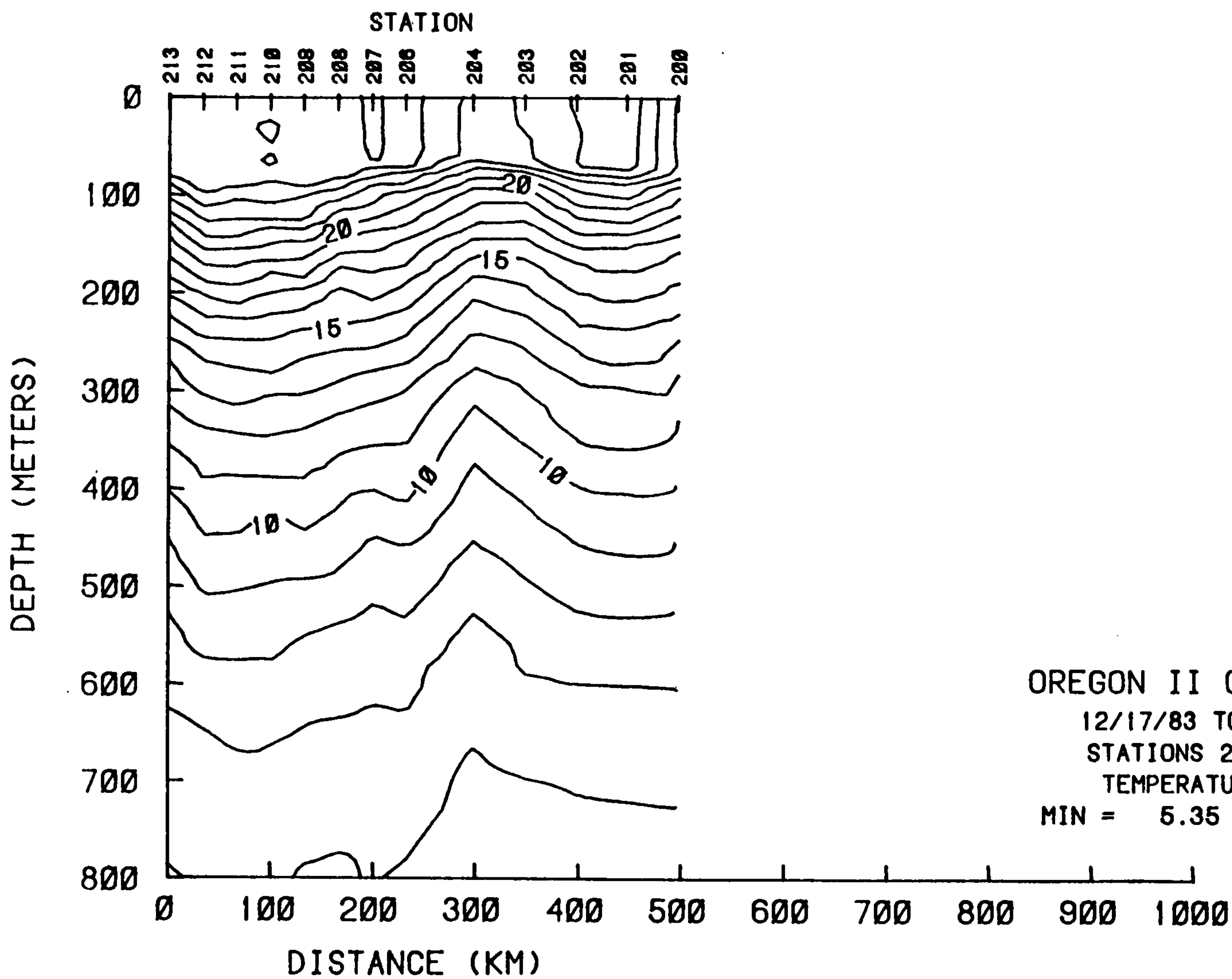
PARAMETERS AT SURFACE OREGON II CRUISE 138



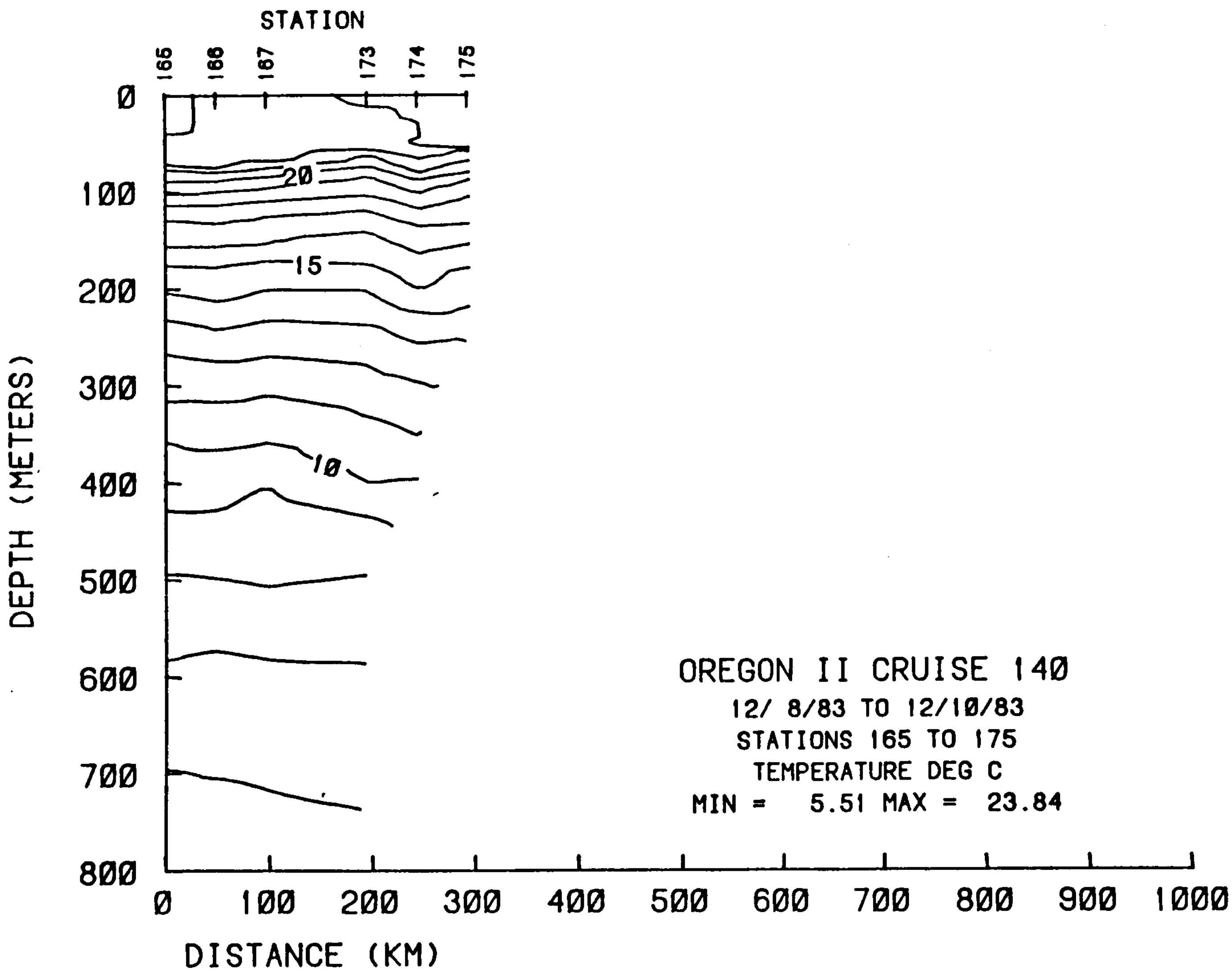
OREGON II CRUISE 140
12/ 8/83 TO 12/21/83
96 W
94 W
92 W
90 W
88 W
86 W
84 W
82 W
29 N
27 N
25 N
23 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
233
163
175
216
231
187
213
199
183
181

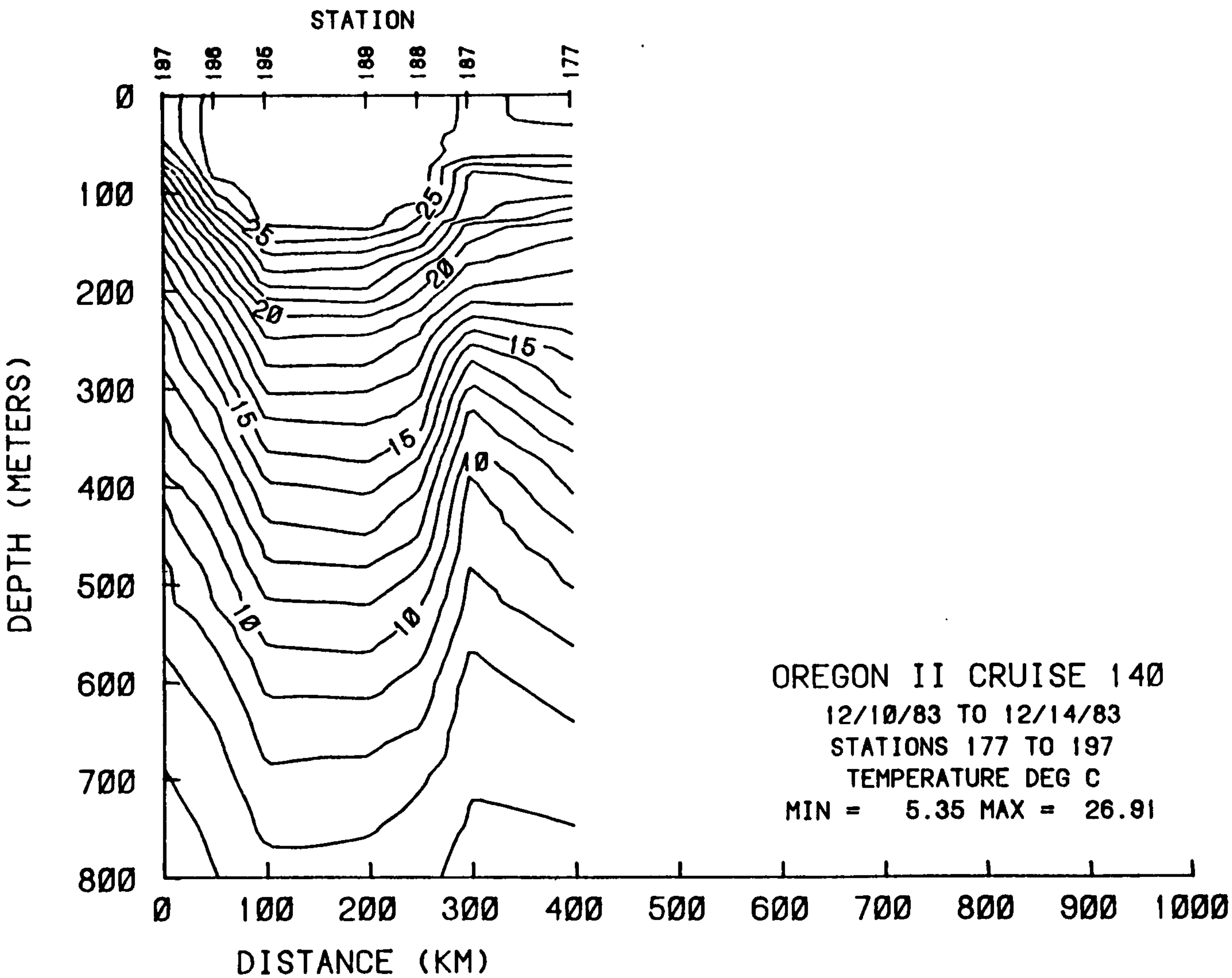


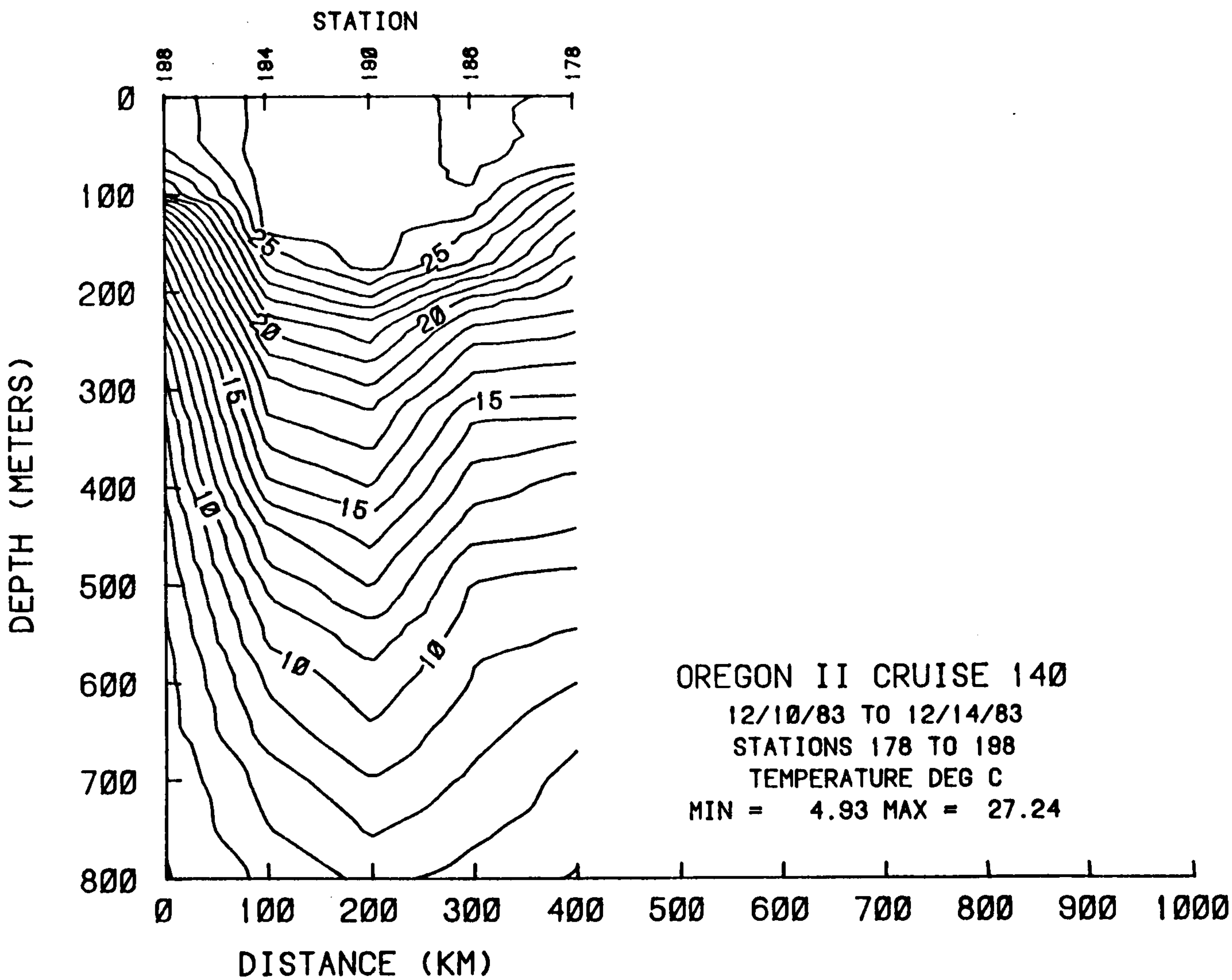
OREGON II CRUISE 140
12/19/83 TO 12/21/83
STATIONS 216 TO 231
TEMPERATURE DEG C
MIN = 5.62 MAX = 23.84

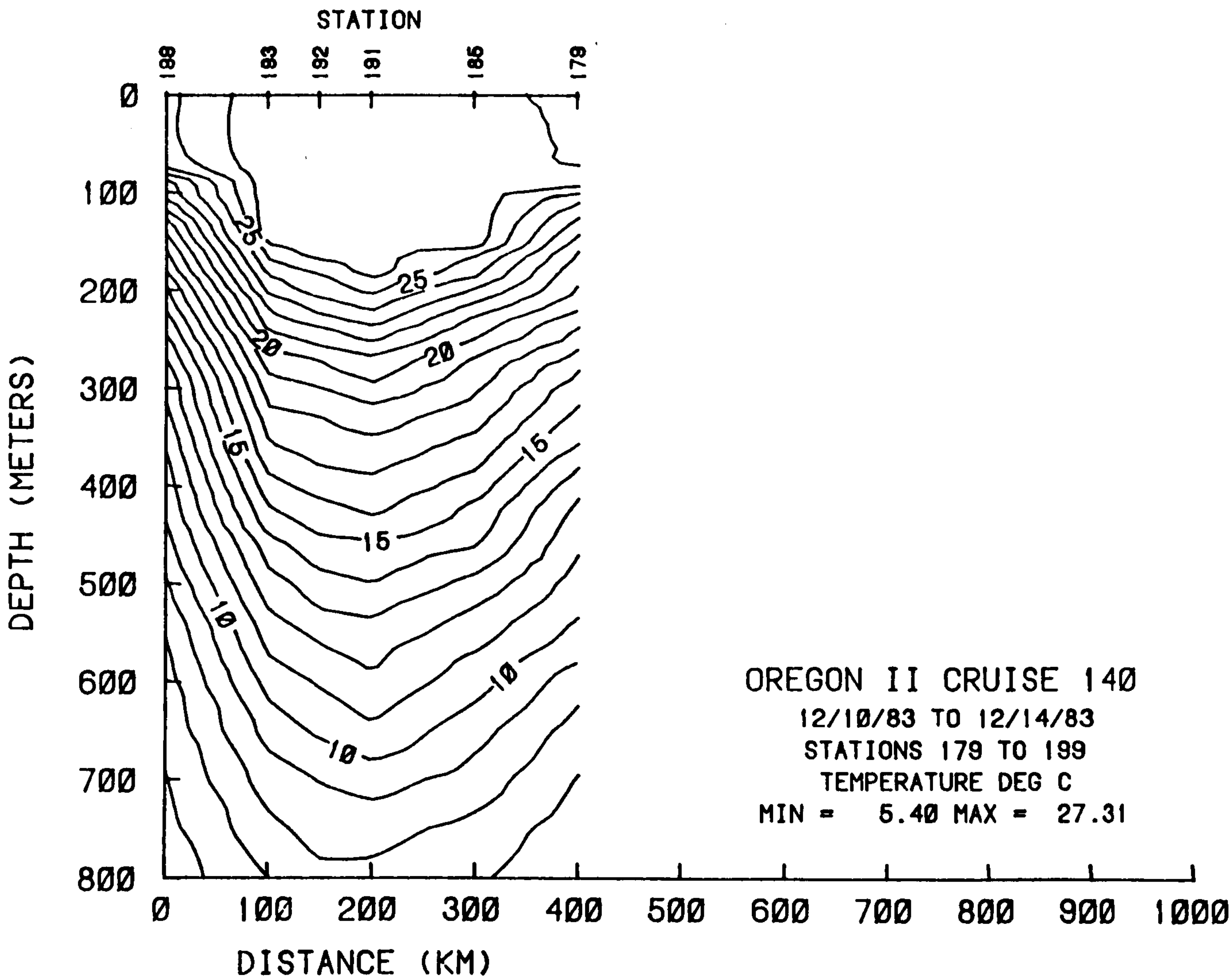


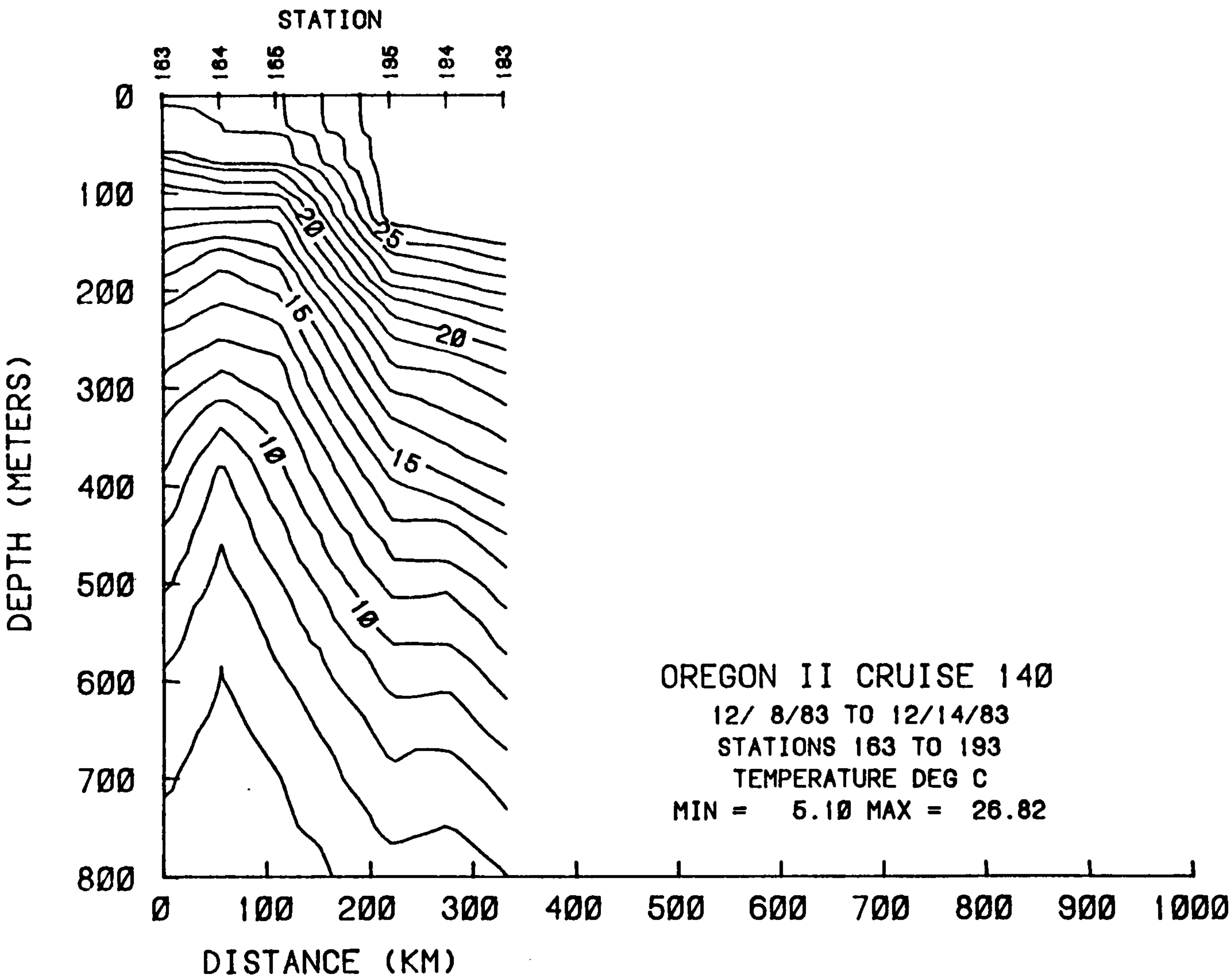
OREGON II CRUISE 140
12/17/83 TO 12/20/83
STATIONS 200 TO 213
TEMPERATURE DEG C
MIN = 5.35 MAX = 25.04

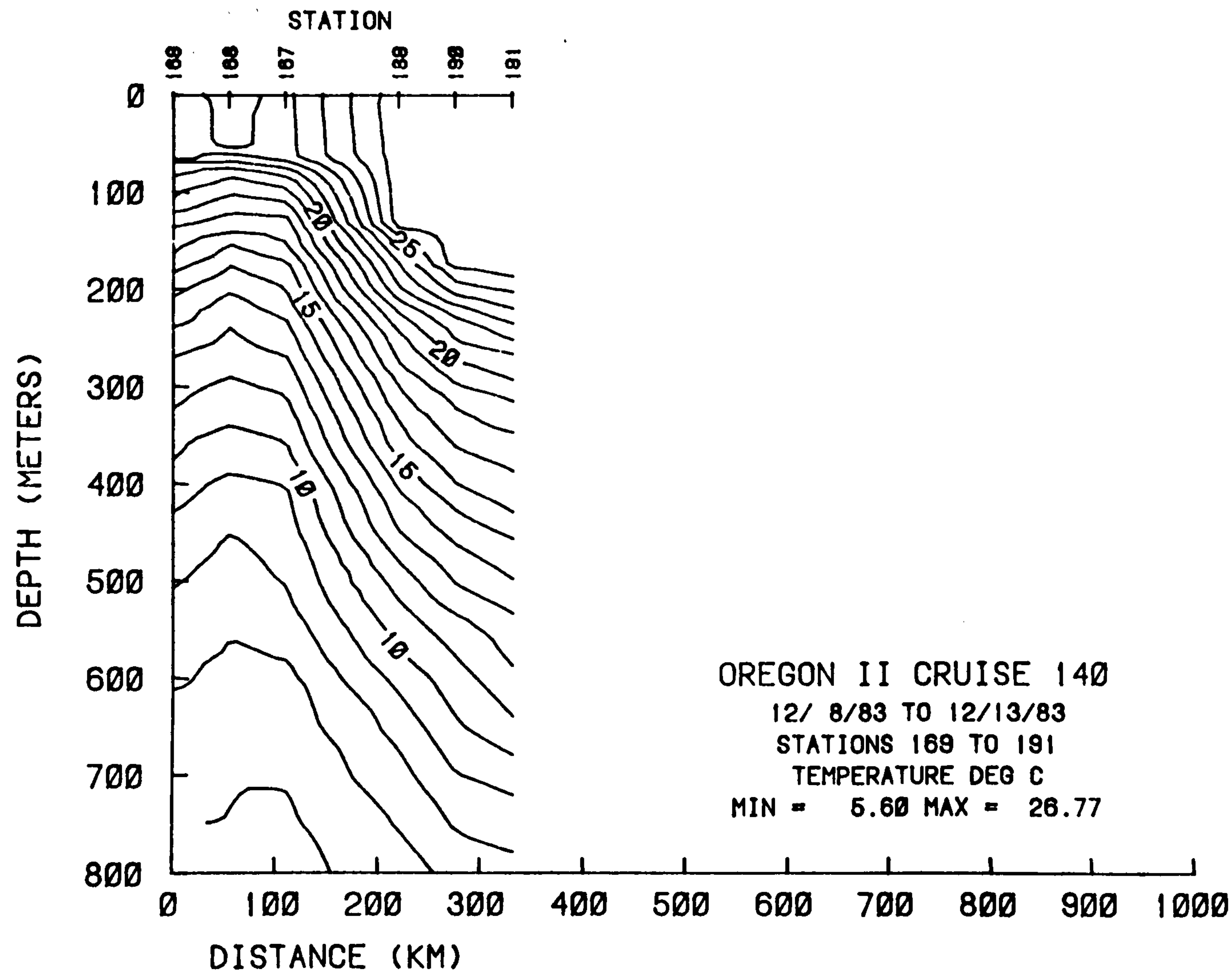

STATION
165
166
167
173
174
175
20
15
10
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0
100
200
300
400
500
600
700
800
900
1000
OREGON II CRUISE 140
12/ 8/83 TO 12/10/83
STATIONS 165 TO 175
TEMPERATURE DEG C
MIN = 5.51 MAX = 23.84

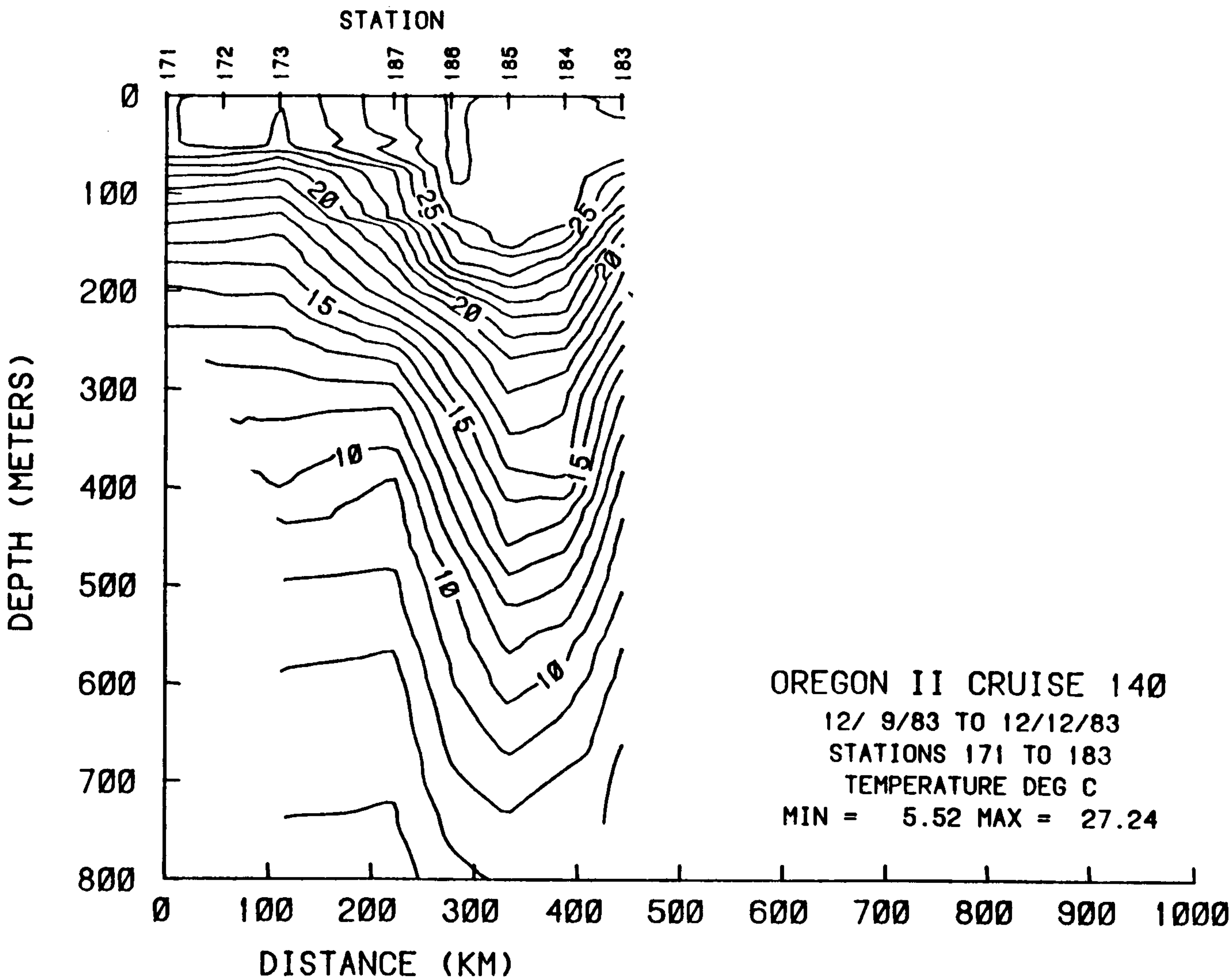

STATION
197
196
195
189
188
187
177
DEPTH (METERS)
DISTANCE (KM)
OREGON II CRUISE 140
12/10/83 TO 12/14/83
STATIONS 177 TO 197
TEMPERATURE DEG C
MIN = 5.35 MAX = 26.91

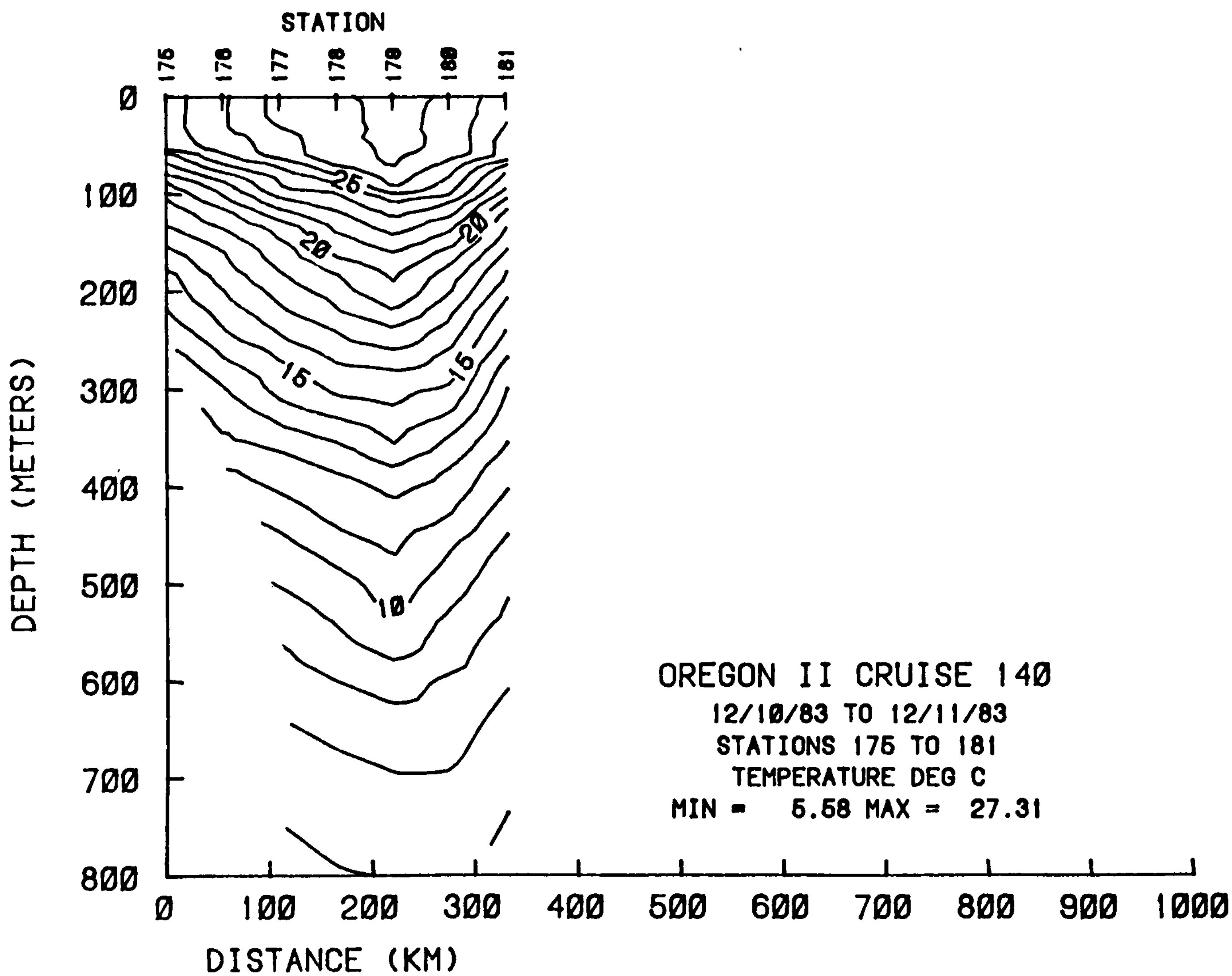

STATION
198
194
190
186
178
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
25
20
15
10
DISTANCE (KM)
0
100
200
300
400
500
600
700
800
900
1000
OREGON II CRUISE 140
12/10/83 TO 12/14/83
STATIONS 178 TO 198
TEMPERATURE DEG C
MIN = 4.93 MAX = 27.24

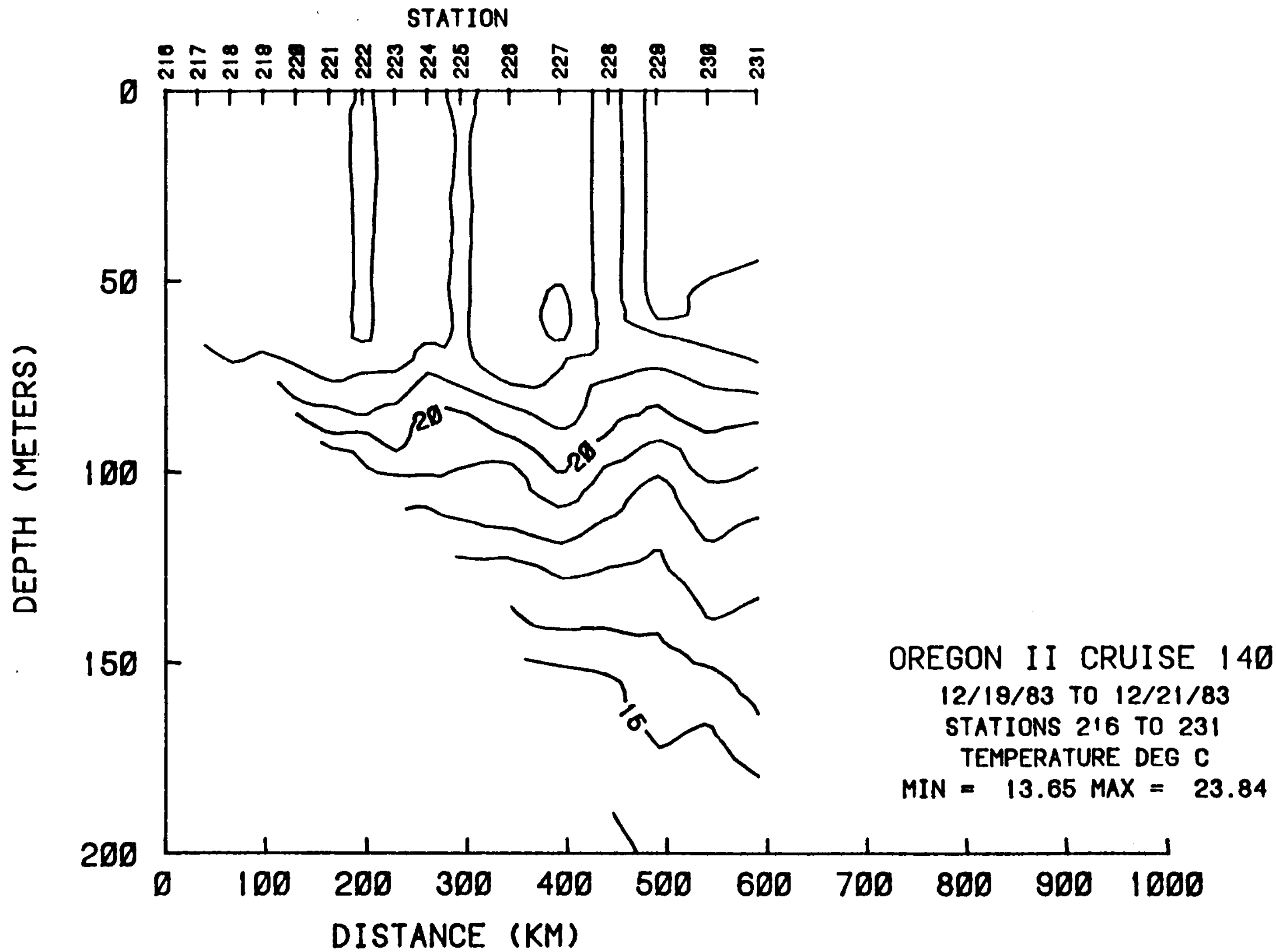

STATION
199
193
192
191
185
179
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
25
20
15
10
0
100
200
300
400
500
600
700
800
900
1000
DISTANCE (KM)
OREGON II CRUISE 140
12/10/83 TO 12/14/83
STATIONS 179 TO 199
TEMPERATURE DEG C
MIN = 5.40 MAX = 27.31

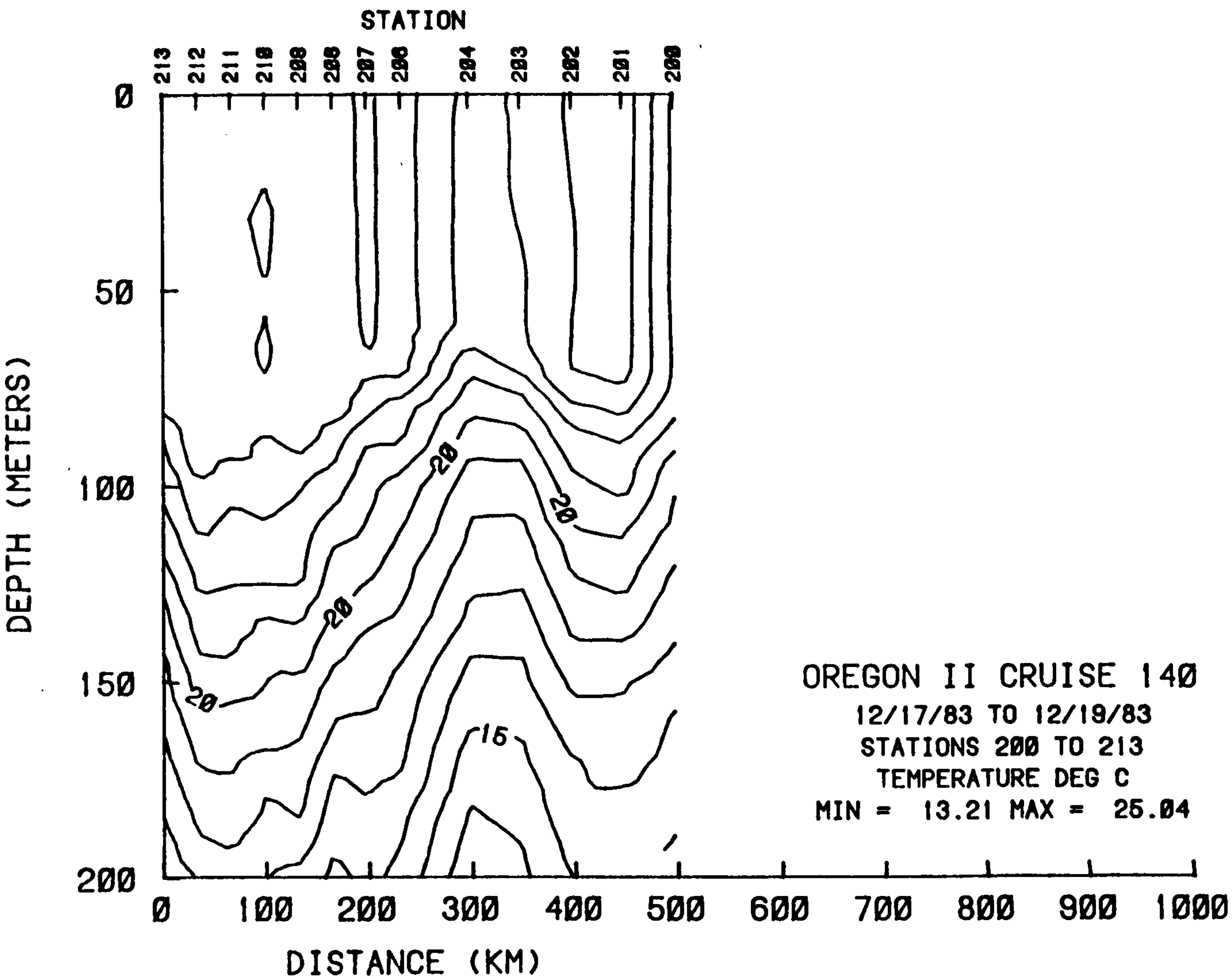

STATION
163
164
165
195
194
193
25
20
20
15
15
10
10
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
0
100
200
300
400
500
600
700
800
900
1000
DISTANCE (KM)
OREGON II CRUISE 140
12/ 8/83 TO 12/14/83
STATIONS 163 TO 193
TEMPERATURE DEG C
MIN = 5.10 MAX = 26.82

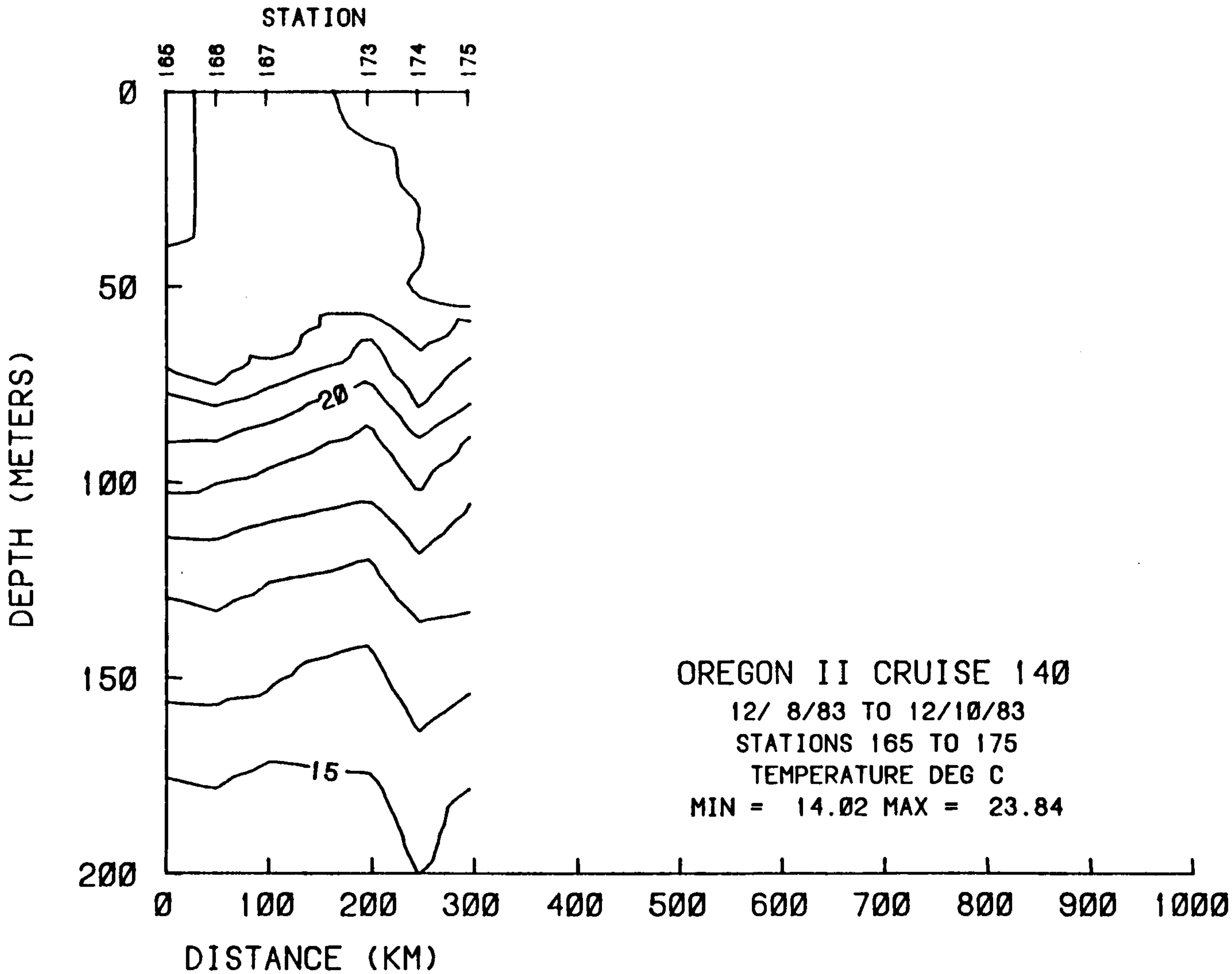

STATION
167
0
100
200
300
400
500
600
700
800
DEPTH (METERS)
20
25
15
20
10
15
10
0
100
200
300
400
500
600
700
800
900
1000
DISTANCE (KM)
OREGON II CRUISE 140
12/ 8/83 TO 12/13/83
STATIONS 169 TO 191
TEMPERATURE DEG C
MIN = 5.60 MAX = 26.77

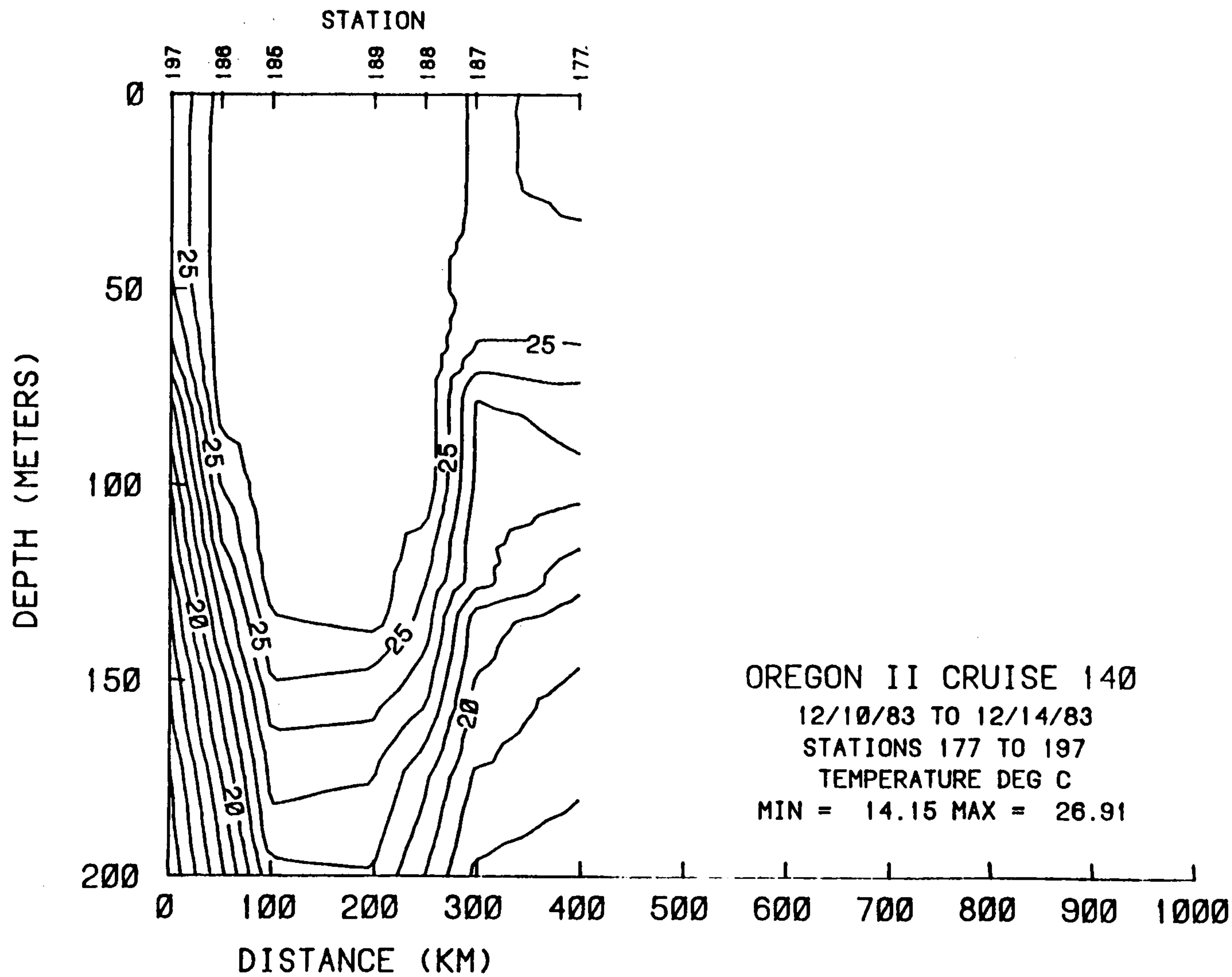

STATION
171
172
173
187
186
185
184
183
DEPTH (METERS)
DISTANCE (KM)
OREGON II CRUISE 140
12/ 9/83 TO 12/12/83
STATIONS 171 TO 183
TEMPERATURE DEG C
MIN = 5.52 MAX = 27.24

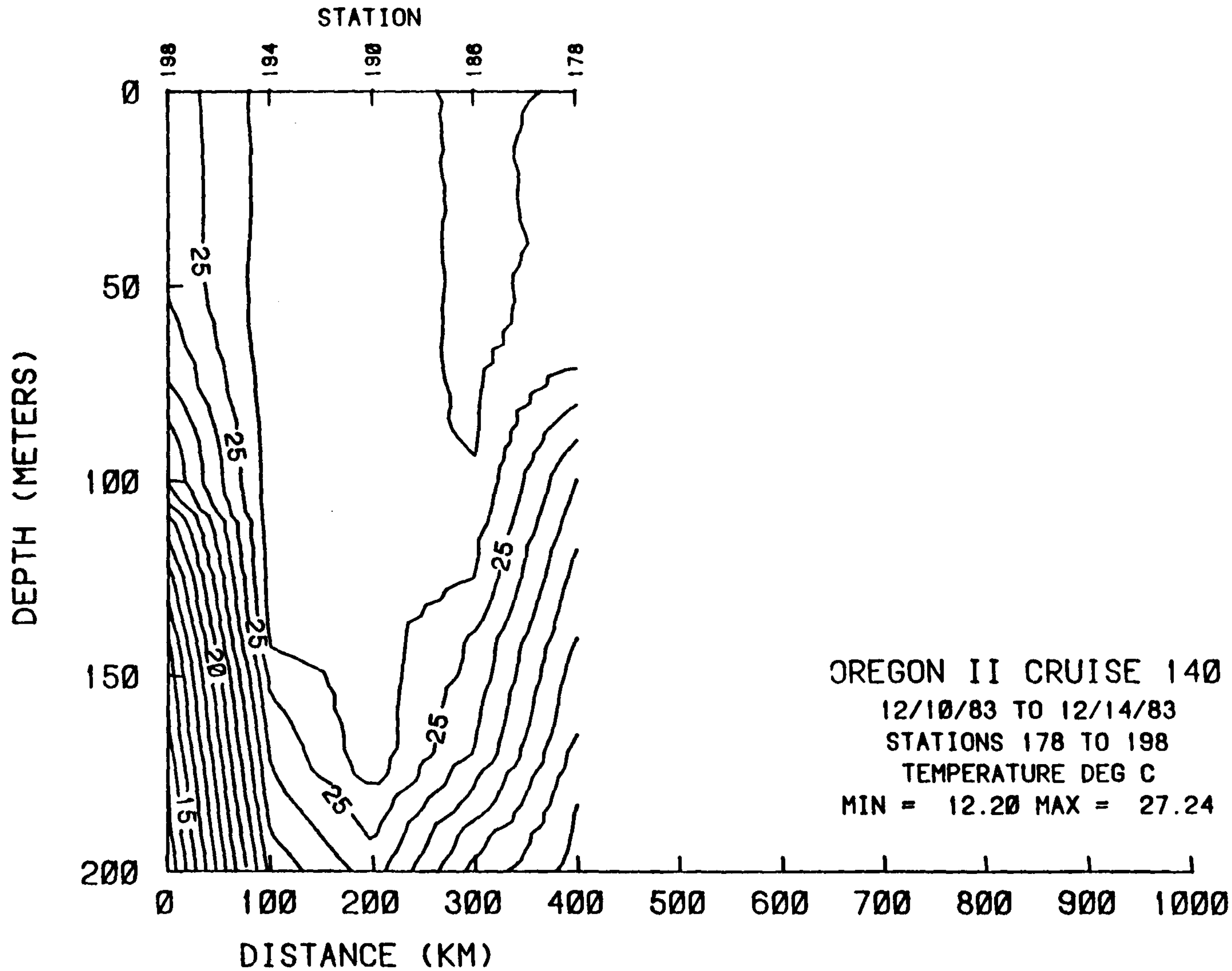

STATION
175
176
177
178
179
180
181
DEPTH (METERS)
DISTANCE (KM)
25
20
20
15
15
10
OREGON II CRUISE 140
12/10/83 TO 12/11/83
STATIONS 175 TO 181
TEMPERATURE DEG C
MIN = 5.58 MAX = 27.31

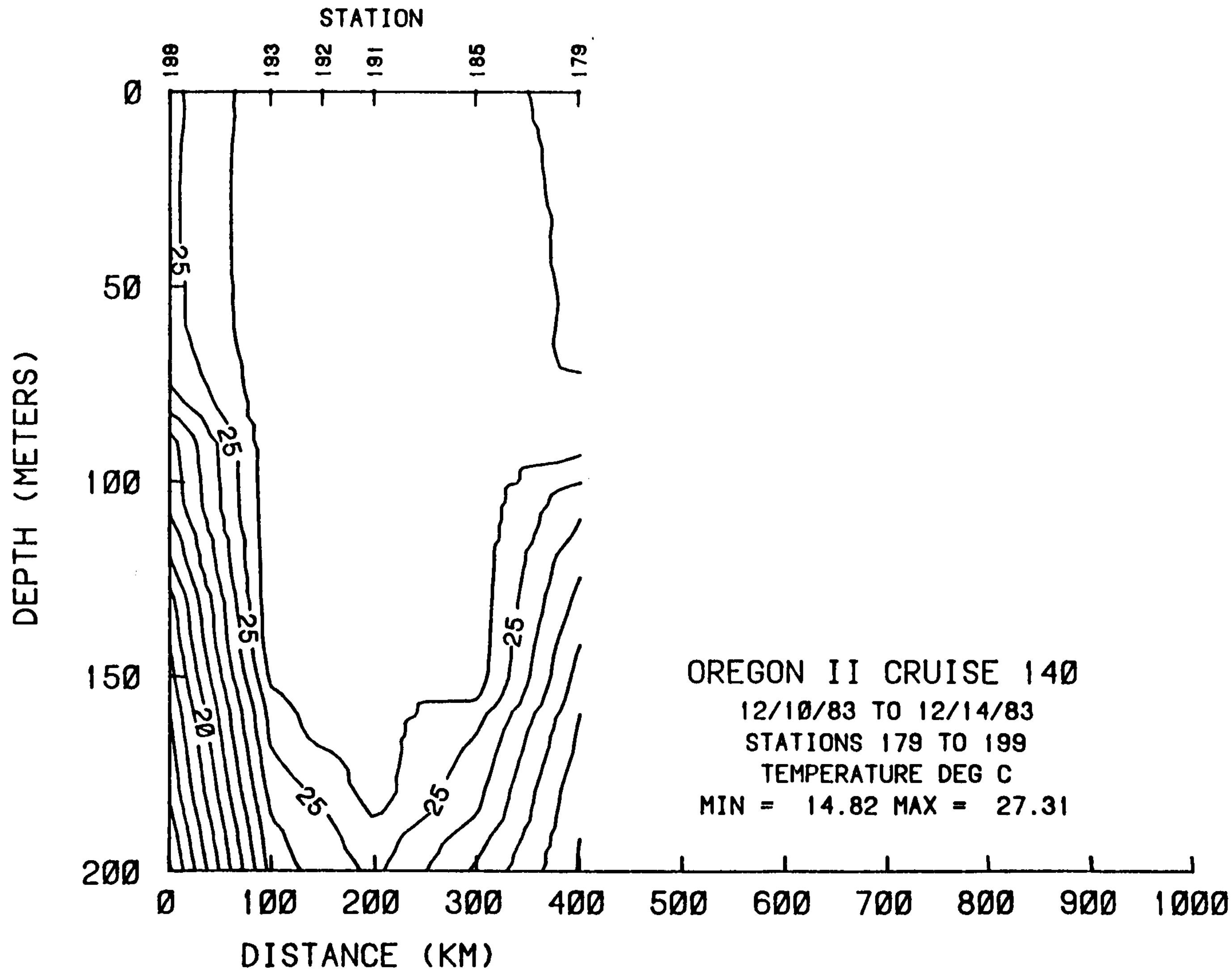

STATION
216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231
DEPTH (METERS)
Ø
5Ø
1ØØ
15Ø
2ØØ
2Ø
2Ø
16
Ø 1ØØ 2ØØ 3ØØ 4ØØ 5ØØ 6ØØ 7ØØ 8ØØ 9ØØ 1ØØØ
DISTANCE (KM)
OREGON II CRUISE 14Ø
12/19/83 TO 12/21/83
STATIONS 216 TO 231
TEMPERATURE DEG C
MIN = 13.65 MAX = 23.84

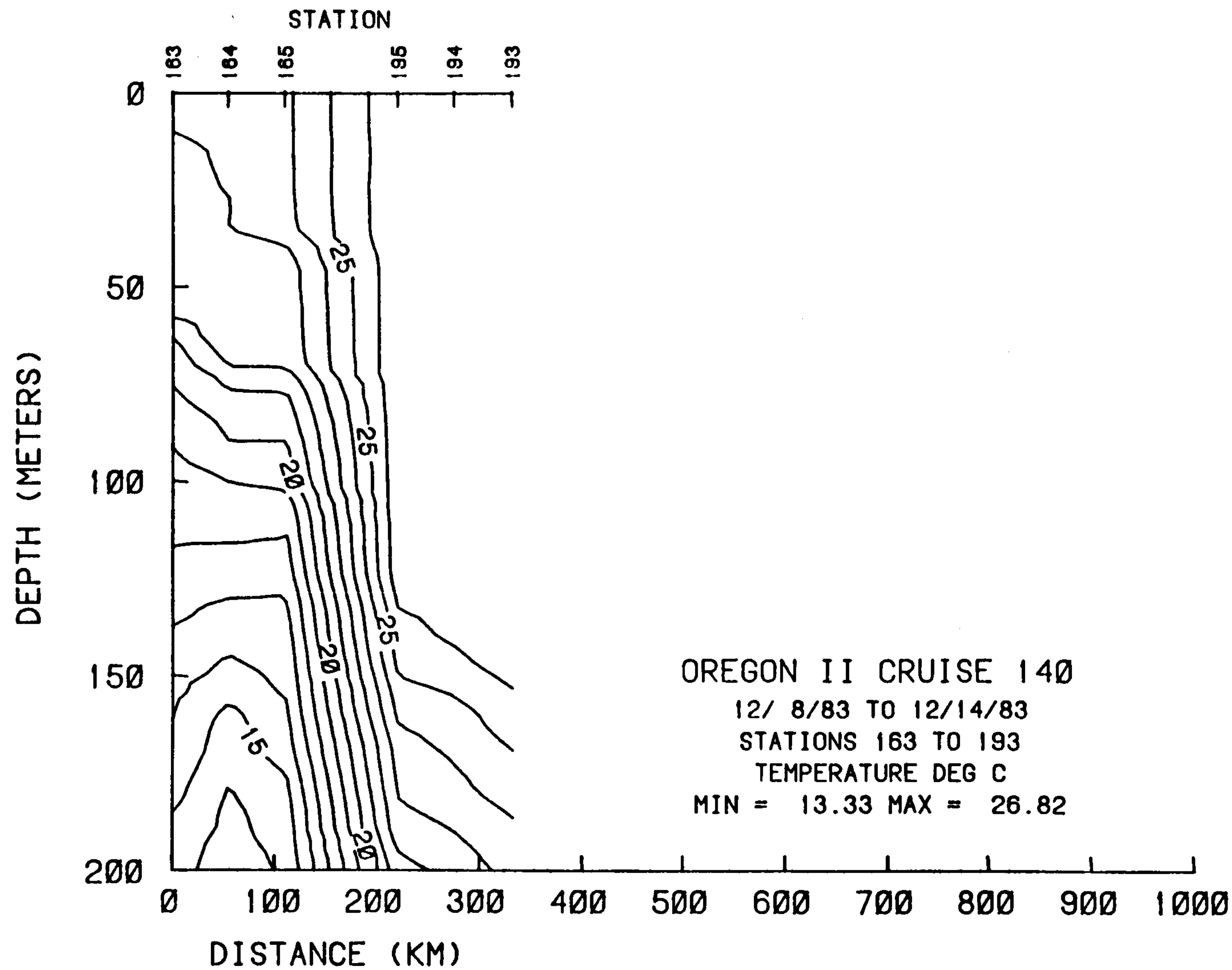

STATION
213
212
211
210
209
208
207
206
204
203
202
201
200
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0
100
200
300
400
500
600
700
800
900
1000
20
20
20
20
15
OREGON II CRUISE 140
12/17/83 TO 12/19/83
STATIONS 200 TO 213
TEMPERATURE DEG C
MIN = 13.21 MAX = 25.04

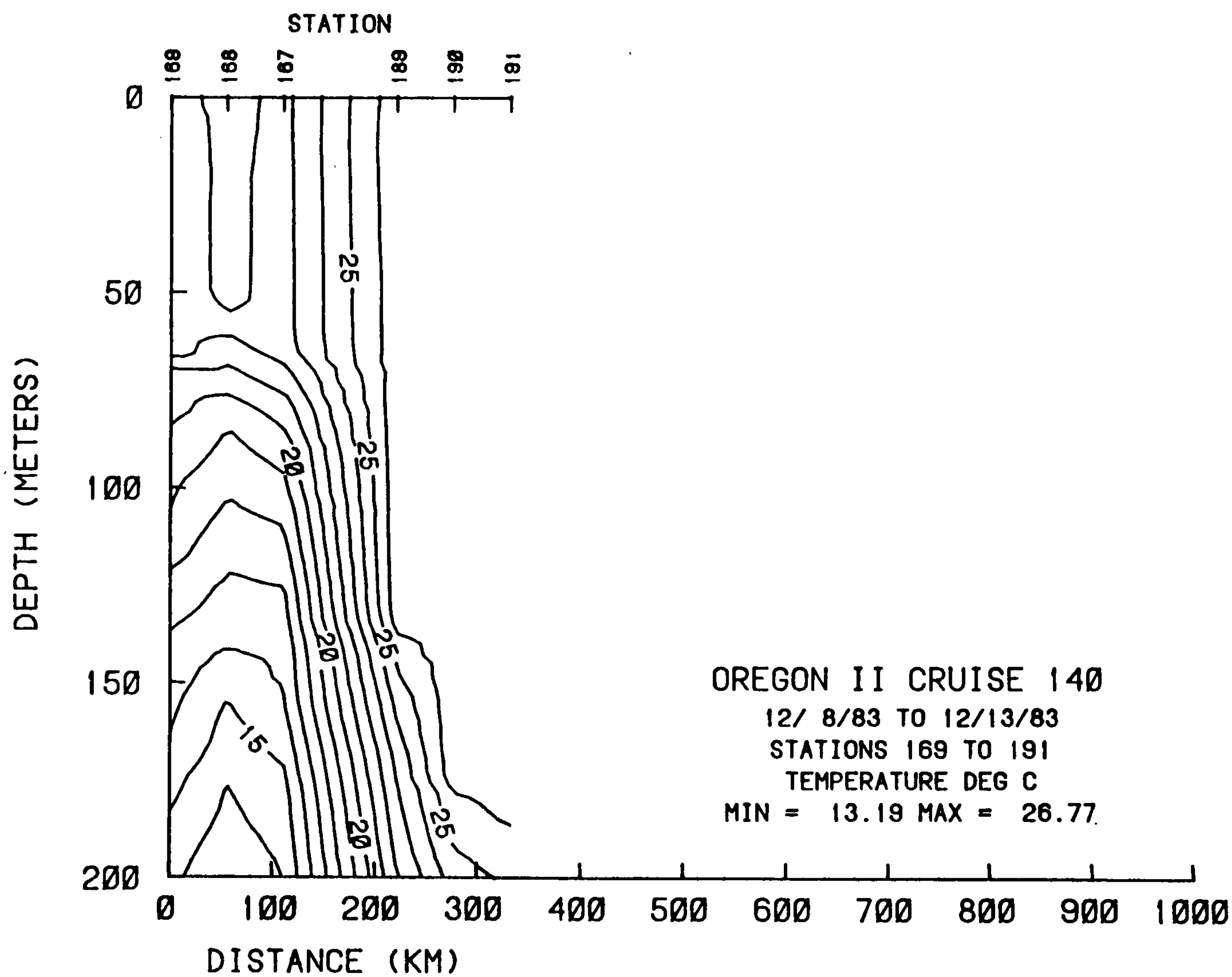

STATION
165
166
167
173
174
175
DEPTH (METERS)
0
50
100
150
200
20
15
0
100
200
300
400
500
600
700
800
900
1000
DISTANCE (KM)
OREGON II CRUISE 140
12/ 8/83 TO 12/10/83
STATIONS 165 TO 175
TEMPERATURE DEG C
MIN = 14.02 MAX = 23.84

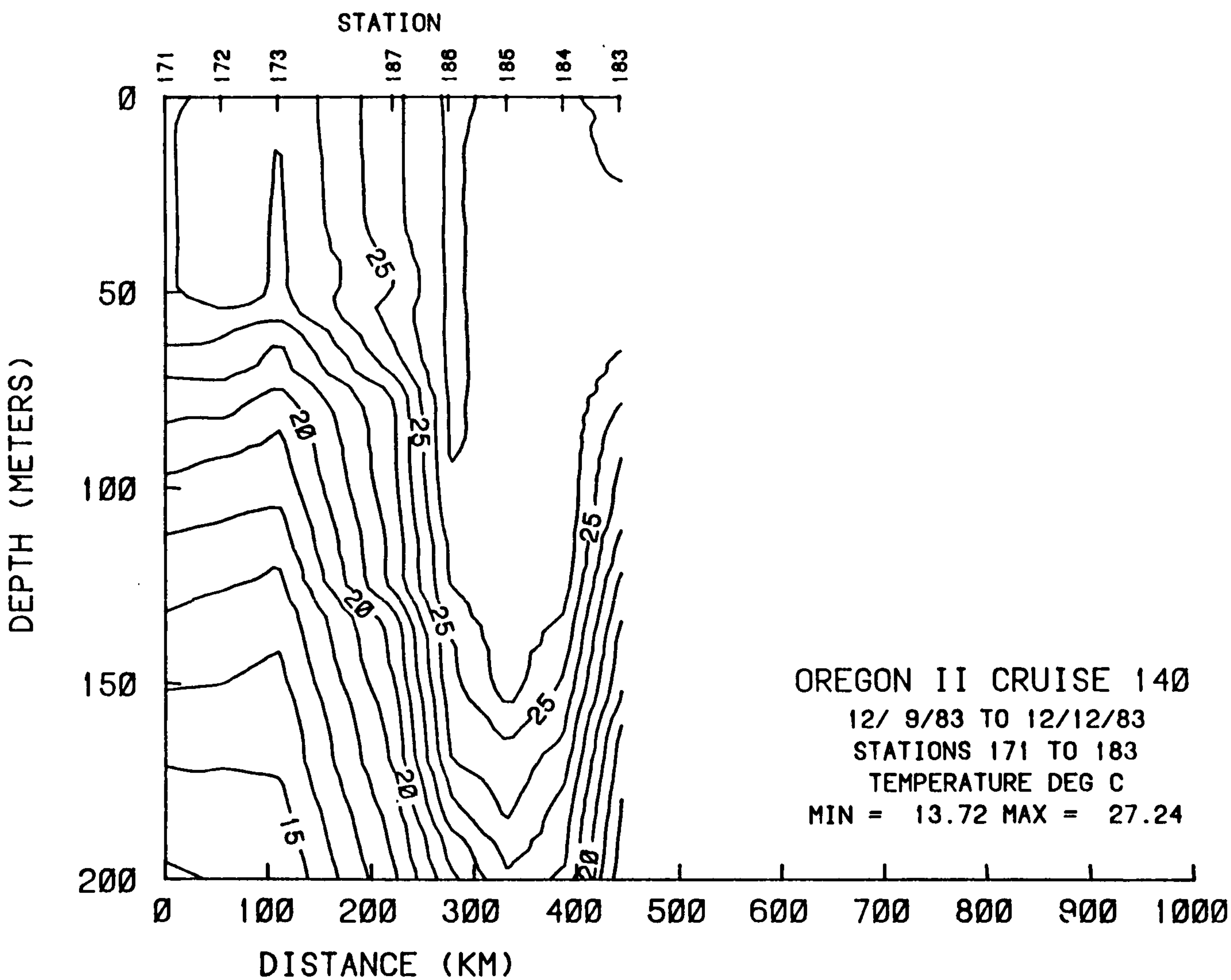

STATION
197
186
185
189
188
187
177
Ø
50
100
150
200
DEPTH (METERS)
25
20
Ø
100
200
300
400
500
600
700
800
900
1000
DISTANCE (KM)
OREGON II CRUISE 140
12/10/83 TO 12/14/83
STATIONS 177 TO 197
TEMPERATURE DEG C
MIN = 14.15 MAX = 26.91

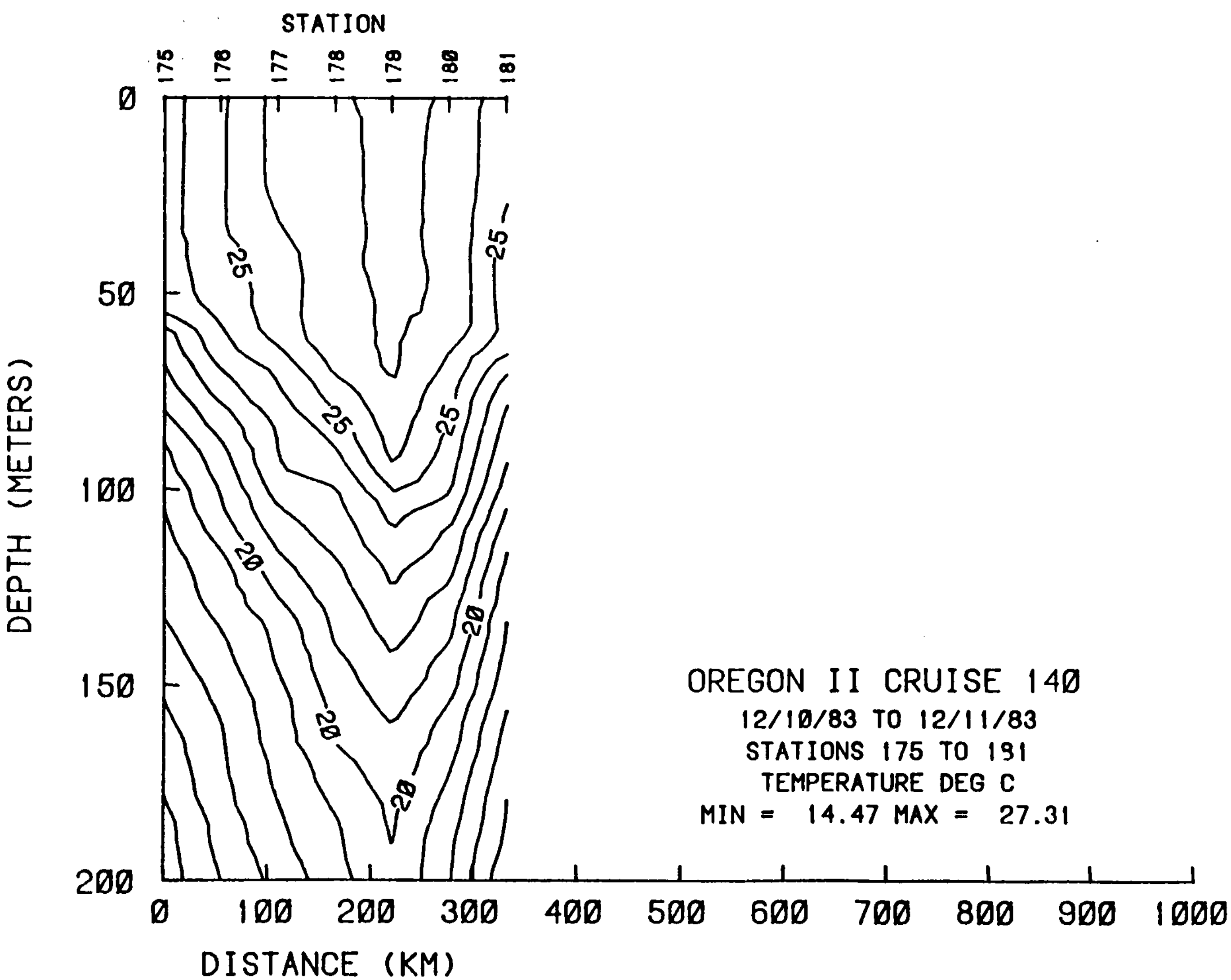

STATION
198
194
190
186
178
0
50
100
150
200
DEPTH (METERS)
25
25
25
20
15
25
25
25
0
100
200
300
400
500
600
700
800
900
1000
DISTANCE (KM)
OREGON II CRUISE 140
12/10/83 TO 12/14/83
STATIONS 178 TO 198
TEMPERATURE DEG C
MIN = 12.20 MAX = 27.24

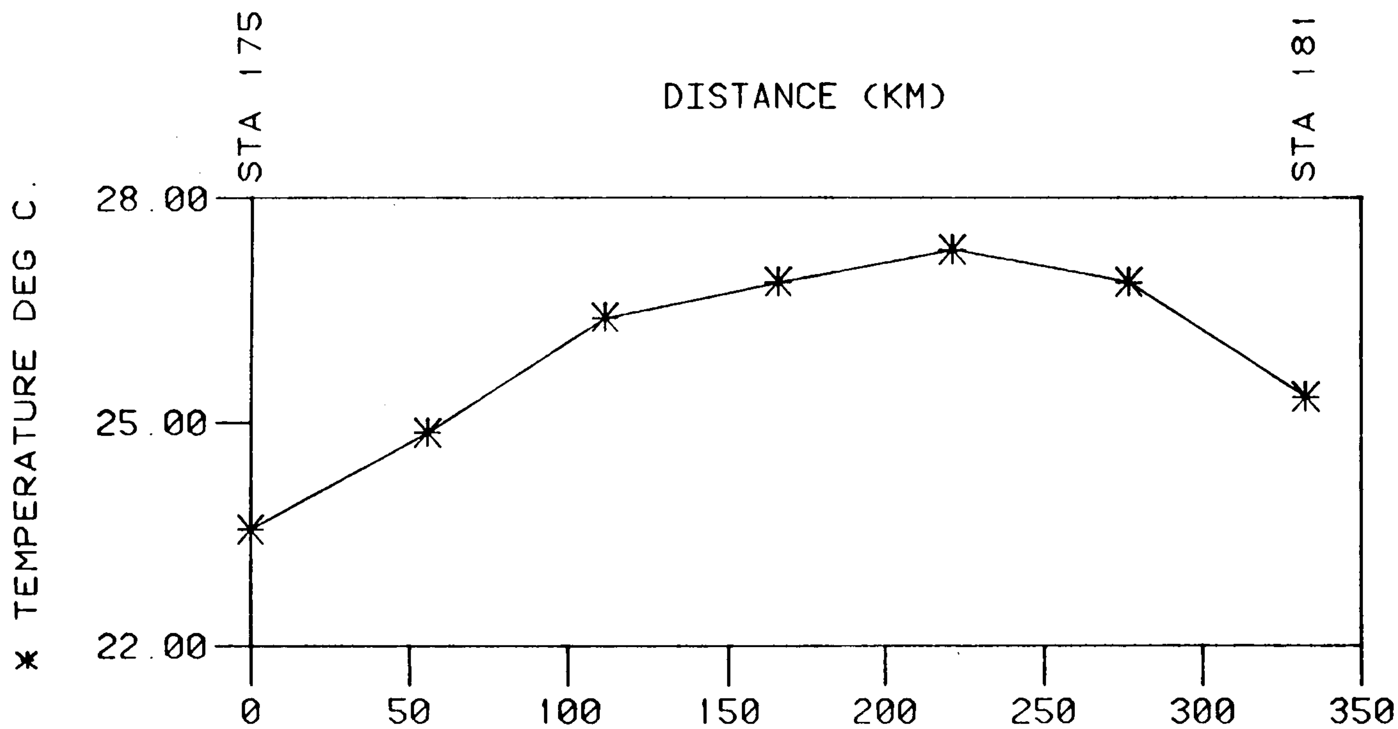

STATION
199
193
192
191
185
179
DEPTH (METERS)
DISTANCE (KM)
25
20
OREGON II CRUISE 140
12/10/83 TO 12/14/83
STATIONS 179 TO 199
TEMPERATURE DEG C
MIN = 14.82 MAX = 27.31


STATION
163
164
165
195
194
193
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0
100
200
300
400
500
600
700
800
900
1000
25
25
25
20
20
20
15
OREGON II CRUISE 140
12/ 8/83 TO 12/14/83
STATIONS 163 TO 193
TEMPERATURE DEG C
MIN = 13.33 MAX = 26.82

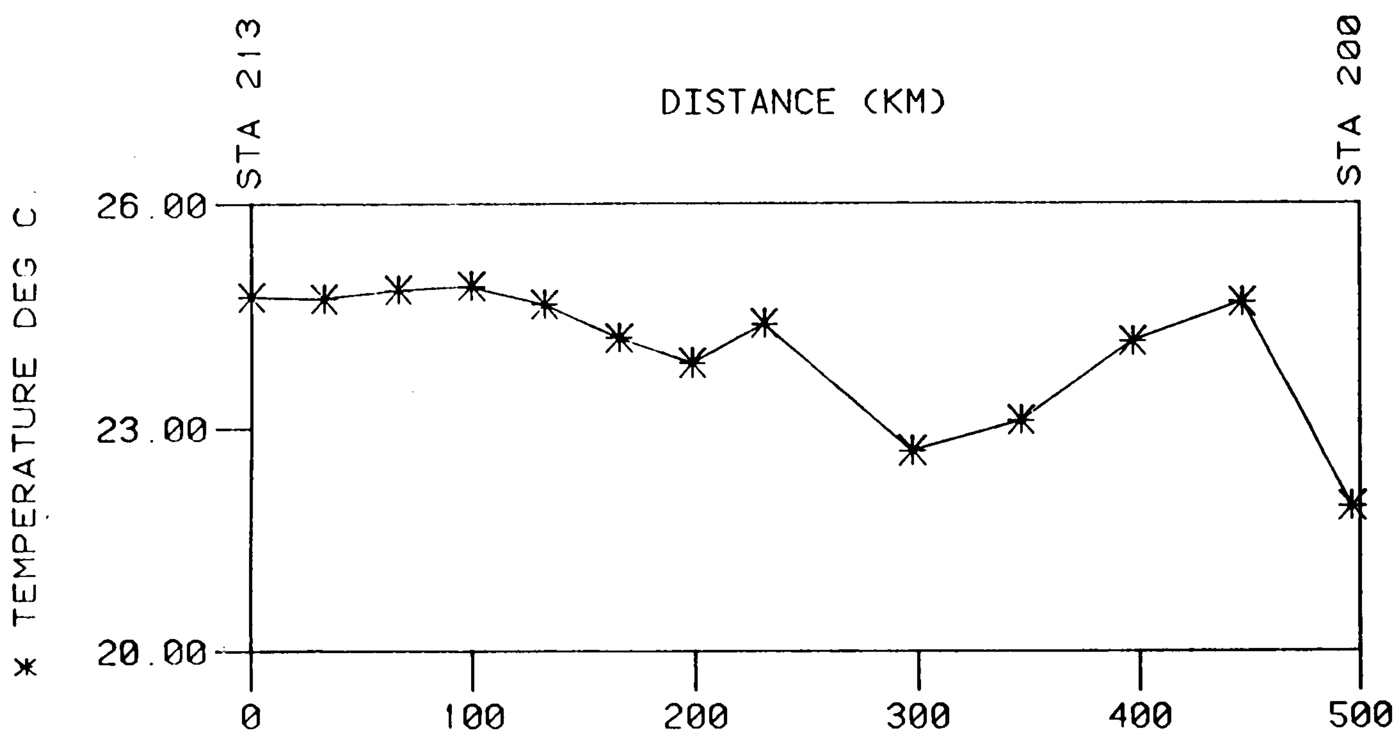

STATION
169
168
167
189
190
191
0
50
100
150
200
DEPTH (METERS)
25
20
25
20
25
15
20
25
0
100
200
300
400
500
600
700
800
900
1000
DISTANCE (KM)
OREGON II CRUISE 140
12/ 8/83 TO 12/13/83
STATIONS 169 TO 191
TEMPERATURE DEG C
MIN = 13.19 MAX = 26.77


STATION
171
172
173
187
186
185
184
183
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0
100
200
300
400
500
600
700
800
900
1000
25
20
15
OREGON II CRUISE 140
12/ 9/83 TO 12/12/83
STATIONS 171 TO 183
TEMPERATURE DEG C
MIN = 13.72 MAX = 27.24

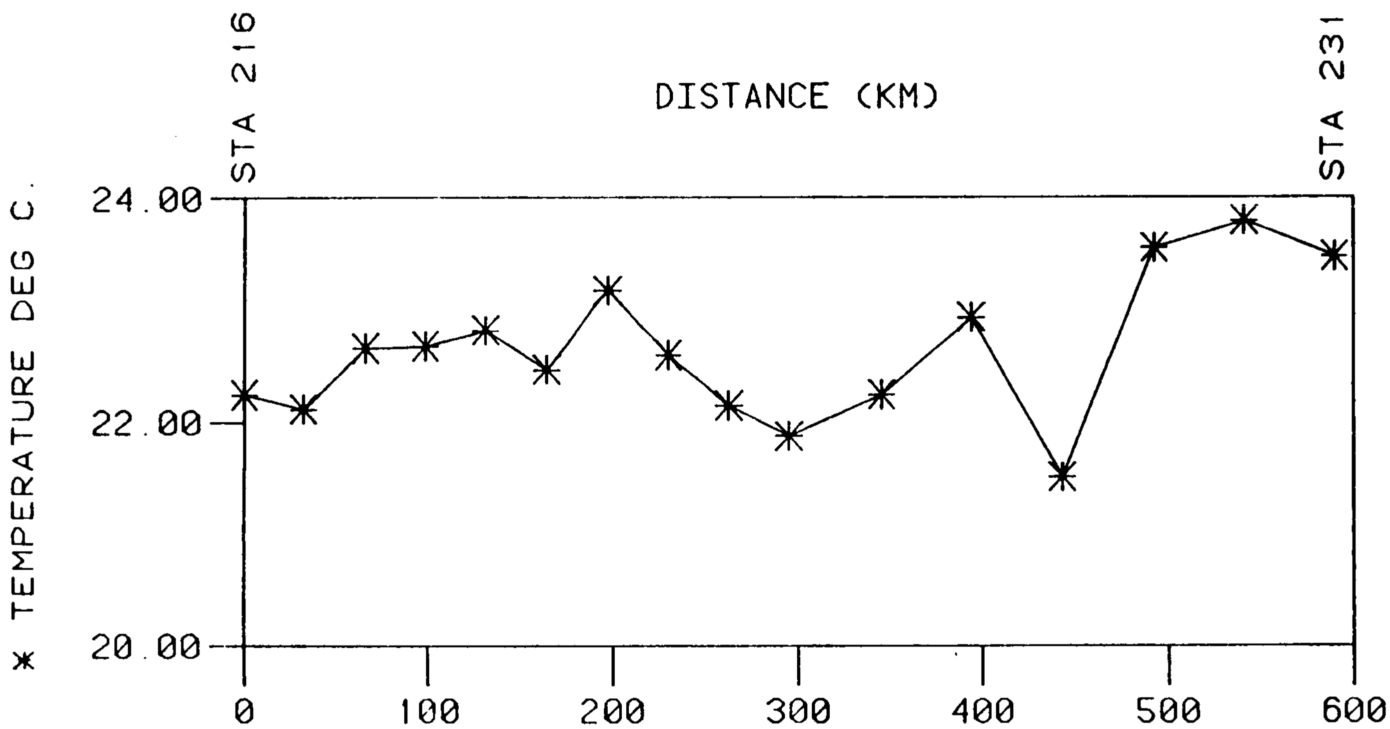

STATION
175 176 177 178 179 180 181
DEPTH (METERS)
Ø 50 100 150 200
25
20
DISTANCE (KM)
Ø 100 200 300 400 500 600 700 800 900 1000
OREGON II CRUISE 140
12/10/83 TO 12/11/83
STATIONS 175 TO 181
TEMPERATURE DEG C
MIN = 14.47 MAX = 27.31



PARAMETERS AT SURFACE OREGON II CRUISE 140



PARAMETERS AT SURFACE OREGON II CRUISE 140



PARAMETERS AT SURFACE OREGON II CRUISE 140

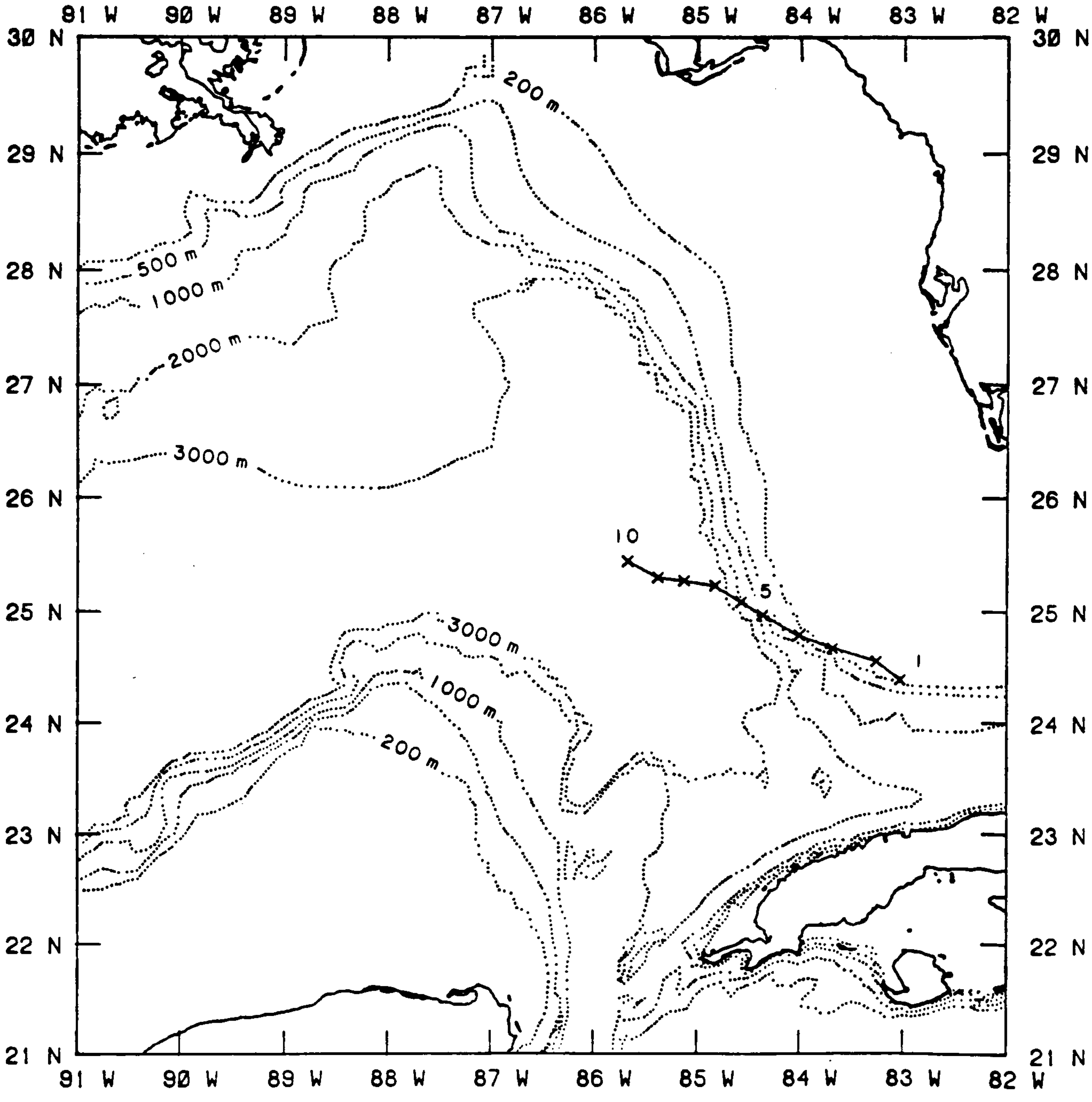
1984 SOOP DATA BY VESSEL

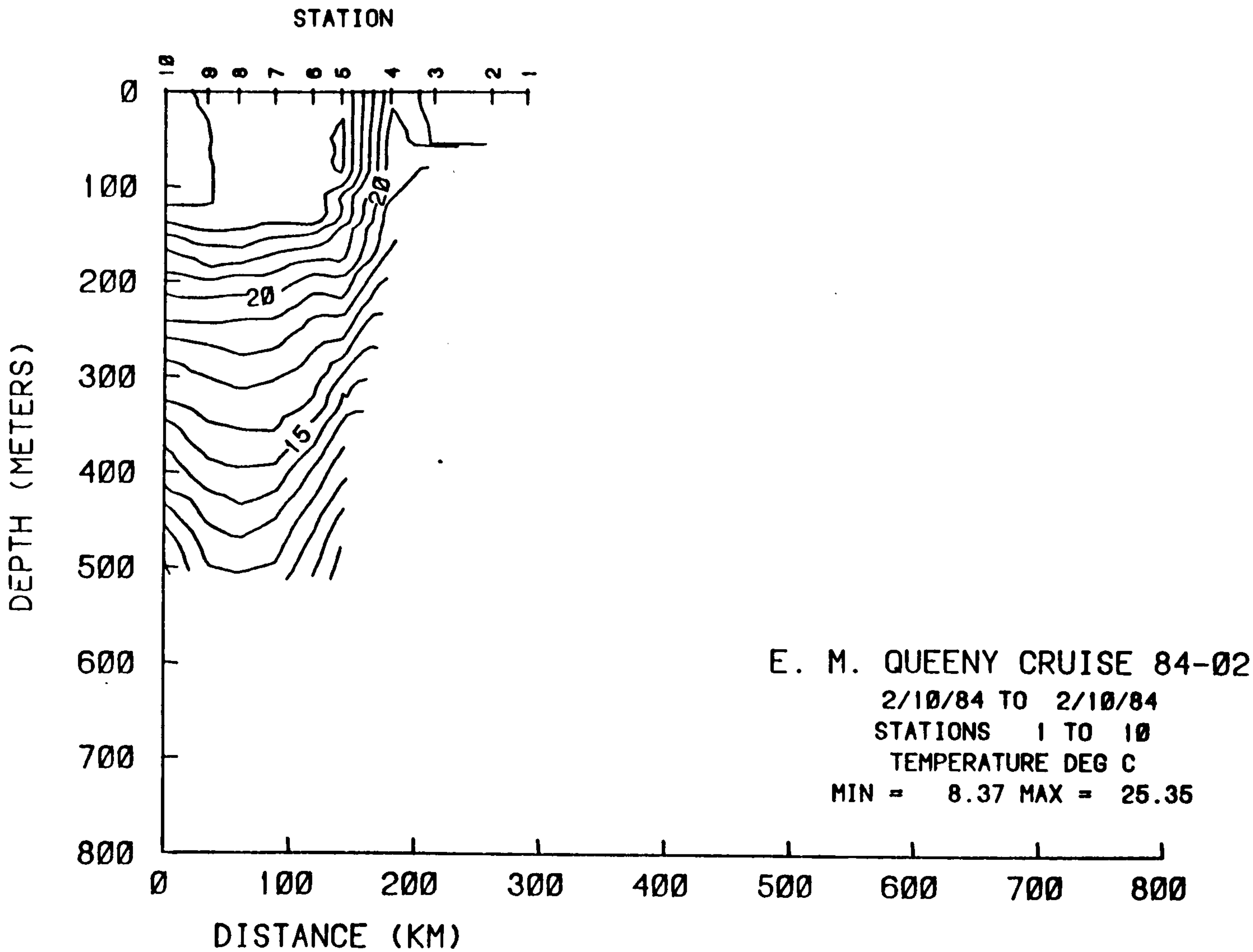
ID	Cruise	Dates
QU84-02	E.M. Queeny Cruise 84-02	84-02-10 to 84-02-10
QU84-03	E.M. Queeny Cruise 84-03	84-03-04 to 84-03-05
QU84-04	E.M. Queeny Cruise 84-04	84-03-30 to 84-03-31
QU84-05	E.M. Queeny Cruise 84-05	84-04-13 to 84-04-14
QU84-08	E.M. Queeny Cruise 84-08	84-05-24 to 84-05-25
QU84-09	E.M. Queeny Cruise 84-09	84-06-08 to 84-06-09
QU84-10	E.M. Queeny Cruise 84-10	84-06-24 to 84-06-25
QU84-11	E.M. Queeny Cruise 84-11	84-07-14 to 84-07-15
QU84-12	E.M. Queeny Cruise 84-12	84-07-25 to 84-07-26
QU84-13	E.M. Queeny Cruise 84-13	84-08-19 to 84-08-20
QU84-14	E.M. Queeny Cruise 84-14	84-09-07 to 84-09-08
QU84-17	E.M. Queeny Cruise 84-17	84-11-08 to 84-11-09
QU84-18	E.M. Queeny Cruise 84-18	84-11-26 to 84-11-27
QU84-19	E.M. Queeny Cruise 84-19	84-12-28 to 84-12-29
NW84-01	Nordic Wasa Cruise 84-01	84-01-07 to 84-01-08
NW84-02	Nordic Wasa Cruise 84-02	84-02-18 to 84-02-19
NW84-03	Nordic Wasa Cruise 84-03	84-03-01 to 84-03-03
NW84-04	Nordic Wasa Cruise 84-04	84-03-13 to 84-03-14
NW84-05	Nordic Wasa Cruise 84-05	84-03-25 to 84-03-27
NW84-06	Nordic Wasa Cruise 84-06	84-04-10 to 84-04-10
N184-02	Nestor I Cruise 84-02	84-05-15 to 84-05-16
N184-03	Nestor I Cruise 84-03	84-05-29 to 84-05-31
N184-04	Nestor I Cruise 84-04	84-06-11 to 84-06-12
N184-05	Nestor I Cruise 84-05	84-06-23 to 84-06-24
N184-06	Nestor I Cruise 84-06	84-08-14 to 84-08-15
N184-07	Nestor I Cruise 84-07	84-08-26 to 84-08-28
N184-08	Nestor I Cruise 84-08	84-09-08 to 84-09-09
N184-09	Nestor I Cruise 84-09	84-09-21 to 84-09-21
N184-10	Nestor I Cruise 84-10	84-10-15 to 84-10-16
N184-11	Nestor I Cruise 84-11	84-10-28 to 84-10-29
N184-12	Nestor I Cruise 84-12	84-11-09 to 84-11-10
N184-14	Nestor I Cruise 84-14	84-12-03 to 84-12-04
N184-15	Nestor I Cruise 84-15	84-12-16 to 84-12-16
N184-16	Nestor I Cruise 84-16	84-12-29 to 84-12-30
B84-01	Bellows Cruise 84-01	84-02-26 to 84-02-26
B84-05	Bellows Cruise 84-05	84-04-25 to 84-04-29
B84-06	Bellows Cruise 84-06	84-05-07 to 84-05-12
B84-08	Bellows Cruise 84-08	84-01-24 to 84-01-25
SC84-05	Suncoaster Cruise 84-05	84-03-25 to 84-03-26
GYRE84-G-4-II	Gyre Cruise 84-G-4-II	84-04-21 to 84-04-25
GYRE84-G-5	Gyre Cruise 85-G-5	84-05-02 to 84-05-12
ORII143	Oregon II Cruise 143	84-04-21 to 84-05-14
YUCAI84-01	Yuca I Cruise 84-01	84-05-31 to 84-06-06

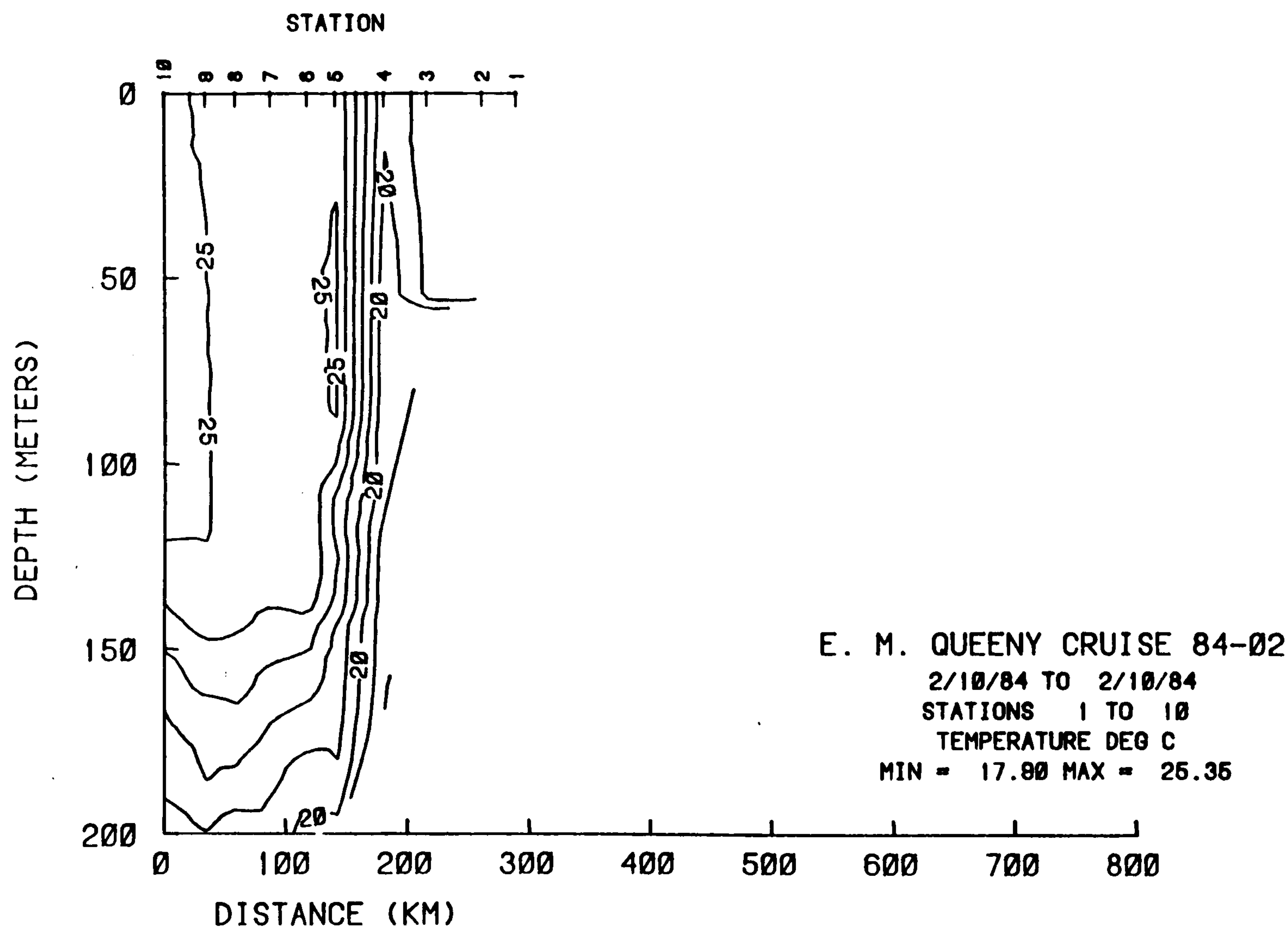
1984 CHRONOLOGICAL SOOP DATA LISTING

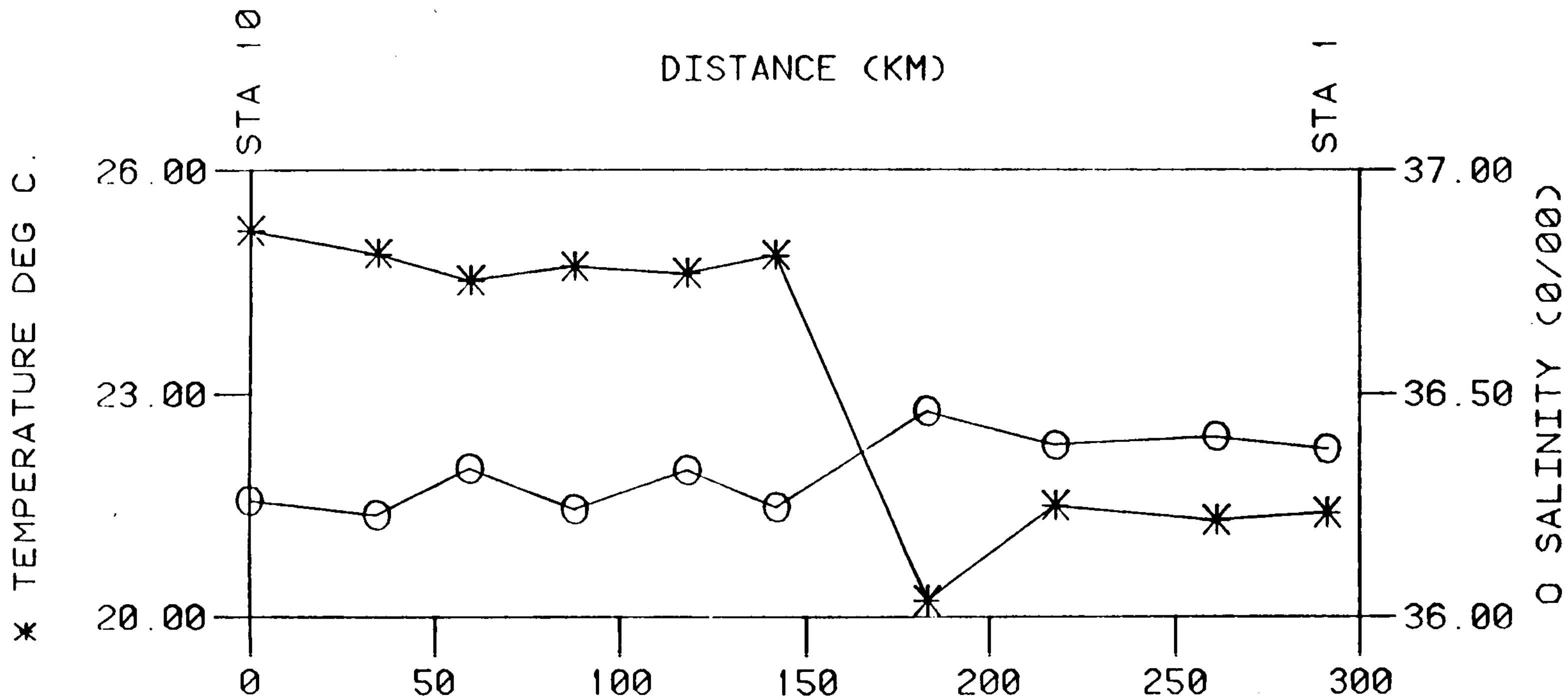
ID	Cruise	Dates
NW84-01	Nordic Wasa Cruise 84-01	84-01-07 to 84-01-08
B84-08	Bellows Cruise 84-08	84-01-24 to 84-01-25
QU84-02	E.M. Queeny Cruise 84-02	84-02-10 to 84-02-10
NW84-02	Nordic Wasa Cruise 84-02	84-02-18 to 84-02-19
B84-01	Bellows Cruise 84-01	84-02-26 to 84-02-26
NW84-03	Nordic Wasa Cruise 84-03	84-03-01 to 84-03-03
QU84-03	E.M. Queeny Cruise 84-03	84-03-04 to 84-03-05
NW84-04	Nordic Wasa Cruise 84-04	84-03-13 to 84-03-14
SC84-05	Suncoaster Cruise 84-05	84-03-25 to 84-03-26
NW84-05	Nordic Wasa Cruise 84-05	84-03-25 to 84-03-27
QU84-04	E.M. Queeny Cruise 84-04	84-03-30 to 84-03-31
NW84-06	Nordic Wasa Cruise 84-06	84-04-10 to 84-04-10
QU84-05	E.M. Queeny Cruise 84-05	84-04-13 to 84-04-14
ORII143	Oregon II Cruise 143	84-04-21 to 84-05-14
GYRE84-G-4-II	Gyre Cruise 84-G-4-II	84-04-21 to 84-04-25
B84-05	Bellows Cruise 84-05	84-04-25 to 84-04-29
GYRE84-G-5	Gyre Cruise 85-G-5	84-05-02 to 84-05-12
B84-06	Bellows Cruise 84-06	84-05-07 to 84-05-12
N184-02	Nestor I Cruise 84-02	84-05-15 to 84-05-16
QU84-08	E.M. Queeny Cruise 84-08	84-05-24 to 84-05-25
N184-03	Nestor I Cruise 84-03	84-05-29 to 84-05-31
YUCAI84-01	Yuca I Cruise 84-01	84-05-31 to 84-06-06
QU84-09	E.M. Queeny Cruise 84-09	84-06-08 to 84-06-09
N184-04	Nestor I Cruise 84-04	84-06-11 to 84-06-12
N184-05	Nestor I Cruise 84-05	84-06-23 to 84-06-24
QU84-10	E.M. Queeny Cruise 84-10	84-06-24 to 84-06-25
QU84-11	E.M. Queeny Cruise 84-11	84-07-14 to 84-07-15
QU84-12	E.M. Queeny Cruise 84-12	84-07-25 to 84-07-26
N184-06	Nestor I Cruise 84-06	84-08-14 to 84-08-15
QU84-13	E.M. Queeny Cruise 84-13	84-08-19 to 84-08-20
N184-07	Nestor I Cruise 84-07	84-08-26 to 84-08-28
QU84-14	E.M. Queeny Cruise 84-14	84-09-07 to 84-09-08
N184-08	Nestor I Cruise 84-08	84-09-08 to 84-09-09
N184-09	Nestor I Cruise 84-09	84-09-21 to 84-09-21
N184-10	Nestor I Cruise 84-10	84-10-15 to 84-10-16
N184-11	Nestor I Cruise 84-11	84-10-28 to 84-10-29
QU84-17	E.M. Queeny Cruise 84-17	84-11-08 to 84-11-09
N184-12	Nestor I Cruise 84-12	84-11-09 to 84-11-10
QU84-18	E.M. Queeny Cruise 84-18	84-11-26 to 84-11-27
N184-14	Nestor I Cruise 84-14	84-12-03 to 84-12-04
QU84-19	E.M. Queeny Cruise 84-19	84-12-28 to 84-12-29
N184-15	Nestor I Cruise 84-15	84-12-16 to 84-12-16
N184-16	Nestor I Cruise 84-16	84-12-29 to 84-12-30

E. M. QUEENY CRUISE 84-02 2/10/84 TO 2/10/84

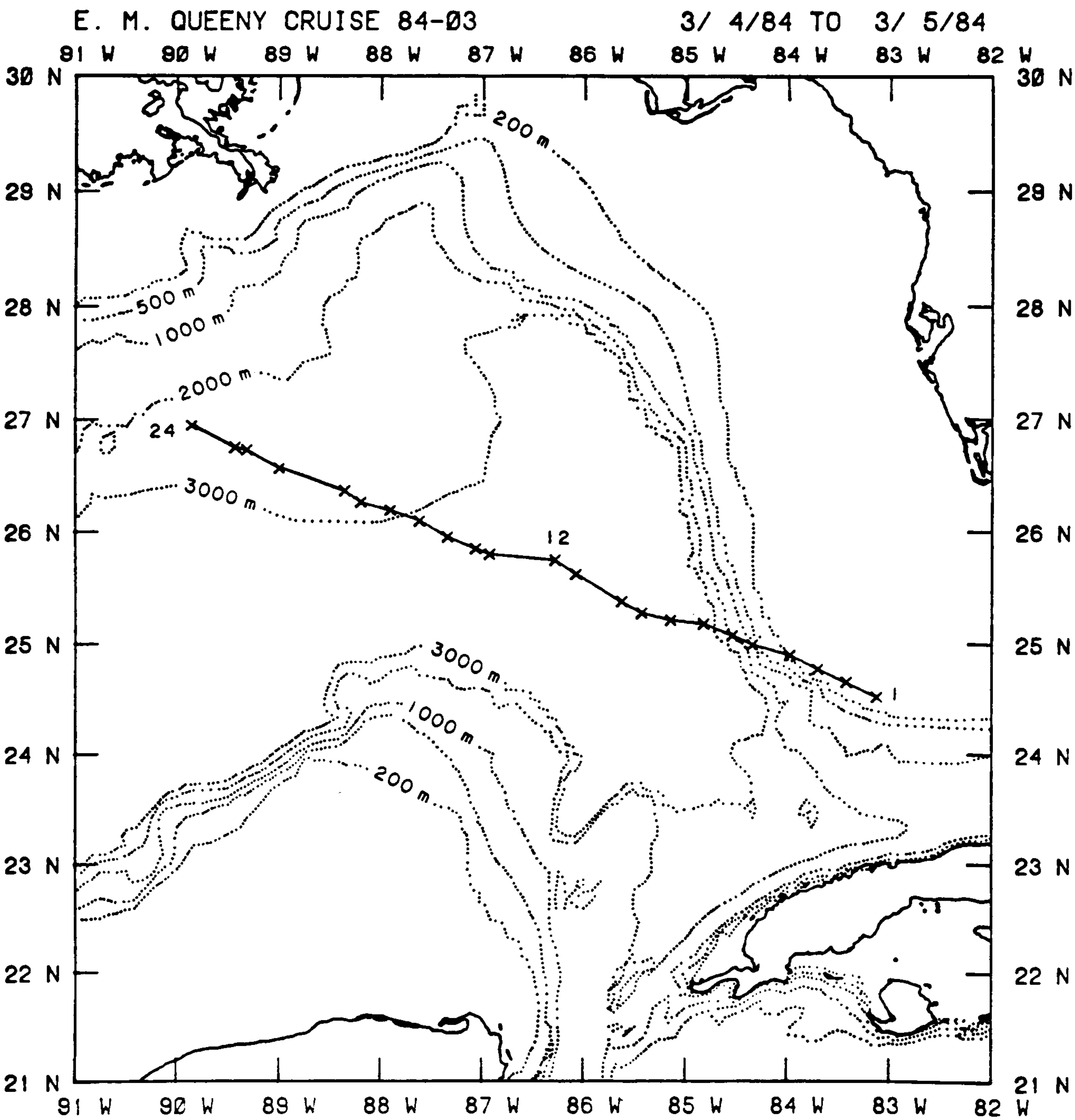


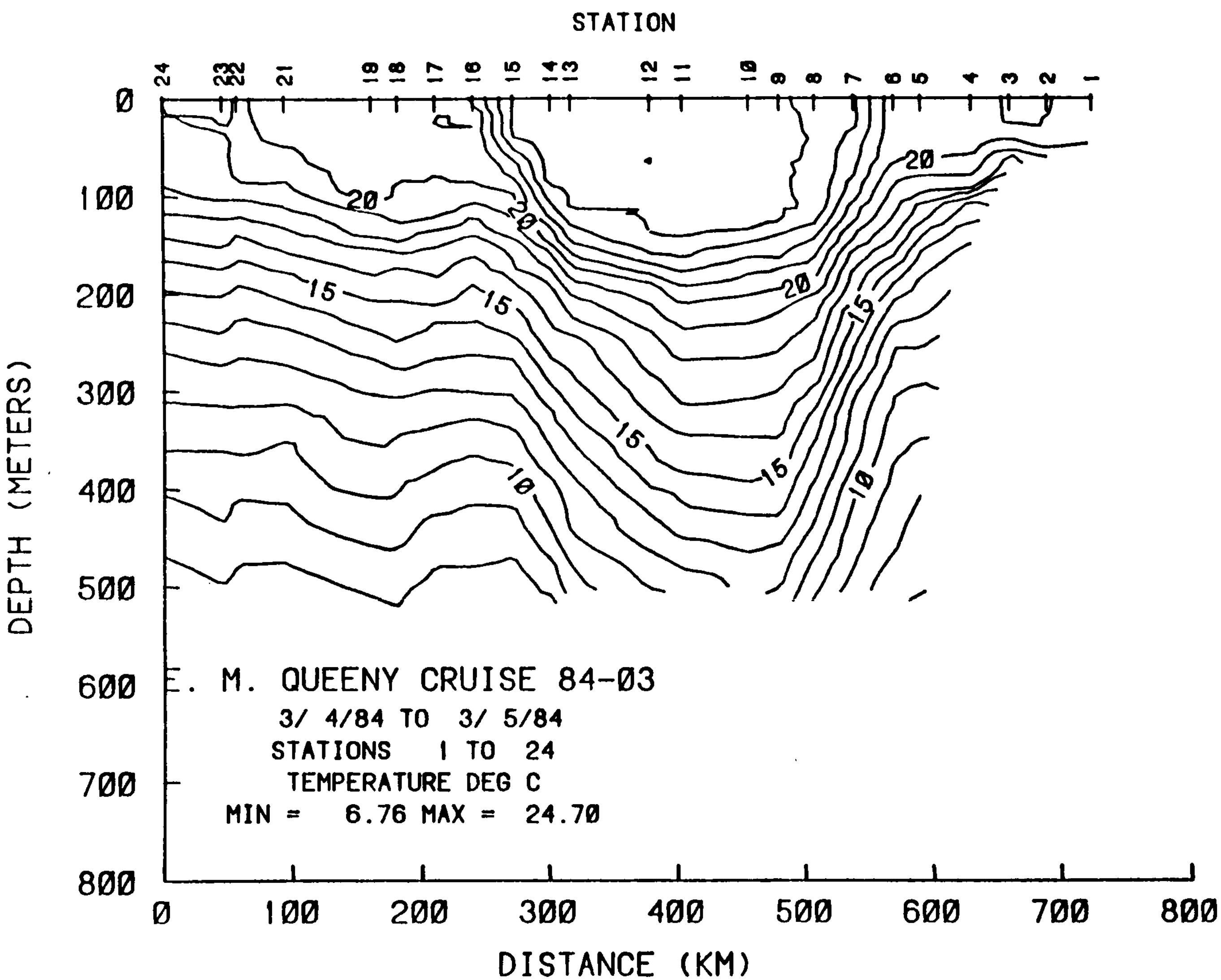

STATION
10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
20
20
15
E. M. QUEENY CRUISE 84-02
2/10/84 TO 2/10/84
STATIONS 1 TO 10
TEMPERATURE DEG C
MIN = 8.37 MAX = 25.35
0 100 200 300 400 500 600 700 800
DISTANCE (KM)

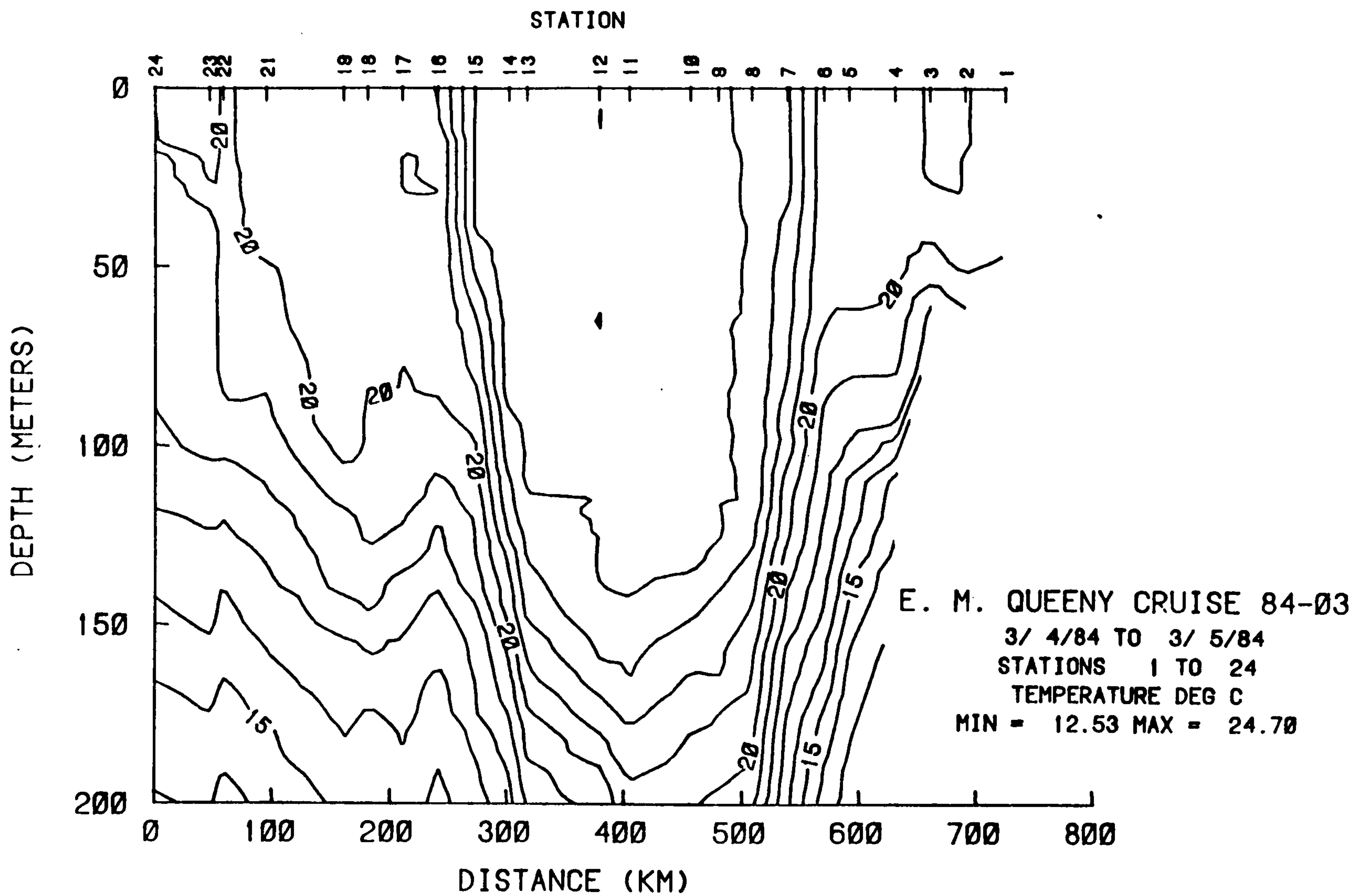

STATION
10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
50
100
150
200
25
20
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
E. M. QUEENY CRUISE 84-02
2/10/84 TO 2/10/84
STATIONS 1 TO 10
TEMPERATURE DEG C
MIN = 17.80 MAX = 25.36

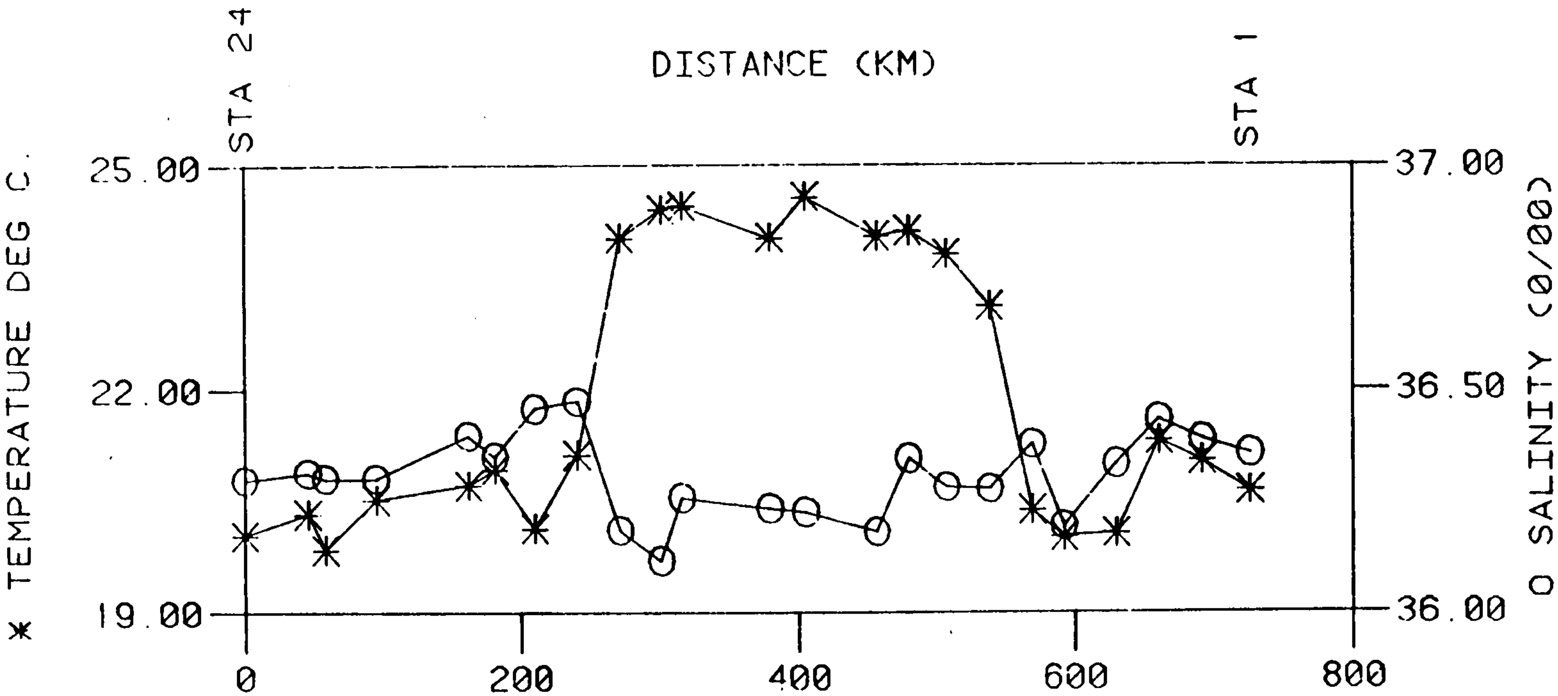


PARAMETERS AT SURFACE E. M. QUEENY CRUISE 84-02

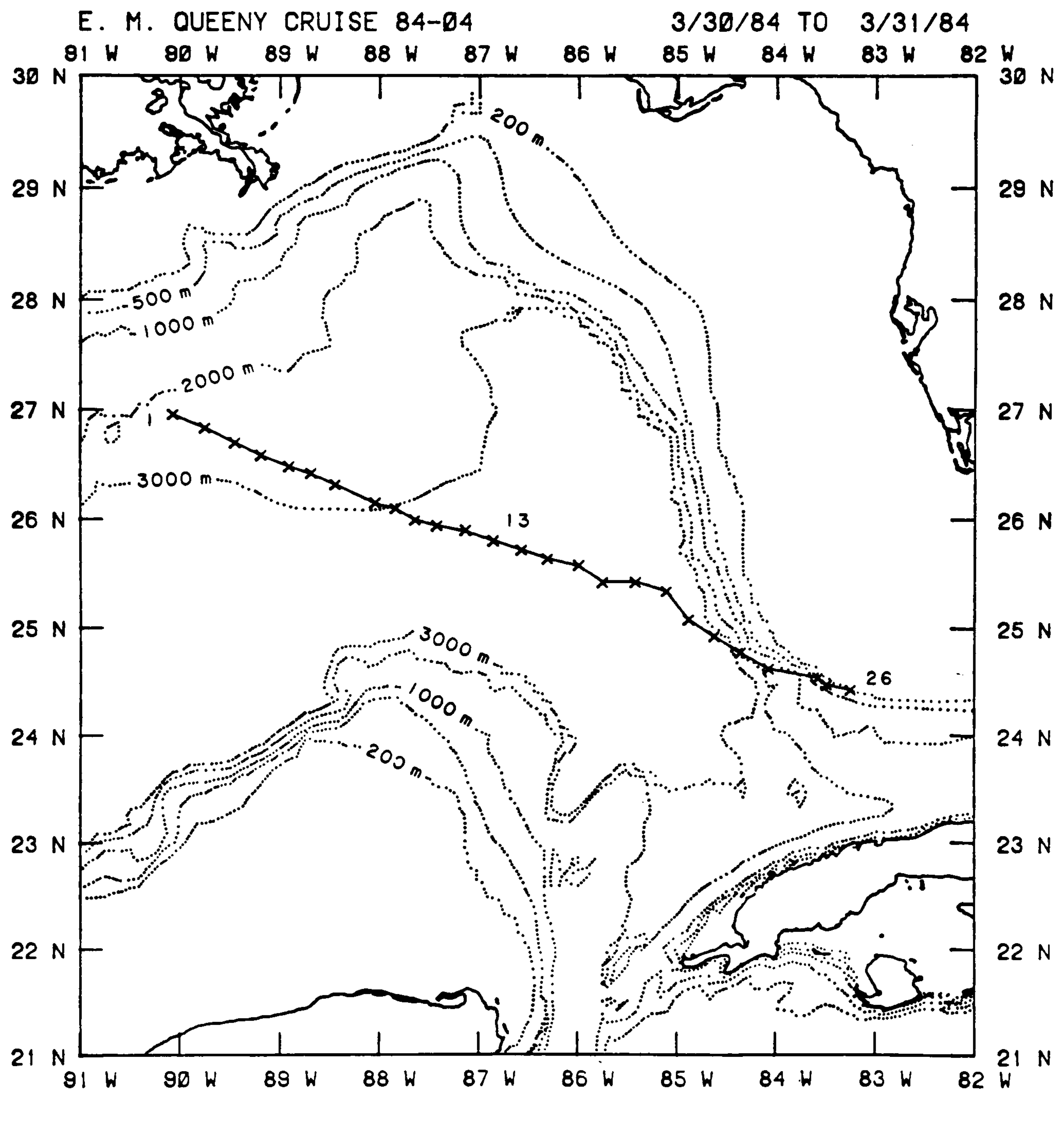

E. M. QUEENY CRUISE 84-Ø3
3/ 4/84 TO 3/ 5/84
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
24
12
1
3000 m
1000 m
200 m


STATION
24 23 22 21 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
20
15
10
E. M. QUEENY CRUISE 84-03
3/ 4/84 TO 3/ 5/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 6.76 MAX = 24.70
0 100 200 300 400 500 600 700 800
DISTANCE (KM)

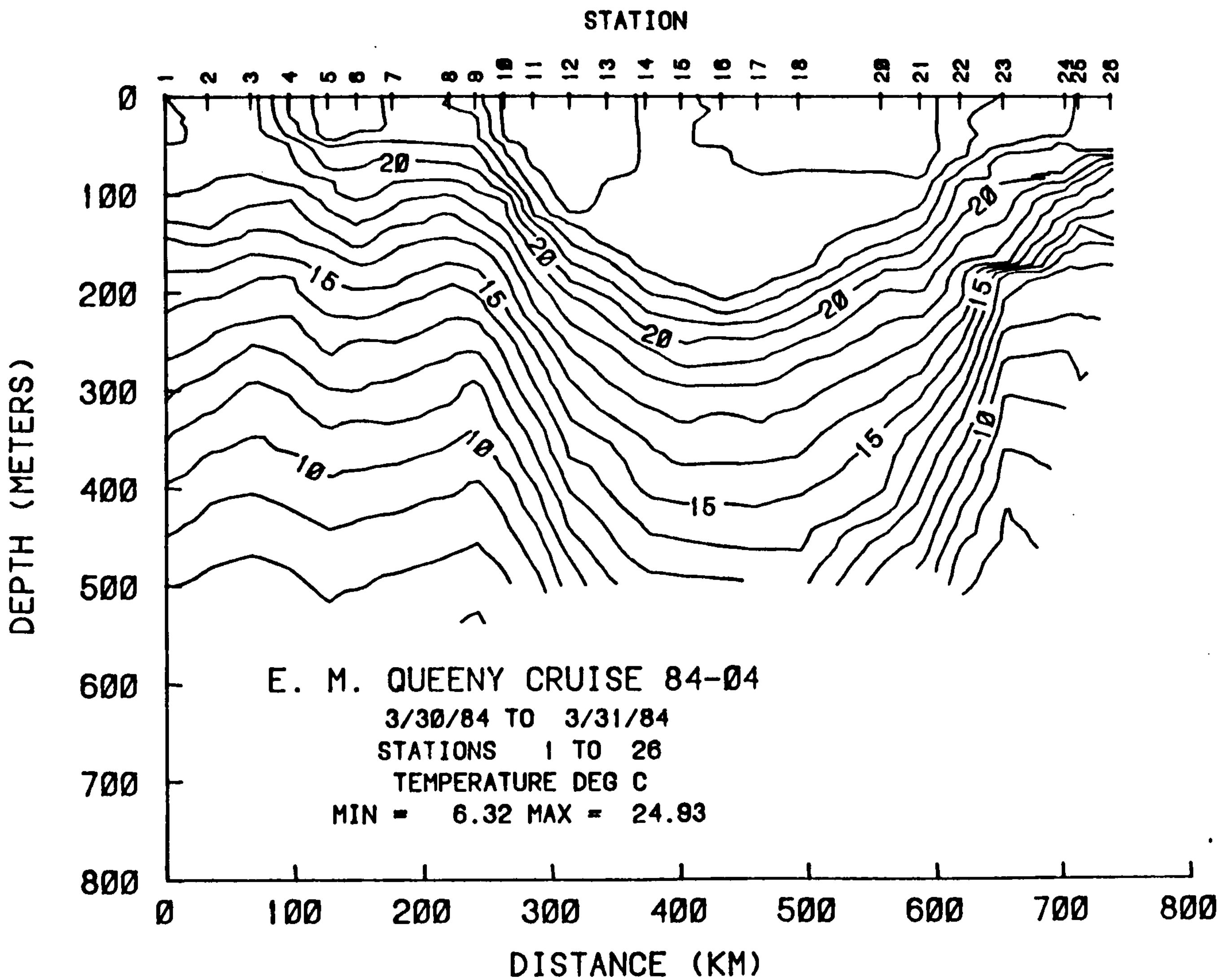

STATION
24
23
22
21
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1
DEPTH (METERS)
Ø
50
100
150
200
DISTANCE (KM)
Ø
100
200
300
400
500
600
700
800
20
15
E. M. QUEENY CRUISE 84-Ø3
3/ 4/84 TO 3/ 5/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 12.53 MAX = 24.7Ø

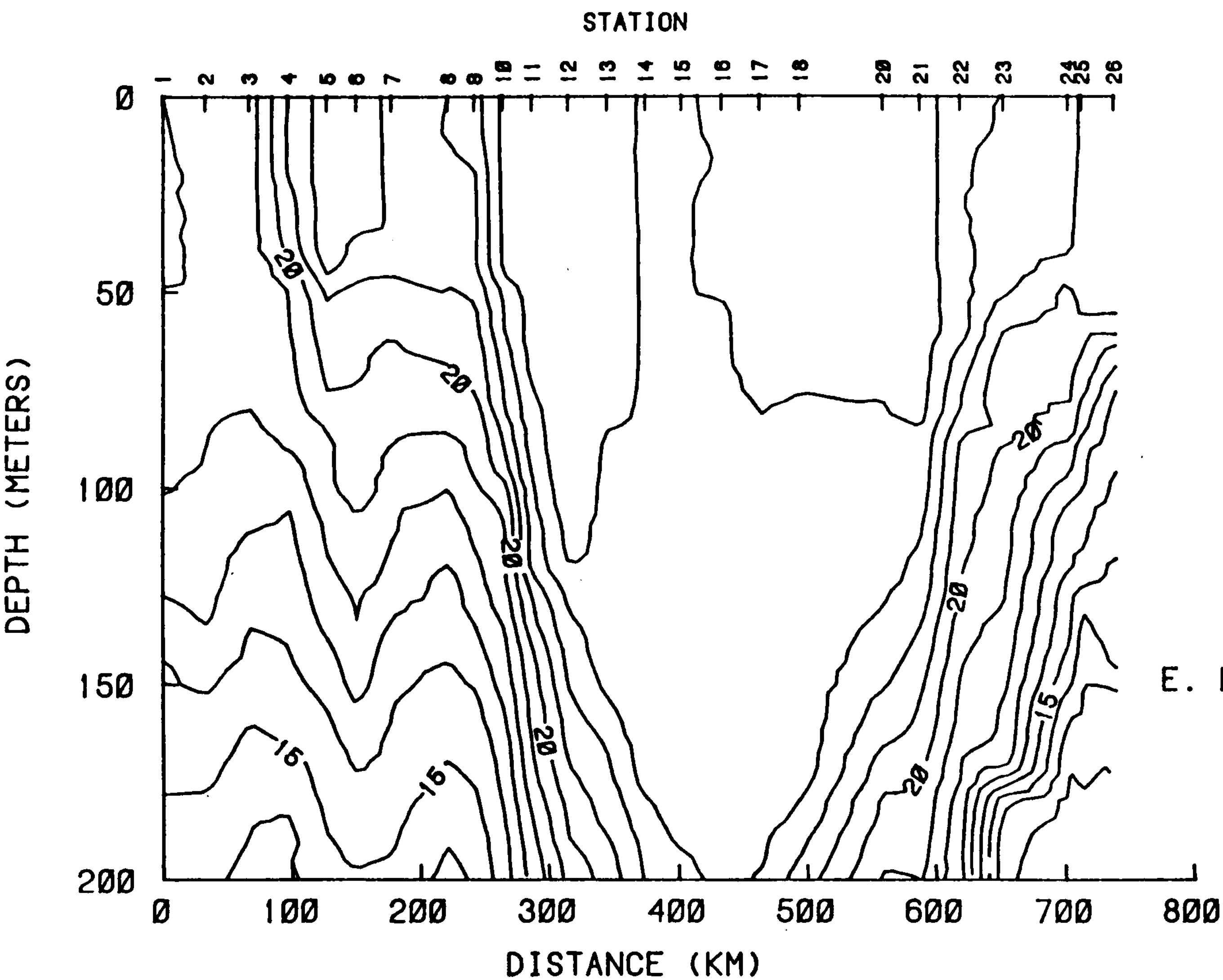


PARAMETERS AT SURFACE E. M. QUEENY CRUISE 84-03

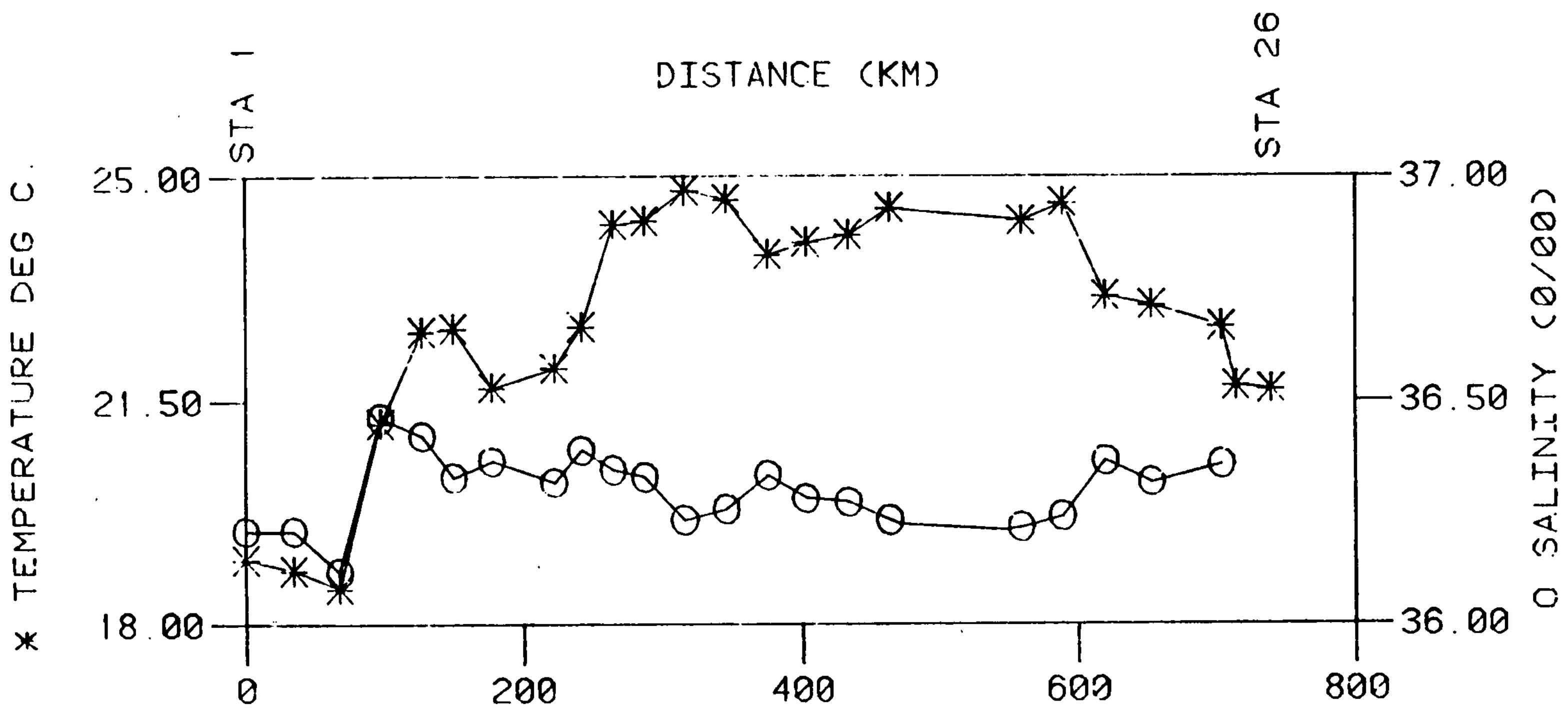


E. M. QUEENY CRUISE 84-Ø4
3/3Ø/84 TO 3/31/84
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
3Ø N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
13
26

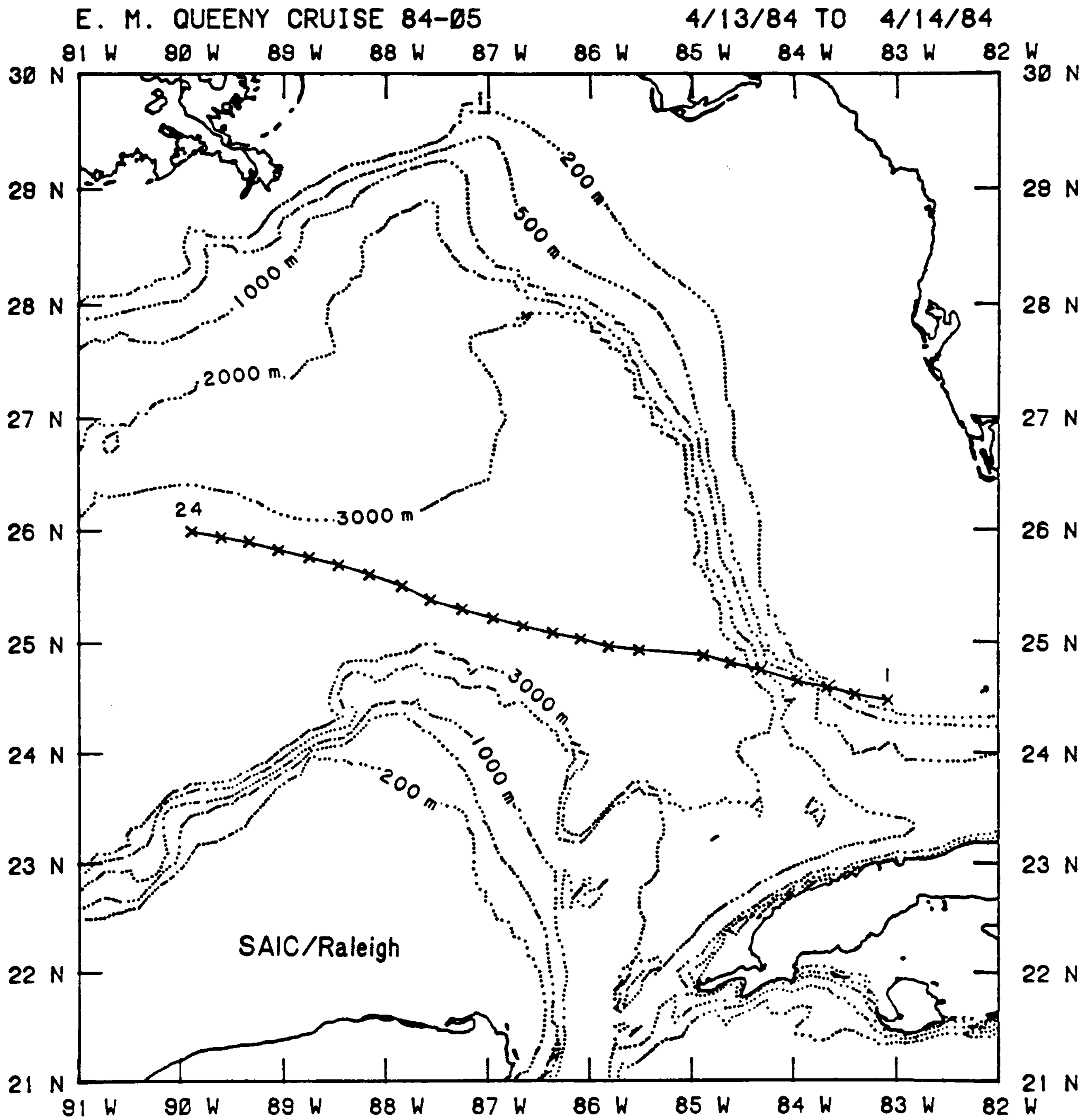

STATION
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 20 21 22 23 24 25 26
DEPTH (METERS)
0 100 200 300 400 500 600 700 800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800
20
15
10
E. M. QUEENY CRUISE 84-04
3/30/84 TO 3/31/84
STATIONS 1 TO 26
TEMPERATURE DEG C
MIN = 6.32 MAX = 24.93

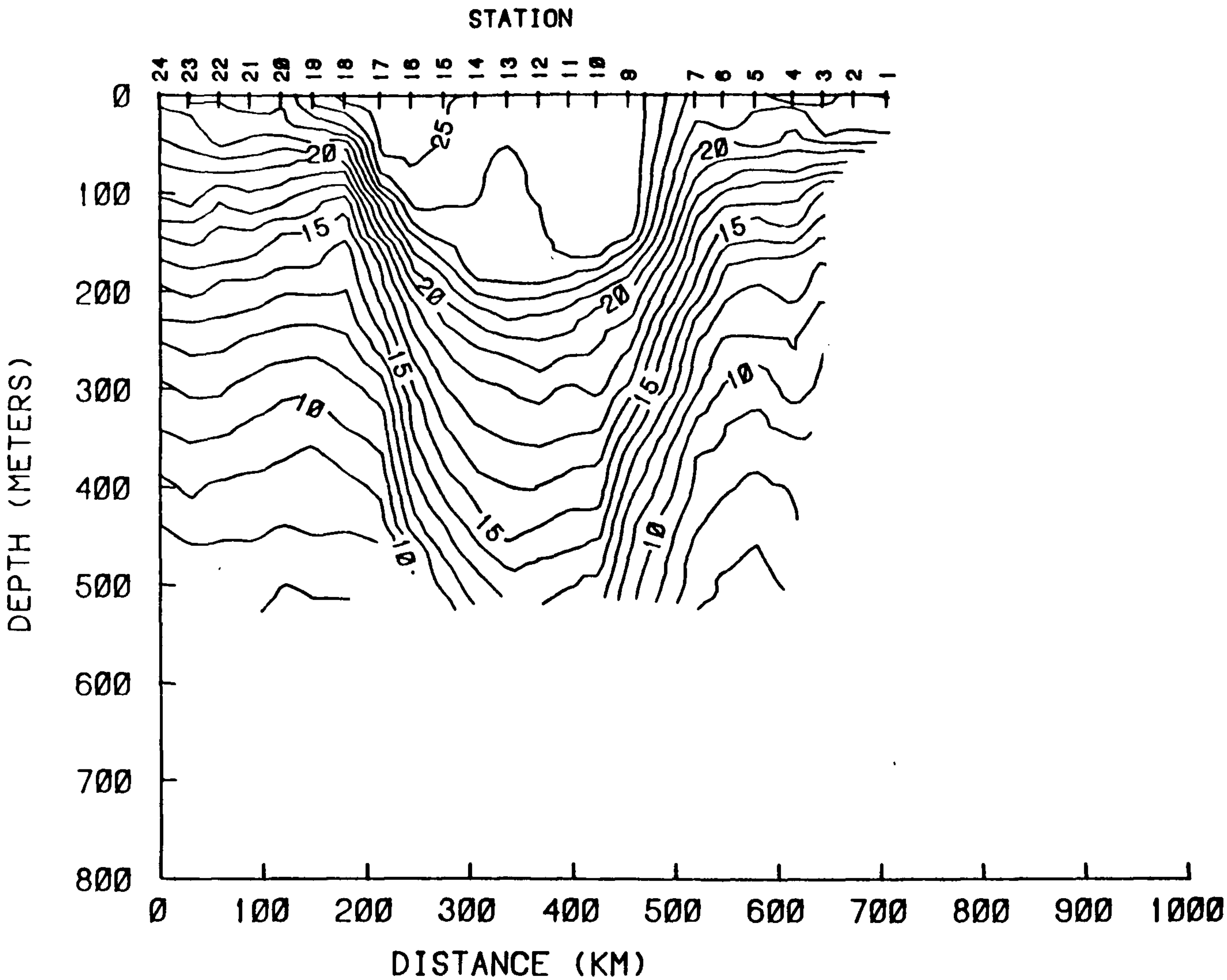


E. M. QUEENY CRUISE 84-04
3/30/84 TO 3/31/84
STATIONS 1 TO 26
TEMPERATURE DEG C
MIN = 11.35 MAX = 24.93



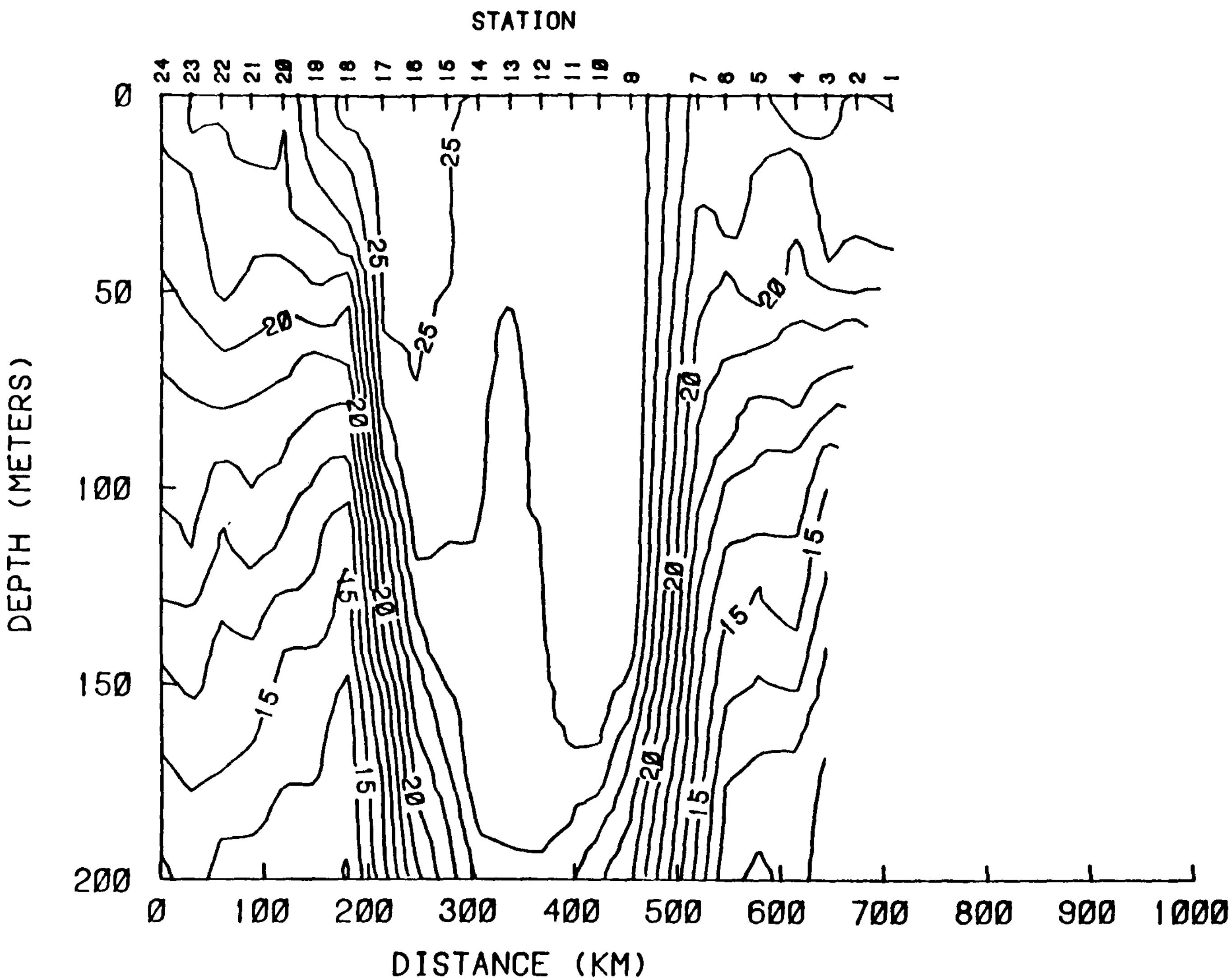
PARAMETERS AT SURFACE E. M. QUEENY CRUISE 84-04


E. M. QUEENY CRUISE 84-Ø5
4/13/84 TO 4/14/84
91 W
9Ø W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
3Ø N
28 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
24
1
3000 m
1000 m
200 m
SAIC/Raleigh



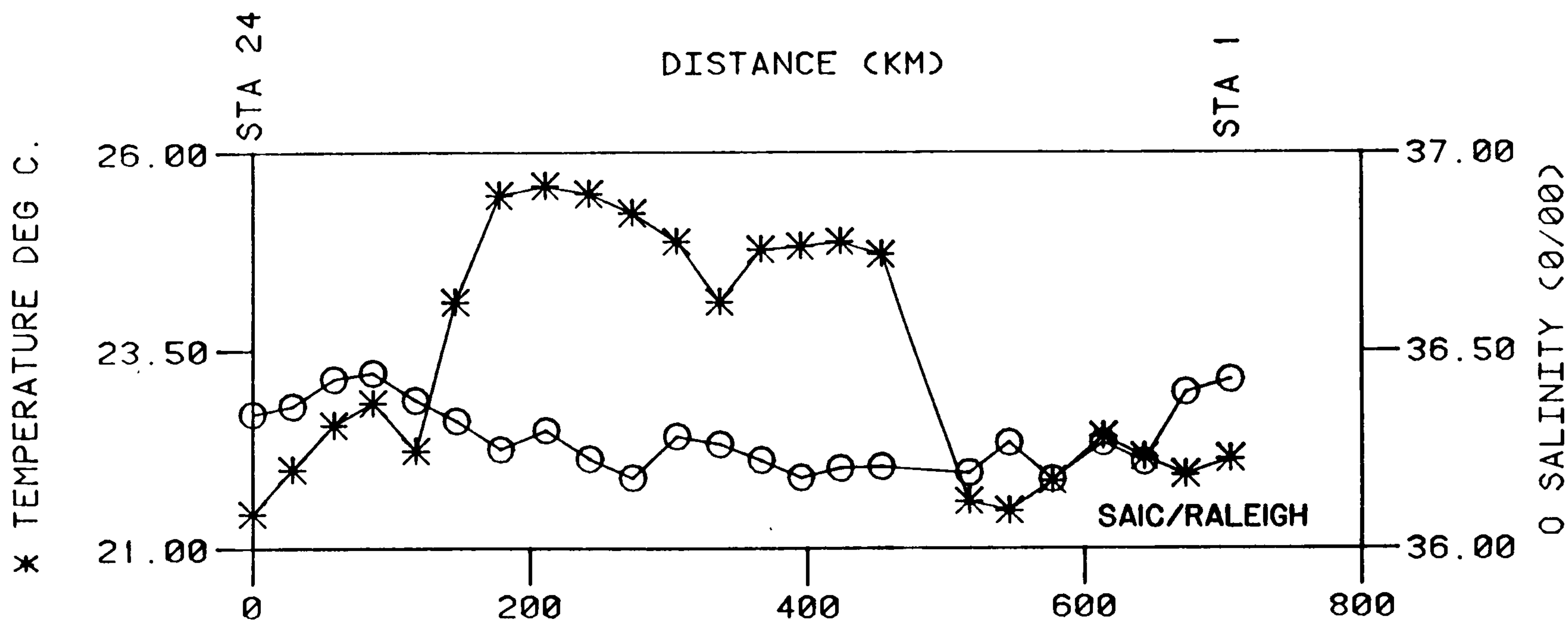
E. M. QUEENY CRUISE 84-05
4/13/84 TO 4/14/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 6.17 MAX = 25.58

SAIC/Raleigh

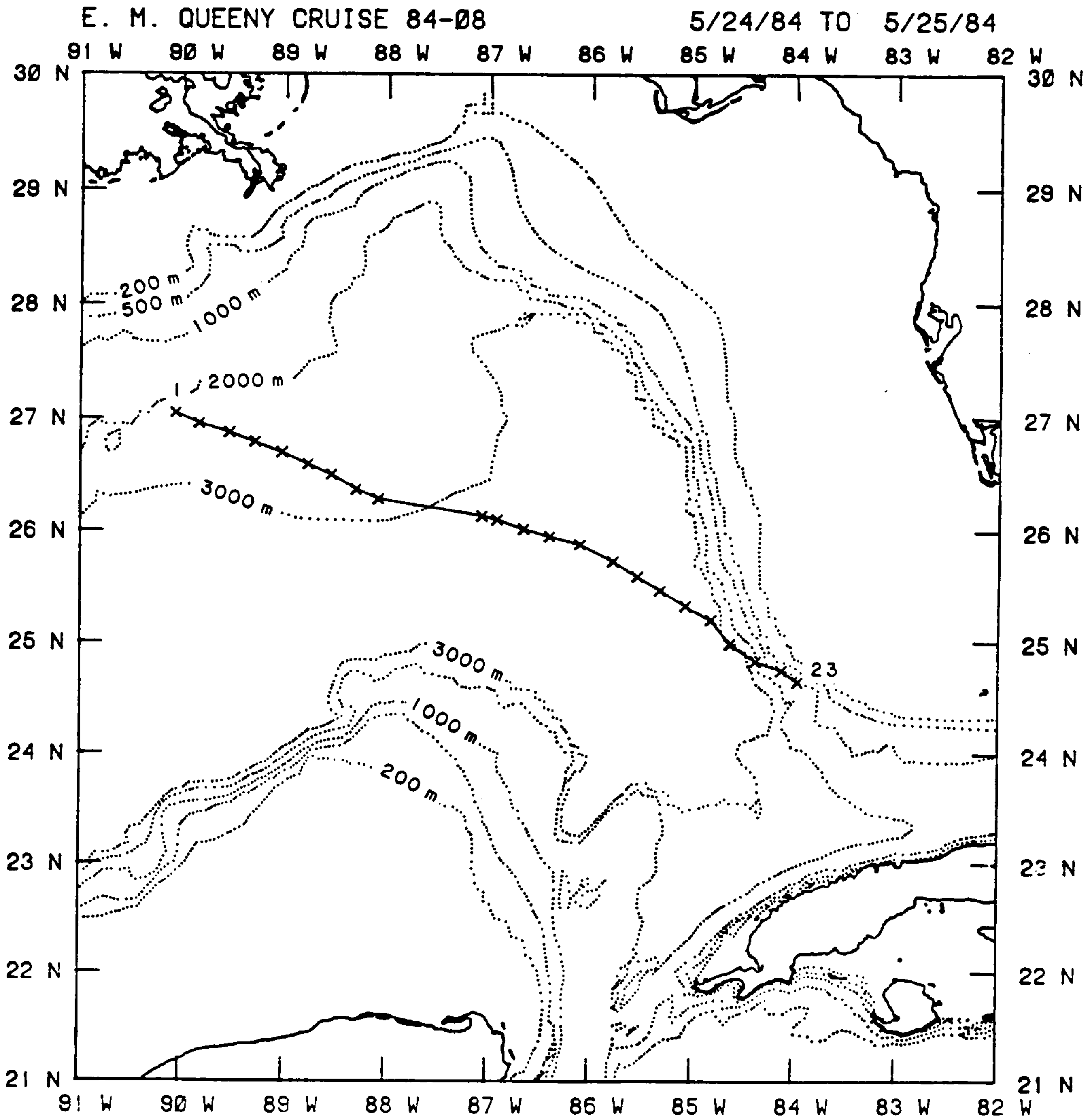


E. M. QUEENY CRUISE 84-05
4/13/84 TO 4/14/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 11.33 MAX = 25.58

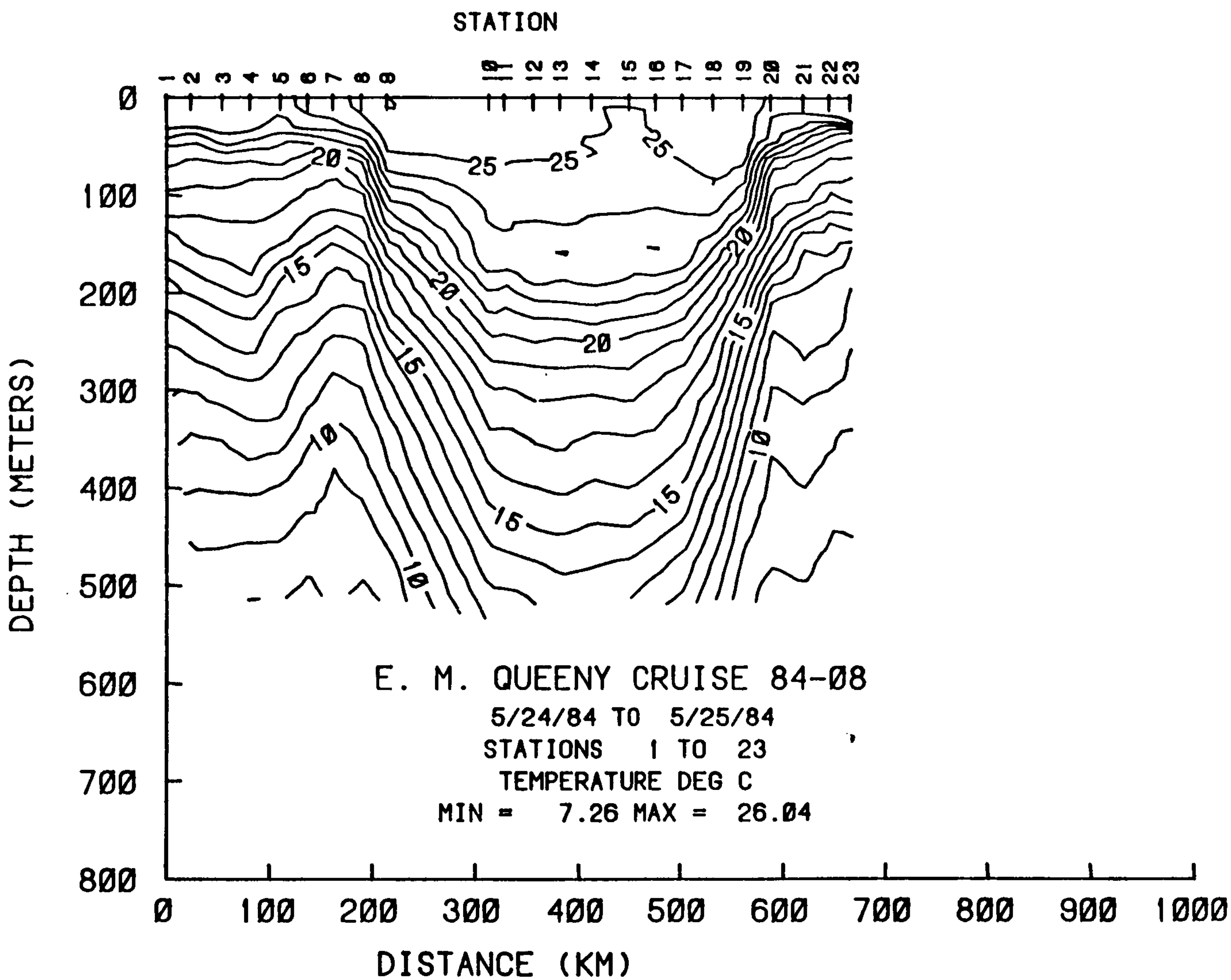
SAIC/Raleigh

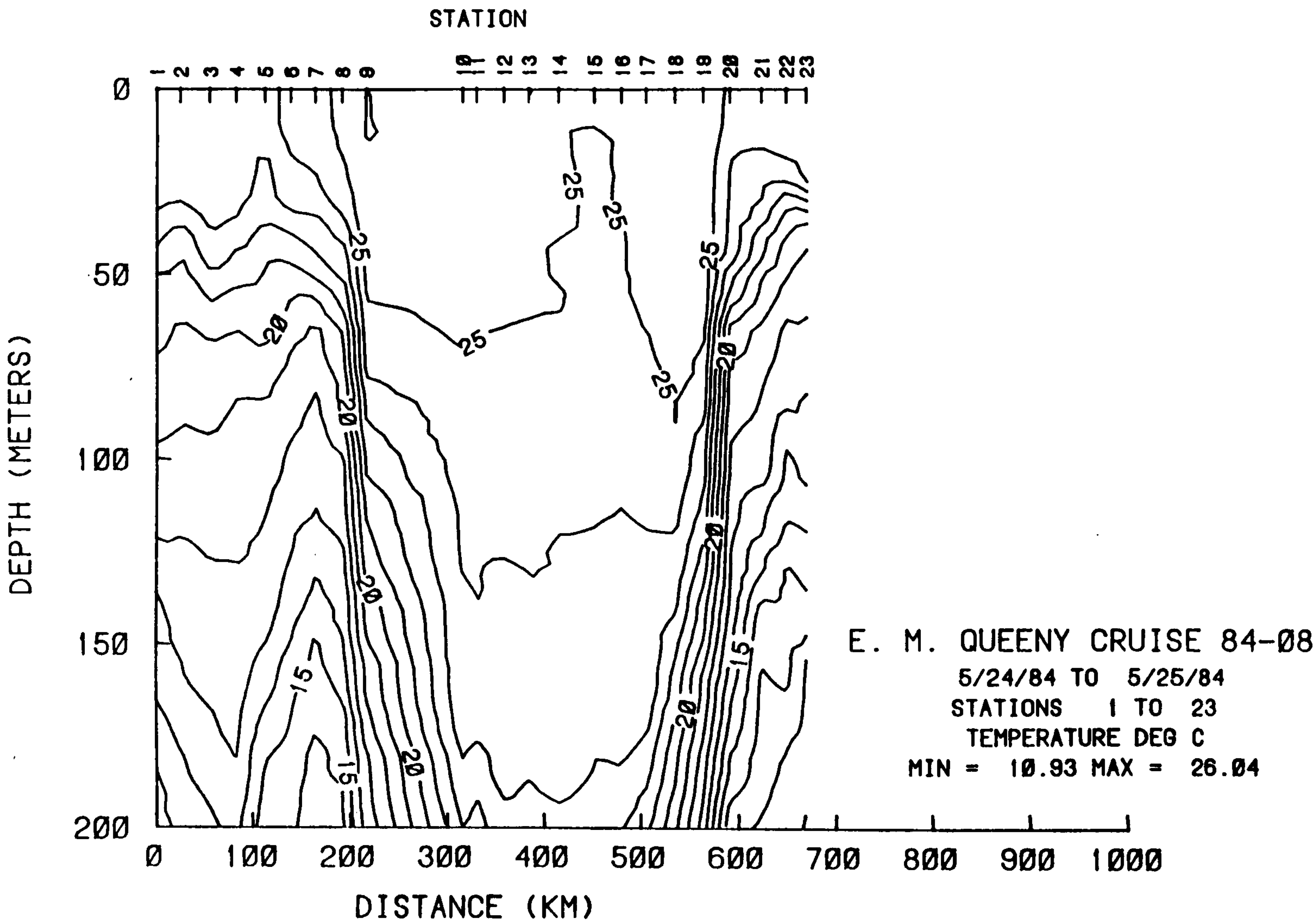


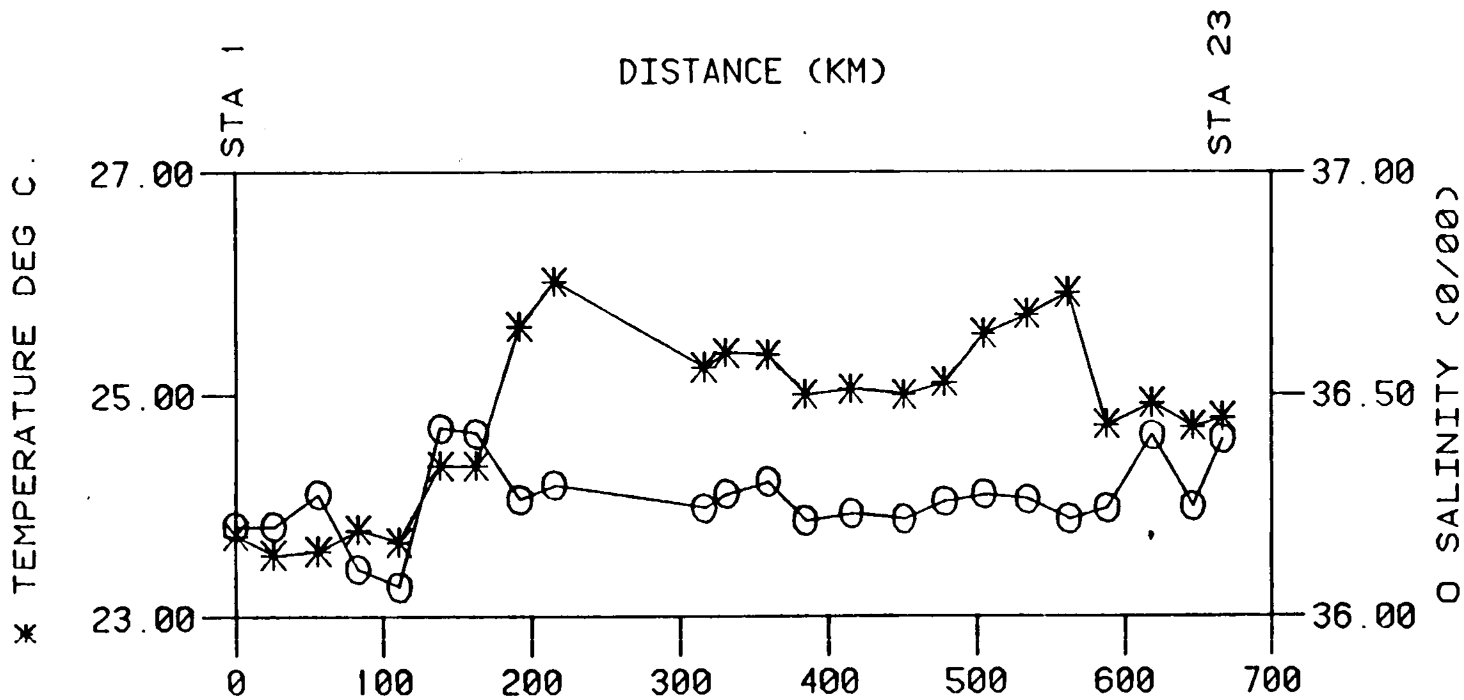
PARAMETERS AT SURFACE E. M. QUEENY CRUISE 84-05



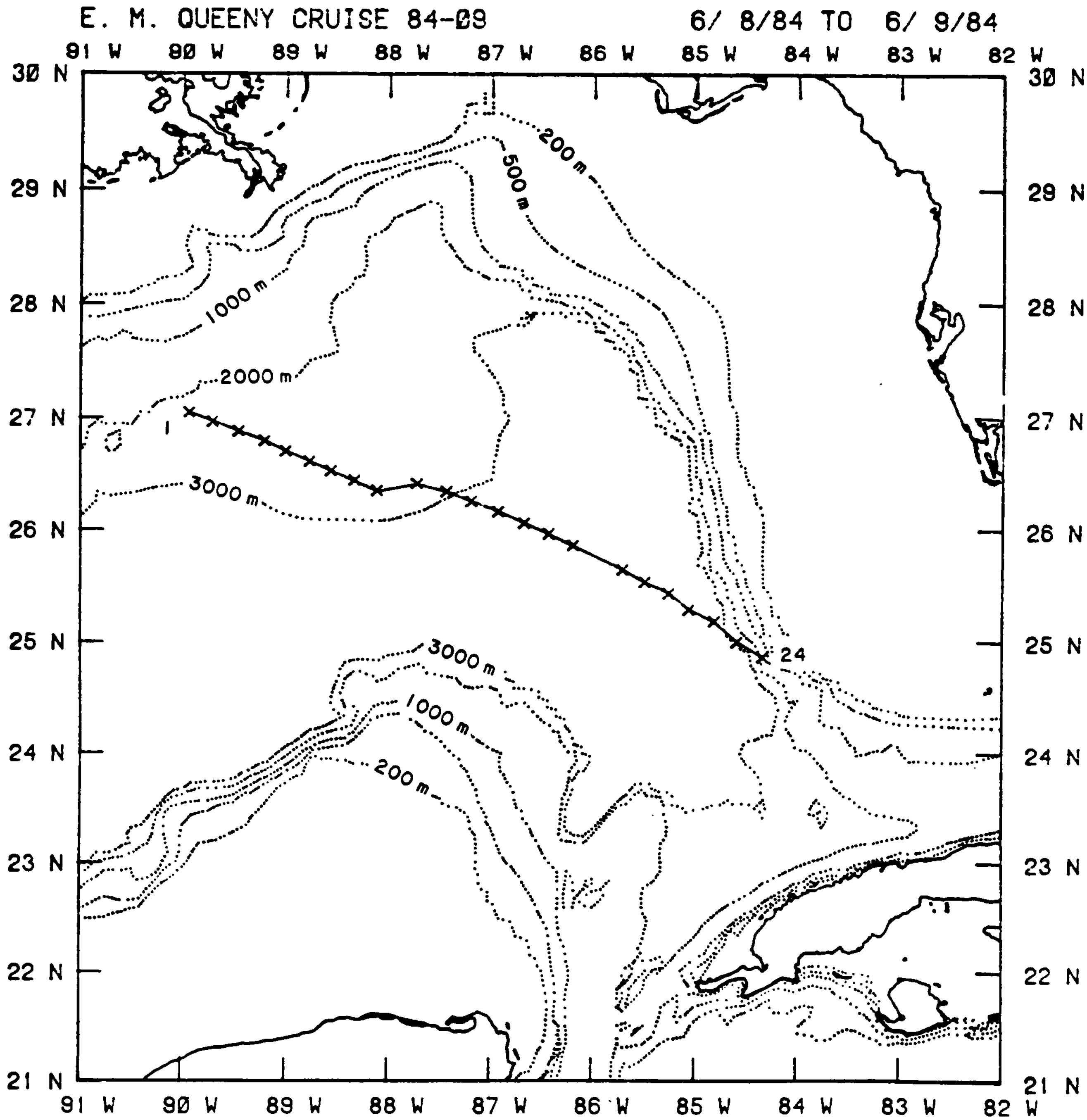
E. M. QUEENY CRUISE 84-Ø8
5/24/84 TO 5/25/84
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
23
3000 m
1000 m
200 m

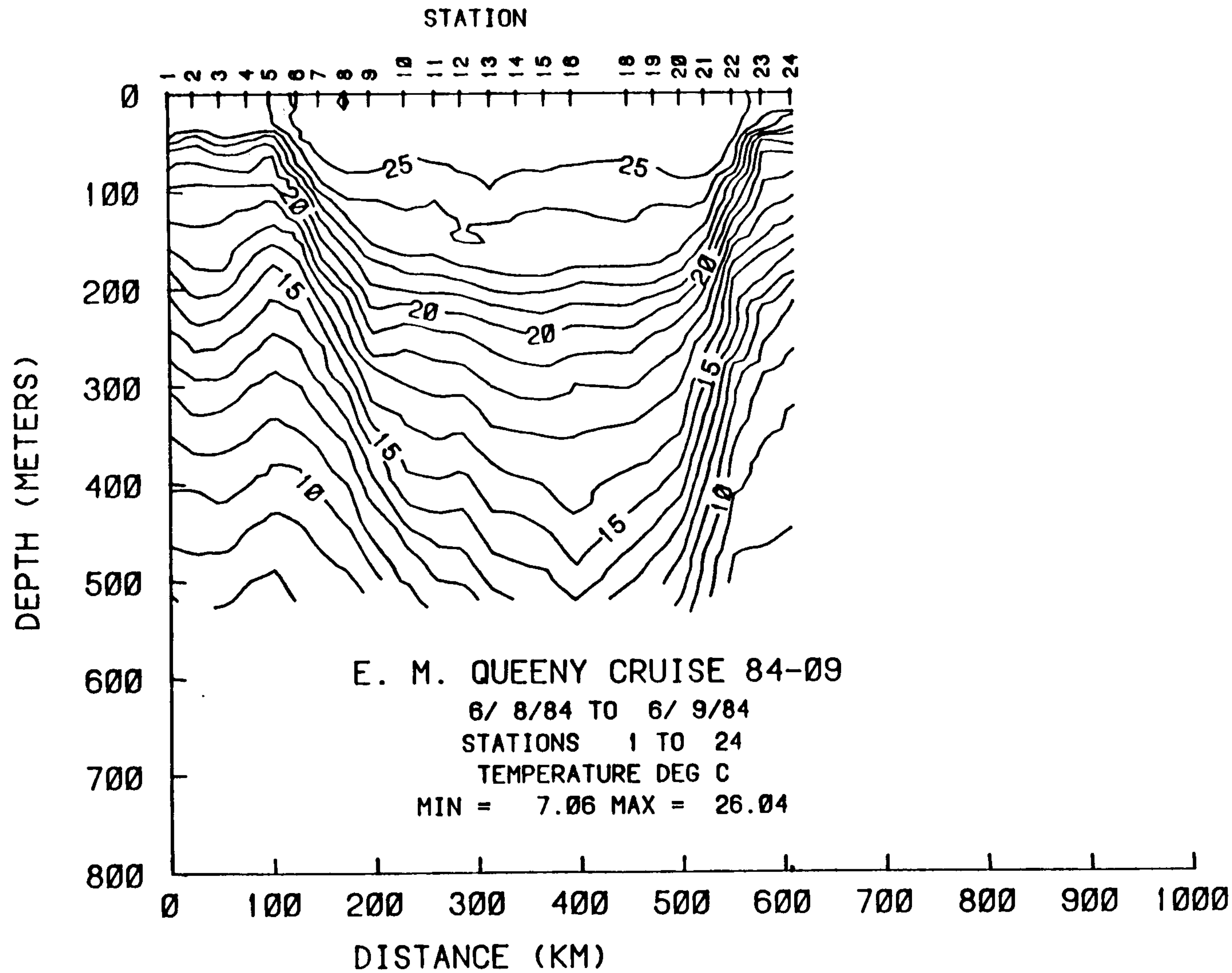

STATION
DEPTH (METERS)
DISTANCE (KM)
E. M. QUEENY CRUISE 84-08
5/24/84 TO 5/25/84
STATIONS 1 TO 23
TEMPERATURE DEG C
MIN = 7.26 MAX = 26.04

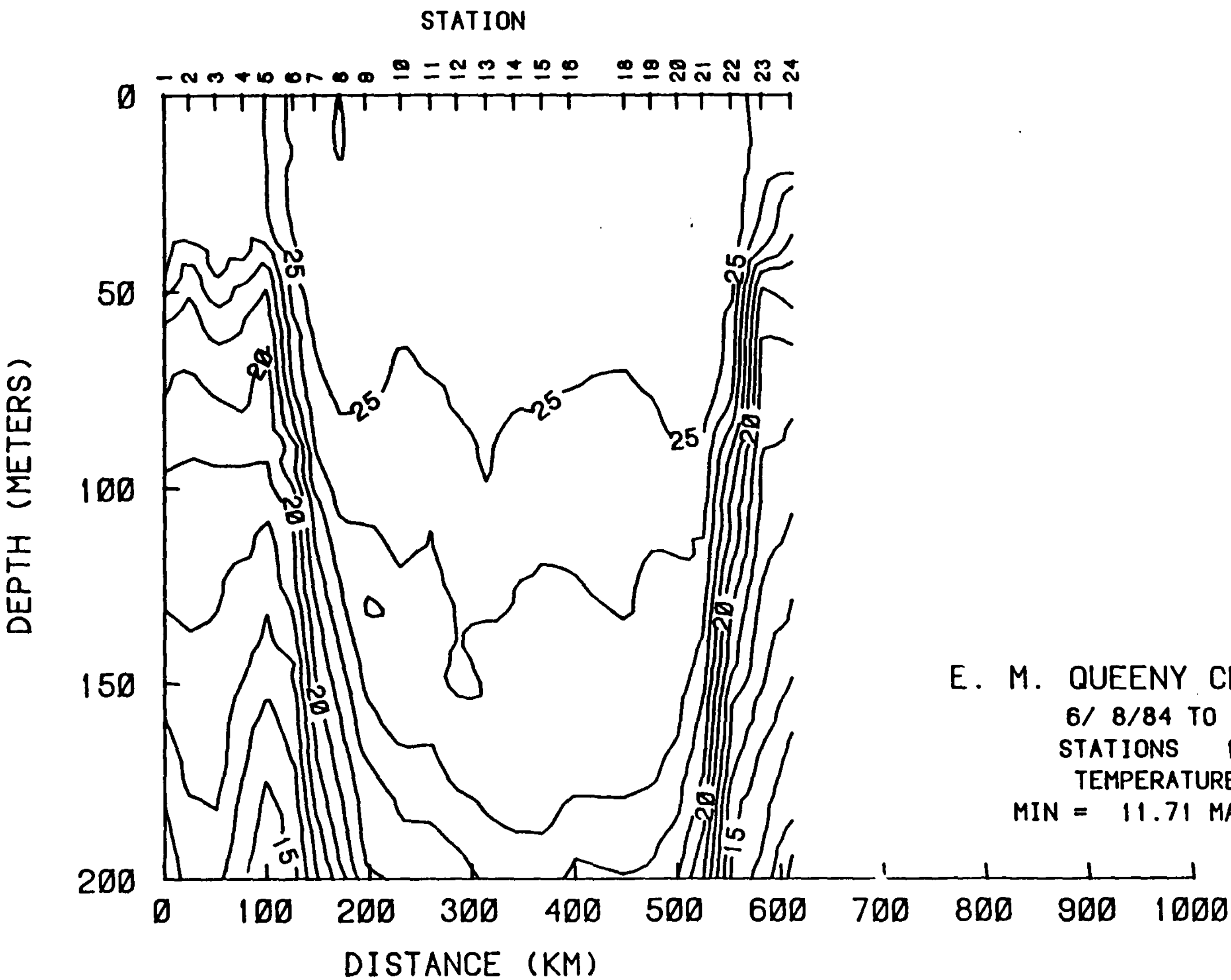

STATION
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
DEPTH (METERS)
0
50
100
150
200
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)
25
20
15
E. M. QUEENY CRUISE 84-08
5/24/84 TO 5/25/84
STATIONS 1 TO 23
TEMPERATURE DEG C
MIN = 10.93 MAX = 26.04



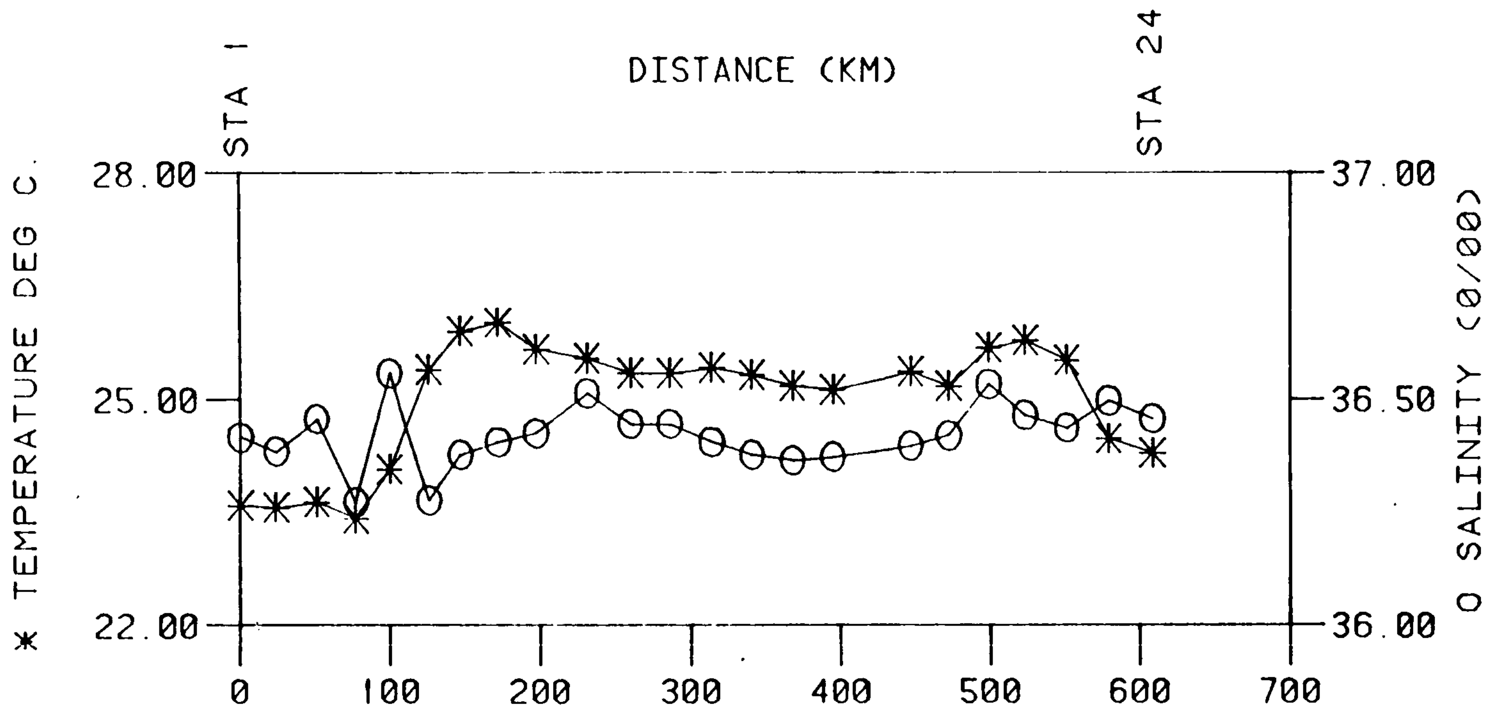
PARAMETERS AT SURFACE E. M. QUEENY CRUISE 84-08


E. M. QUEENY CRUISE 84-09
6/ 8/84 TO 6/ 9/84
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
24
3000 m
1000 m
200 m

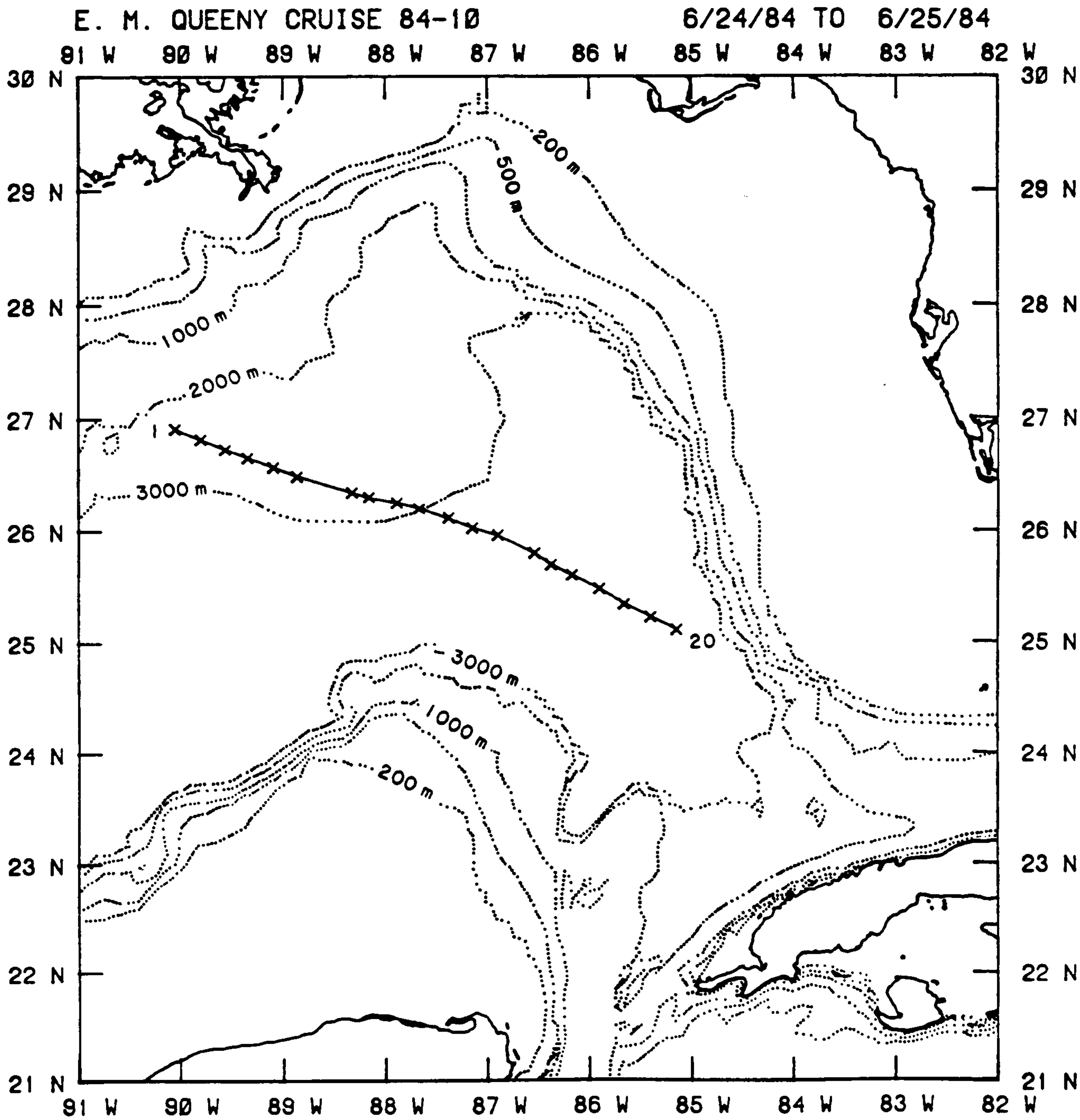

STATION
DEPTH (METERS)
DISTANCE (KM)
E. M. QUEENY CRUISE 84-09
6/ 8/84 TO 6/ 9/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 7.06 MAX = 26.04

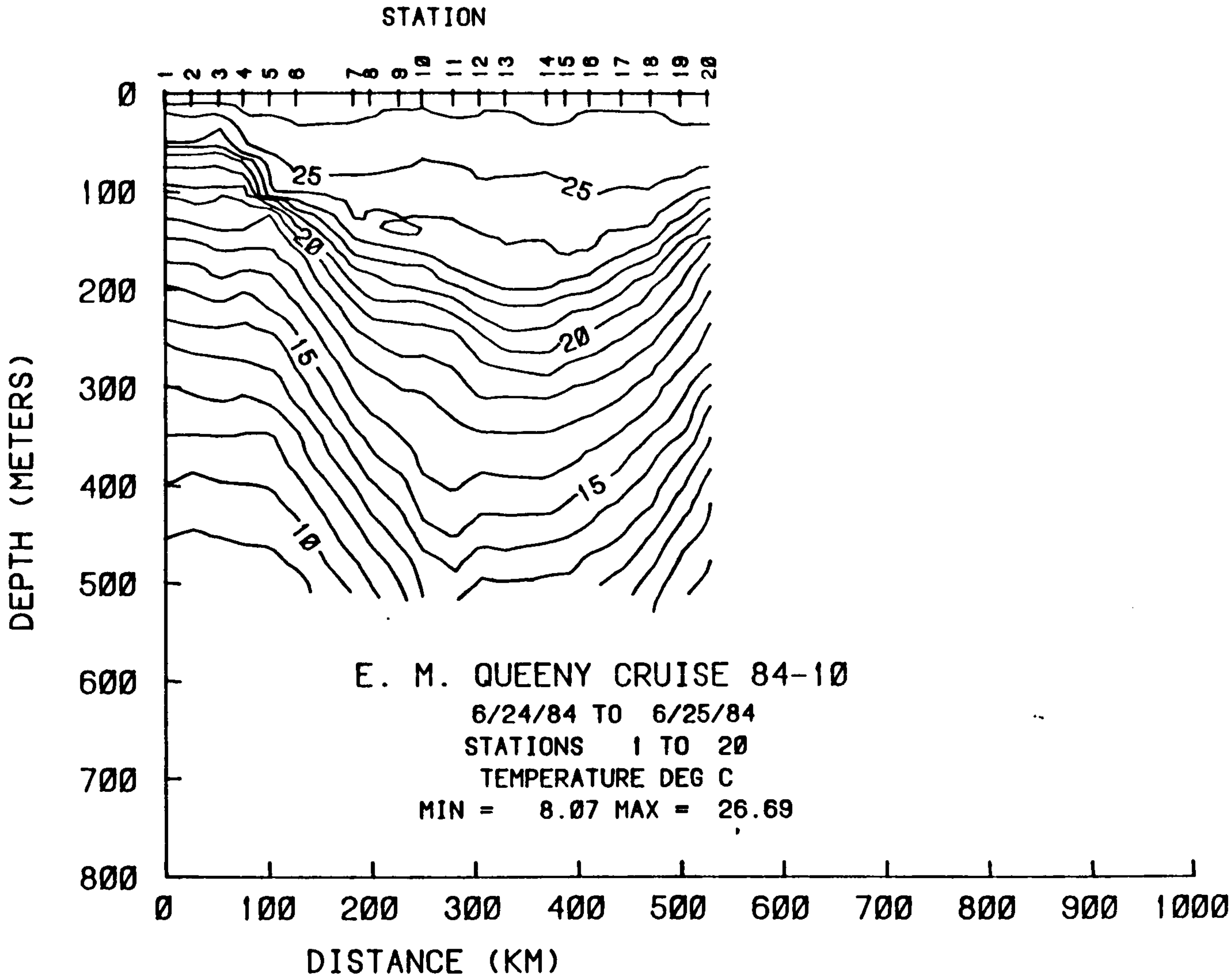


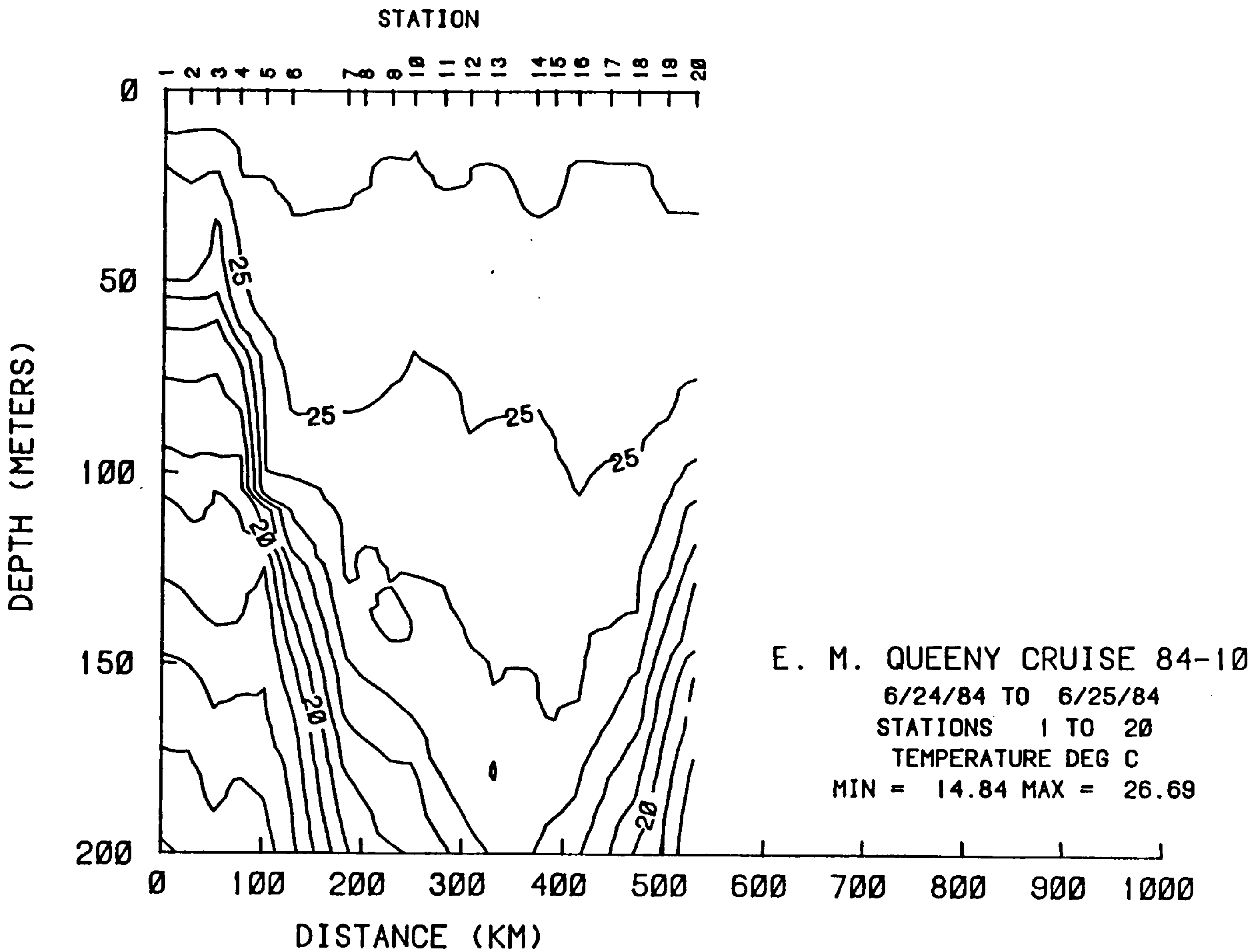
E. M. QUEENY CRUISE 84-09
6/ 8/84 TO 6/ 9/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 11.71 MAX = 26.04

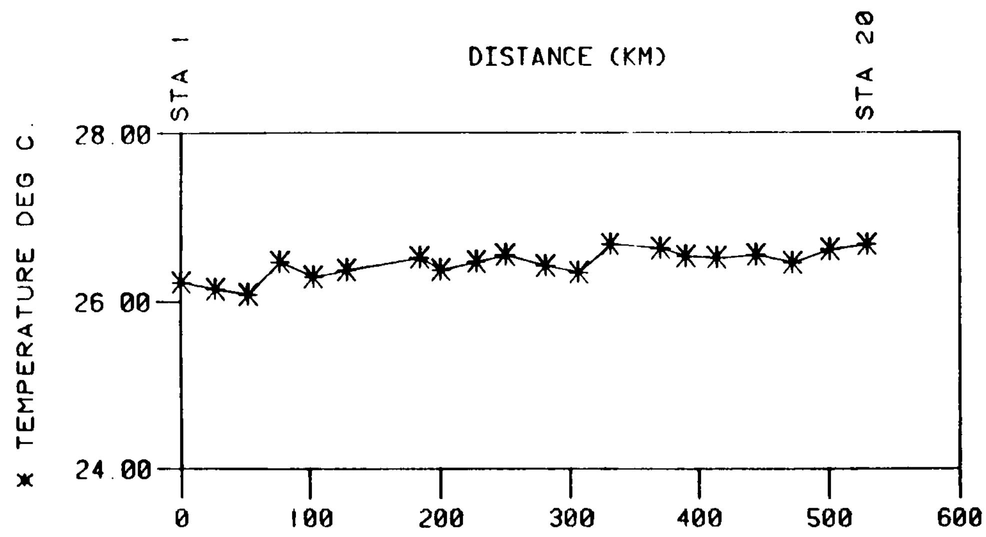


PARAMETERS AT SURFACE E. M. QUEENY CRUISE 84-09

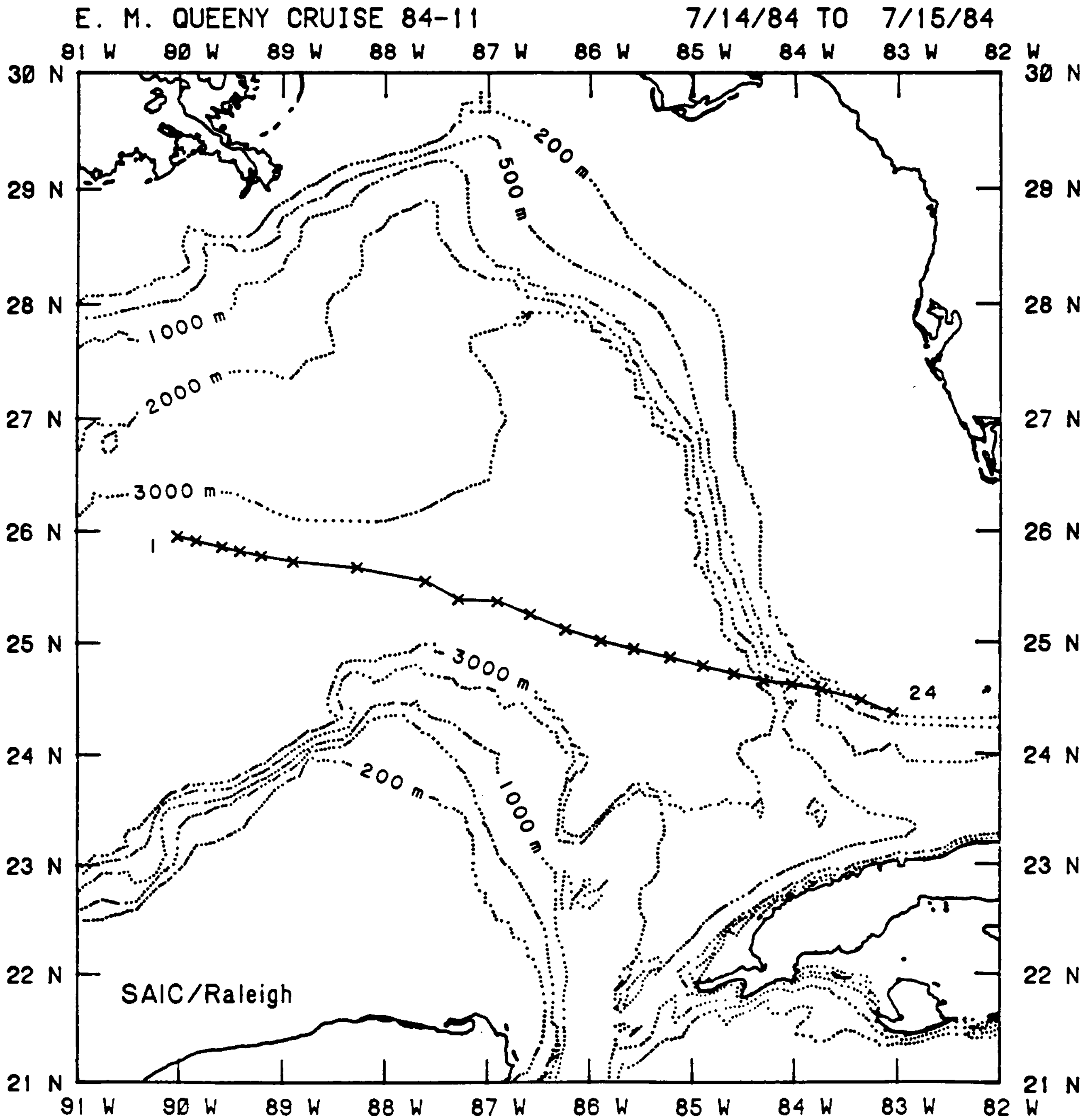

E. M. QUEENY CRUISE 84-10
6/24/84 TO 6/25/84
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
20

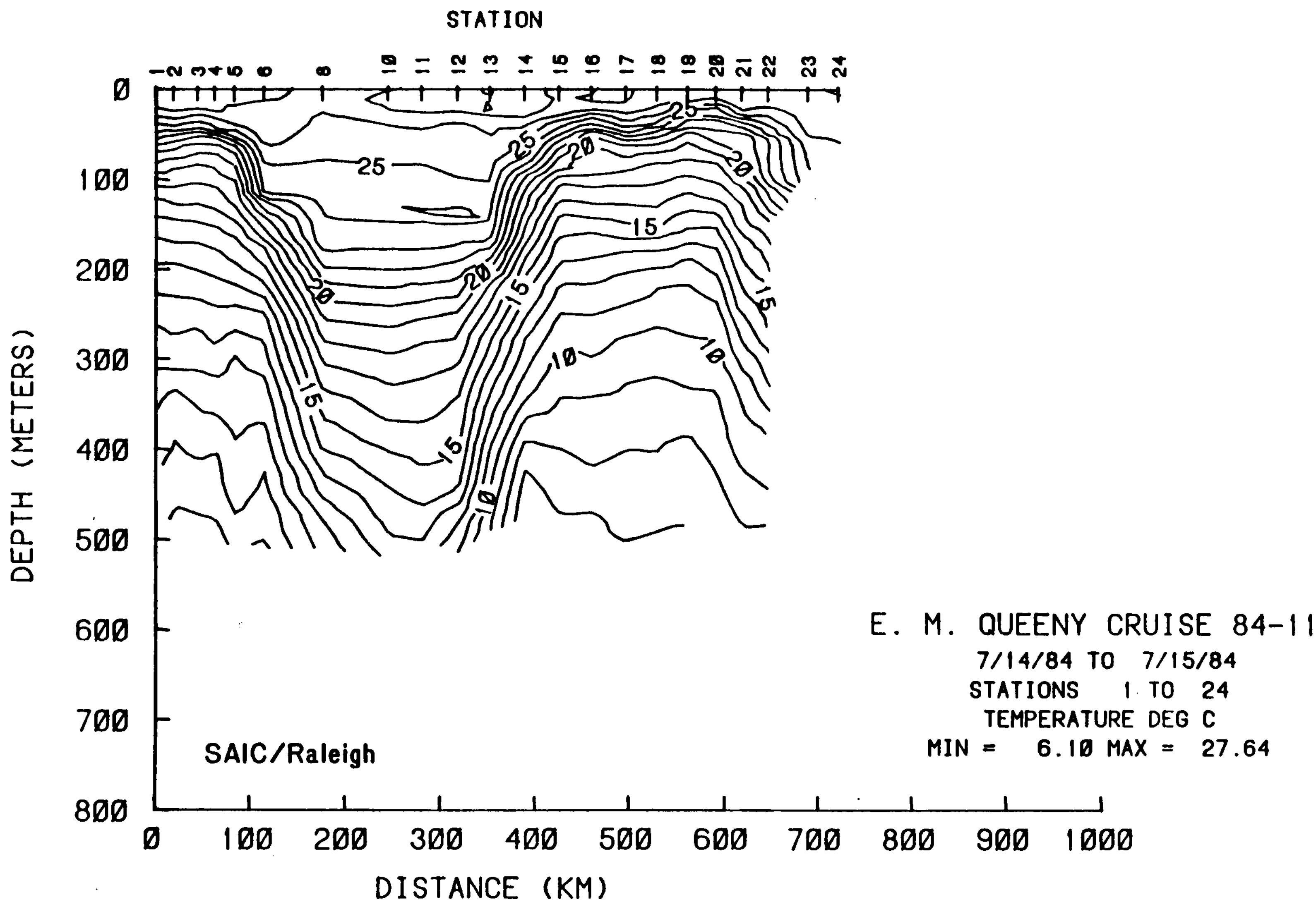

STATION
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
25
25
20
20
15
15
10
E. M. QUEENY CRUISE 84-10
6/24/84 TO 6/25/84
STATIONS 1 TO 20
TEMPERATURE DEG C
MIN = 8.07 MAX = 26.69
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)

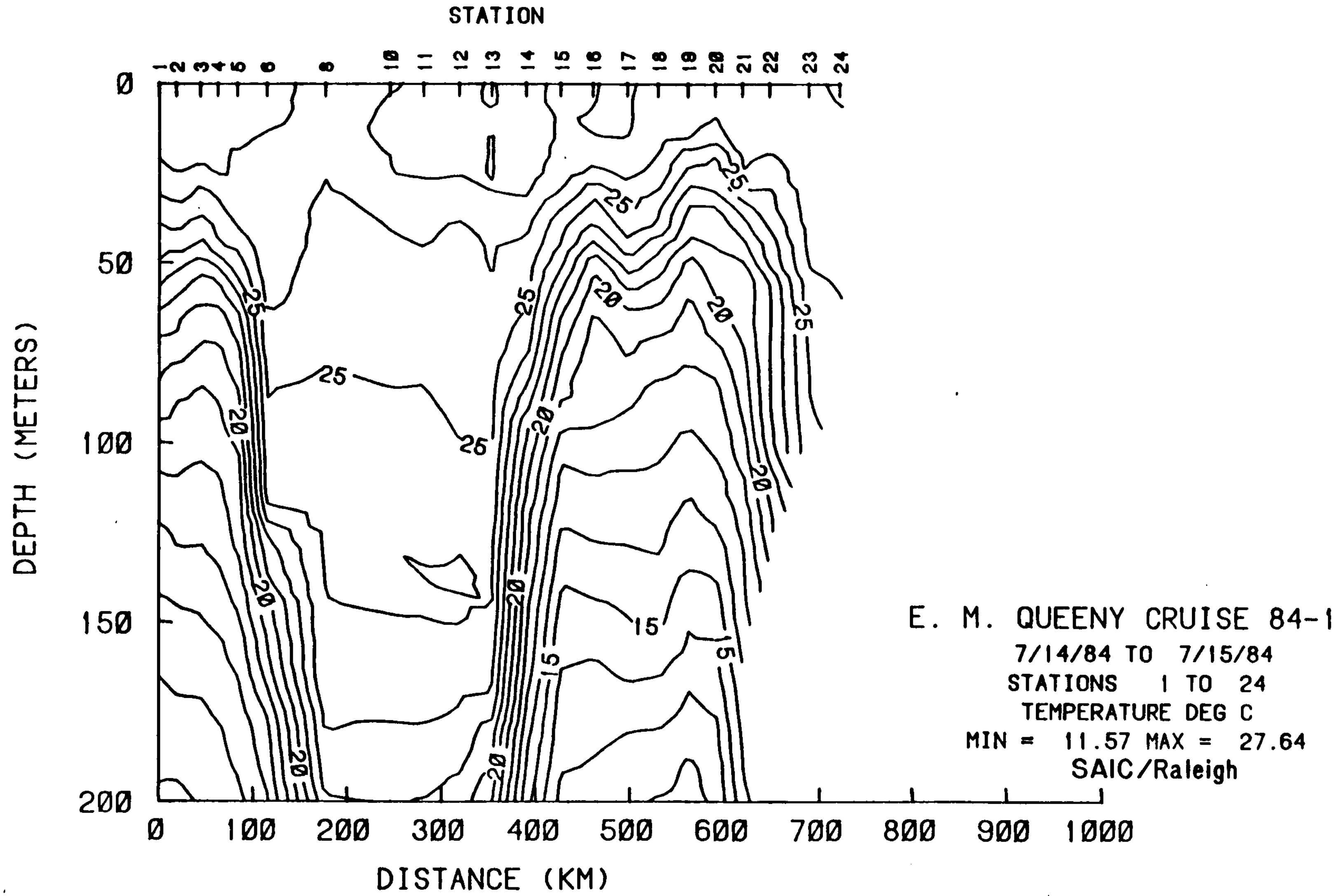

STATION
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
DEPTH (METERS)
0
50
100
150
200
25
25
25
25
20
20
20
0
100
200
300
400
500
600
700
800
900
1000
DISTANCE (KM)
E. M. QUEENY CRUISE 84-10
6/24/84 TO 6/25/84
STATIONS 1 TO 20
TEMPERATURE DEG C
MIN = 14.84 MAX = 26.69

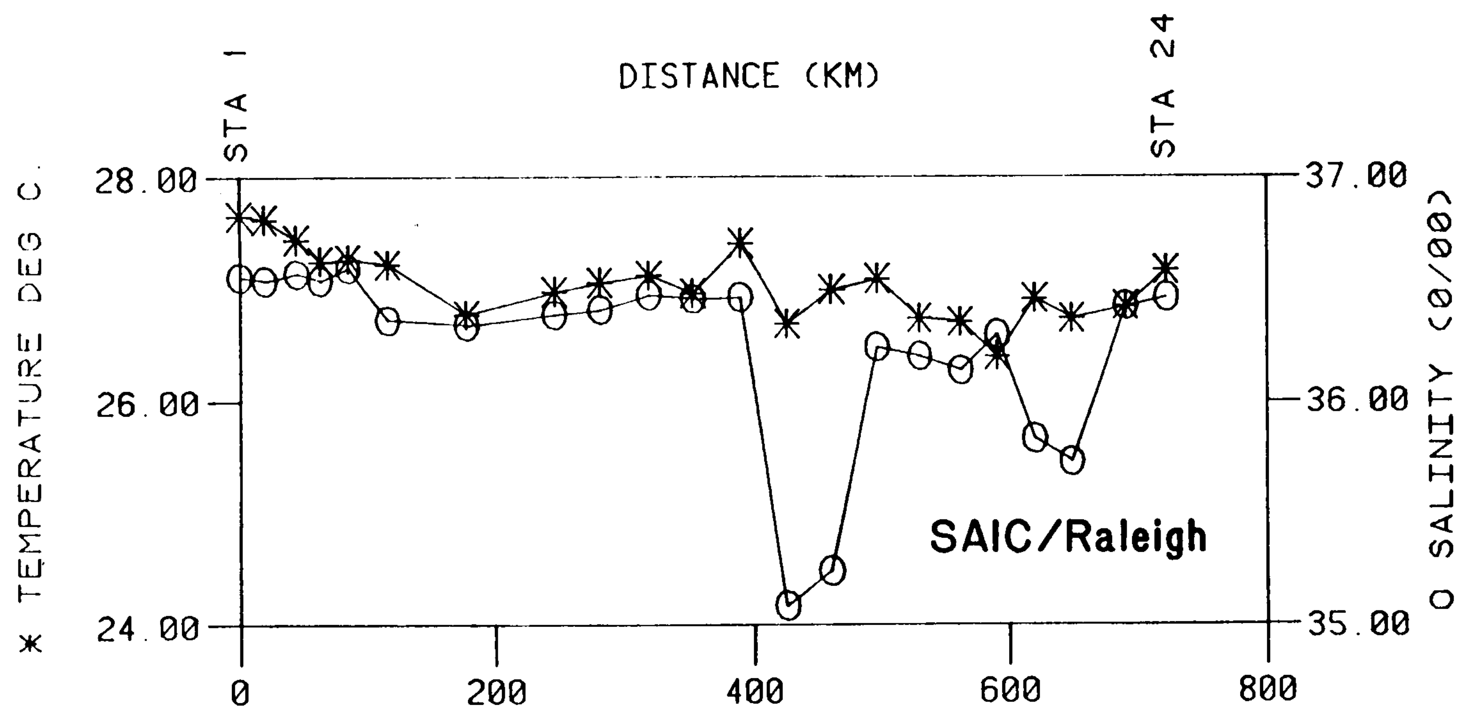


PARAMETERS AT SURFACE E. M. QUEENY CRUISE 84-10

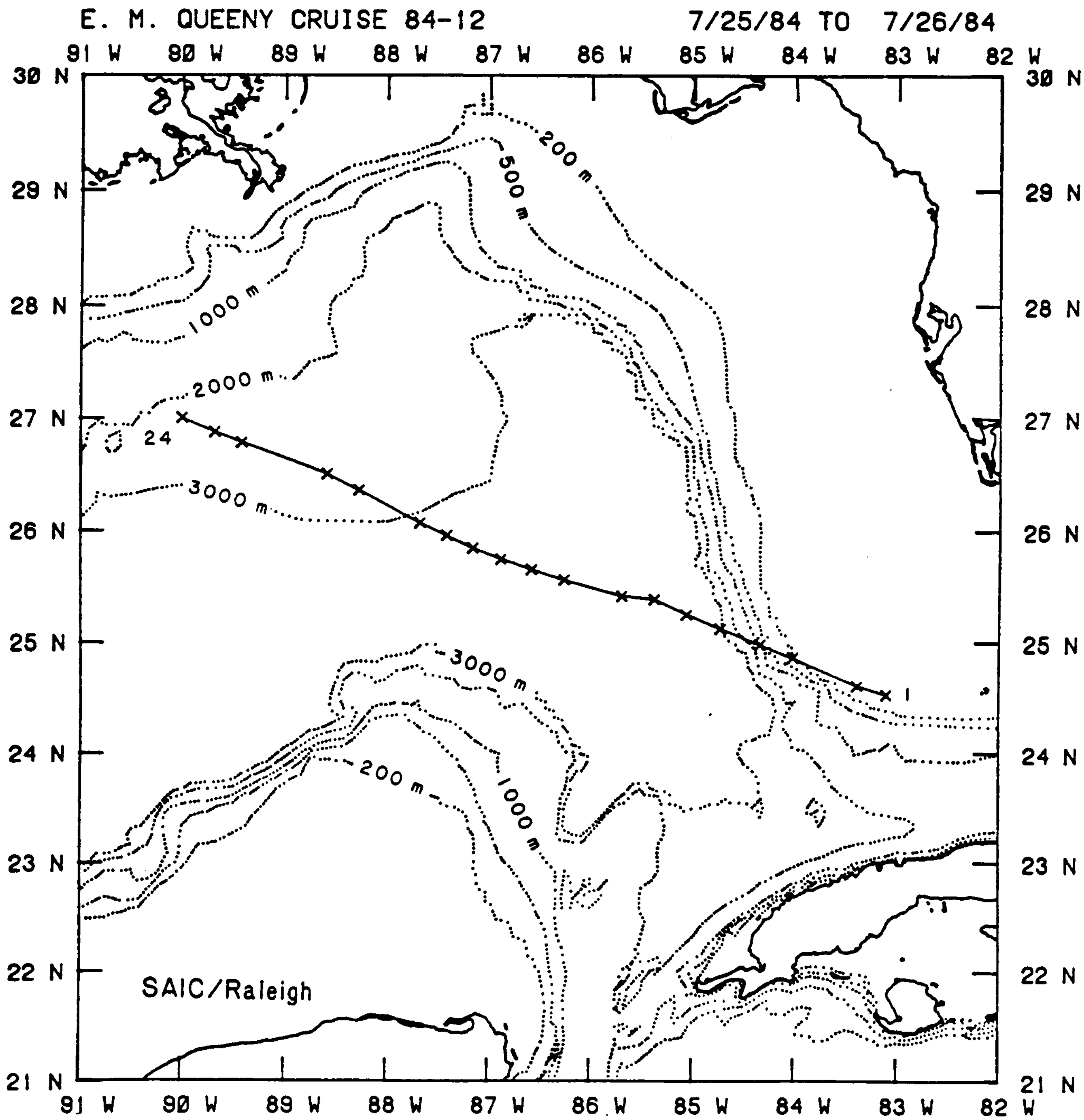

E. M. QUEENY CRUISE 84-11
7/14/84 TO 7/15/84
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
24
3000 m
200 m
1000 m
SAIC/Raleigh

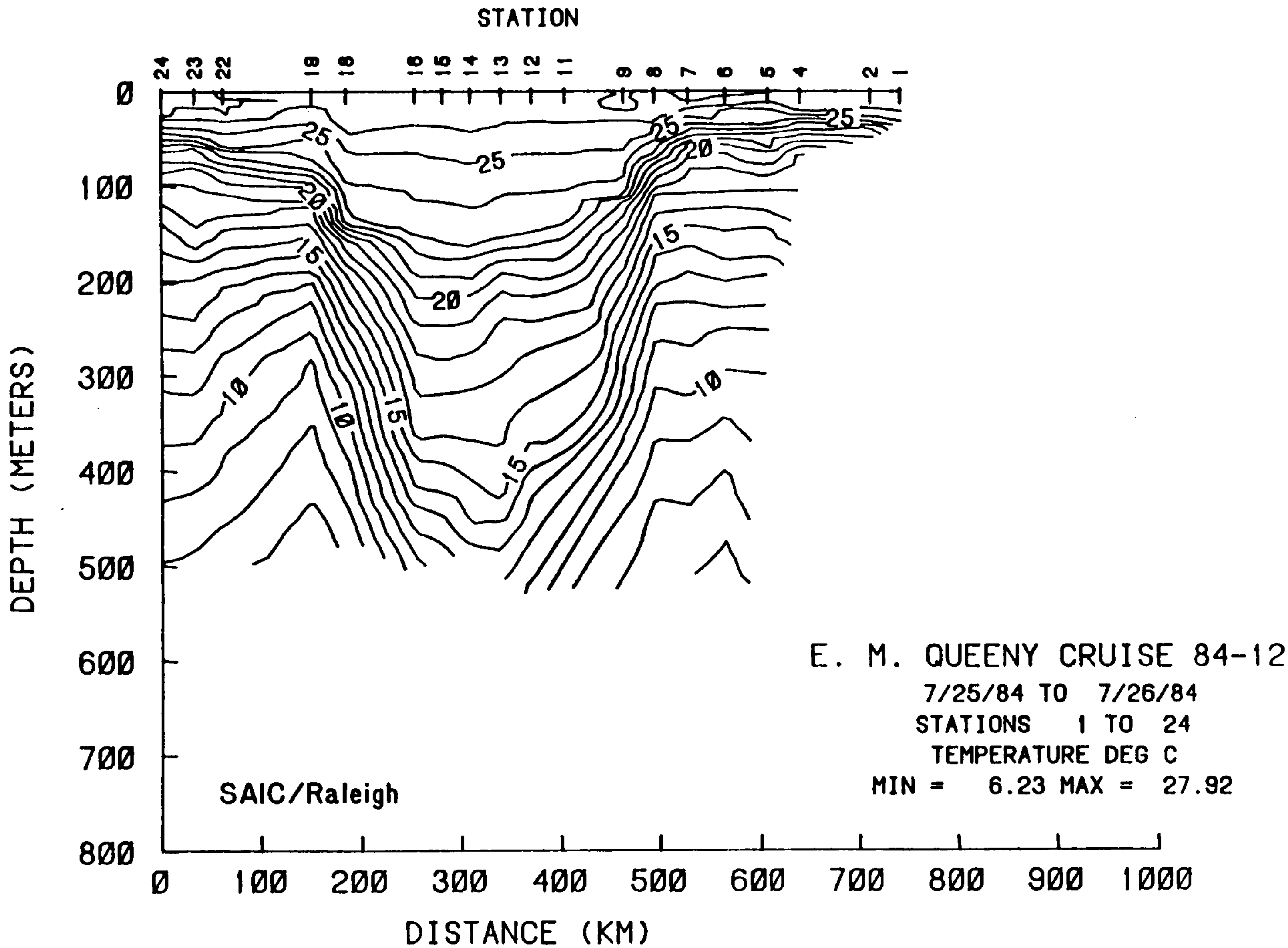

STATION
1 2 3 4 5 6 8 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
25
20
15
10
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
SAIC/Raleigh
E. M. QUEENY CRUISE 84-11
7/14/84 TO 7/15/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 6.10 MAX = 27.64

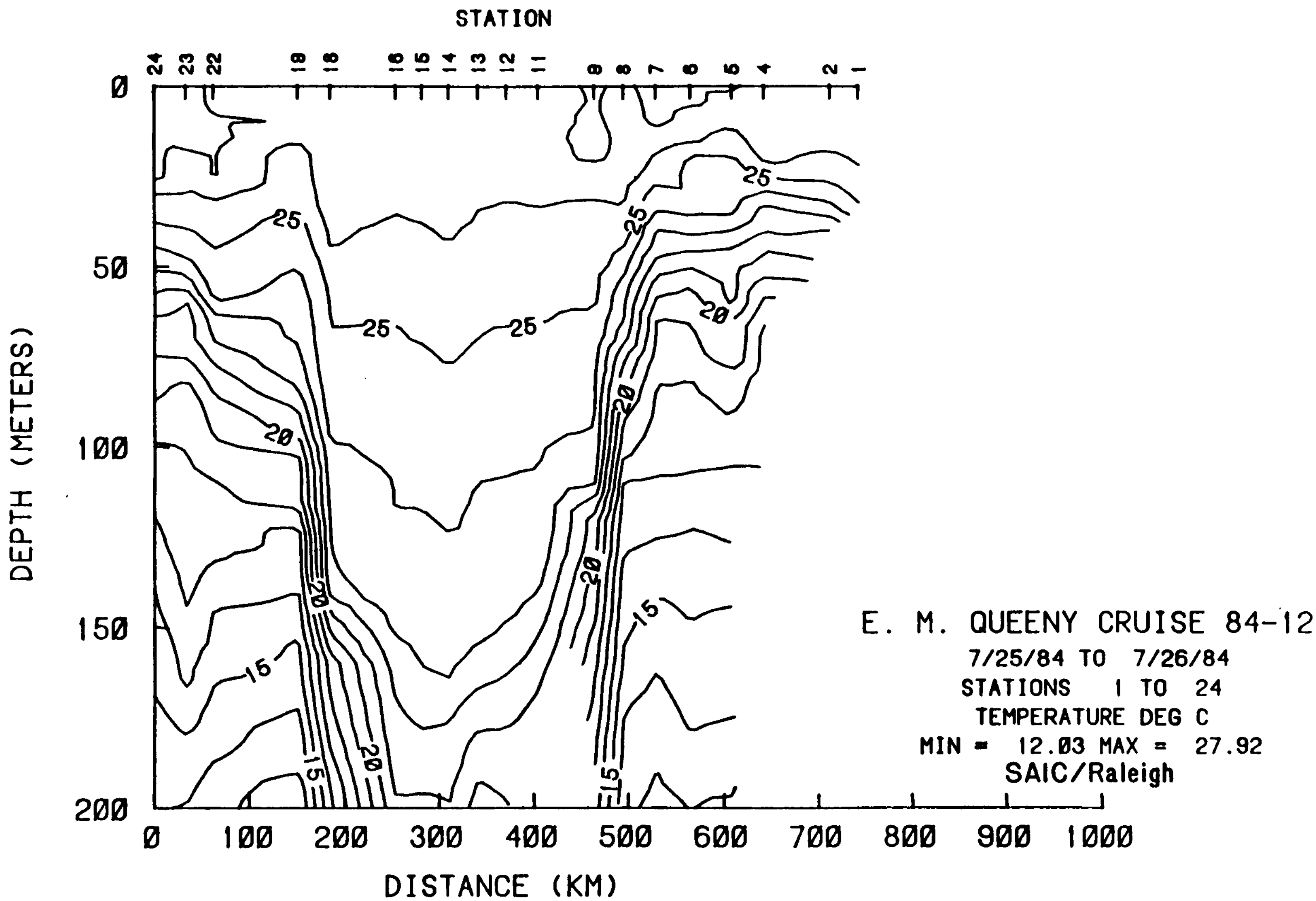

STATION
1 2 3 4 5 6 8 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
DEPTH (METERS)
0
50
100
150
200
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)
25
20
15
E. M. QUEENY CRUISE 84-11
7/14/84 TO 7/15/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 11.57 MAX = 27.64
SAIC/Raleigh

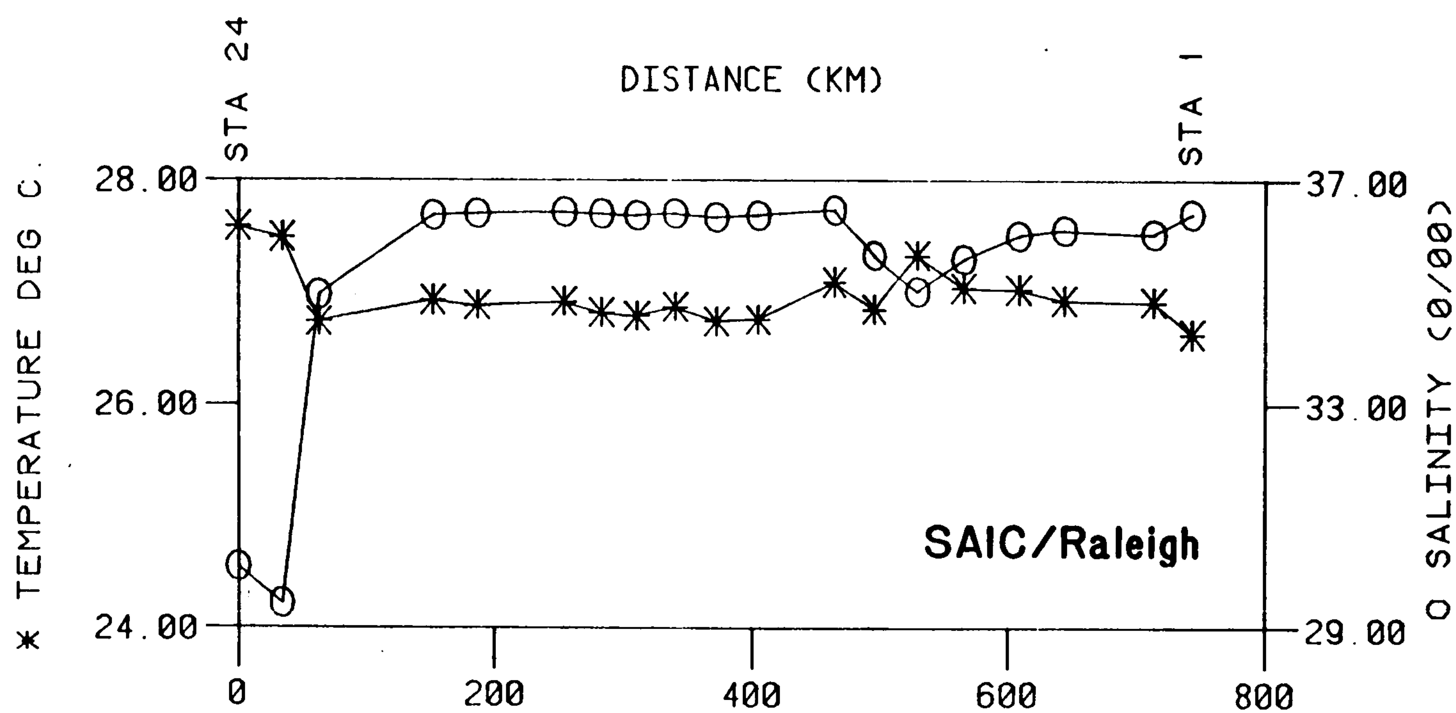


PARAMETERS AT SURFACE E. M. QUEENY CRUISE 84-11

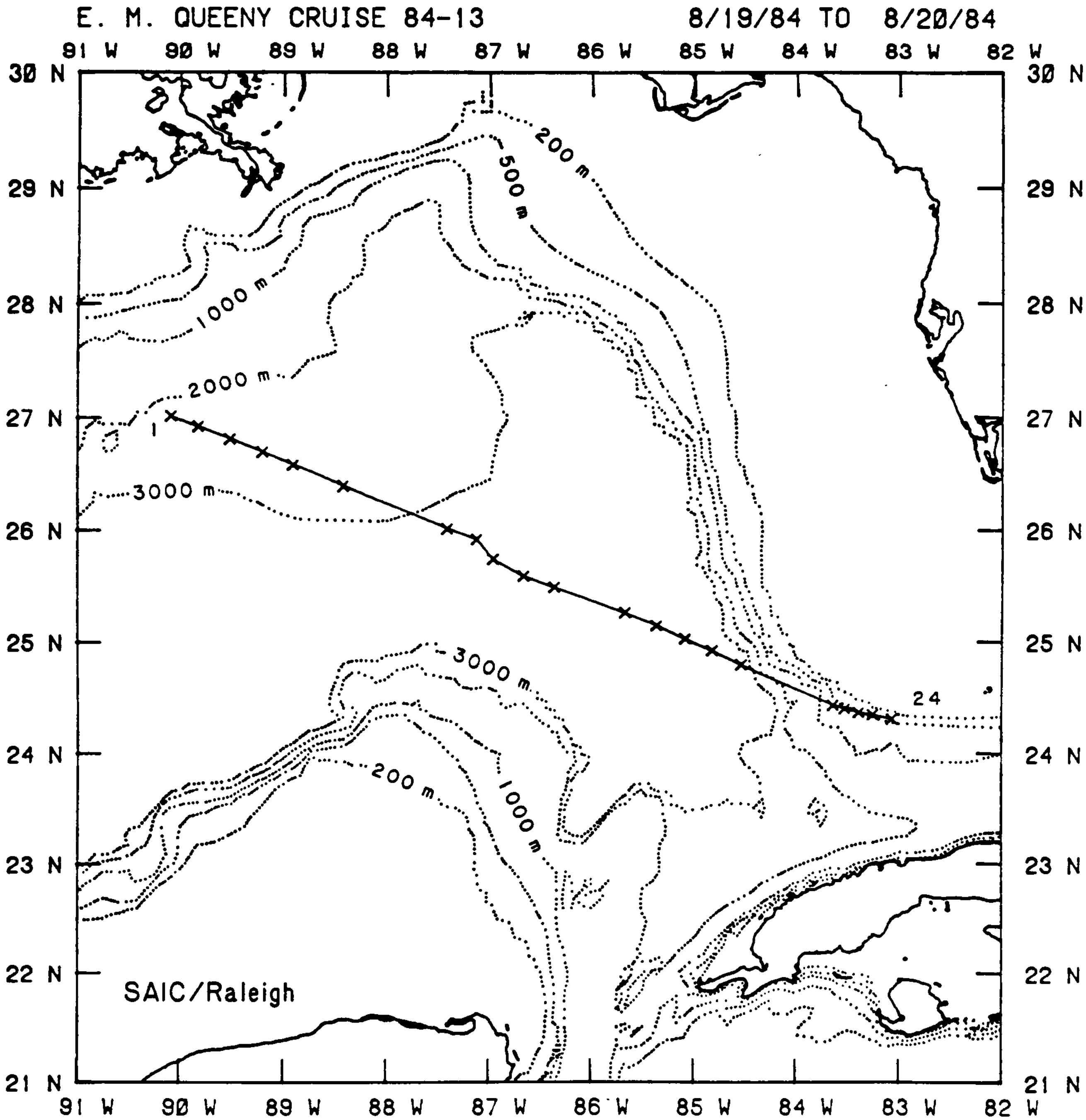

E. M. QUEENY CRUISE 84-12
7/25/84 TO 7/26/84
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
24
1
3000 m
200 m
1000 m
SAIC/Raleigh


STATION
24 23 22 19 18 16 15 14 13 12 11 9 8 7 6 5 4 2 1
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
25
20
15
10
SAIC/Raleigh
E. M. QUEENY CRUISE 84-12
7/25/84 TO 7/26/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 6.23 MAX = 27.92
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)

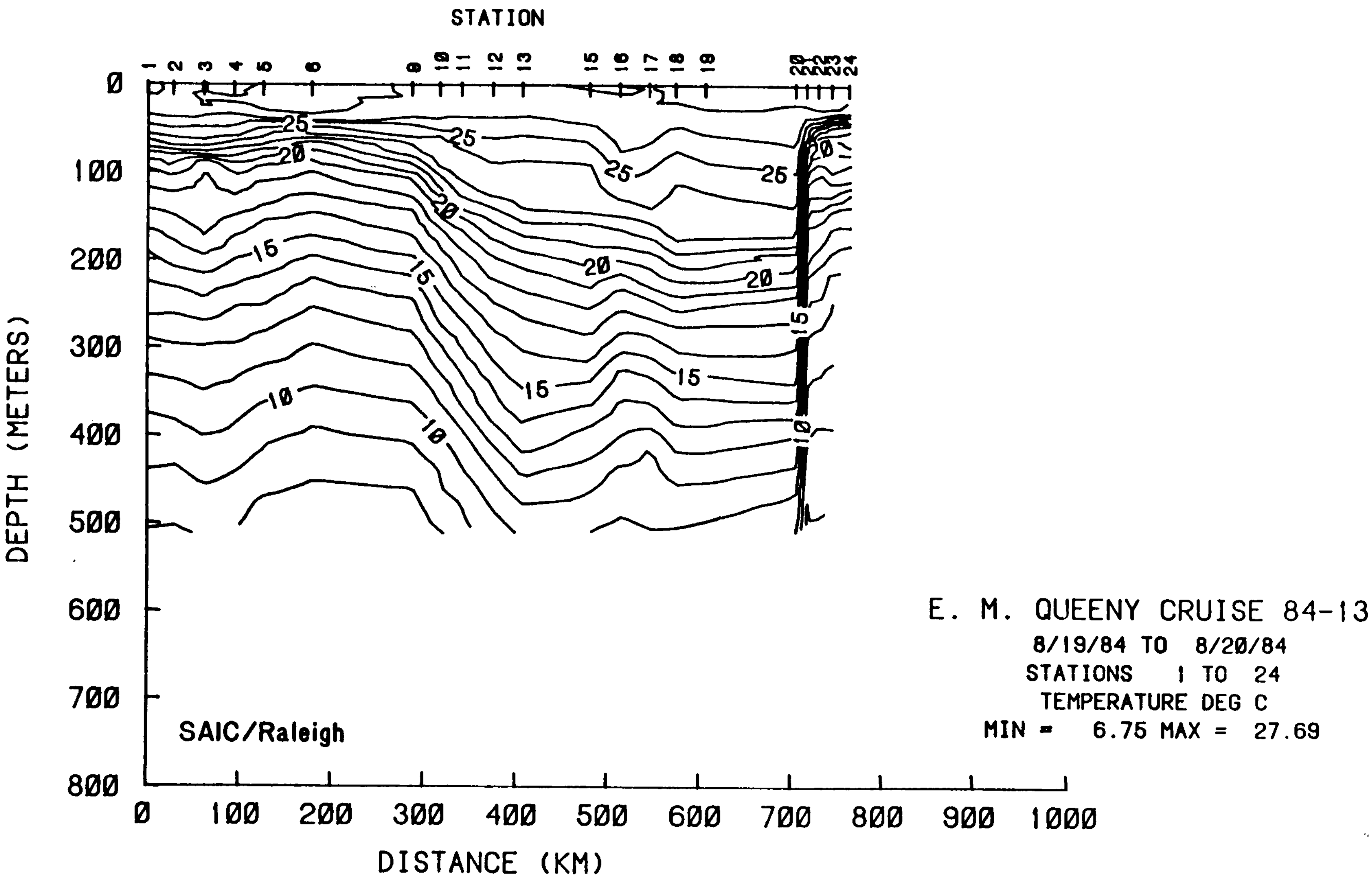

STATION
24 23 22 19 18 16 15 14 13 12 11 9 8 7 6 5 4 2 1
DEPTH (METERS)
Ø
5Ø
1ØØ
15Ø
2ØØ
Ø 1ØØ 2ØØ 3ØØ 4ØØ 5ØØ 6ØØ 7ØØ 8ØØ 9ØØ 1ØØØ
DISTANCE (KM)
25
2Ø
15
E. M. QUEENY CRUISE 84-12
7/25/84 TO 7/26/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 12.Ø3 MAX = 27.92
SAIC/Raleigh

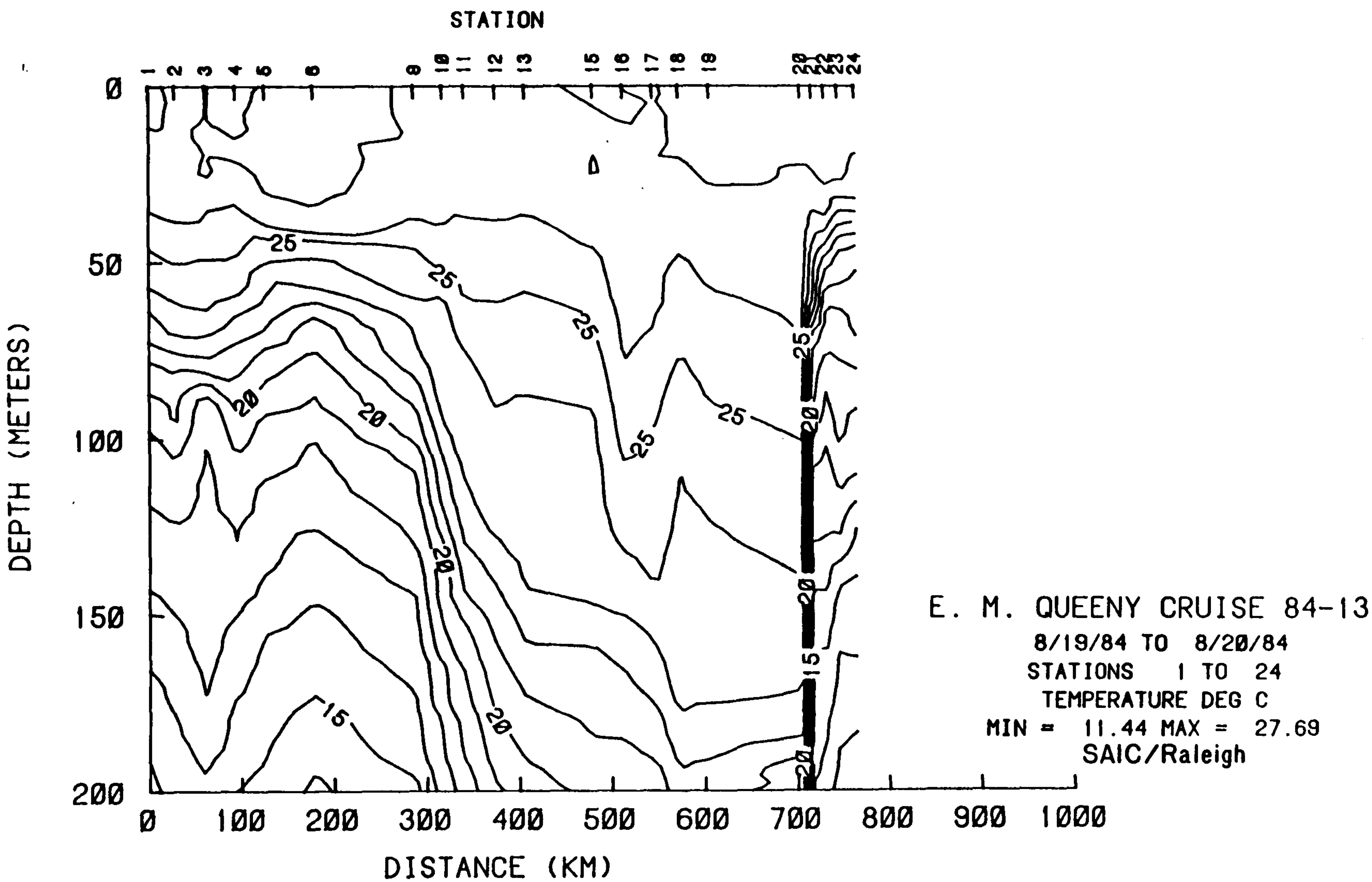


PARAMETERS AT SURFACE E. M. QUEENY CRUISE 84-12

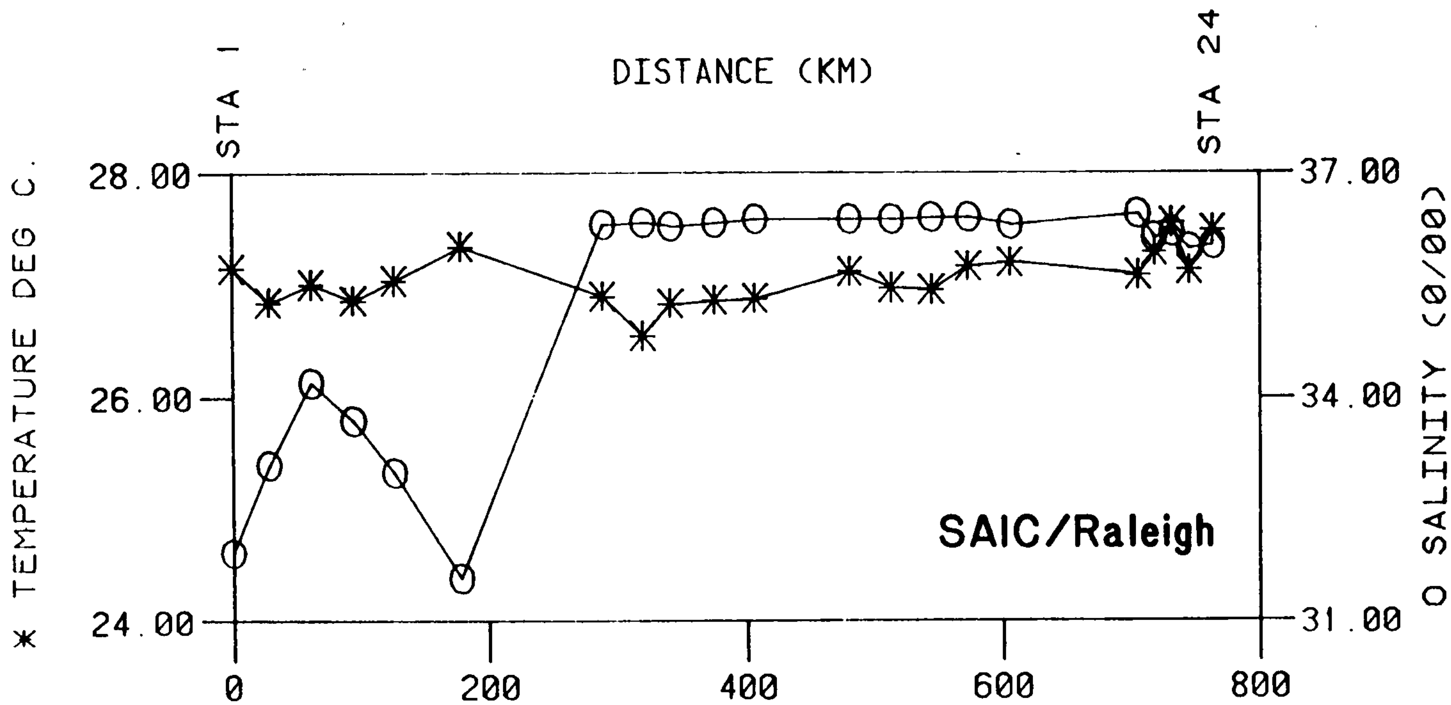


E. M. QUEENY CRUISE 84-13
8/19/84 TO 8/20/84
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
24
3000 m
200 m
1000 m
SAIC/Raleigh

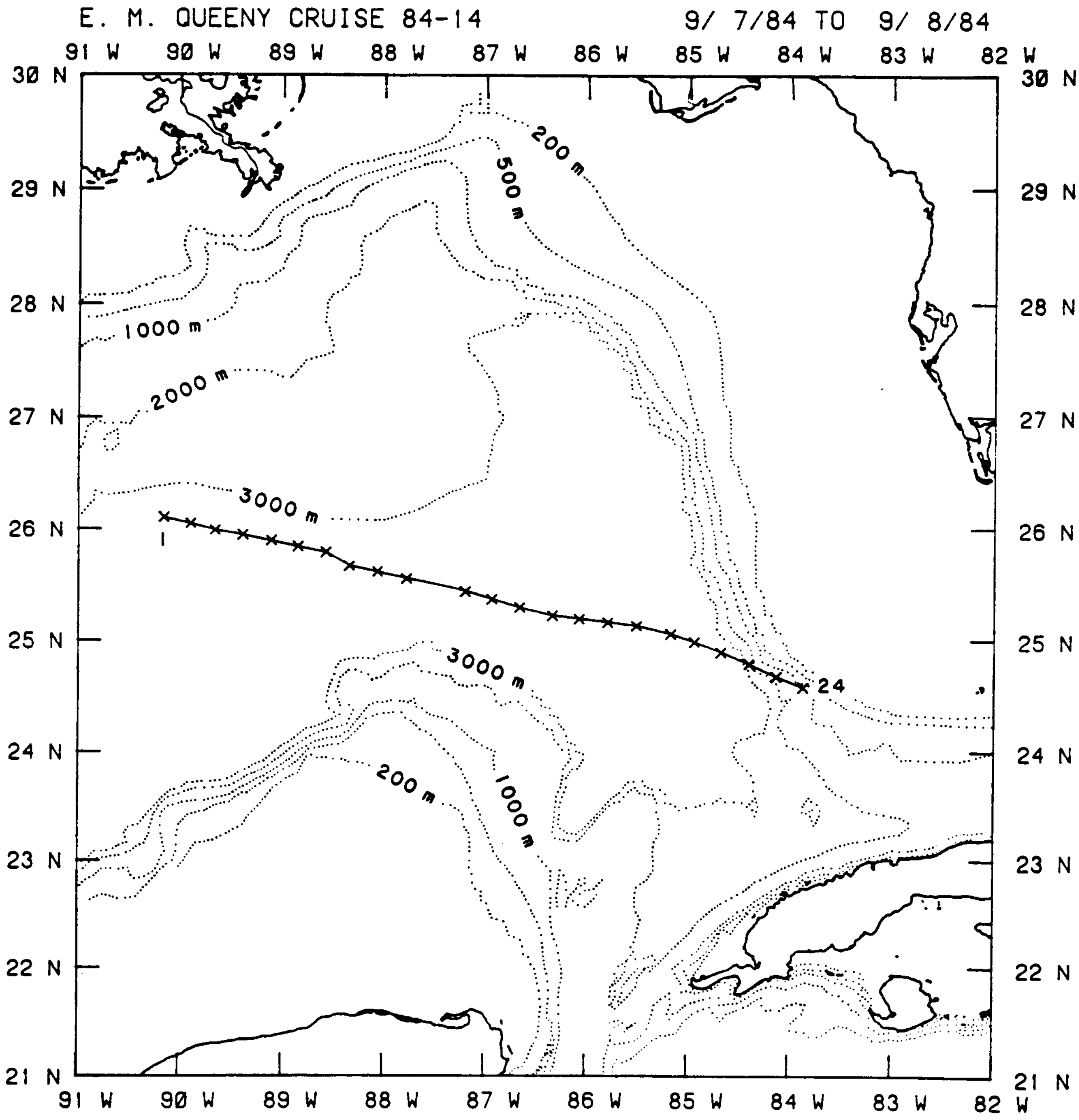

STATION
1 2 3 4 5 6 8 10 11 12 13 15 16 17 18 19 20 21 22 23 24
25
20
15
10
DEPTH (METERS)
0 100 200 300 400 500 600 700 800
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)
SAIC/Raleigh
E. M. QUEENY CRUISE 84-13
8/19/84 TO 8/20/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 6.75 MAX = 27.69



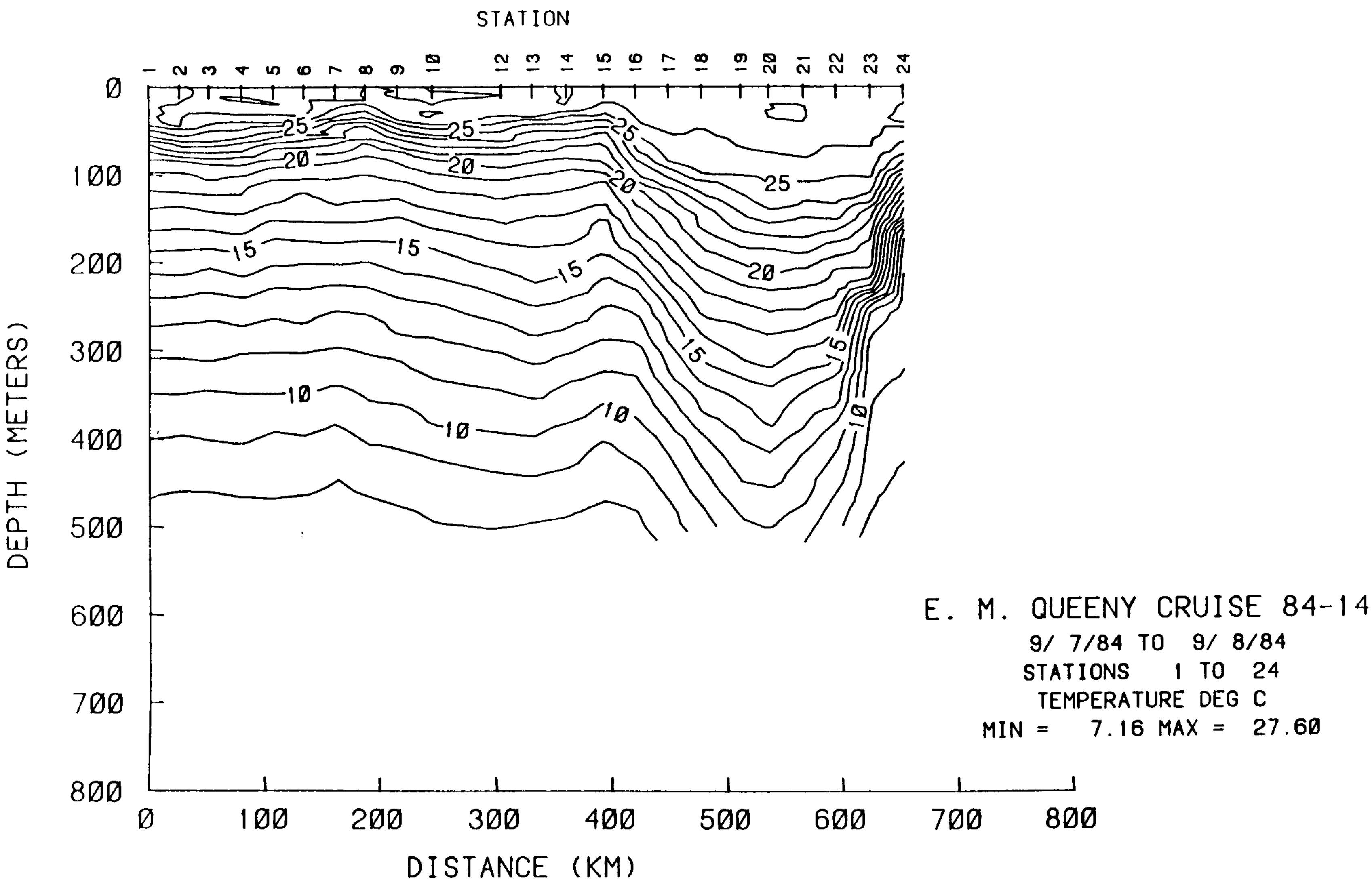
STATION
1 2 3 4 5 6 8 10 11 12 13 15 16 17 18 19 20 21 22 23 24
DEPTH (METERS)
Ø
5Ø
1ØØ
15Ø
2ØØ
25
2Ø
15
Ø 1ØØ 2ØØ 3ØØ 4ØØ 5ØØ 6ØØ 7ØØ 8ØØ 9ØØ 1ØØØ
DISTANCE (KM)
E. M. QUEENY CRUISE 84-13
8/19/84 TO 8/2Ø/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 11.44 MAX = 27.69
SAIC/Raleigh

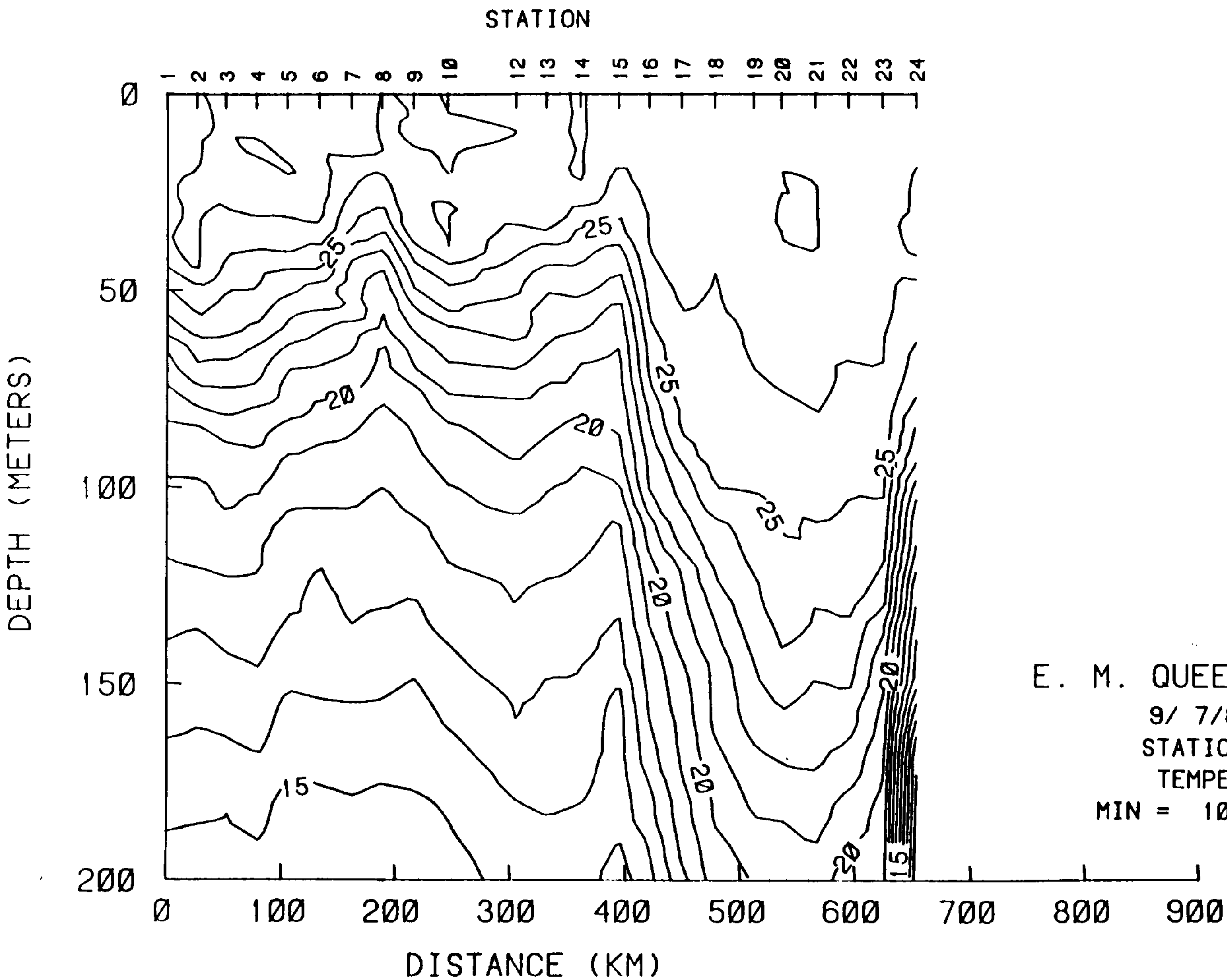


PARAMETERS AT SURFACE E. M. QUEENY CRUISE 84-13

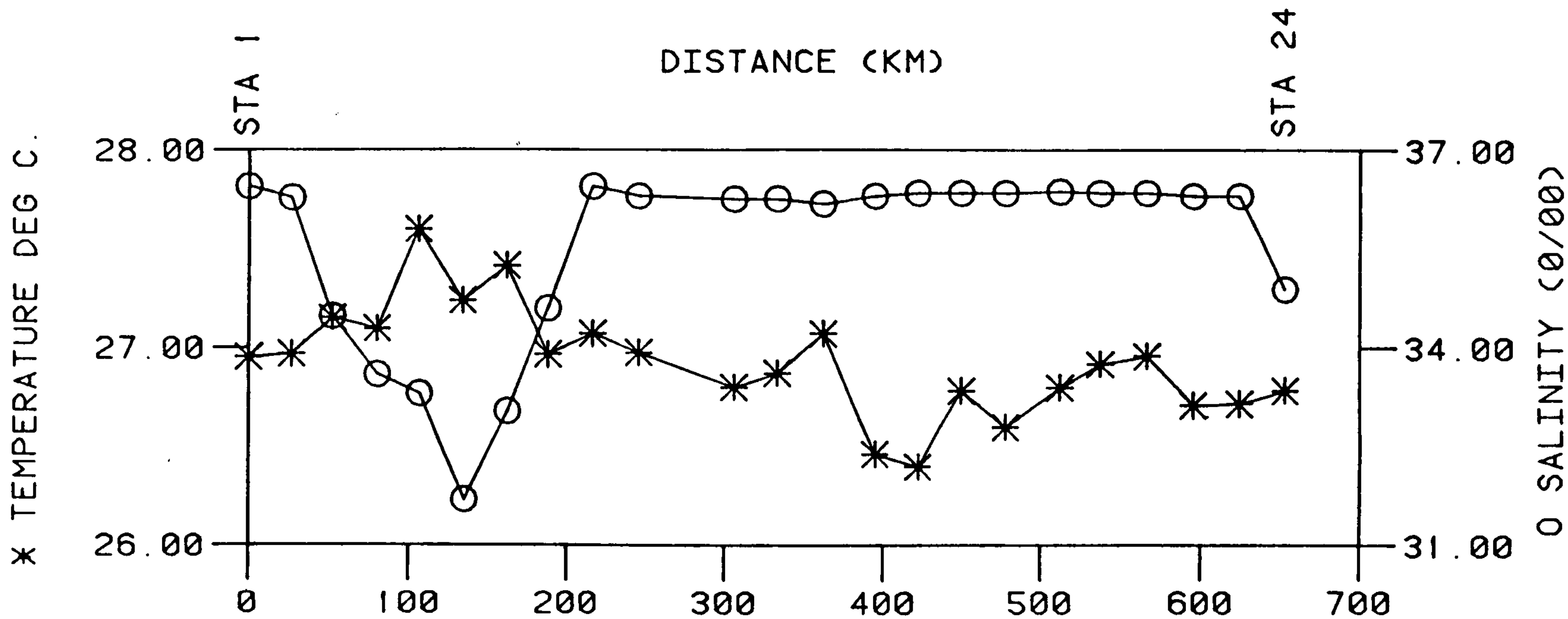


E. M. QUEENY CRUISE 84-14
9/ 7/84 TO 9/ 8/84
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
24
3000 m
200 m
1000 m

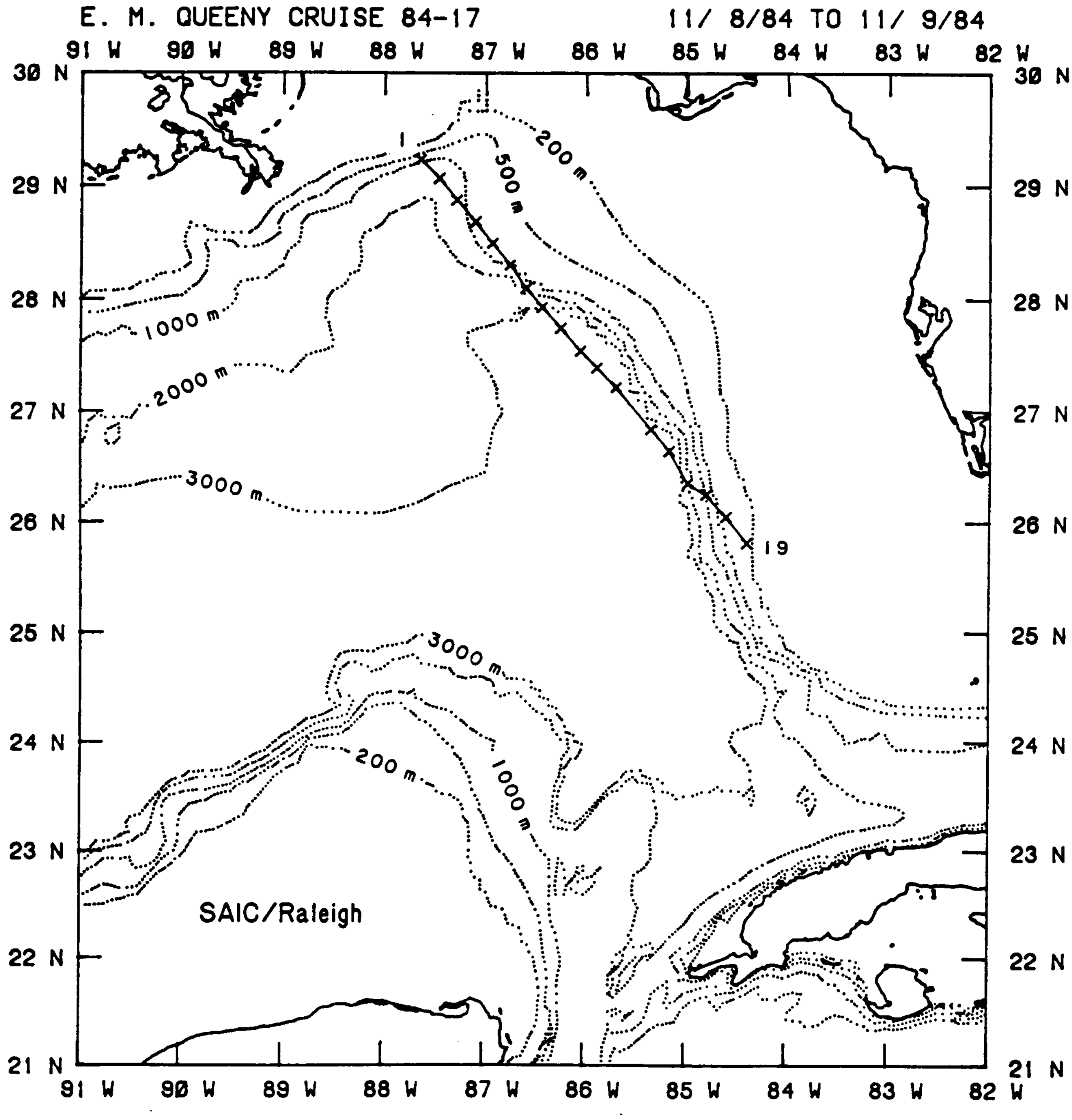

STATION
DEPTH (METERS)
DISTANCE (KM)
E. M. QUEENY CRUISE 84-14
9/ 7/84 TO 9/ 8/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 7.16 MAX = 27.60

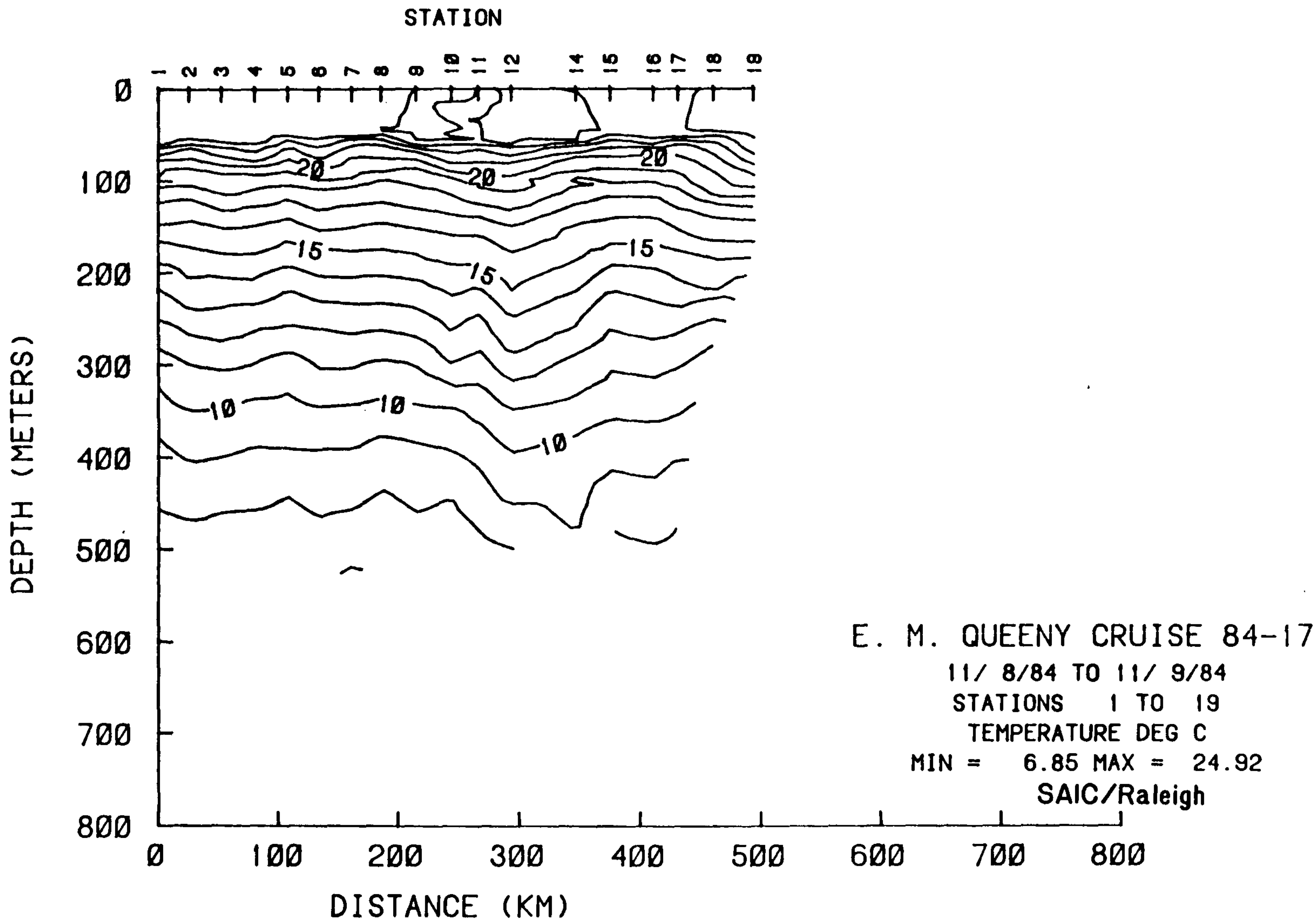


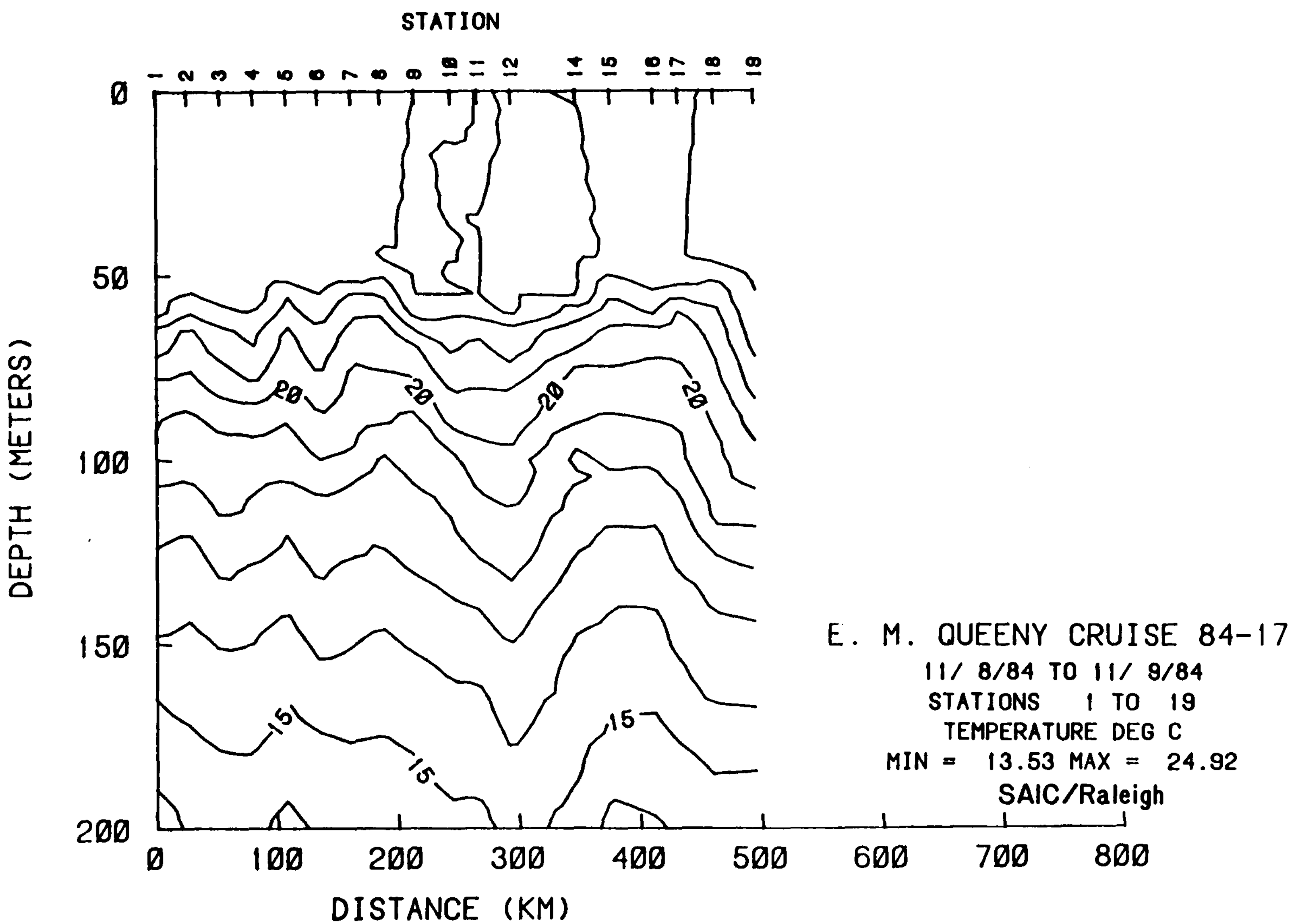
E. M. QUEENY CRUISE 84-14
9/ 7/84 TO 9/ 8/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 10.17 MAX = 27.60



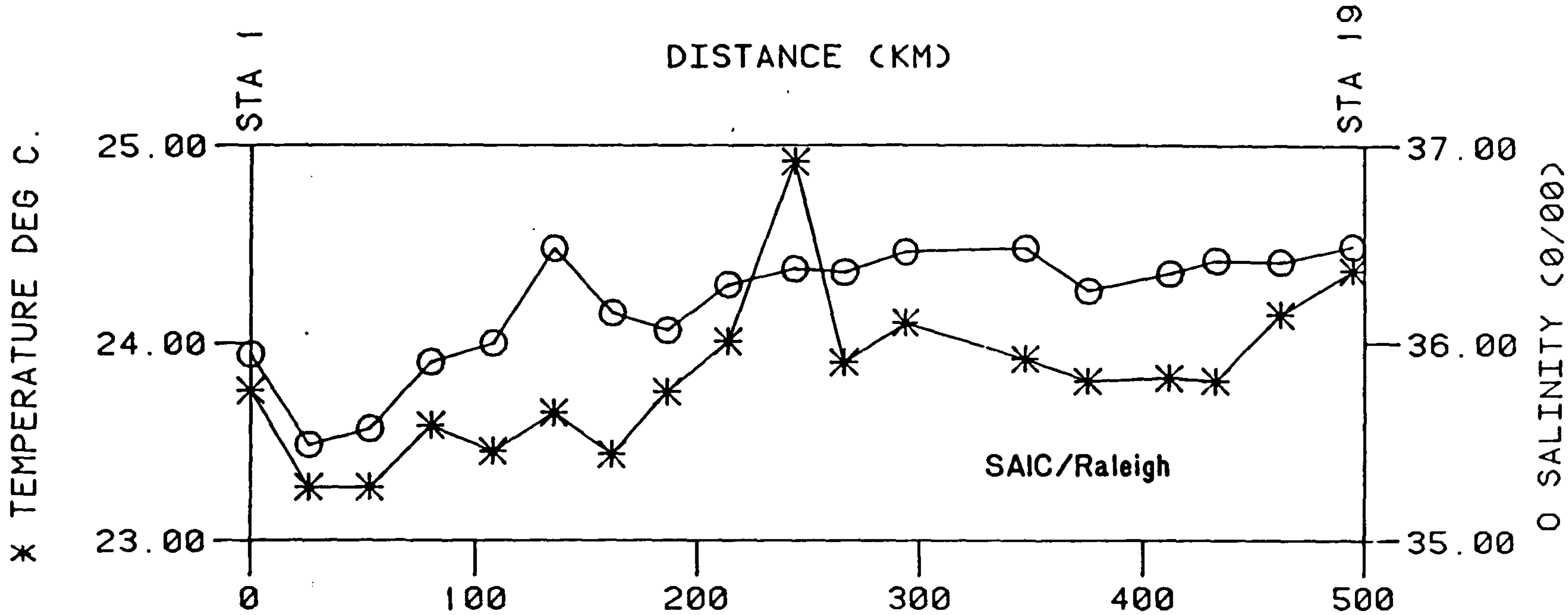
PARAMETERS AT SURFACE E. M. QUEENY CRUISE 84-14


E. M. QUEENY CRUISE 84-17
11/ 8/84 TO 11/ 9/84
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
19
SAIC/Raleigh

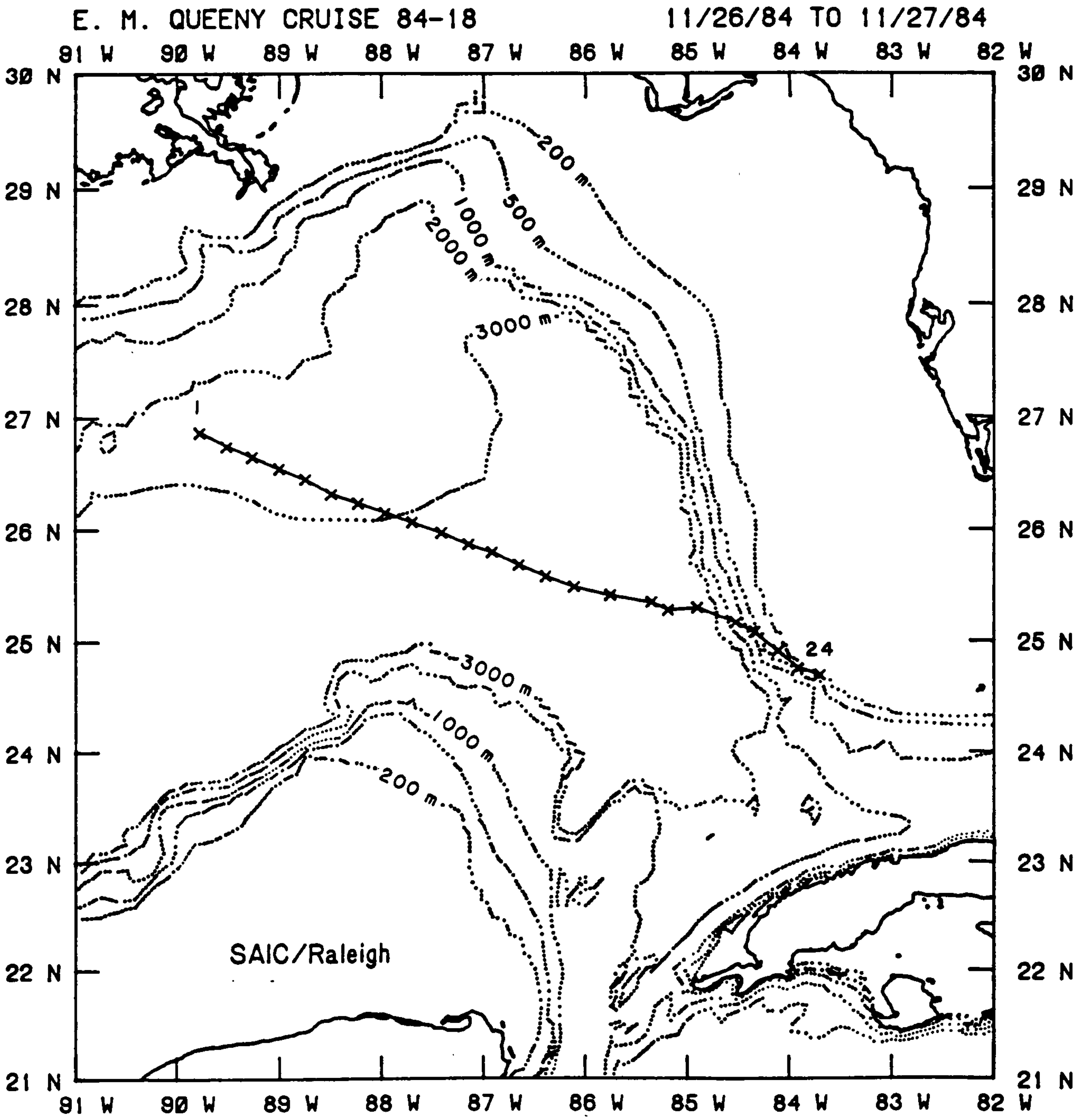

STATION
1 2 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19
DEPTH (METERS)
Ø
100
200
300
400
500
600
700
800
20
20
20
15
15
15
10
10
10
Ø
100
200
300
400
500
600
700
800
DISTANCE (KM)
E. M. QUEENY CRUISE 84-17
11/ 8/84 TO 11/ 9/84
STATIONS 1 TO 19
TEMPERATURE DEG C
MIN = 6.85 MAX = 24.92
SAIC/Raleigh



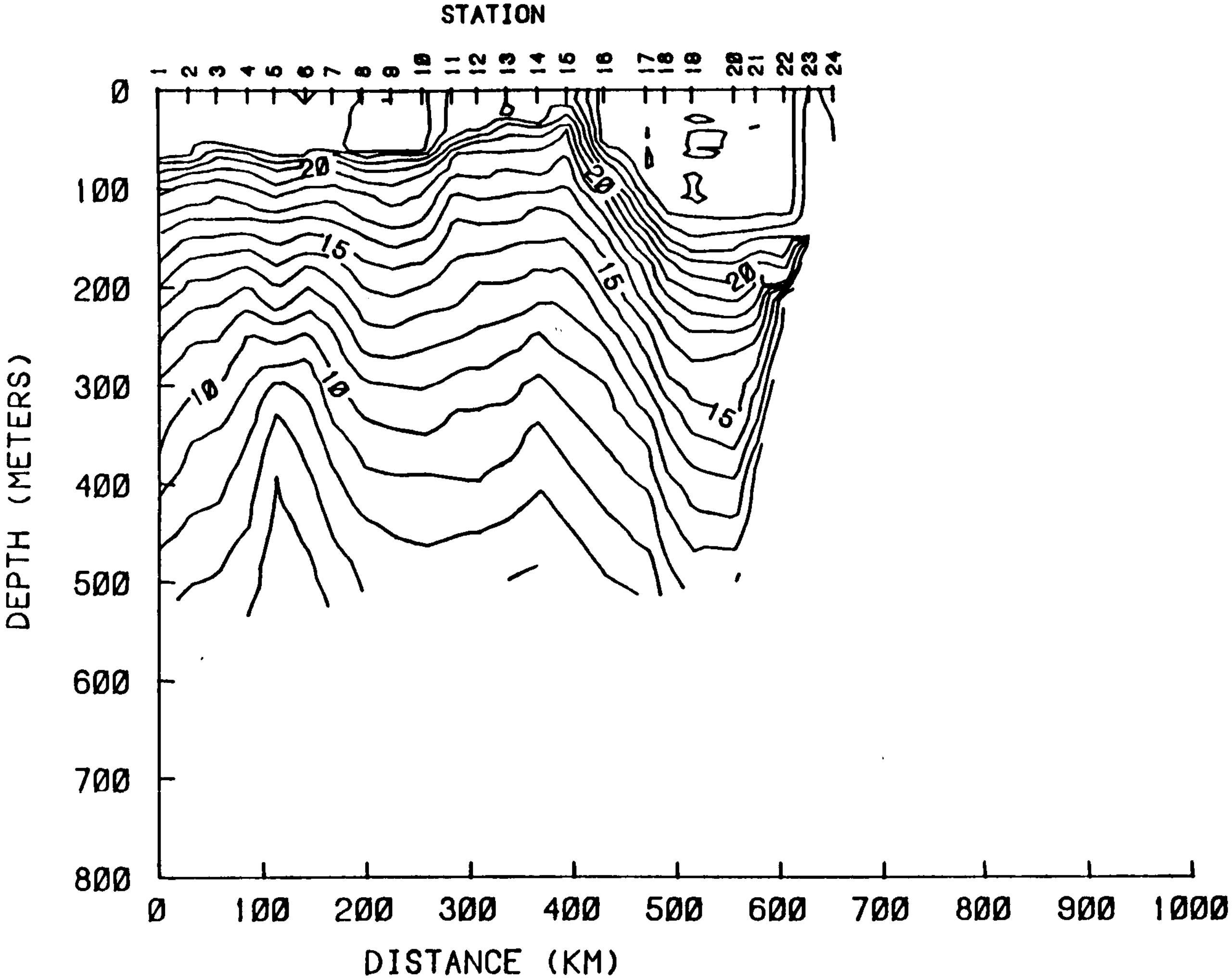
STATION
1 2 3 4 5 6 7 8 9 10 11 12 14 15 16 17 18 19
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800
20
20
20
20
15
15
15
E. M. QUEENY CRUISE 84-17
11/ 8/84 TO 11/ 9/84
STATIONS 1 TO 19
TEMPERATURE DEG C
MIN = 13.53 MAX = 24.92
SAIC/Raleigh



PARAMETERS AT SURFACE E. M. QUEENY CRUISE 84-17



E. M. QUEENY CRUISE 84-18
11/26/84 TO 11/27/84
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
24
SAIC/Raleigh



E. M. QUEENY CRUISE 84-18

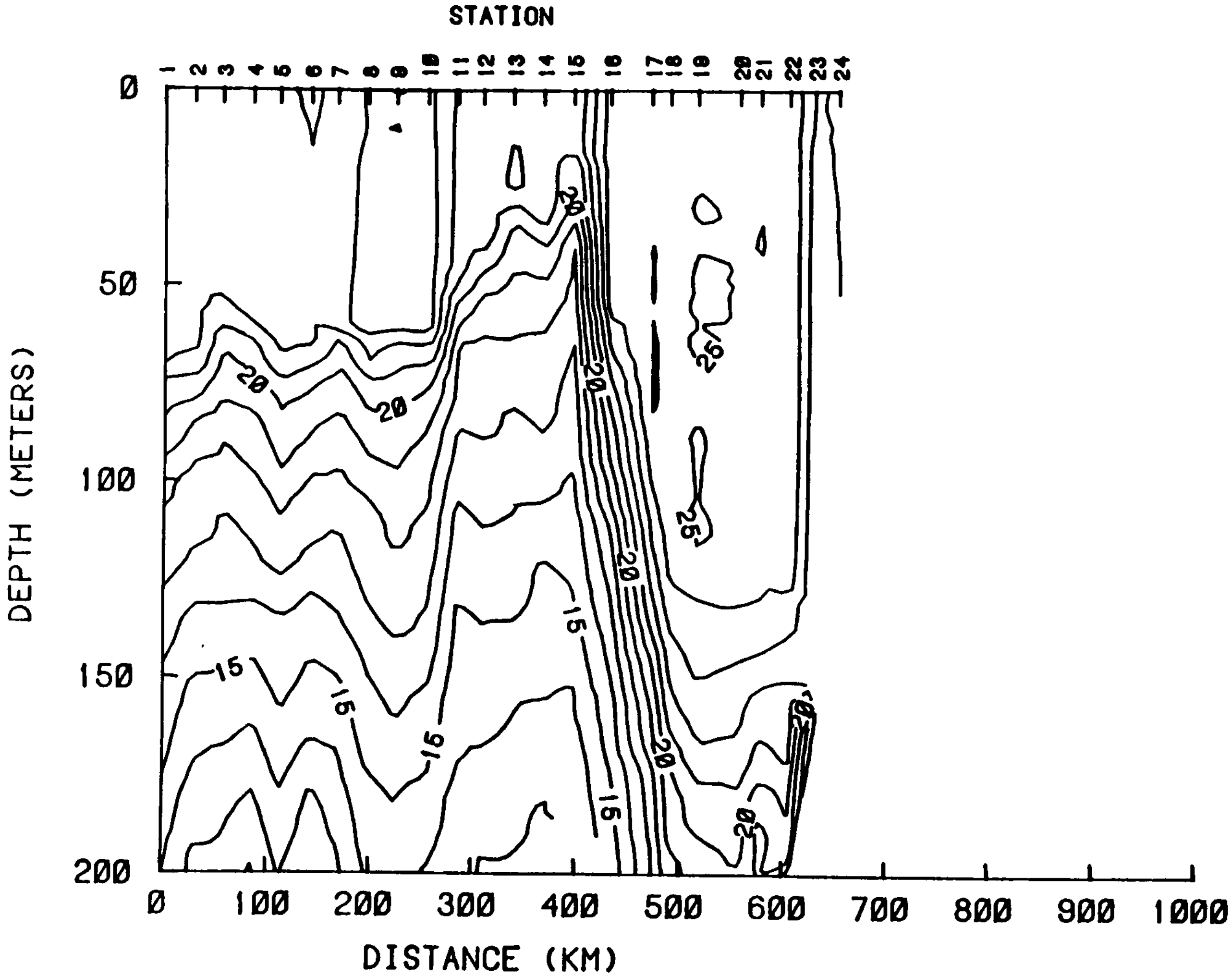
11/26/84 TO 11/27/84

STATIONS 1 TO 24

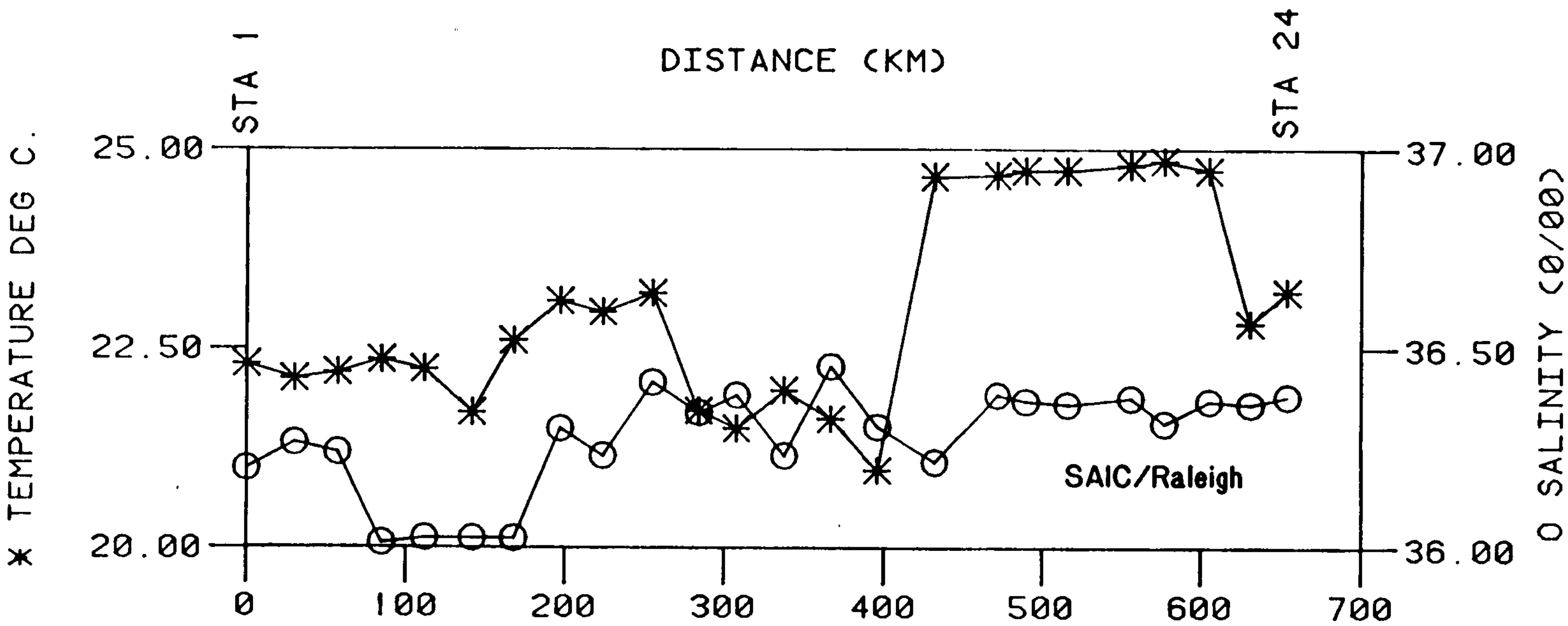
TEMPERATURE DEG C

MIN = 5.15 MAX = 25.05

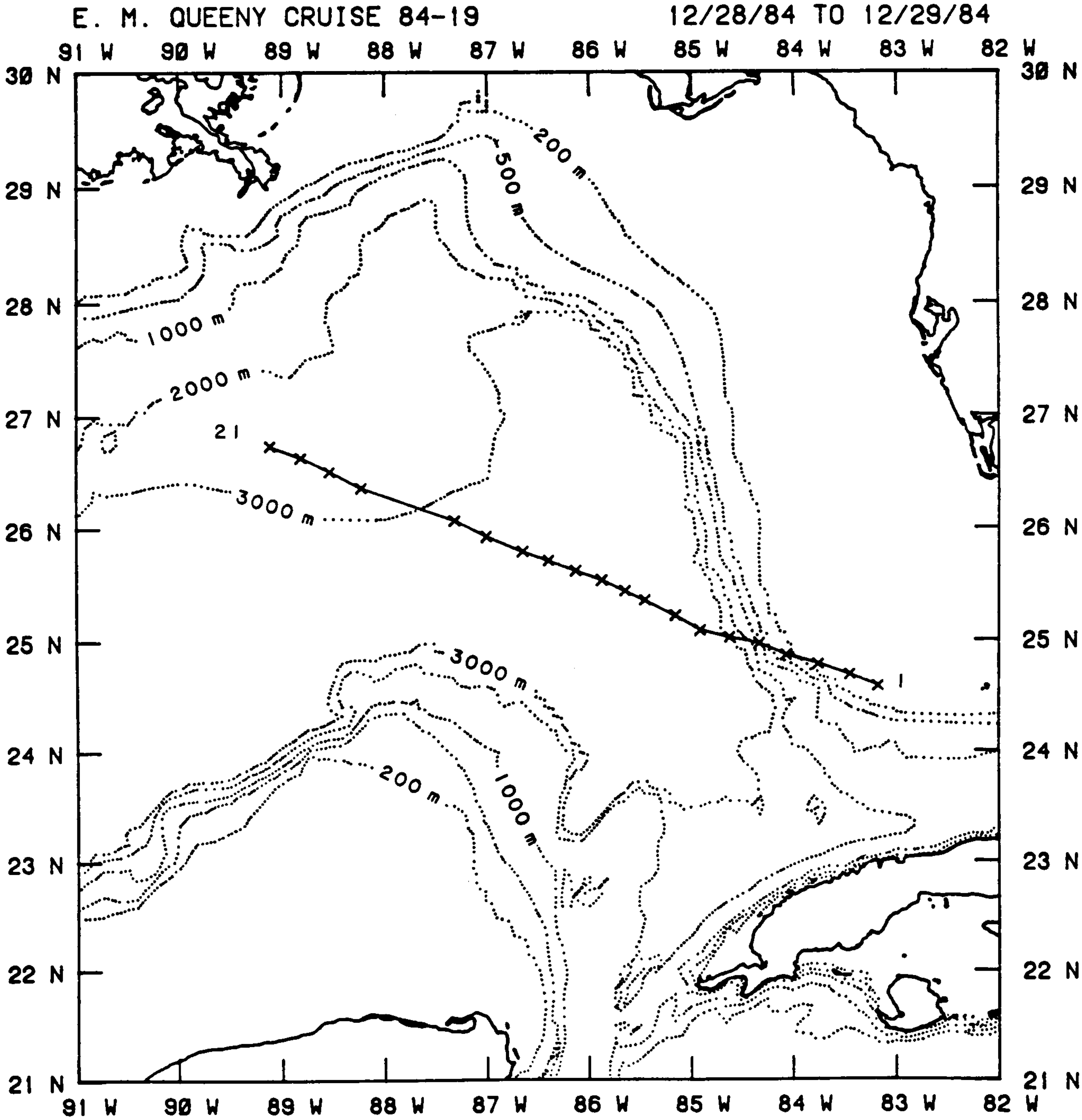
SAIC/Raleigh

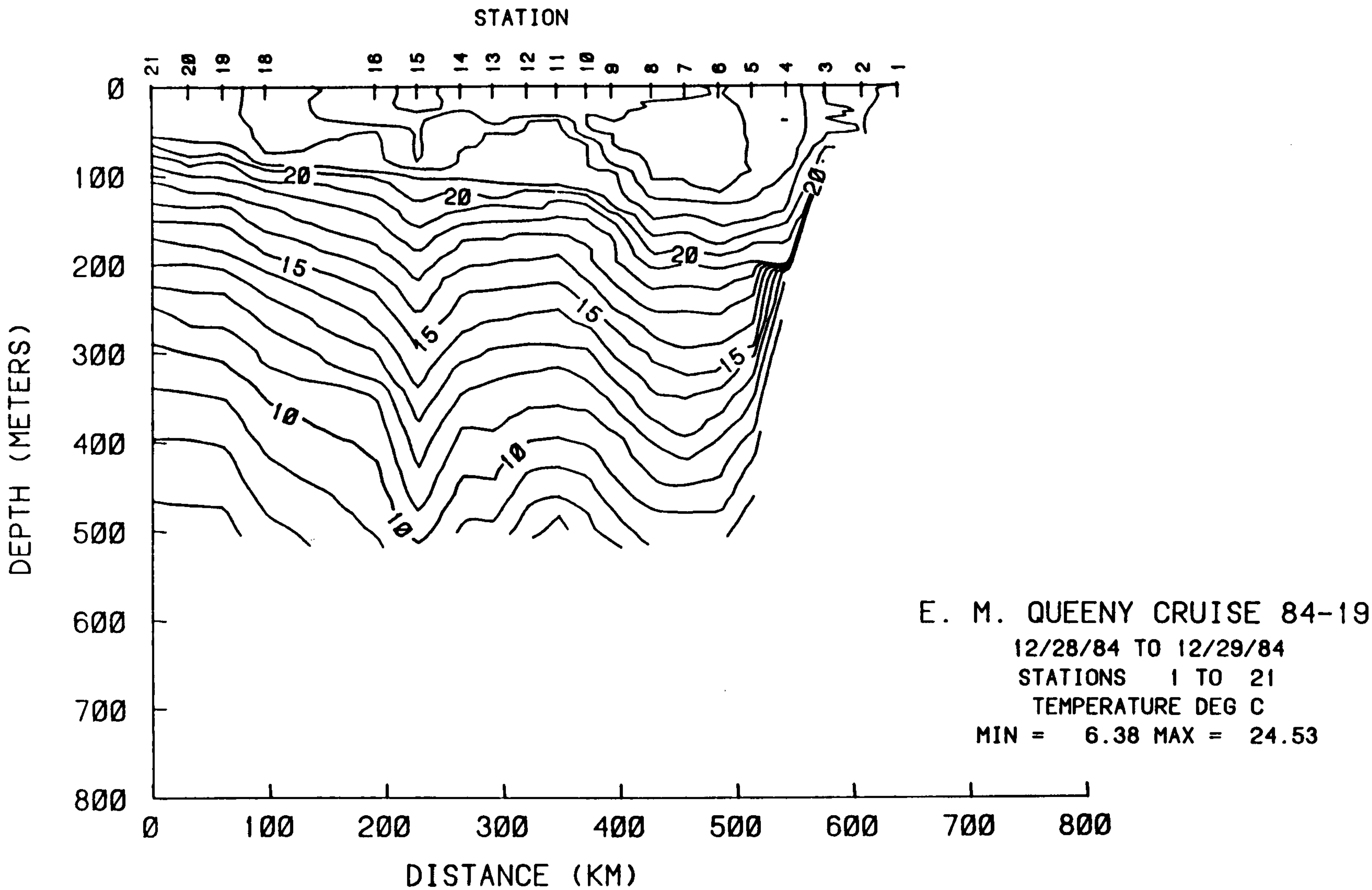


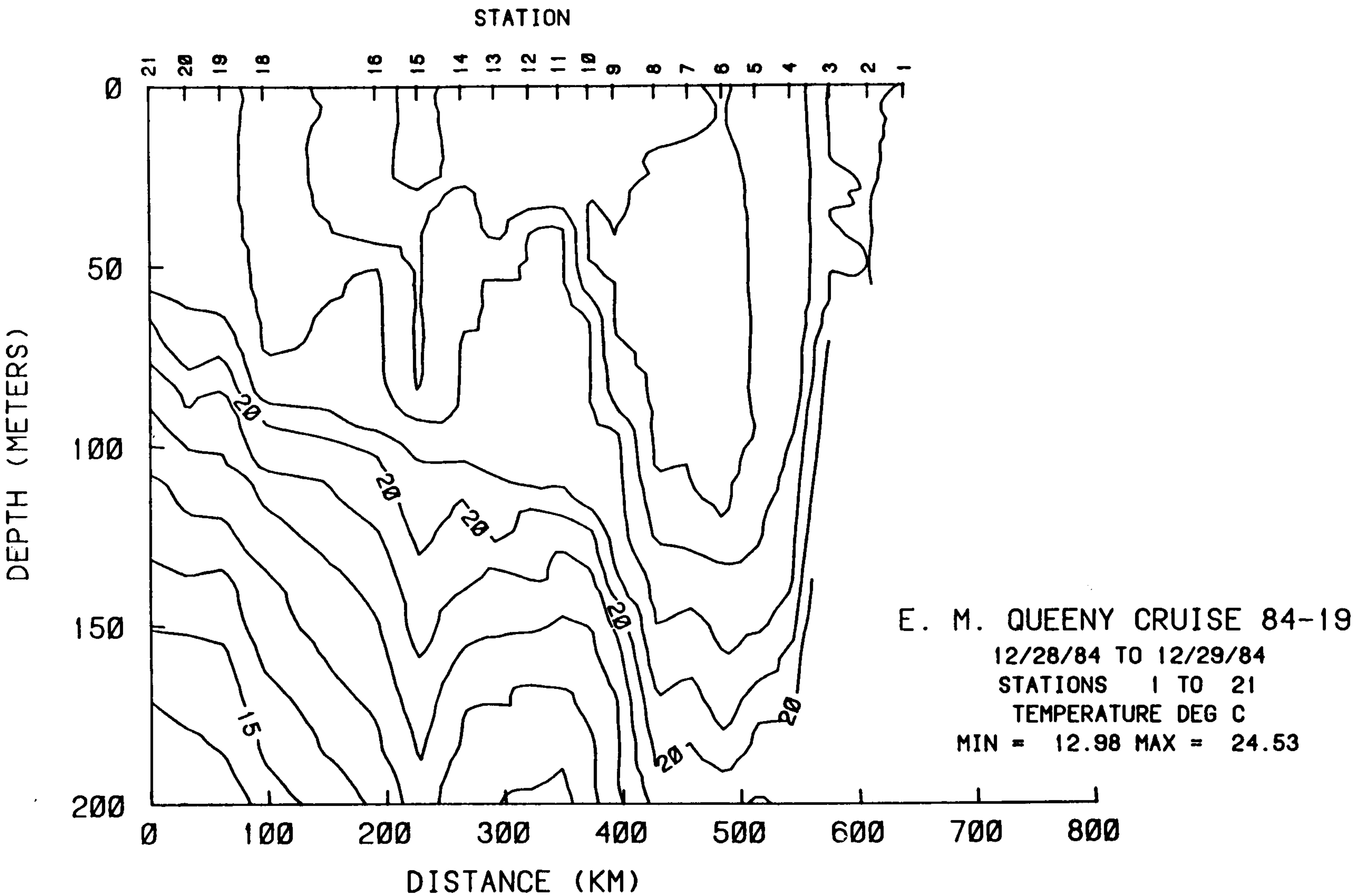
E. M. QUEENY CRUISE 84-18
11/26/84 TO 11/27/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 11.90 MAX = 25.05
SAIC/Raleigh

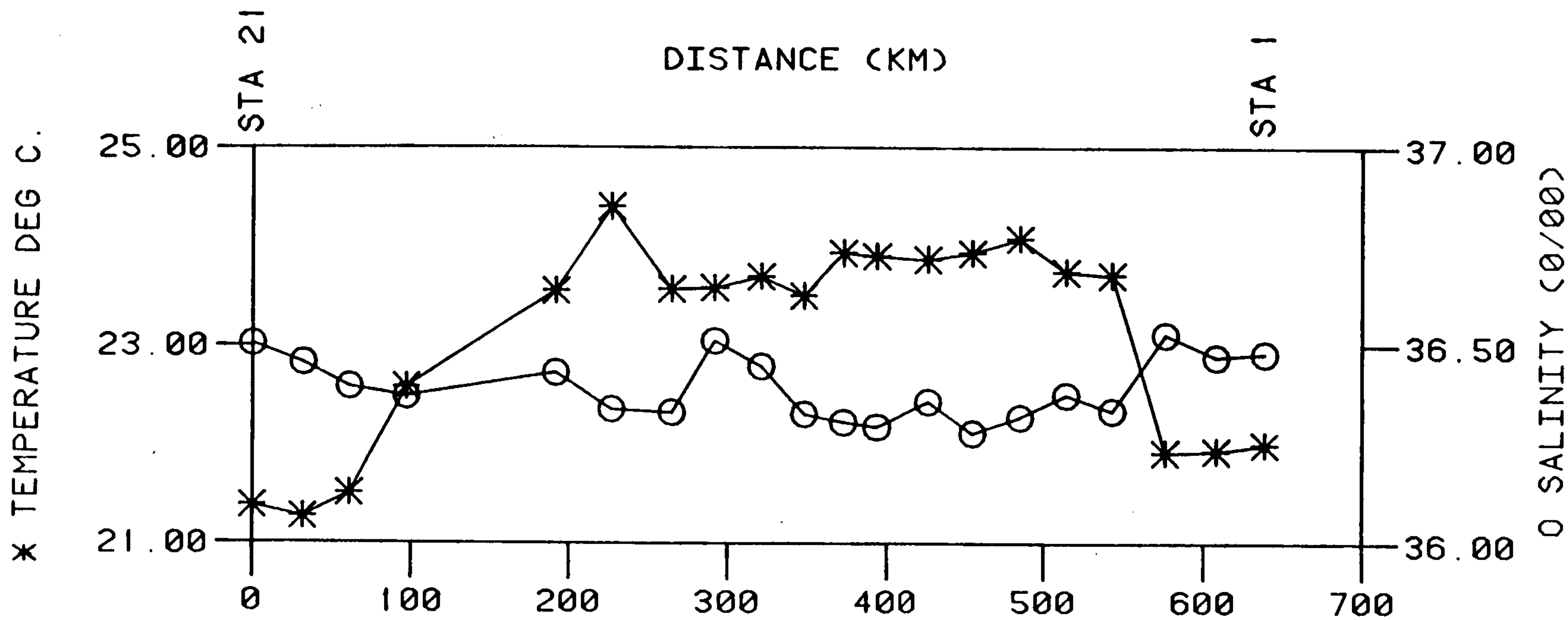


PARAMETERS AT SURFACE E. M. QUEENY CRUISE 84-18


E. M. QUEENY CRUISE 84-19
12/28/84 TO 12/29/84
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
21
1
3000 m
200 m
1000 m


STATION
21 20 19 18 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
20
15
10
DISTANCE (KM)
0 100 200 300 400 500 600 700 800
E. M. QUEENY CRUISE 84-19
12/28/84 TO 12/29/84
STATIONS 1 TO 21
TEMPERATURE DEG C
MIN = 6.38 MAX = 24.53

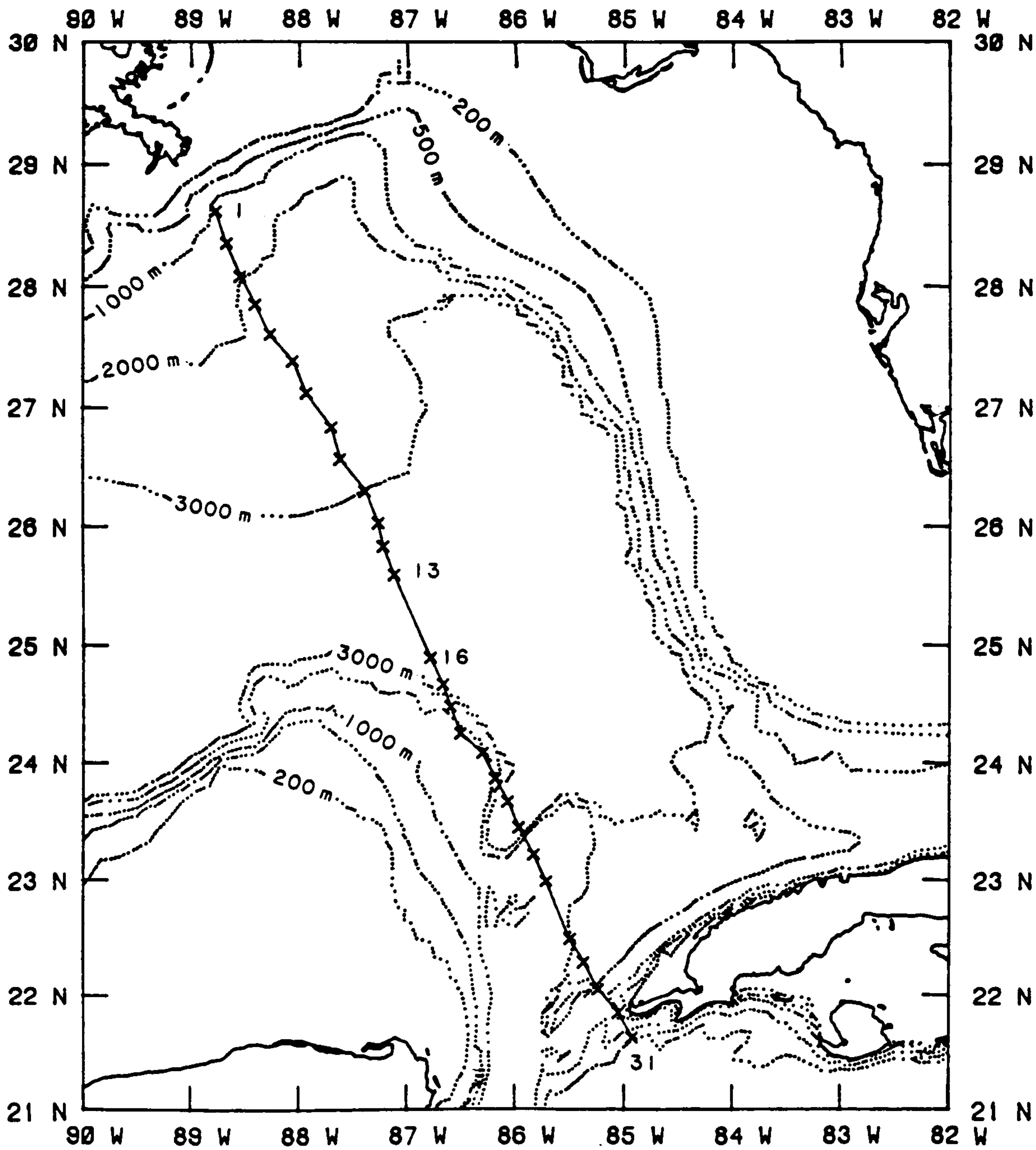

STATION
21 20 19 18 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
50
100
150
200
20
20
20
20
20
20
20
15
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
E. M. QUEENY CRUISE 84-19
12/28/84 TO 12/29/84
STATIONS 1 TO 21
TEMPERATURE DEG C
MIN = 12.98 MAX = 24.53

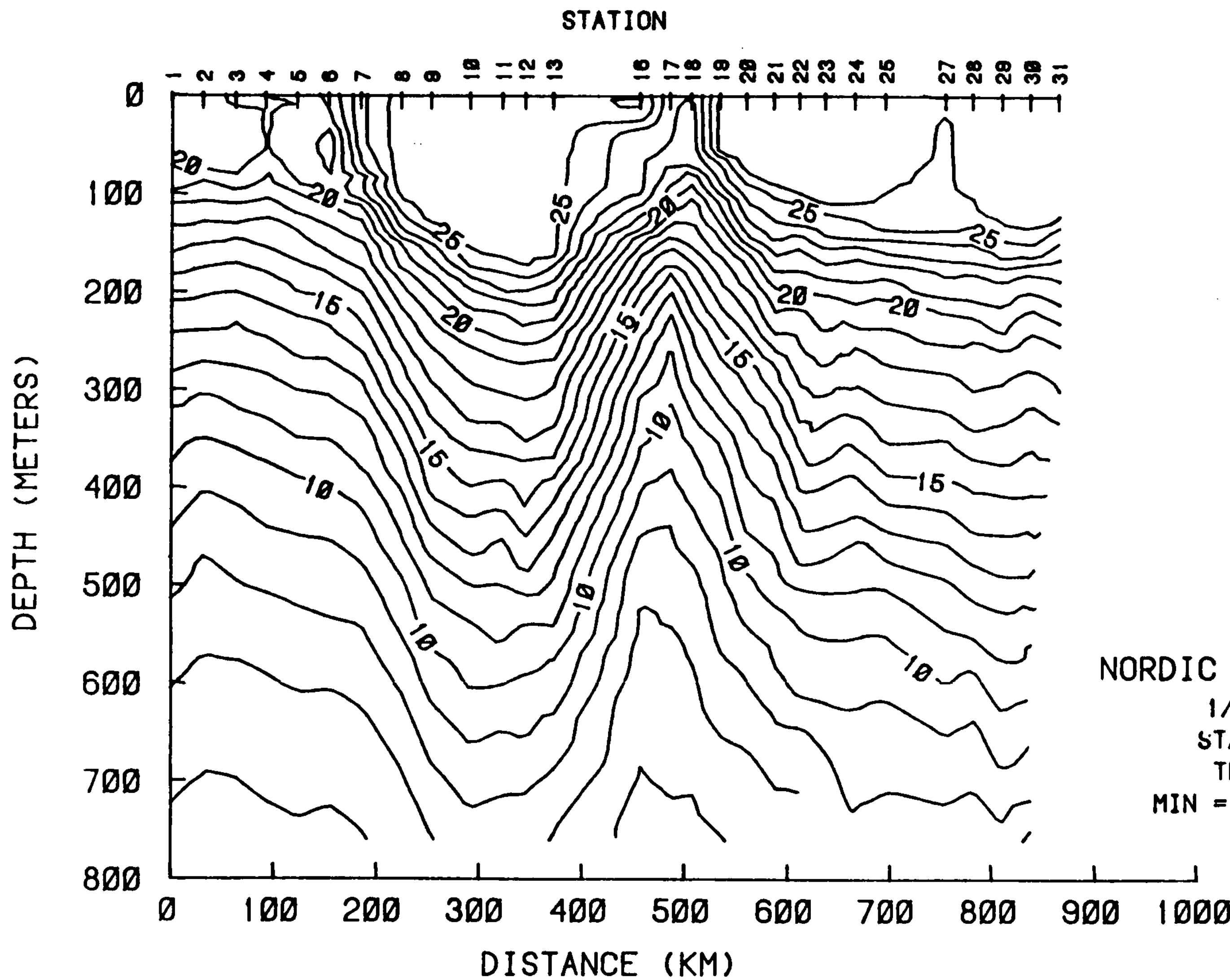


PARAMETERS AT SURFACE E. M. QUEENY CRUISE 84-19

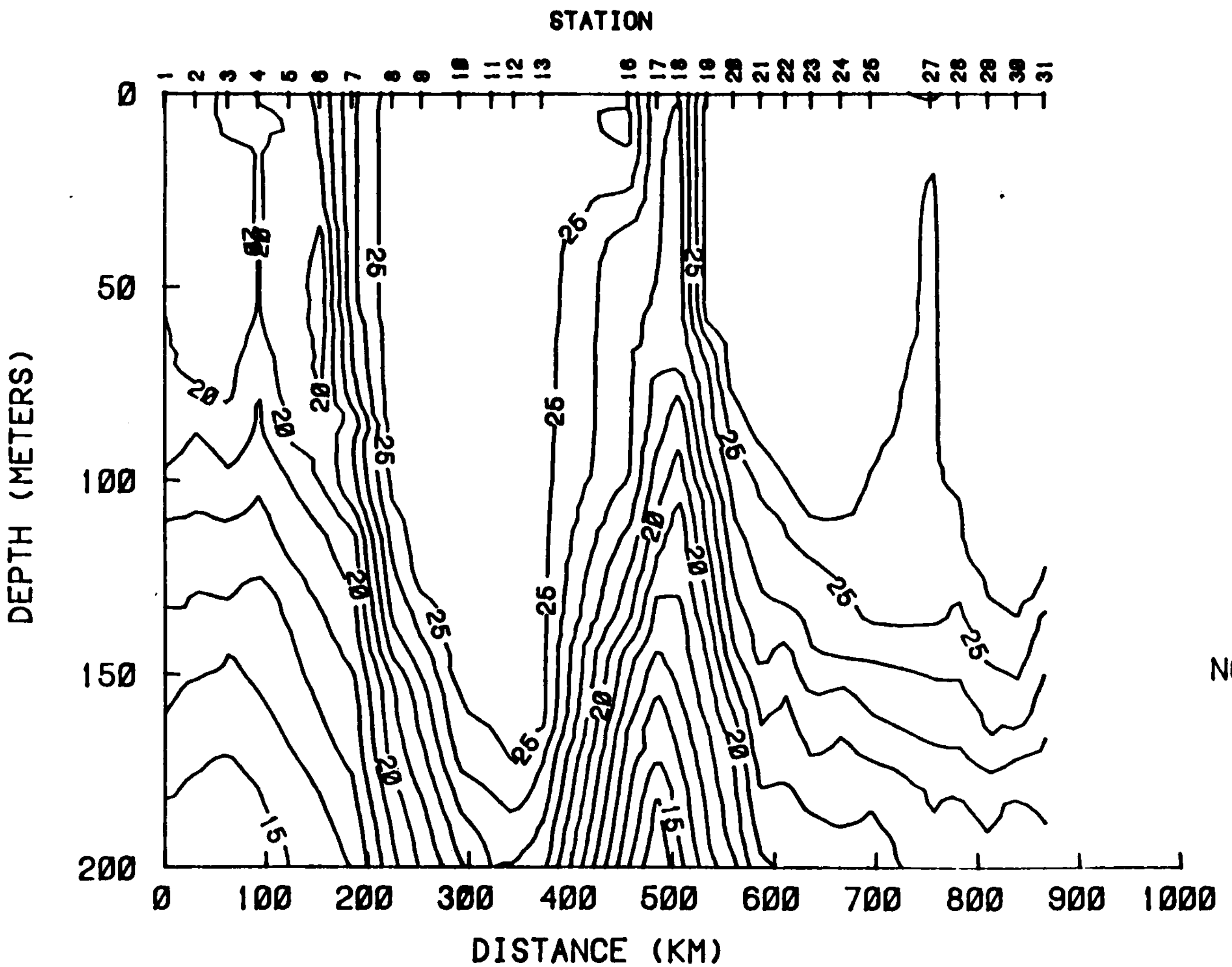
240

NORDIC WASA CRUISE 84-01 1/ 7/84 TO 1/ 8/84

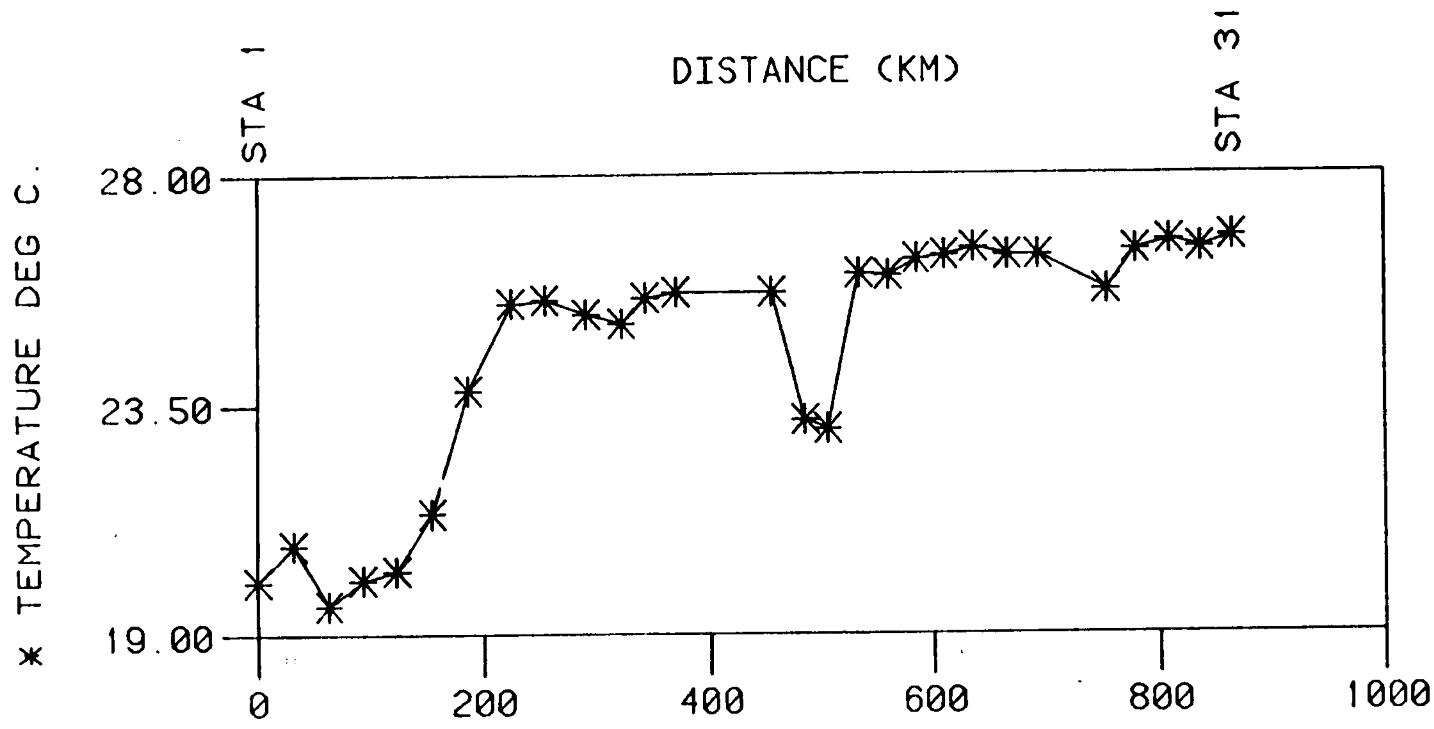




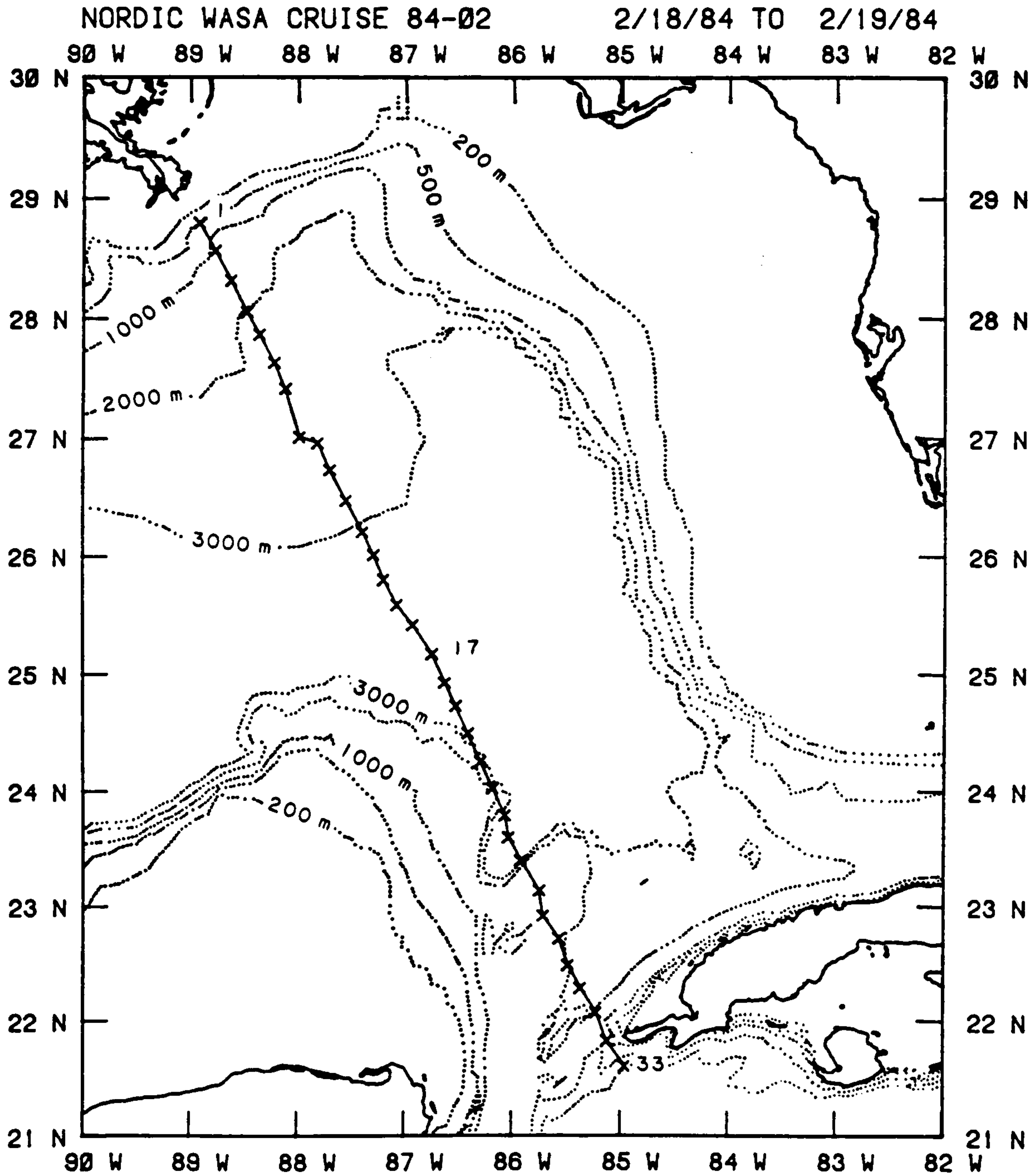
NORDIC WASA CRUISE 84-01
1/ 7/84 TO 1/ 8/84
STATIONS 1 TO 31
TEMPERATURE DEG C
MIN = 5.57 MAX = 26.96

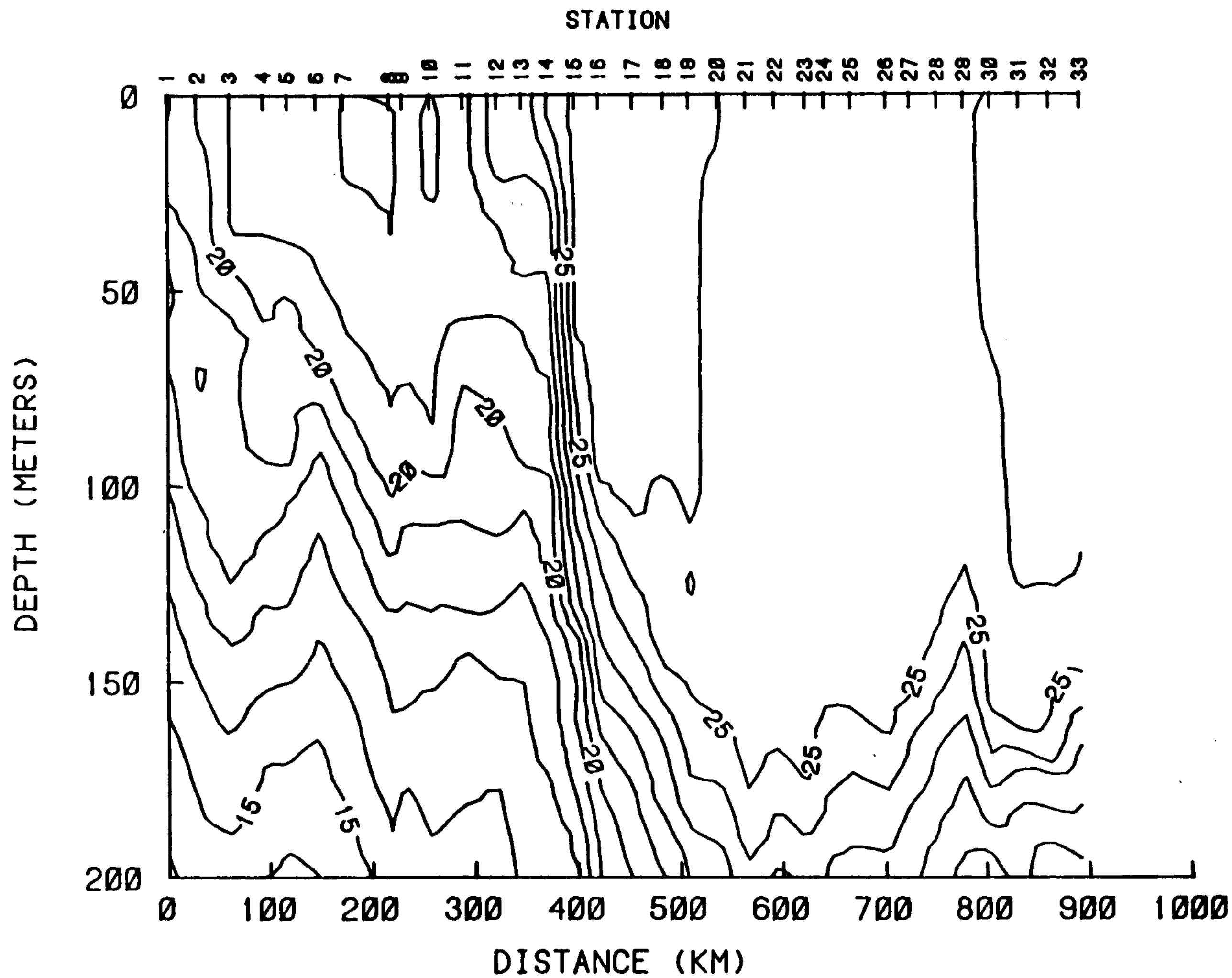


NORDIC WASA CRUISE 84-01
1/ 7/84 TO 1/ 8/84
STATIONS 1 TO 31
TEMPERATURE DEG C
MIN = 12.97 MAX = 26.96

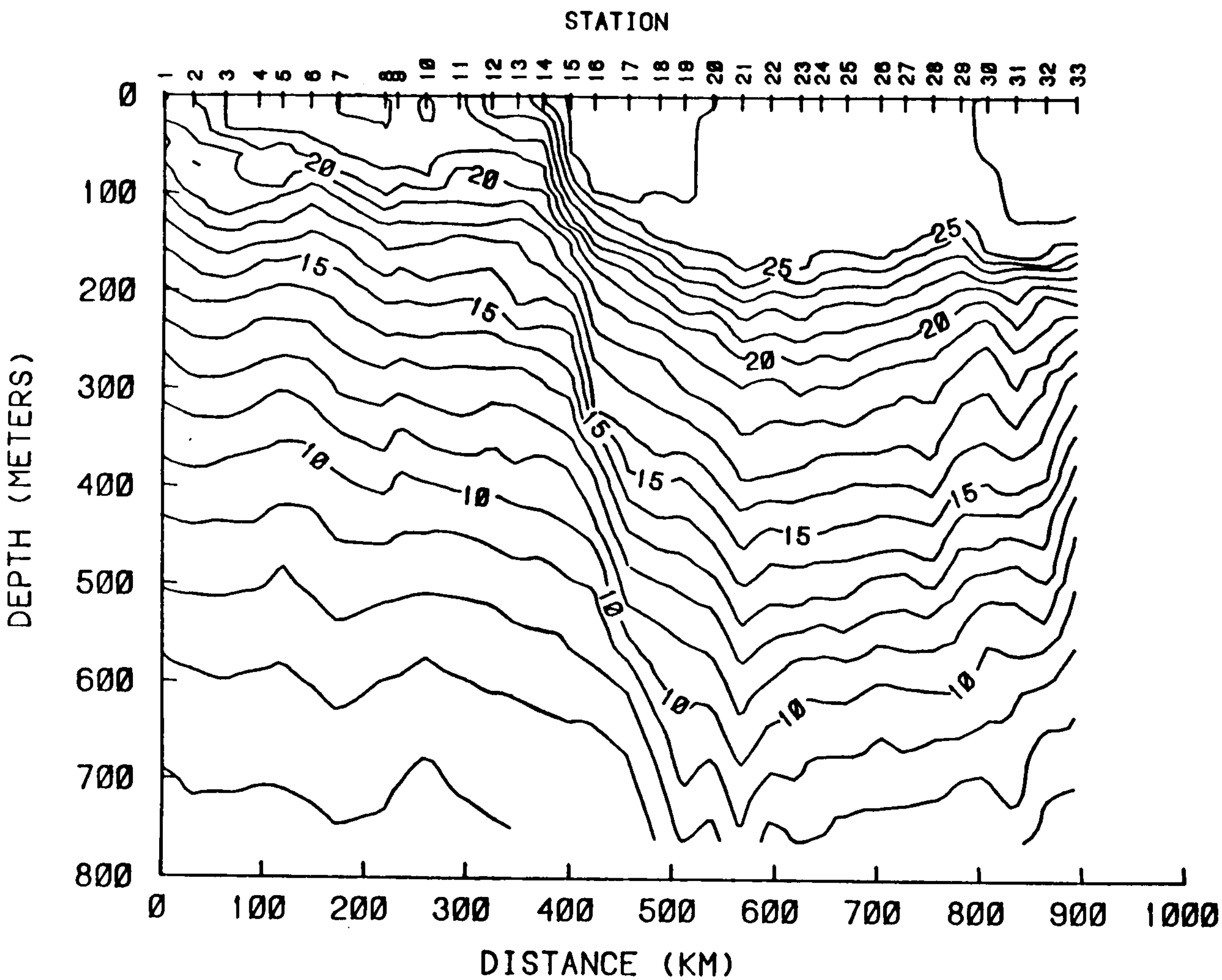


PARAMETERS AT SURFACE NORDIC WASA CRUISE 84-01

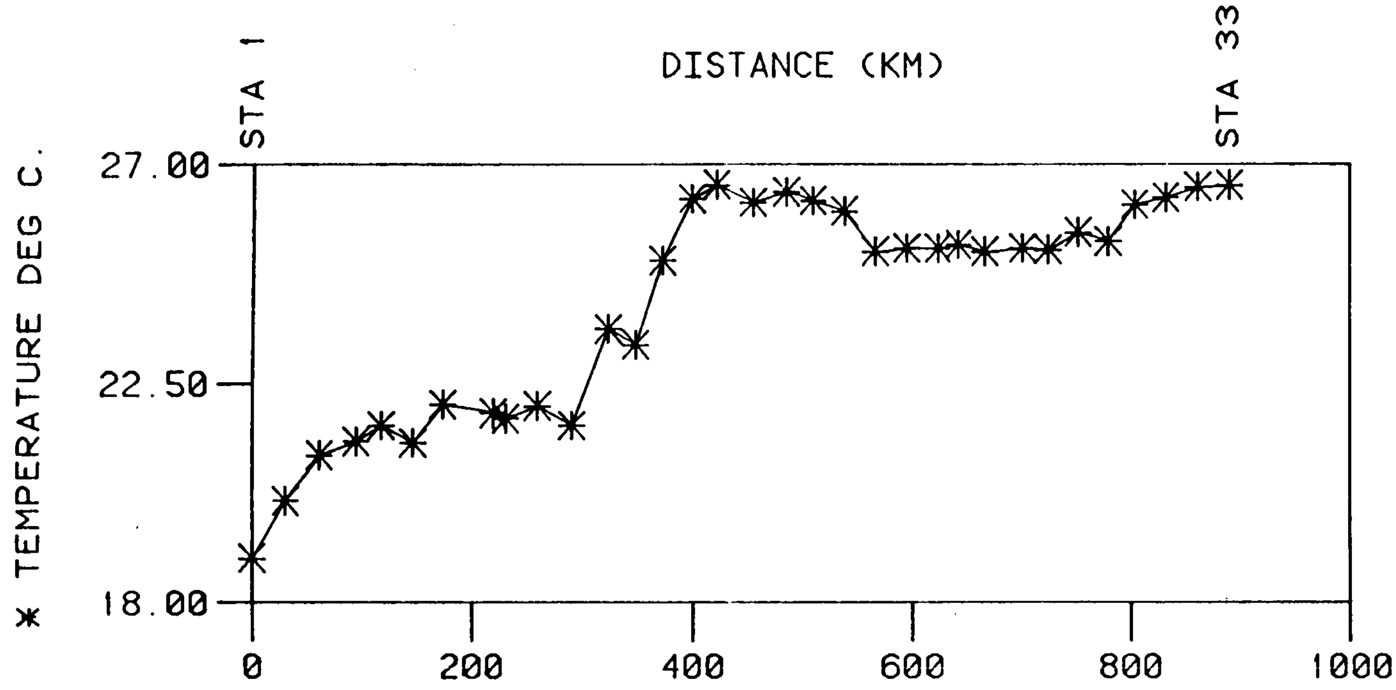

NORDIC WASA CRUISE 84-Ø2
2/18/84 TO 2/19/84
9Ø W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
3Ø N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
17
33



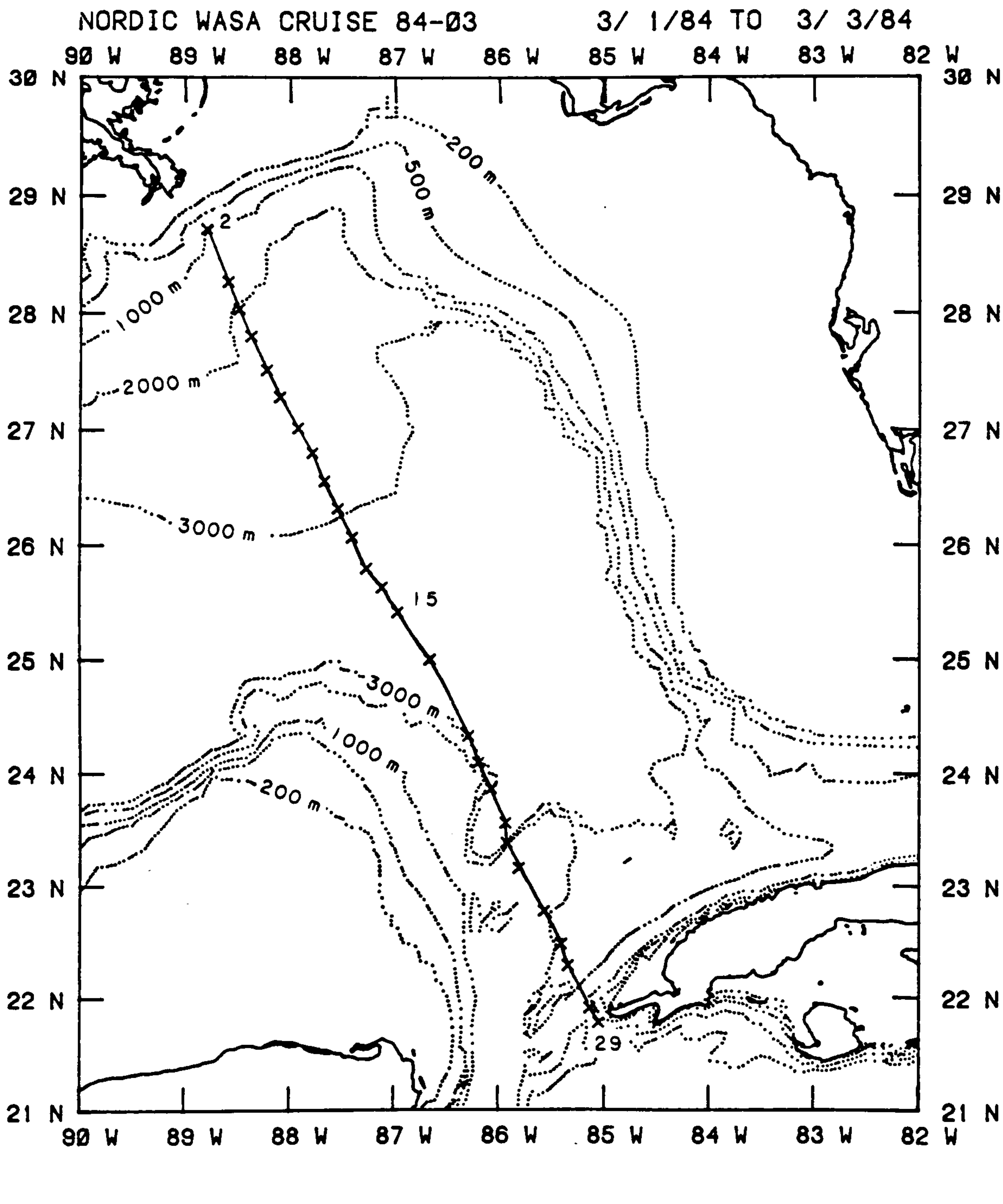
NORDIC WASA CRUISE 84-02
2/18/84 TO 2/19/84
STATIONS 1 TO 33
TEMPERATURE DEG C
MIN = 13.81 MAX = 26.57

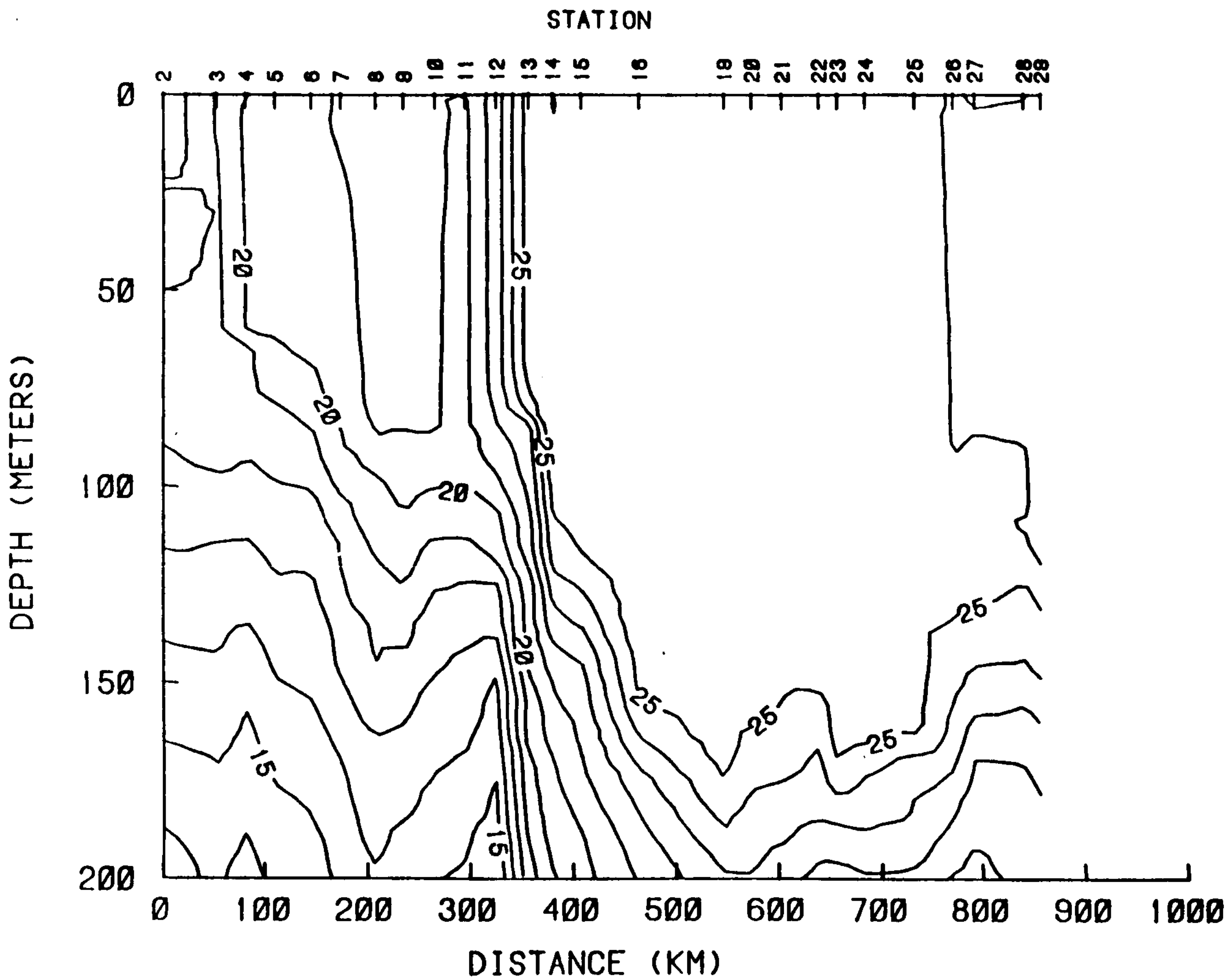


NORDIC WASA CRUISE 84-02
2/18/84 TO 2/19/84
STATIONS 1 TO 33
TEMPERATURE DEG C
MIN = 5.47 MAX = 26.57

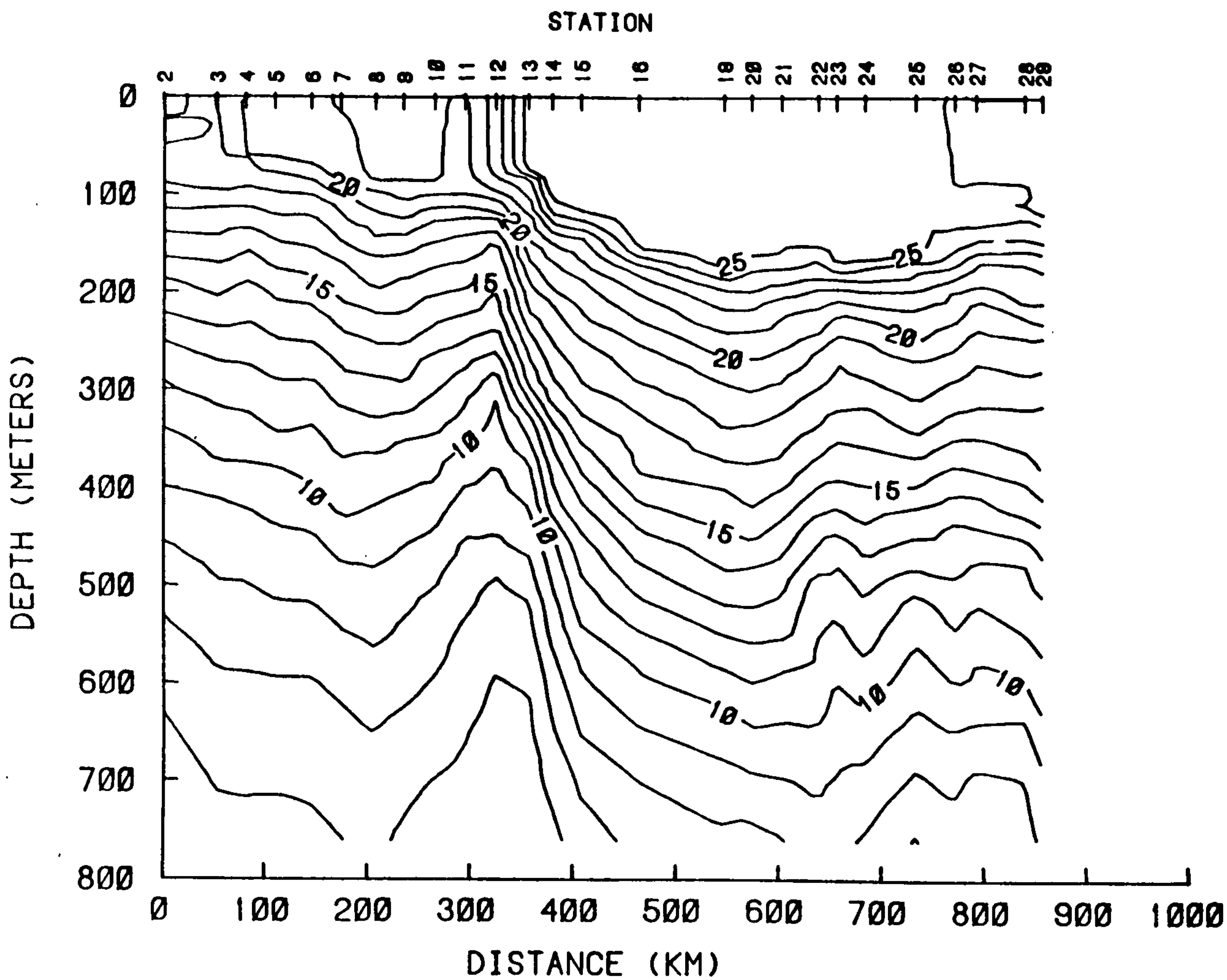


PARAMETERS AT SURFACE NORDIC WASA CRUISE 84-02

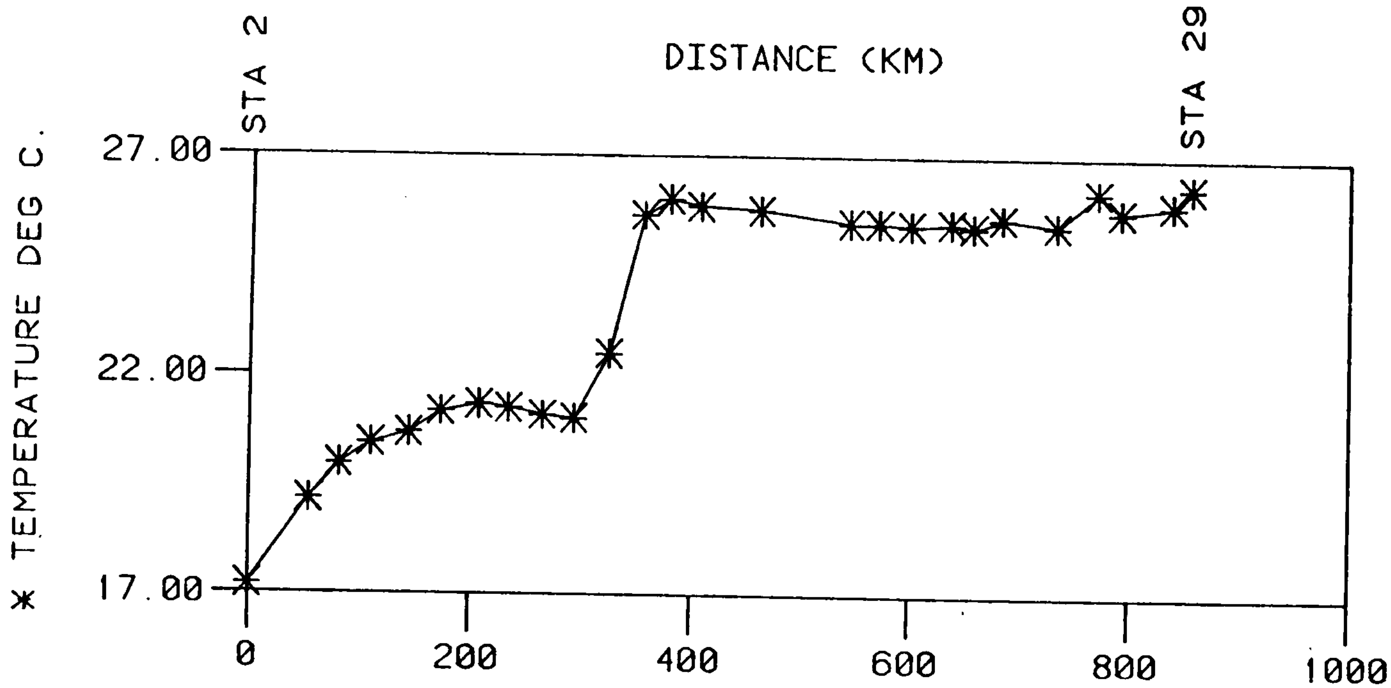

NORDIC WASA CRUISE 84-Ø3
3/ 1/84 TO 3/ 3/84
9Ø W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
3Ø N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
2
15
29



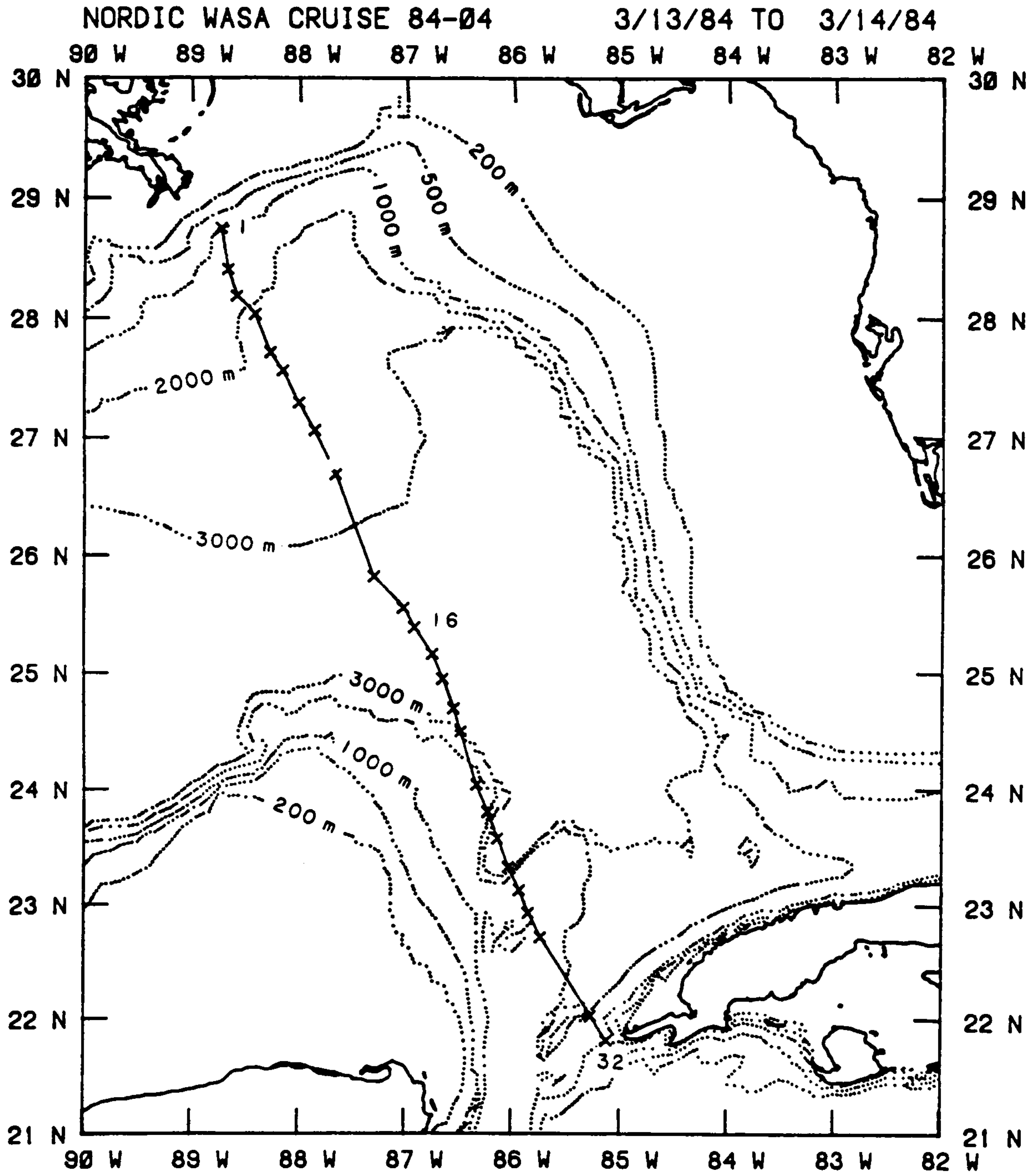
NORDIC WASA CRUISE 84-03
3/ 1/84 TO 3/ 3/84
STATIONS 2 TO 29
TEMPERATURE DEG C
MIN = 13.63 MAX = 26.33

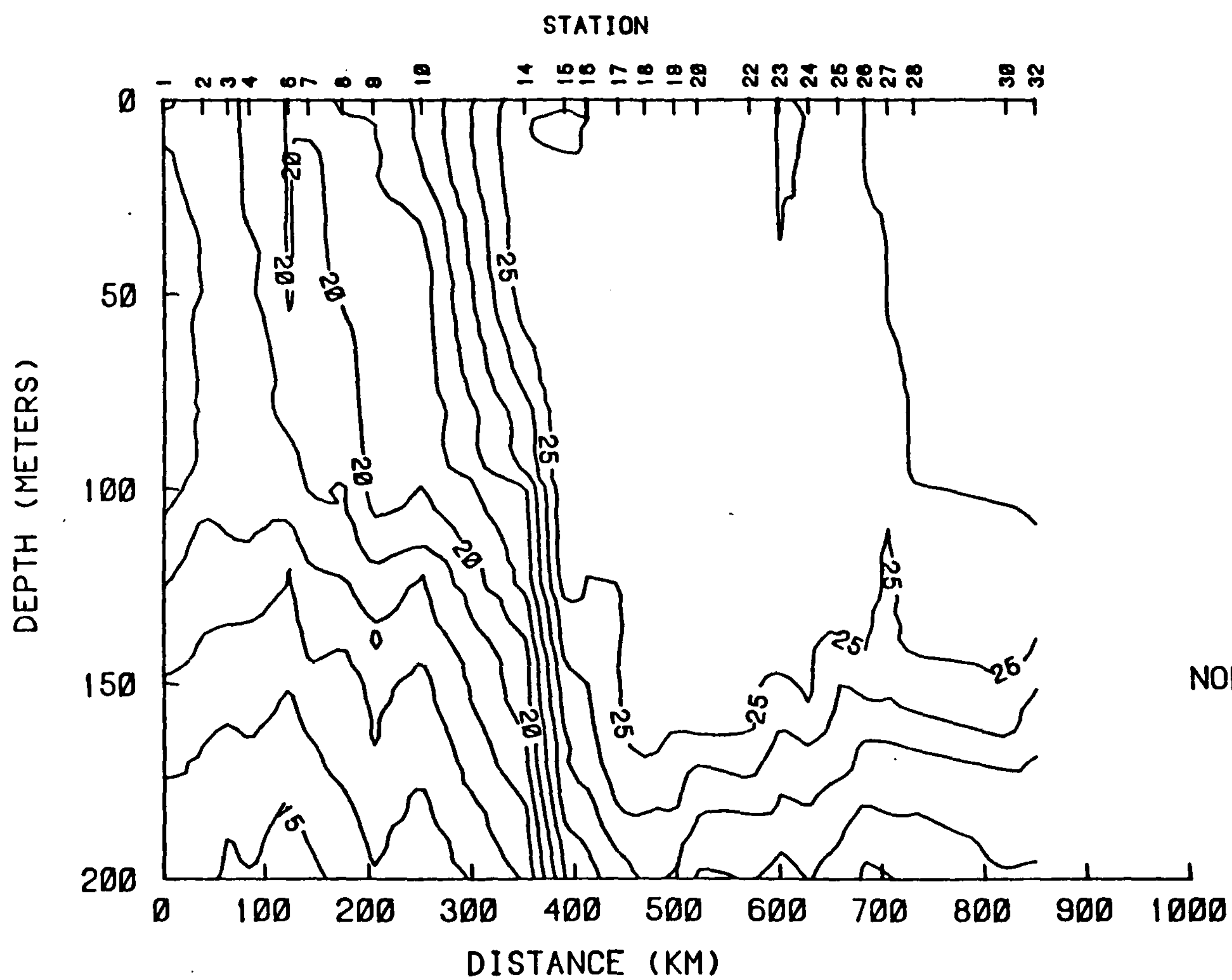


NORDIC WASA CRUISE 84-03
3/ 1/84 TO 3/ 3/84
STATIONS 2 TO 29
TEMPERATURE DEG C
MIN = 5.16 MAX = 26.33

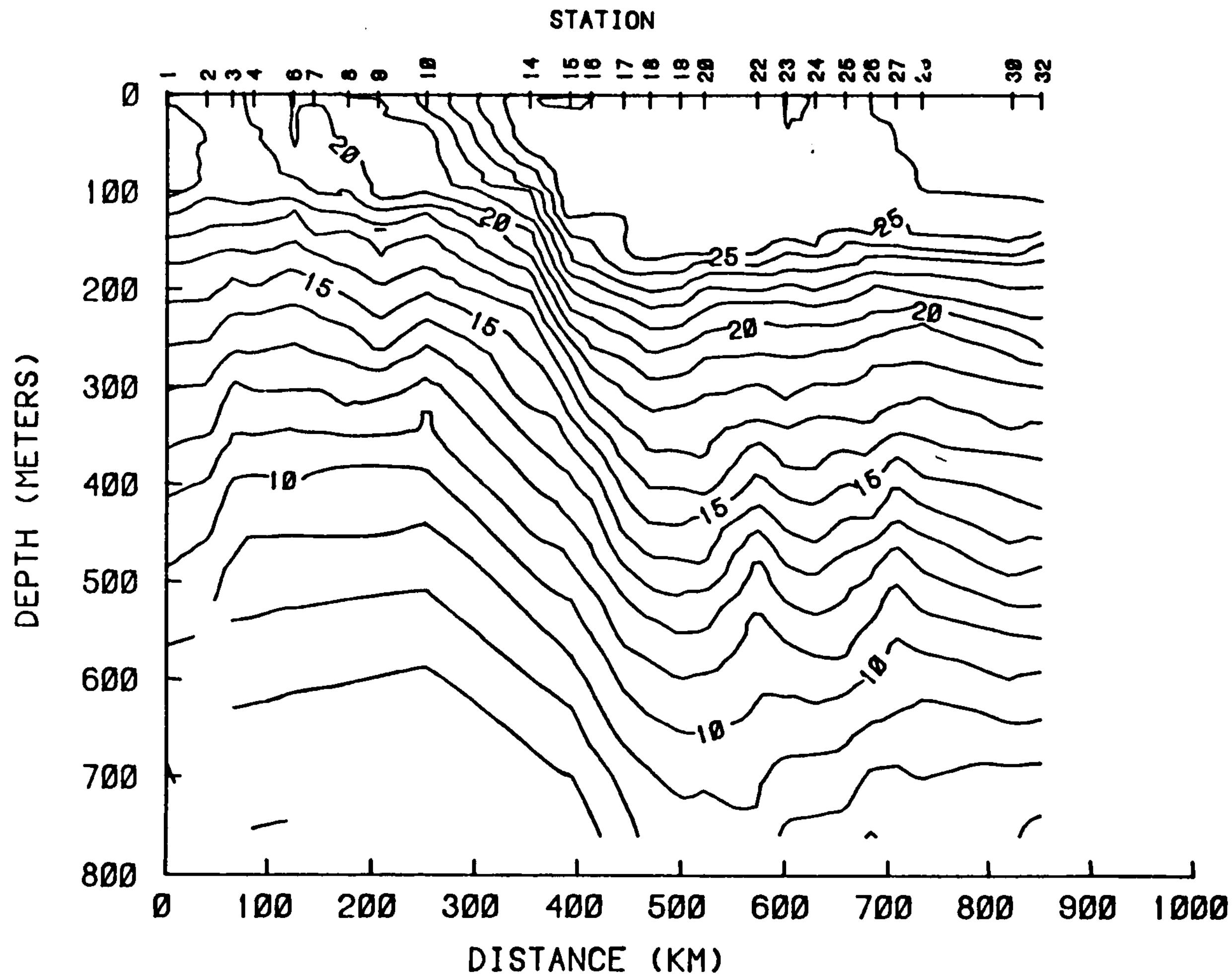


PARAMETERS AT SURFACE NORDIC WASA CRUISE 84-03

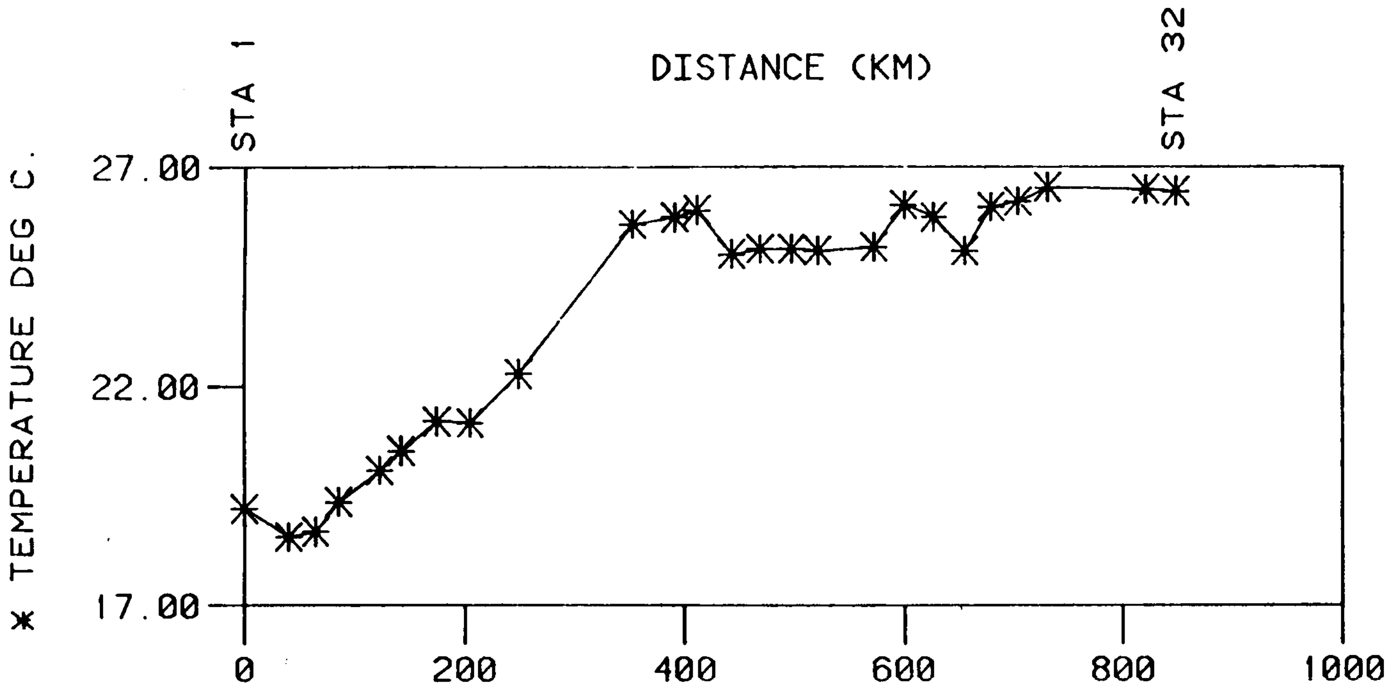

NORDIC WASA CRUISE 84-Ø4
3/13/84 TO 3/14/84
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
16
32



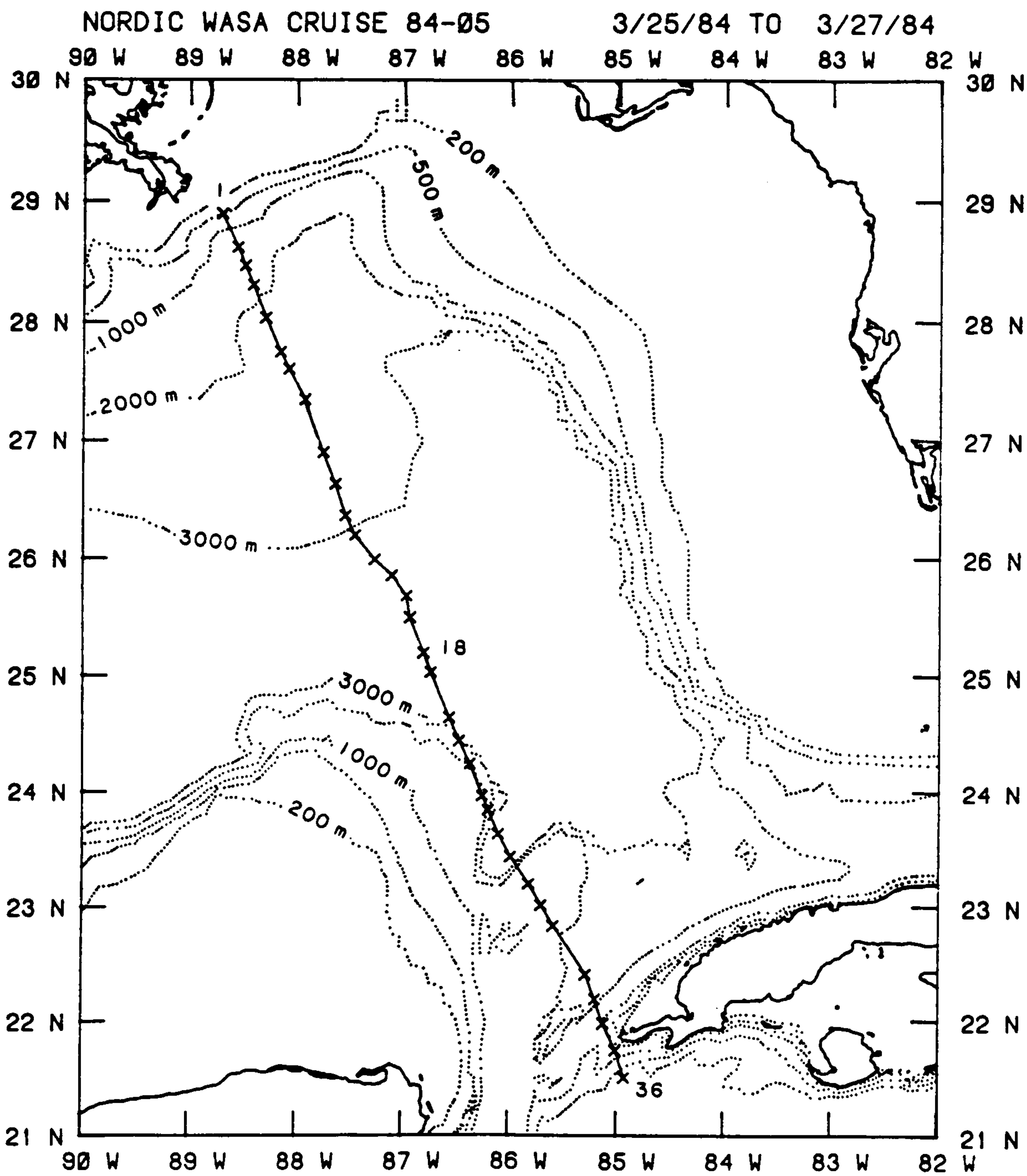
NORDIC WASA CRUISE 84-04
3/13/84 TO 3/14/84
STATIONS 1 TO 32
TEMPERATURE DEG C
MIN = 14.41 MAX = 26.61

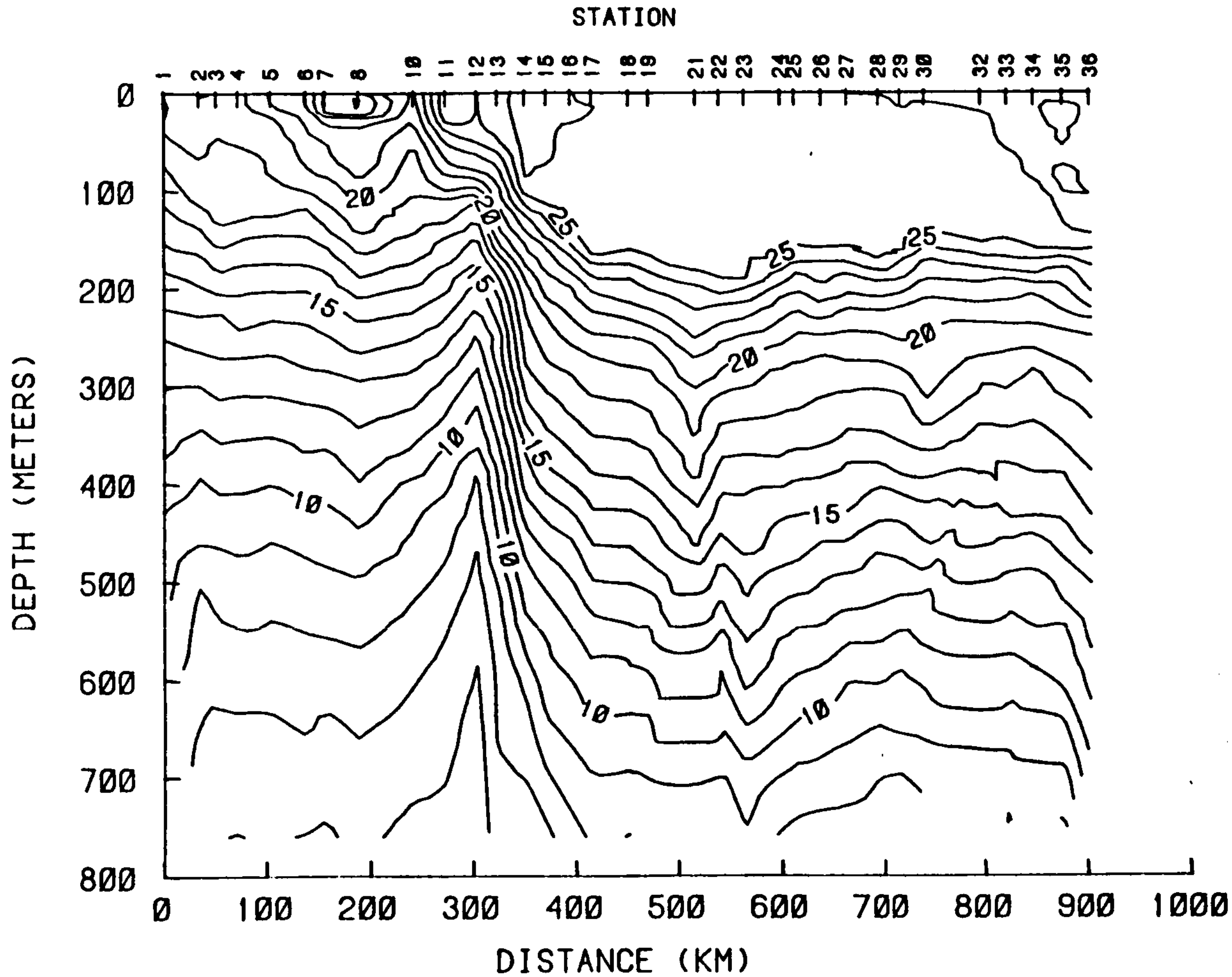


NORDIC WASA CRUISE 84-04
3/13/84 TO 3/14/84
STATIONS 1 TO 32
TEMPERATURE DEG C
MIN = 6.56 MAX = 26.61

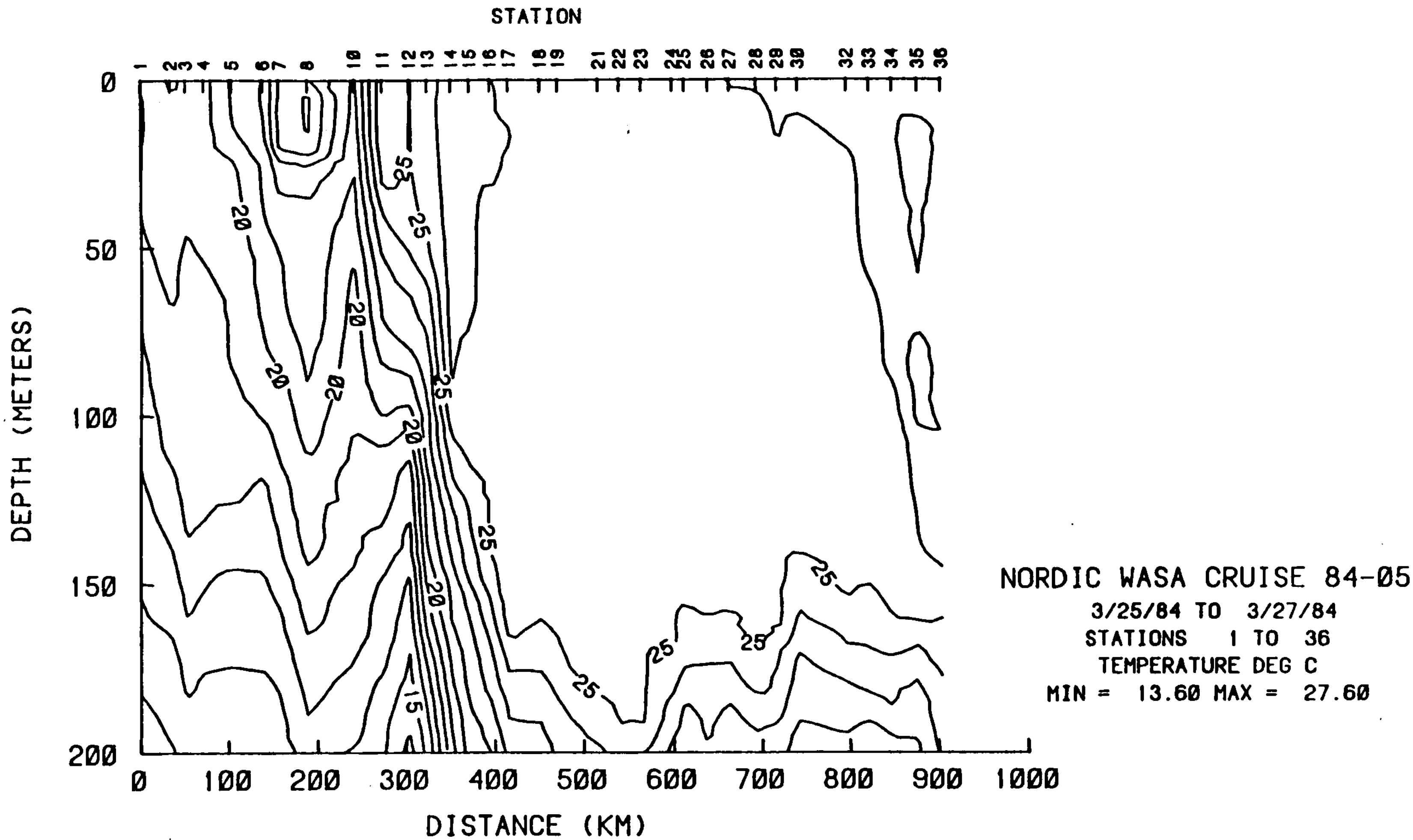


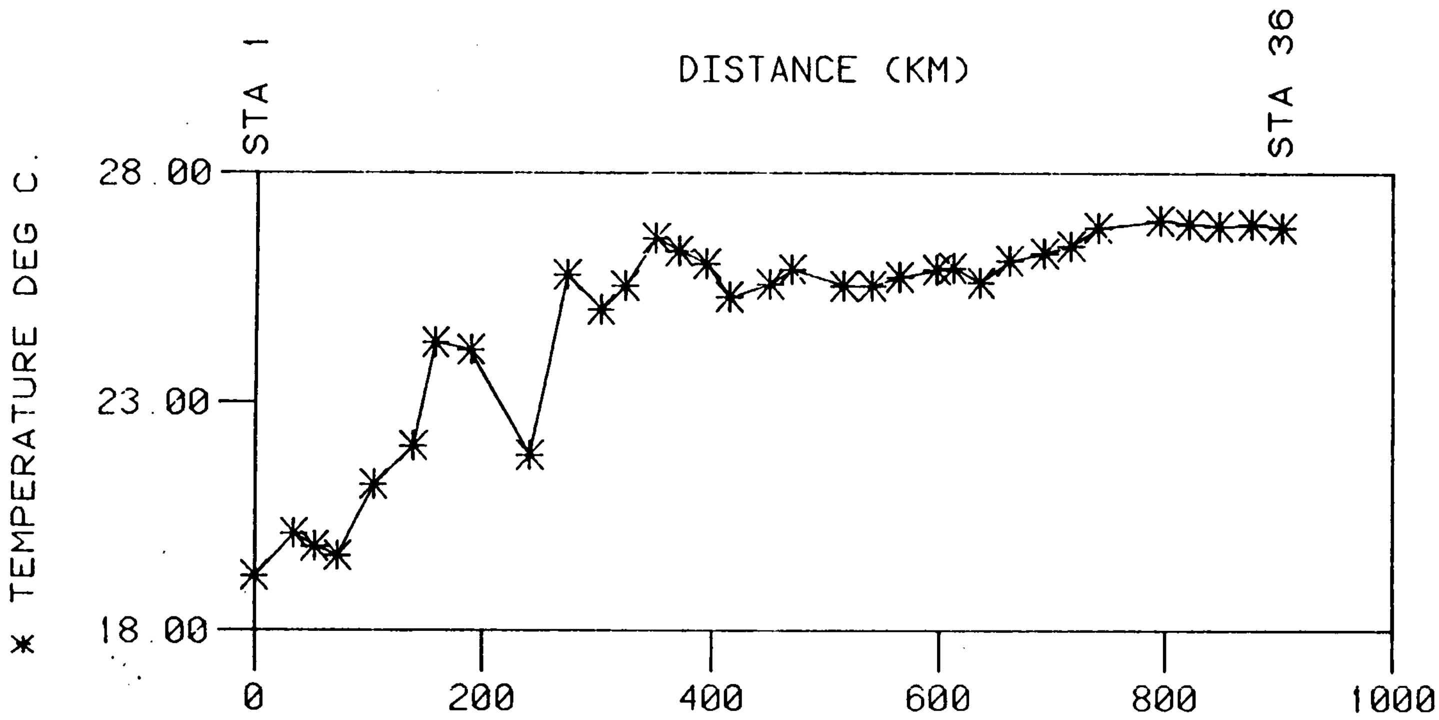
PARAMETERS AT SURFACE NORDIC WASA CRUISE 84-04


NORDIC WASA CRUISE 84-Ø5
3/25/84 TO 3/27/84
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
18
36

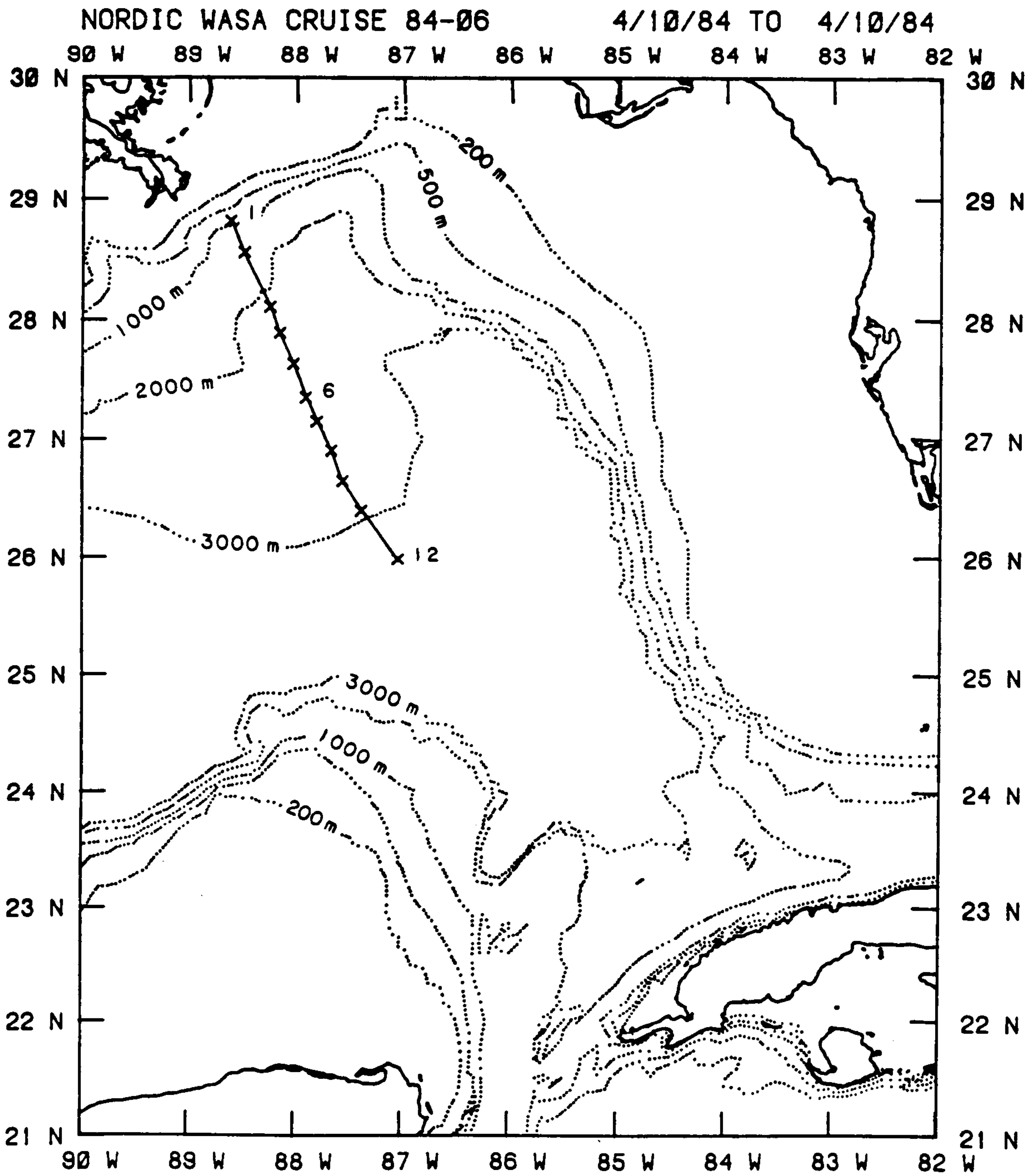


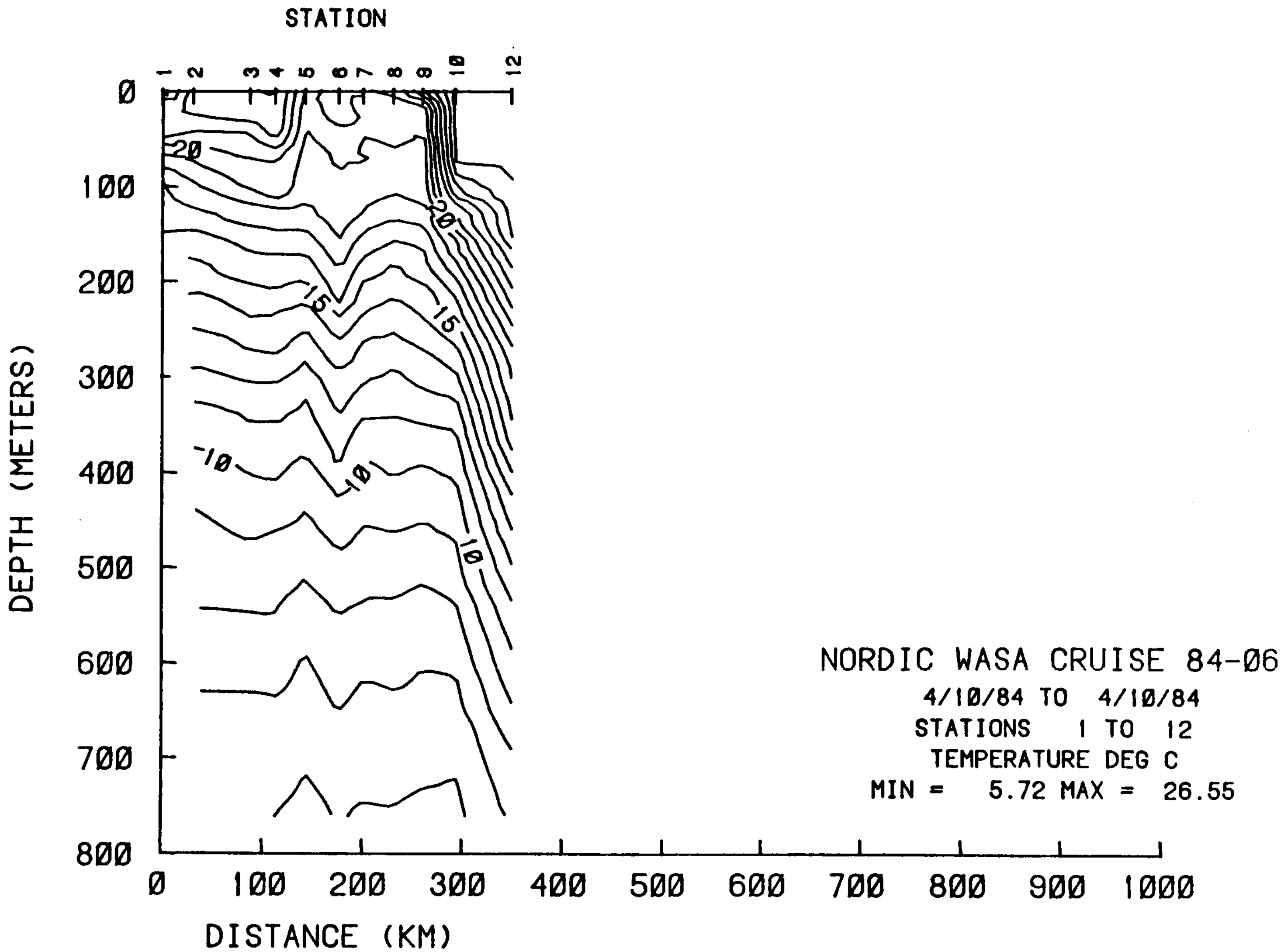
NORDIC WASA CRUISE 84-05
3/25/84 TO 3/27/84
STATIONS 1 TO 36
TEMPERATURE DEG C
MIN = 5.25 MAX = 27.60

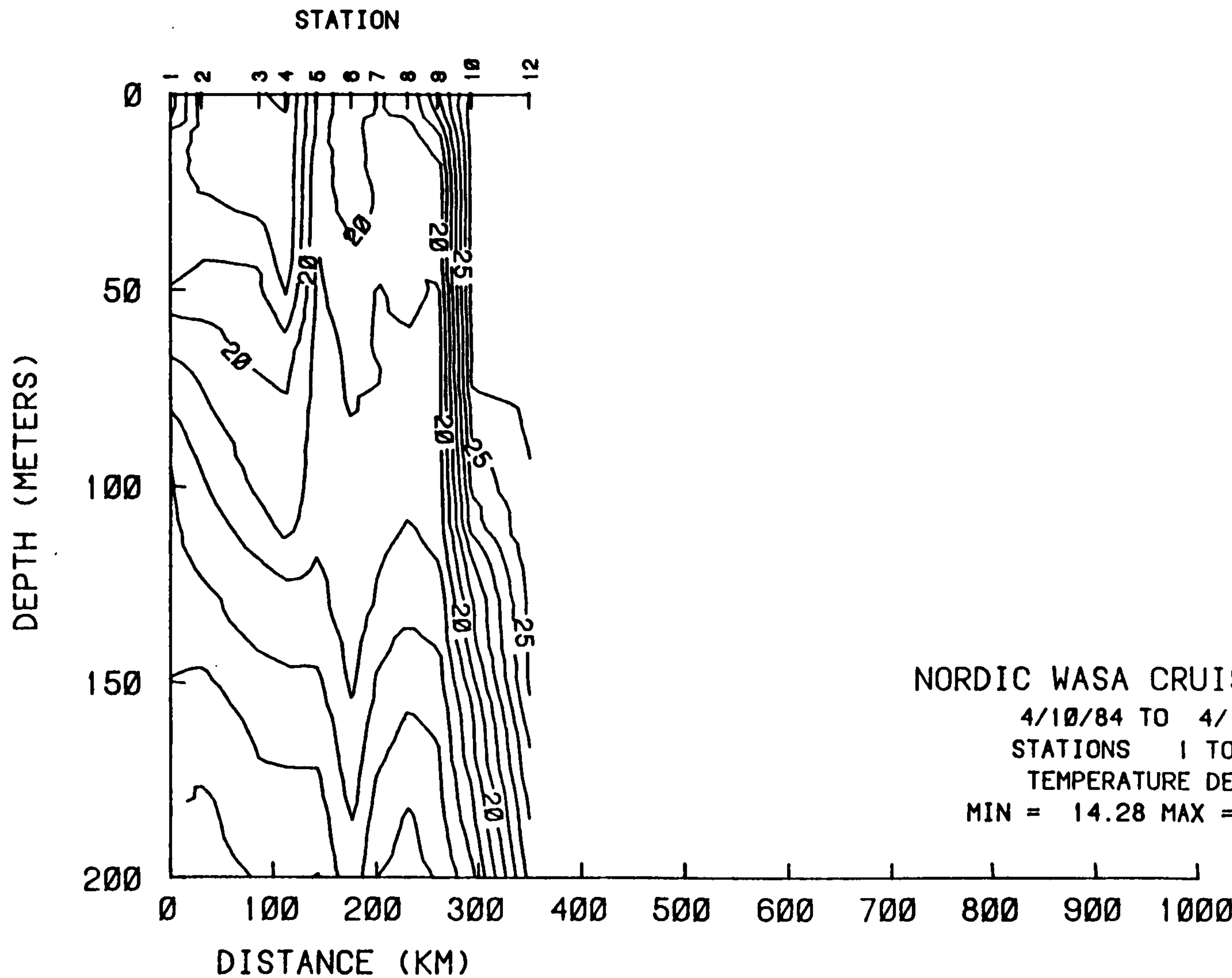

STATION
1 2 3 4 5 6 7 8 10 11 12 13 14 15 16 17 18 19 21 22 23 24 25 26 27 28 29 30 32 33 34 35 36
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
20
25
15
NORDIC WASA CRUISE 84-05
3/25/84 TO 3/27/84
STATIONS 1 TO 36
TEMPERATURE DEG C
MIN = 13.60 MAX = 27.60



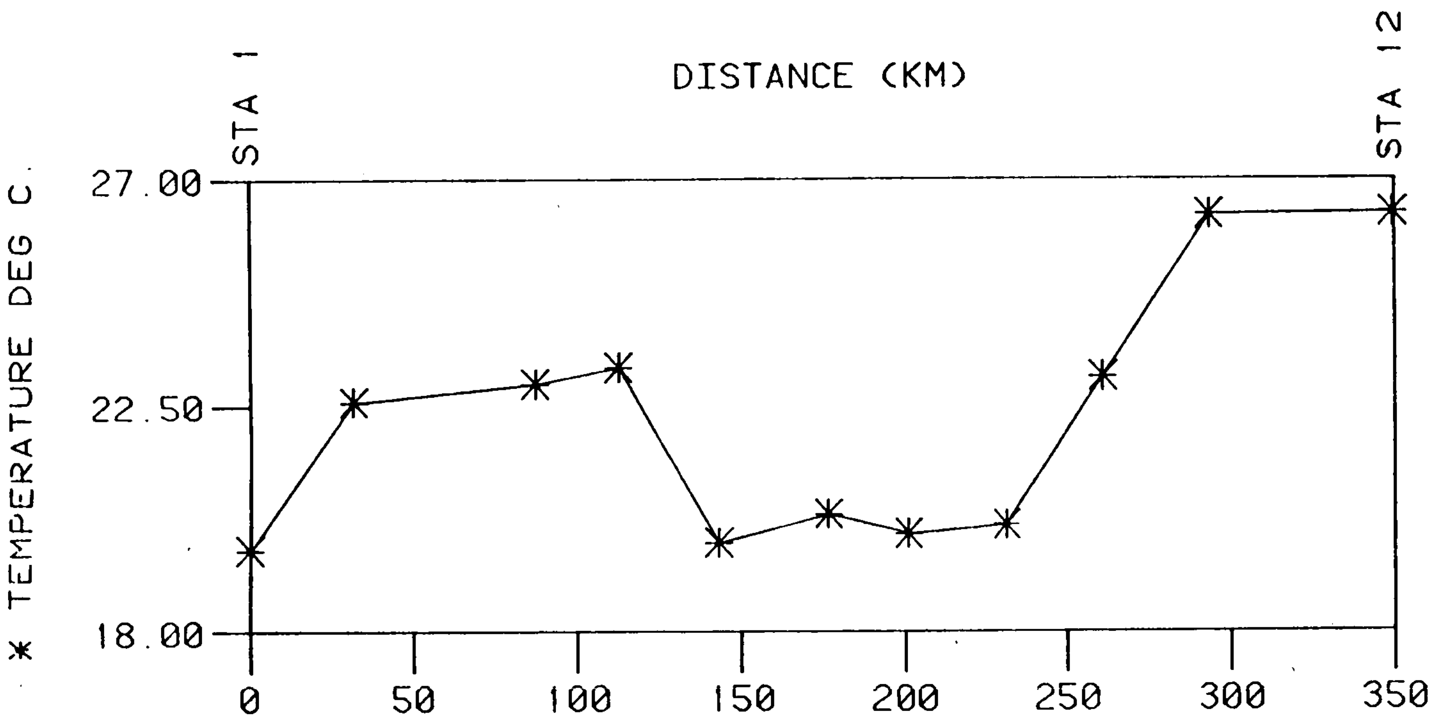
PARAMETERS AT SURFACE NORDIC WASA CRUISE 84-05


NORDIC WASA CRUISE 84-Ø6 4/1Ø/84 TO 4/1Ø/84
9Ø W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
3Ø N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
6
12
3000 m
1000 m
200 m

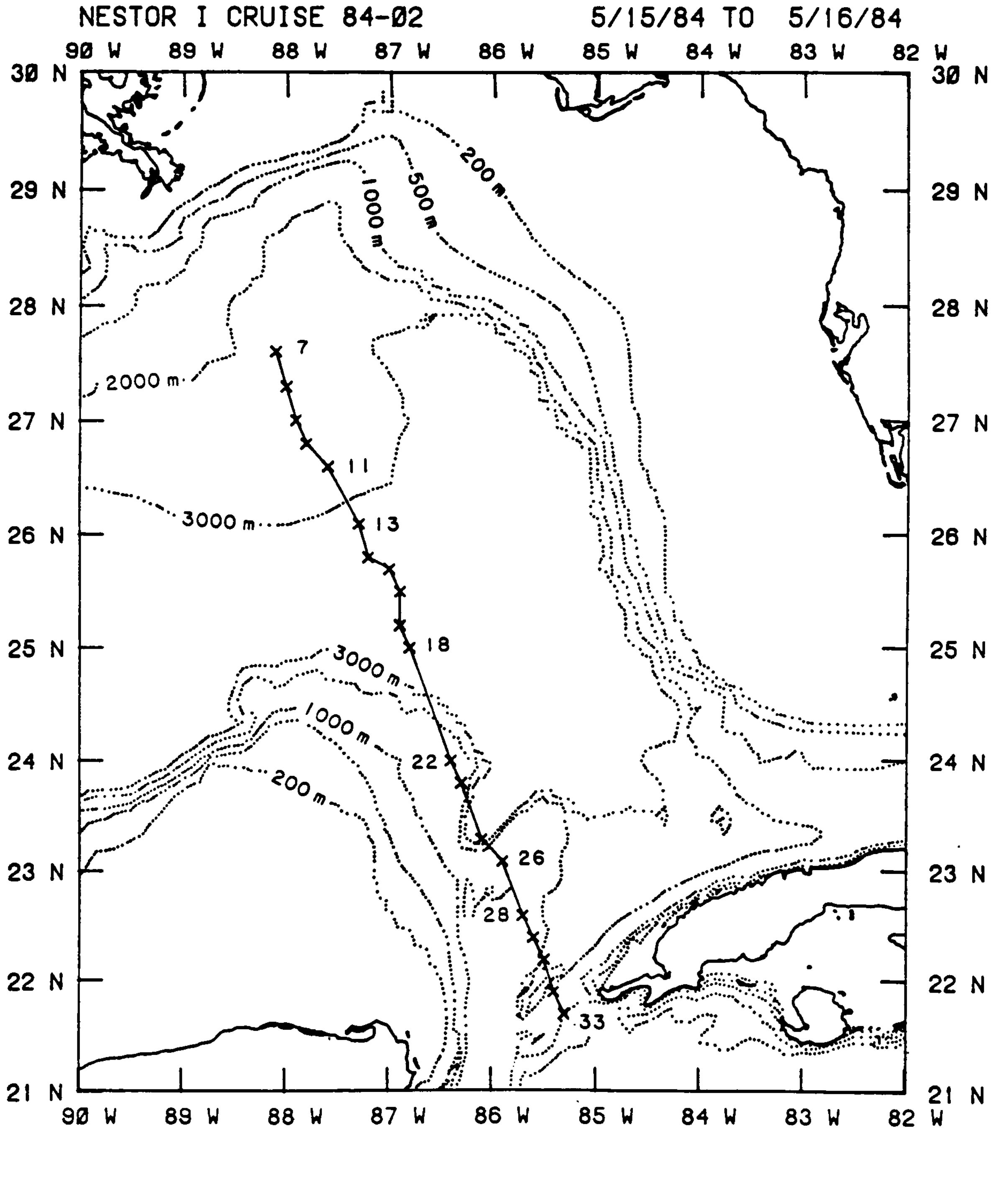

STATION
1 2 3 4 5 6 7 8 9 10 12
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
20
15
10
NORDIC WASA CRUISE 84-06
4/10/84 TO 4/10/84
STATIONS 1 TO 12
TEMPERATURE DEG C
MIN = 5.72 MAX = 26.55

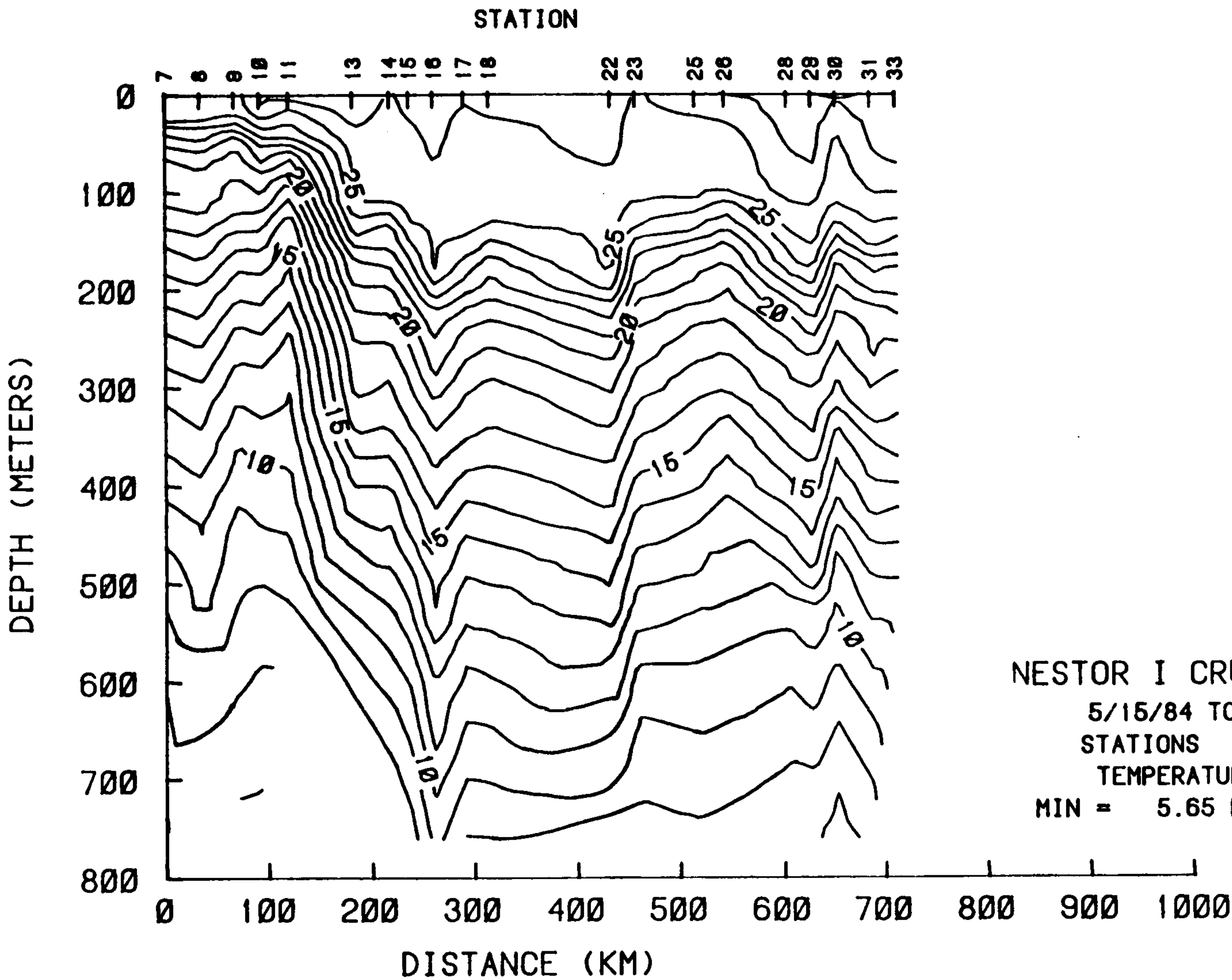


NORDIC WASA CRUISE 84-06
4/10/84 TO 4/10/84
STATIONS 1 TO 12
TEMPERATURE DEG C
MIN = 14.28 MAX = 26.55

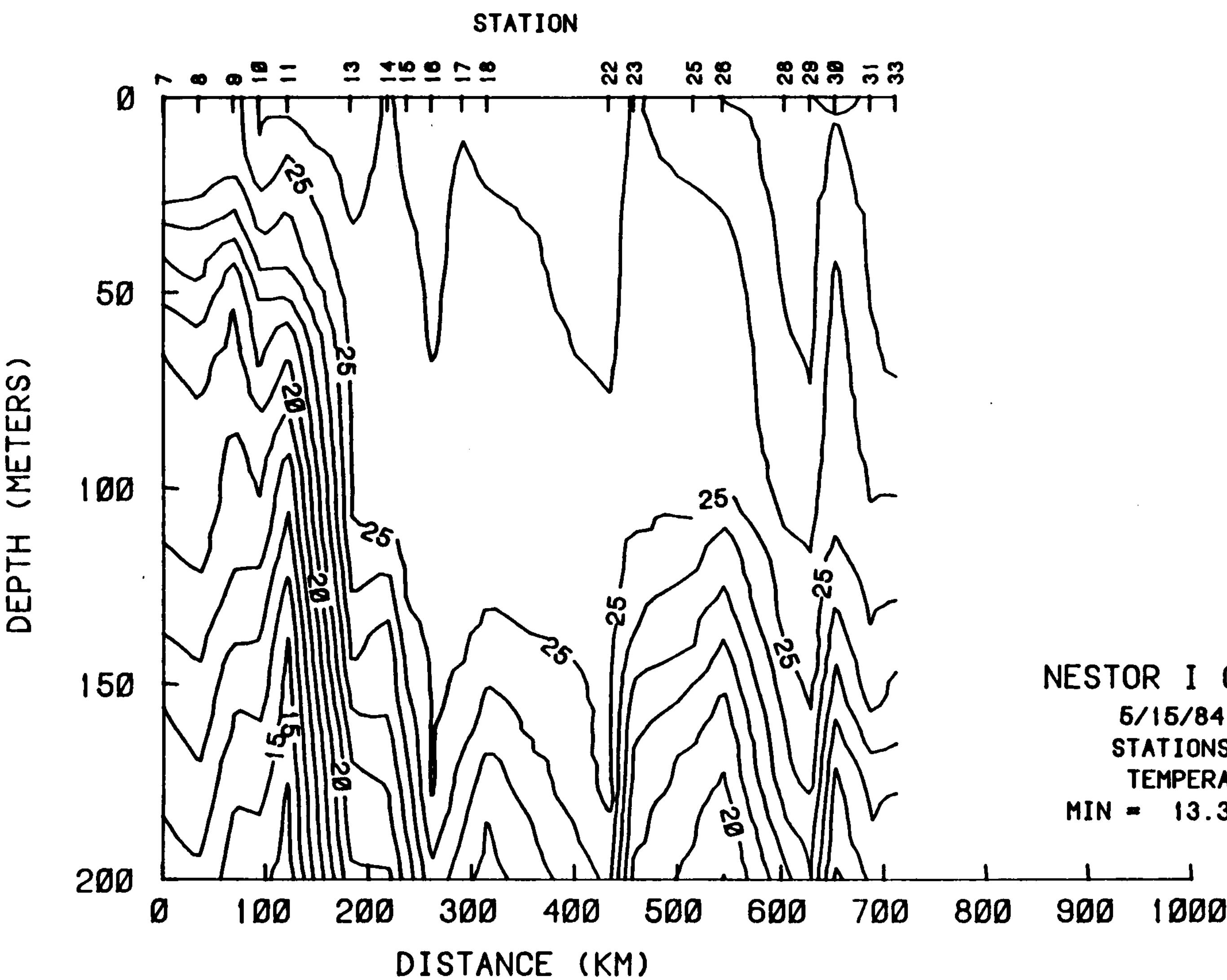


PARAMETERS AT SURFACE NORDIC WASA CRUISE 84-06

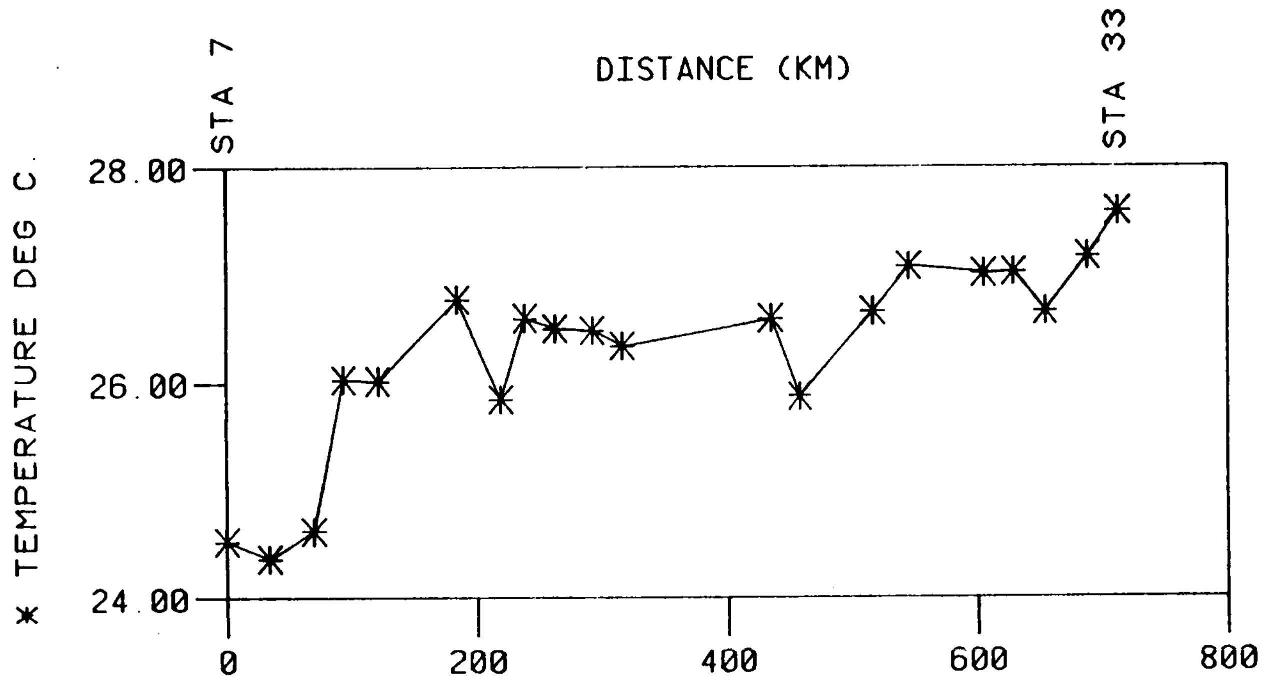

NESTOR I CRUISE 84-Ø2
5/15/84 TO 5/16/84
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
7
11
13
18
22
26
28
33



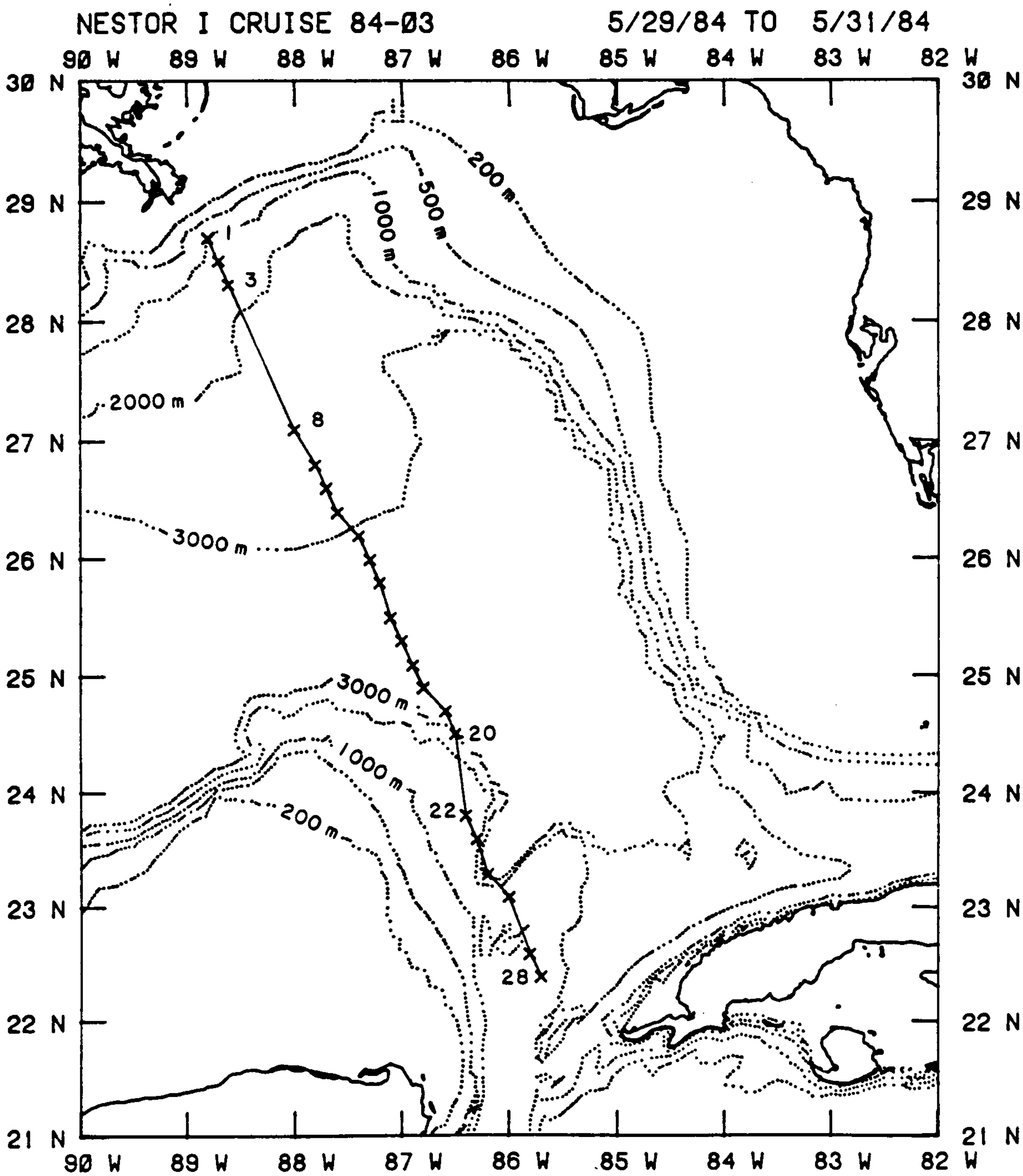
NESTOR I CRUISE 84-02
5/15/84 TO 5/16/84
STATIONS 7 TO 33
TEMPERATURE DEG C
MIN = 5.65 MAX = 27.64



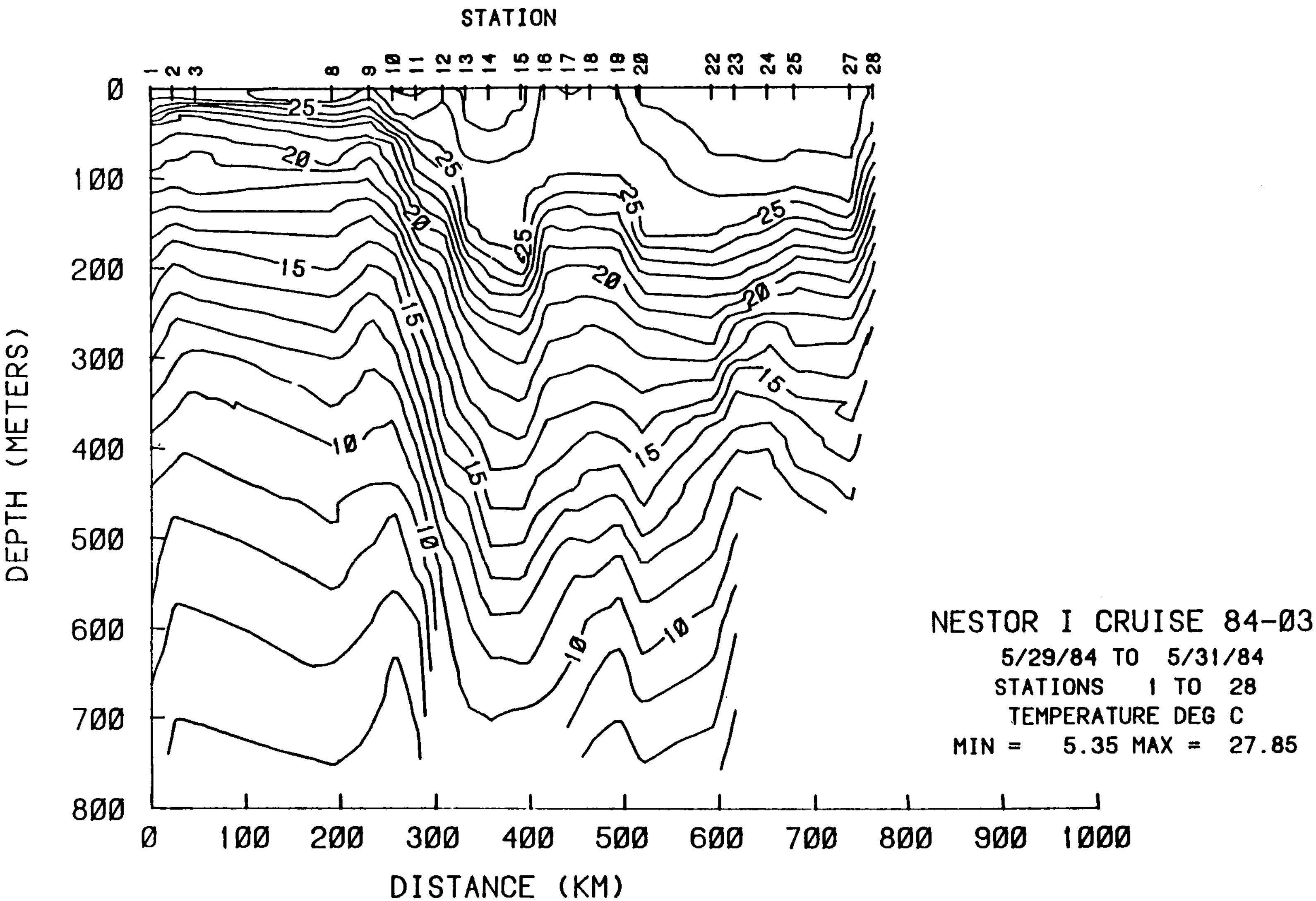
NESTOR I CRUISE 84-02
5/15/84 TO 5/16/84
STATIONS 7 TO 33
TEMPERATURE DEG C
MIN = 13.32 MAX = 27.64

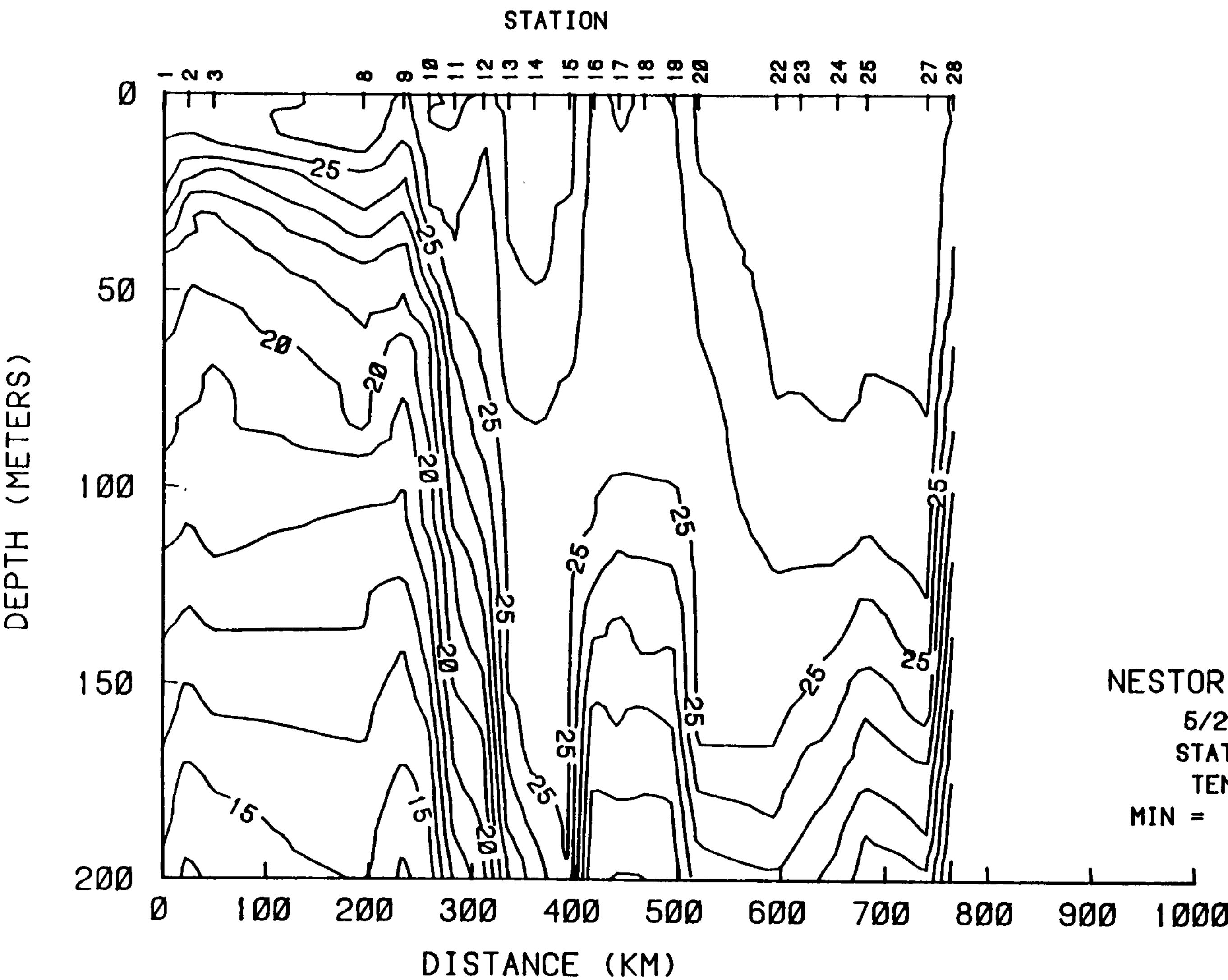


PARAMETERS AT SURFACE NESTOR I CRUISE 84-02

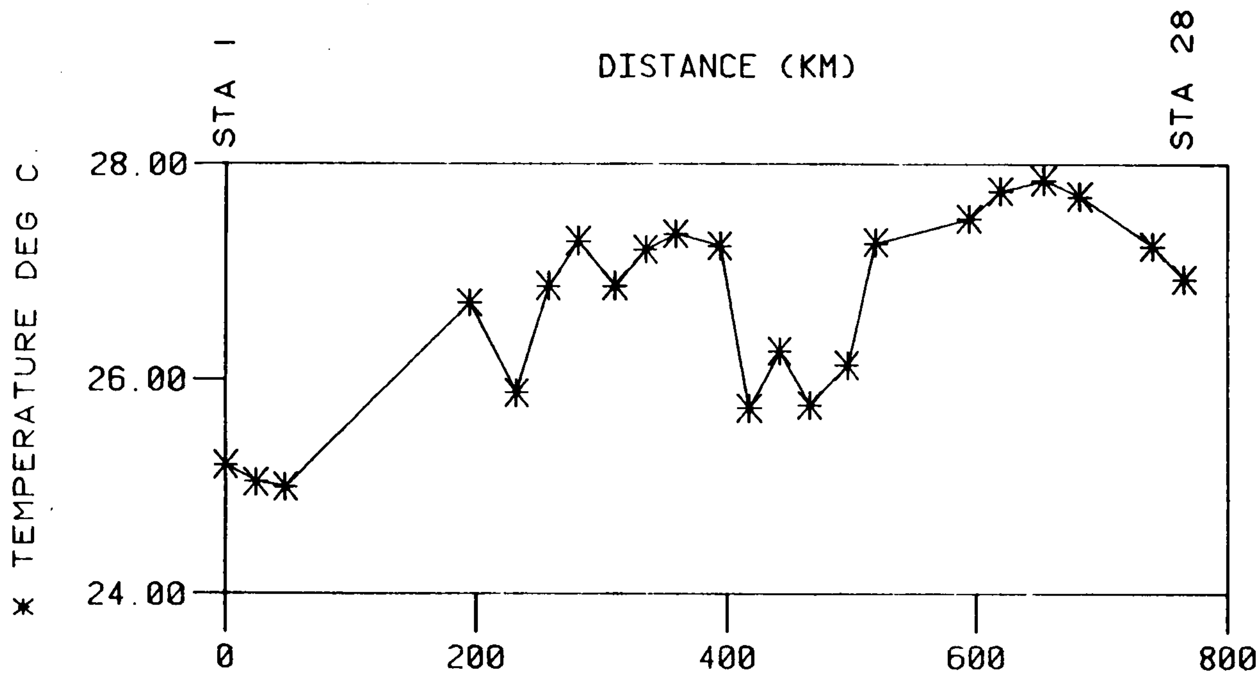


NESTOR I CRUISE 84-03
5/29/84 TO 5/31/84
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
3
8
20
22
28

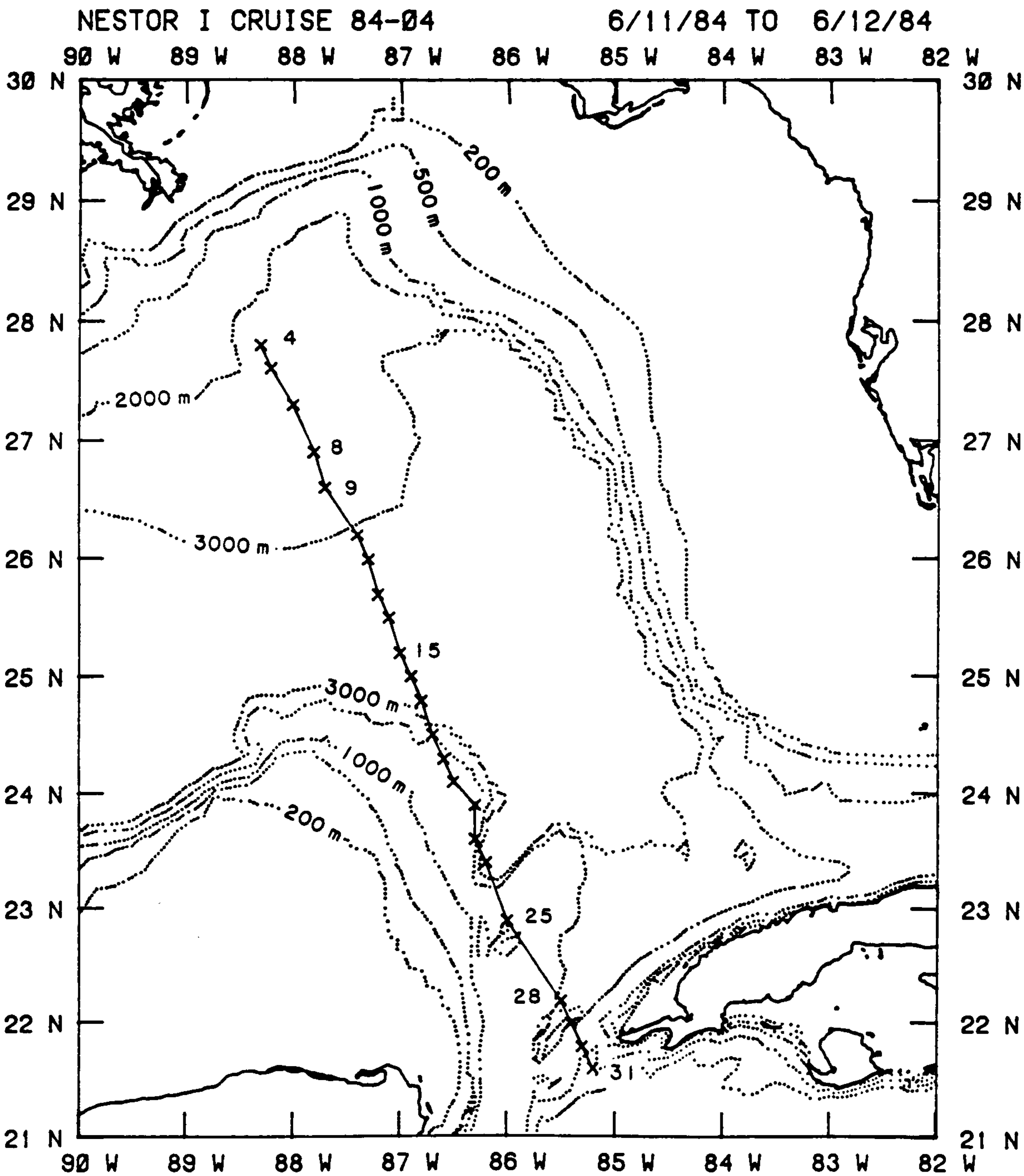

STATION
1 2 3 8 9 10 11 12 13 14 15 16 17 18 19 20 22 23 24 25 27 28
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
10
NESTOR I CRUISE 84-03
5/29/84 TO 5/31/84
STATIONS 1 TO 28
TEMPERATURE DEG C
MIN = 5.35 MAX = 27.85

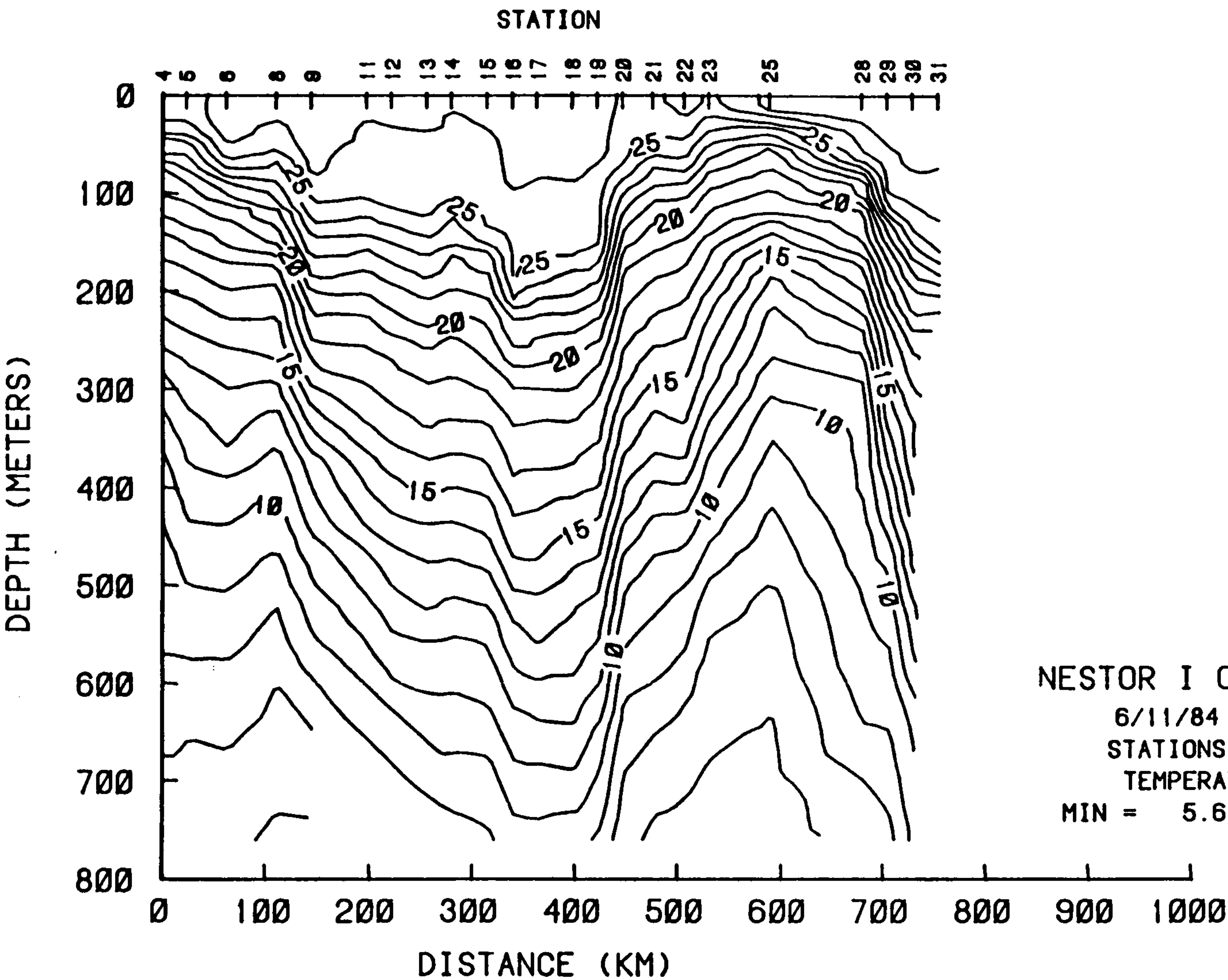


NESTOR I CRUISE 84-03
5/29/84 TO 5/31/84
STATIONS 1 TO 28
TEMPERATURE DEG C
MIN = 13.77 MAX = 27.85

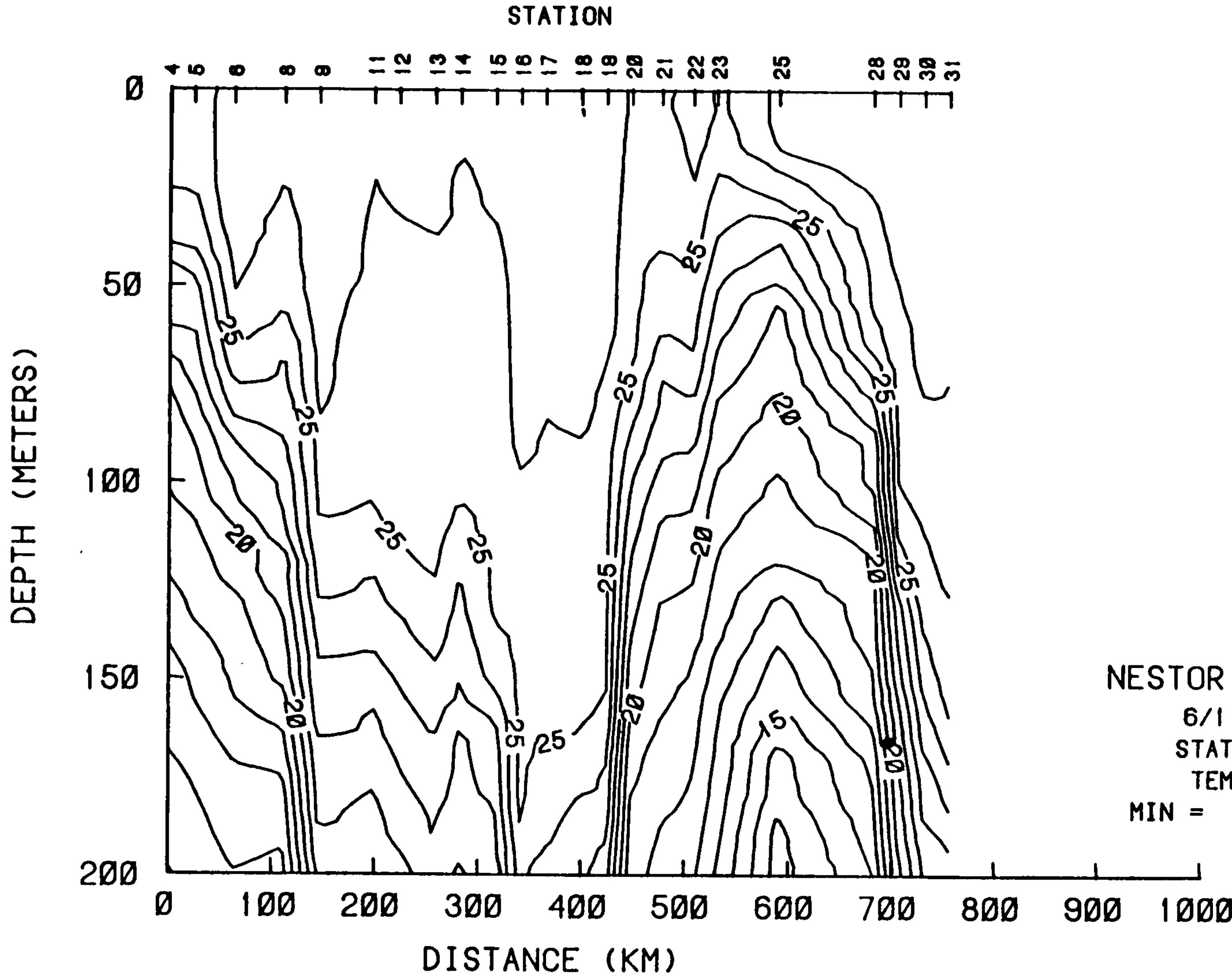


PARAMETERS AT SURFACE NESTOR I CRUISE 84-03

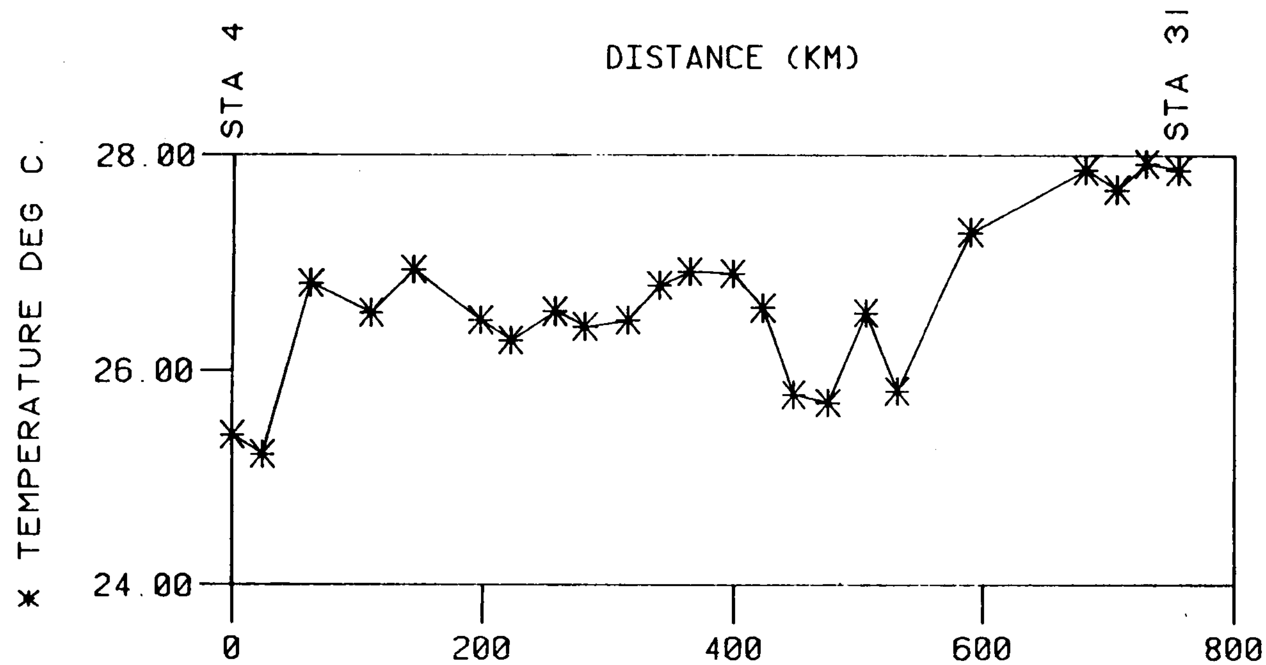

NESTOR I CRUISE 84-Ø4
6/11/84 TO 6/12/84
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
1000 m
200 m
4
8
9
15
25
28
31



NESTOR I CRUISE 84-04
6/11/84 TO 6/12/84
STATIONS 4 TO 31
TEMPERATURE DEG C
MIN = 5.64 MAX = 27.98

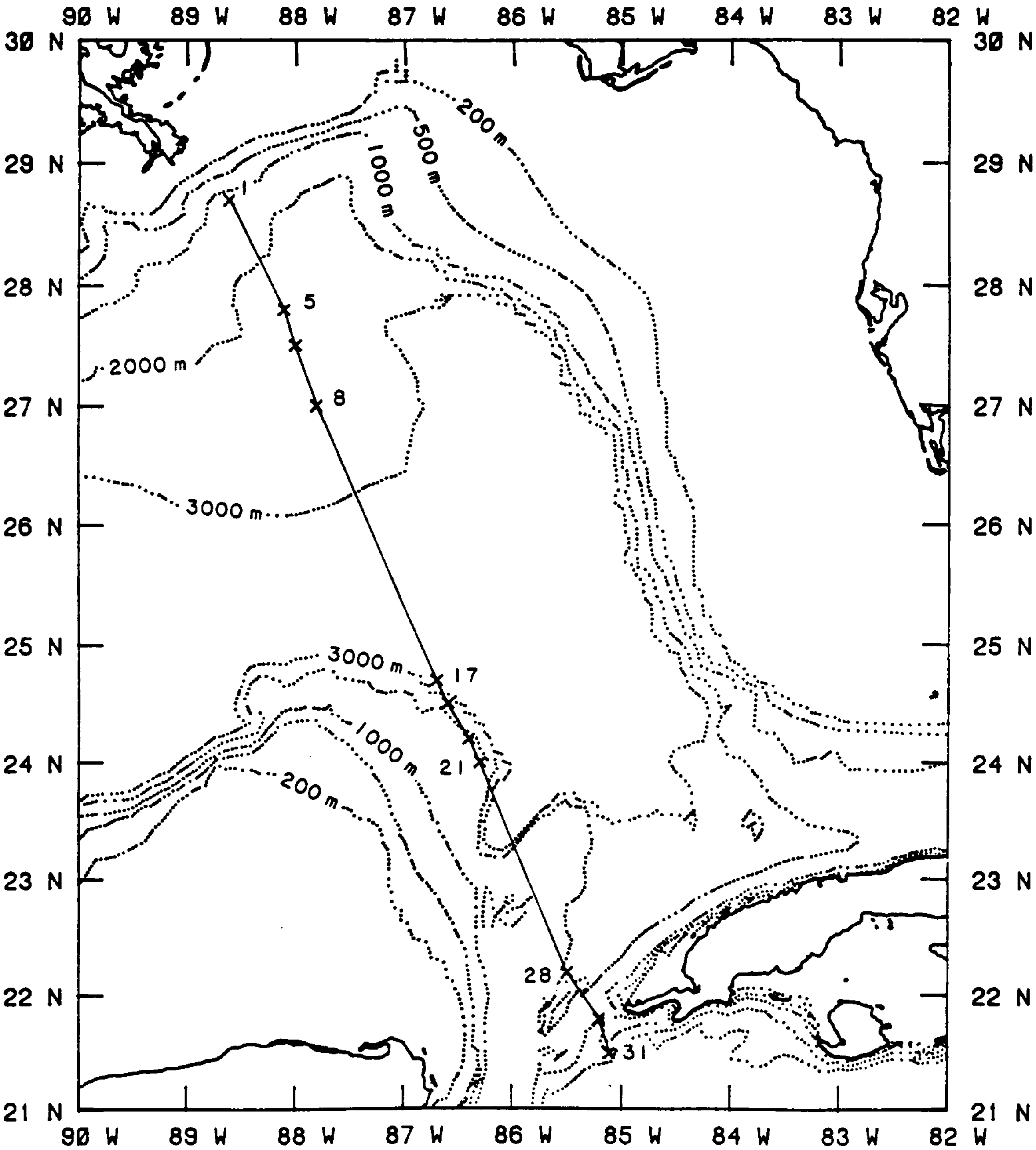


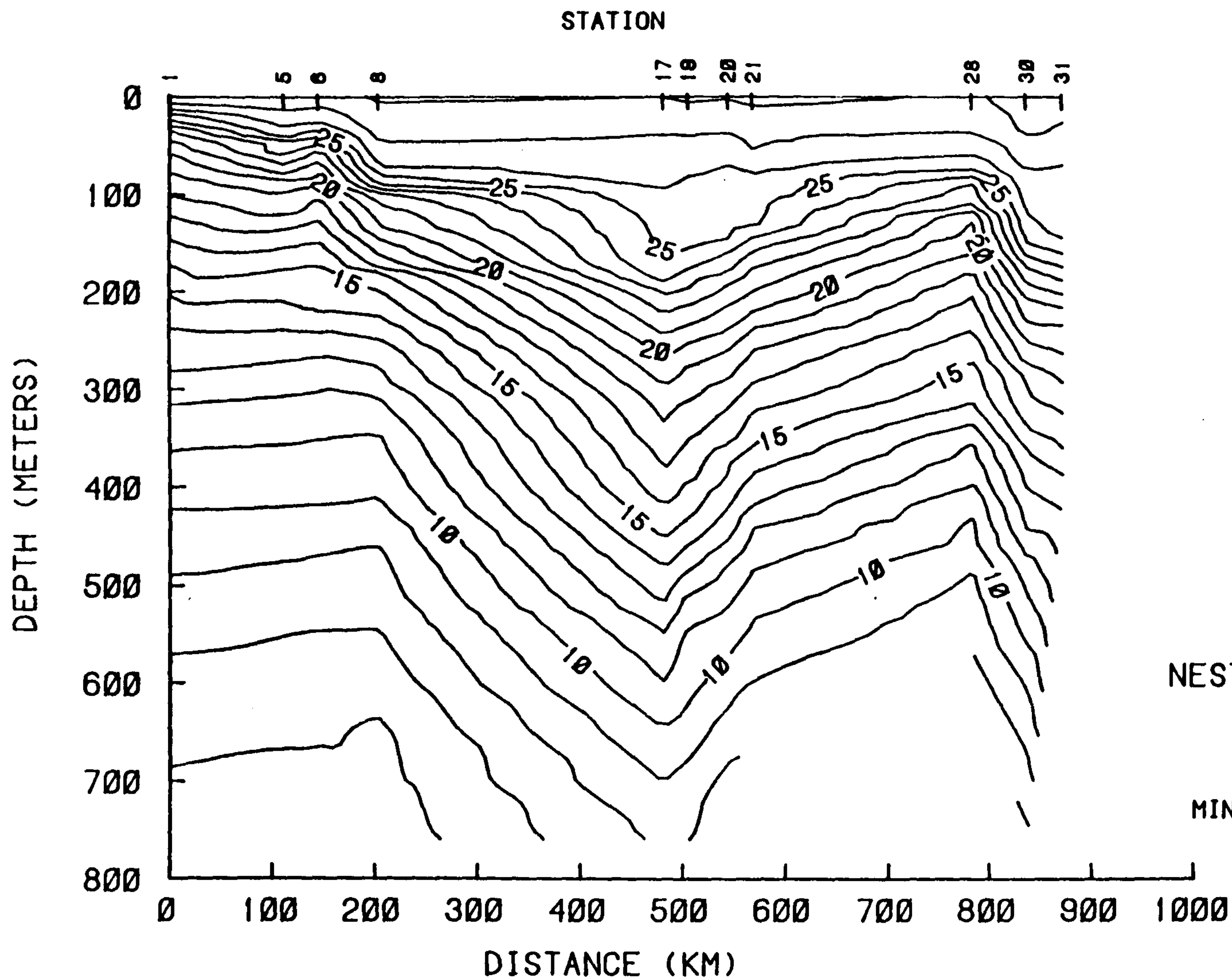
NESTOR I CRUISE 84-04
6/11/84 TO 6/12/84
STATIONS 4 TO 31
TEMPERATURE DEG C
MIN = 12.64 MAX = 27.98



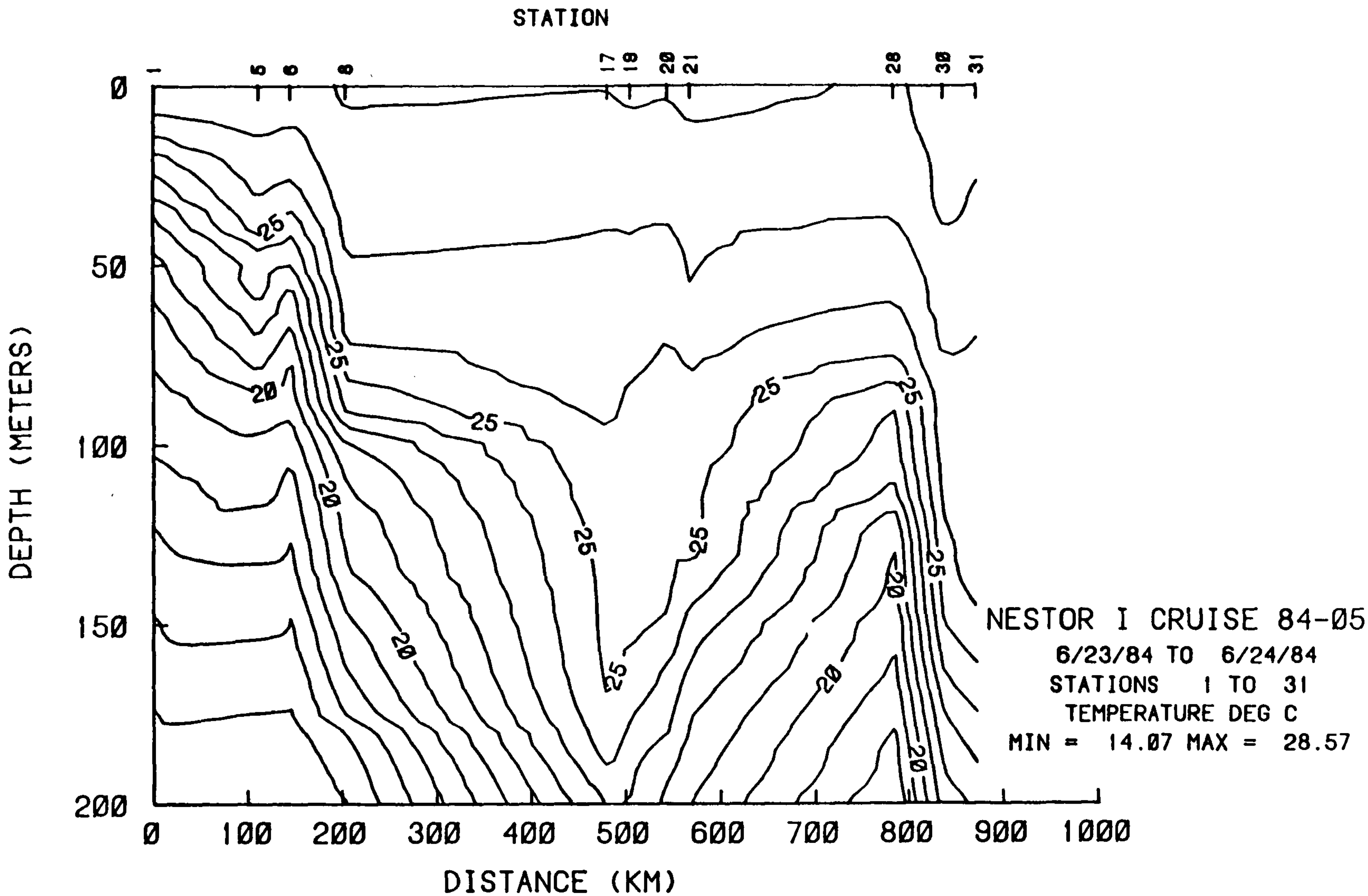
PARAMETERS AT SURFACE NESTOR I CRUISE 84-04

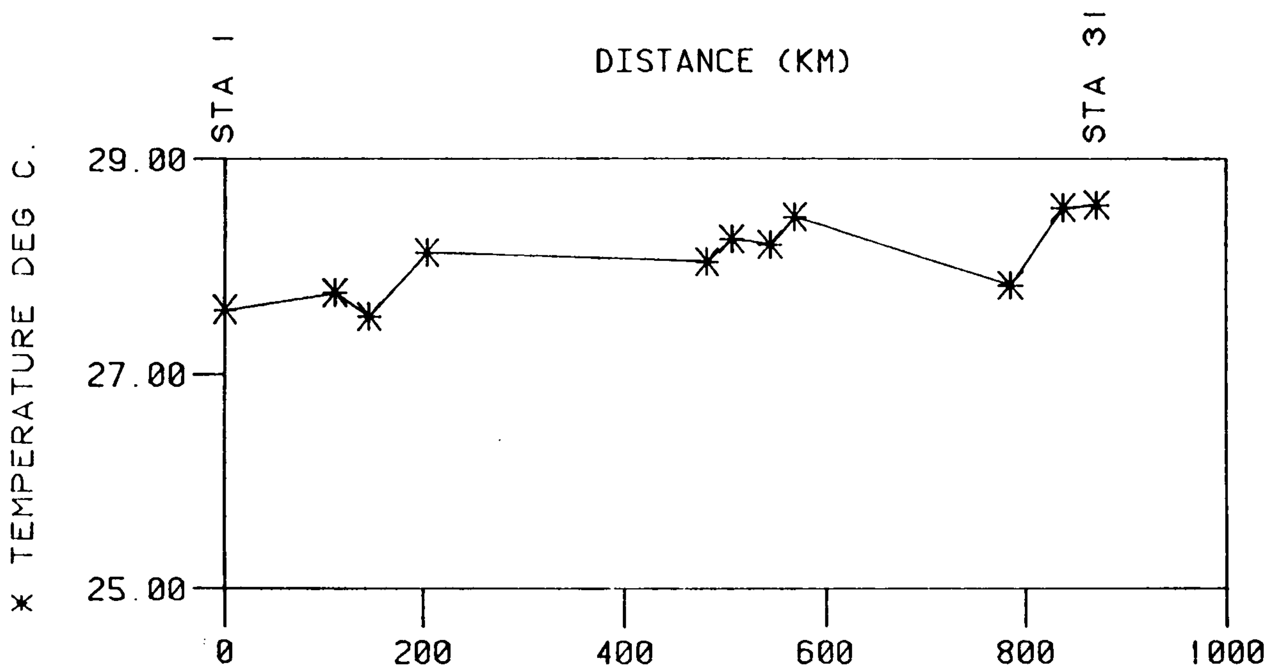
NESTOR I CRUISE 84-05 6/23/84 TO 6/24/84



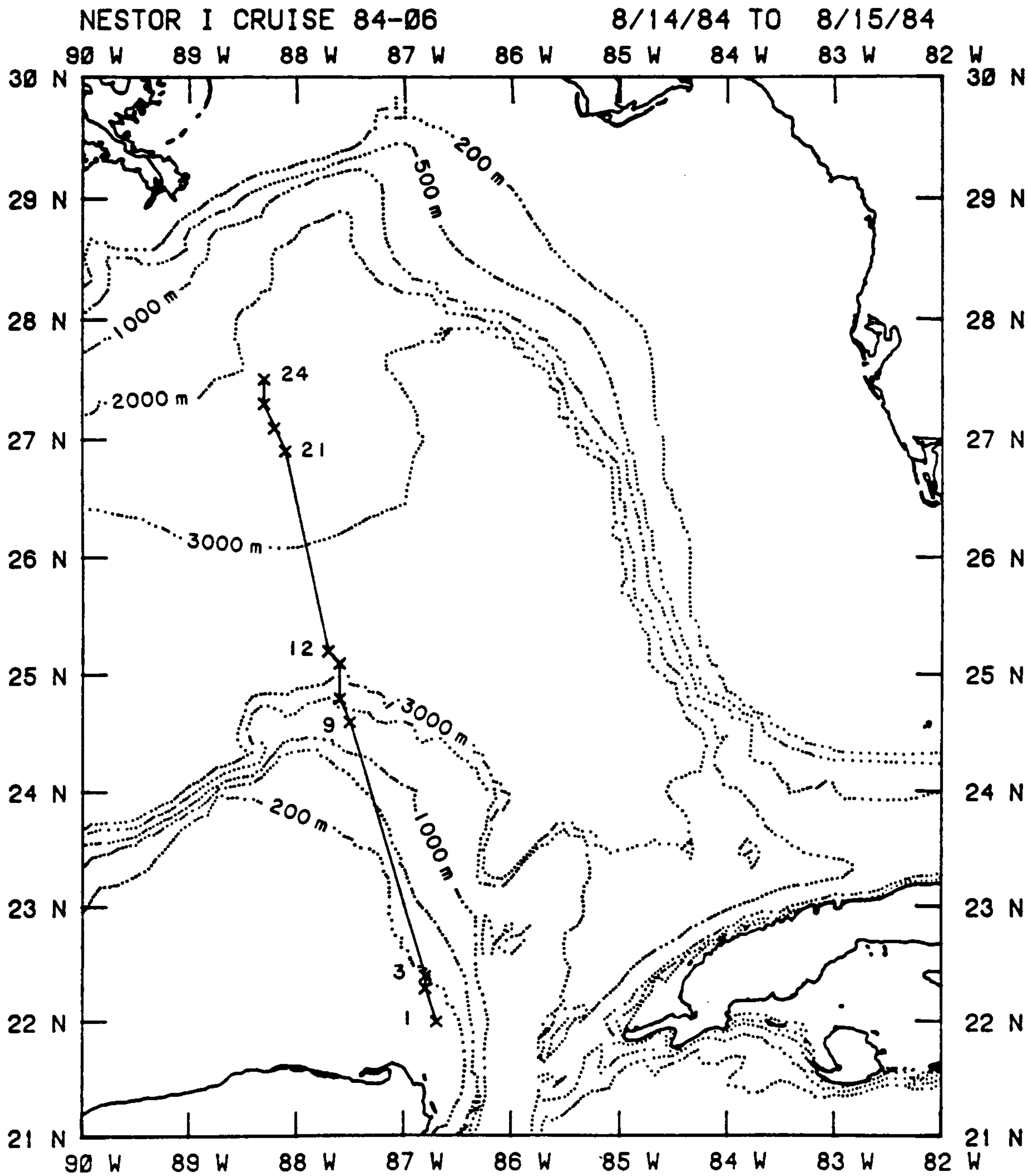


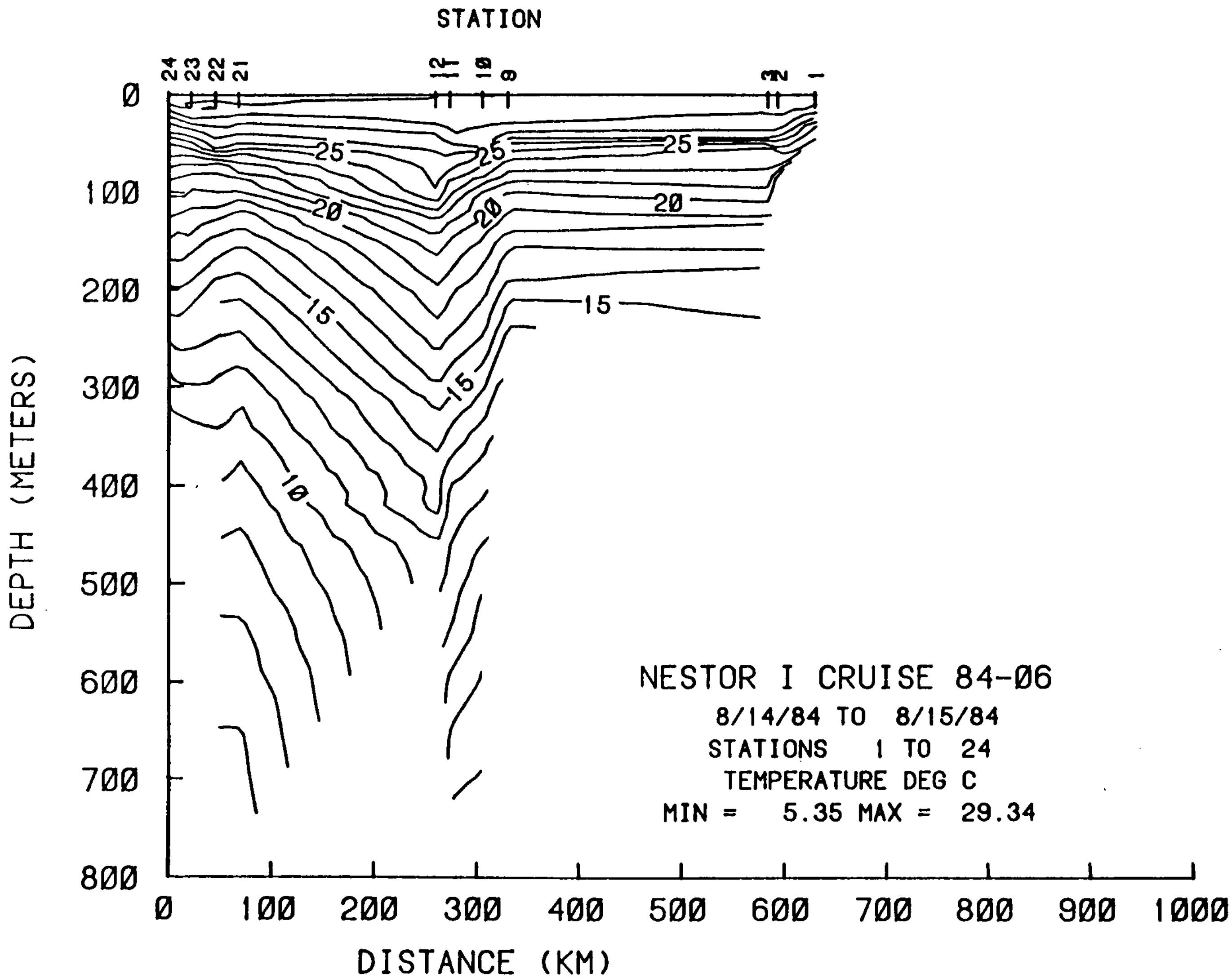
NESTOR I CRUISE 84-05
6/23/84 TO 6/24/84
STATIONS 1 TO 31
TEMPERATURE DEG C
MIN = 5.40 MAX = 28.57

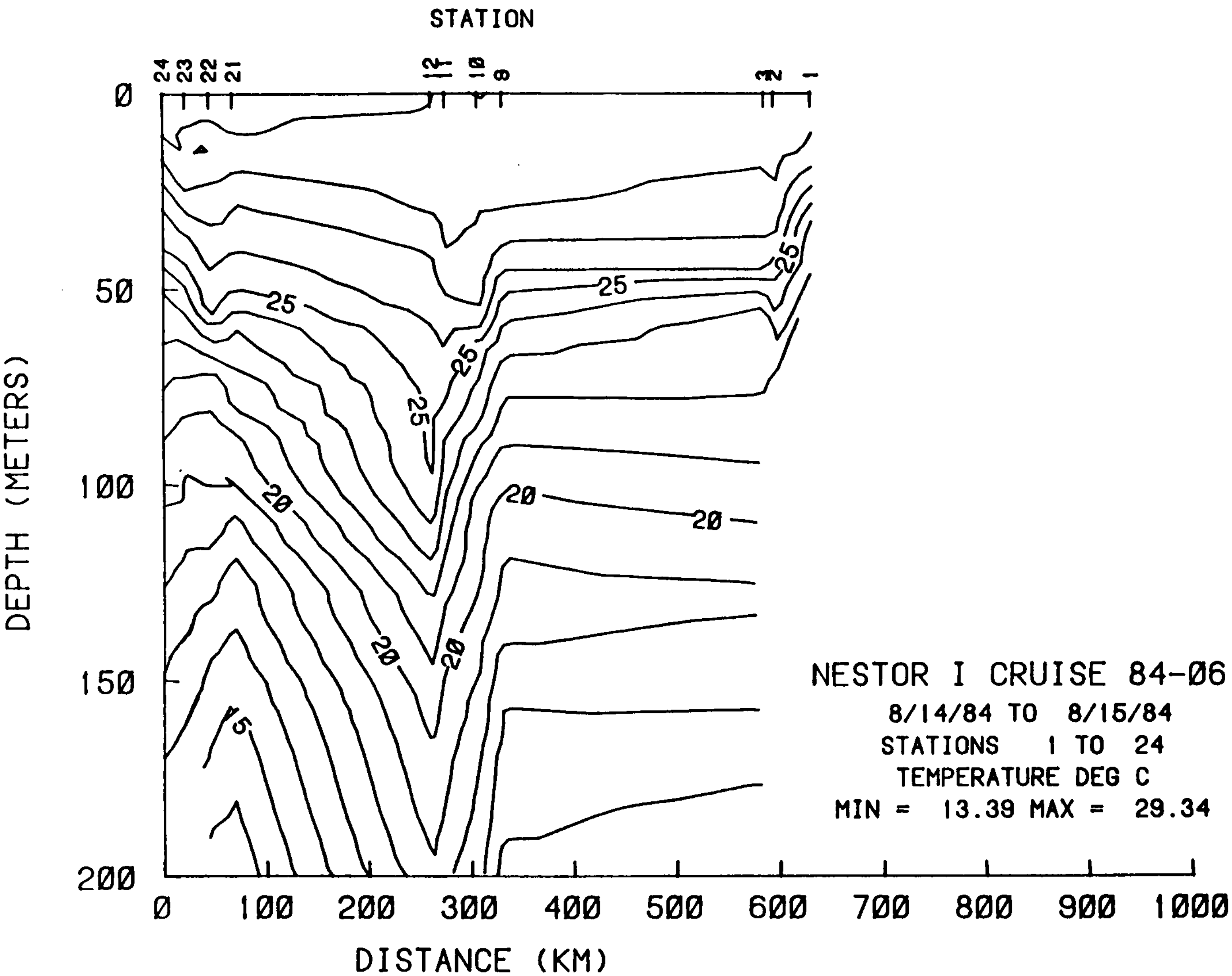

STATION
1 5 6 8 17 18 20 21 28 30 31
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
NESTOR I CRUISE 84-05
6/23/84 TO 6/24/84
STATIONS 1 TO 31
TEMPERATURE DEG C
MIN = 14.07 MAX = 28.57

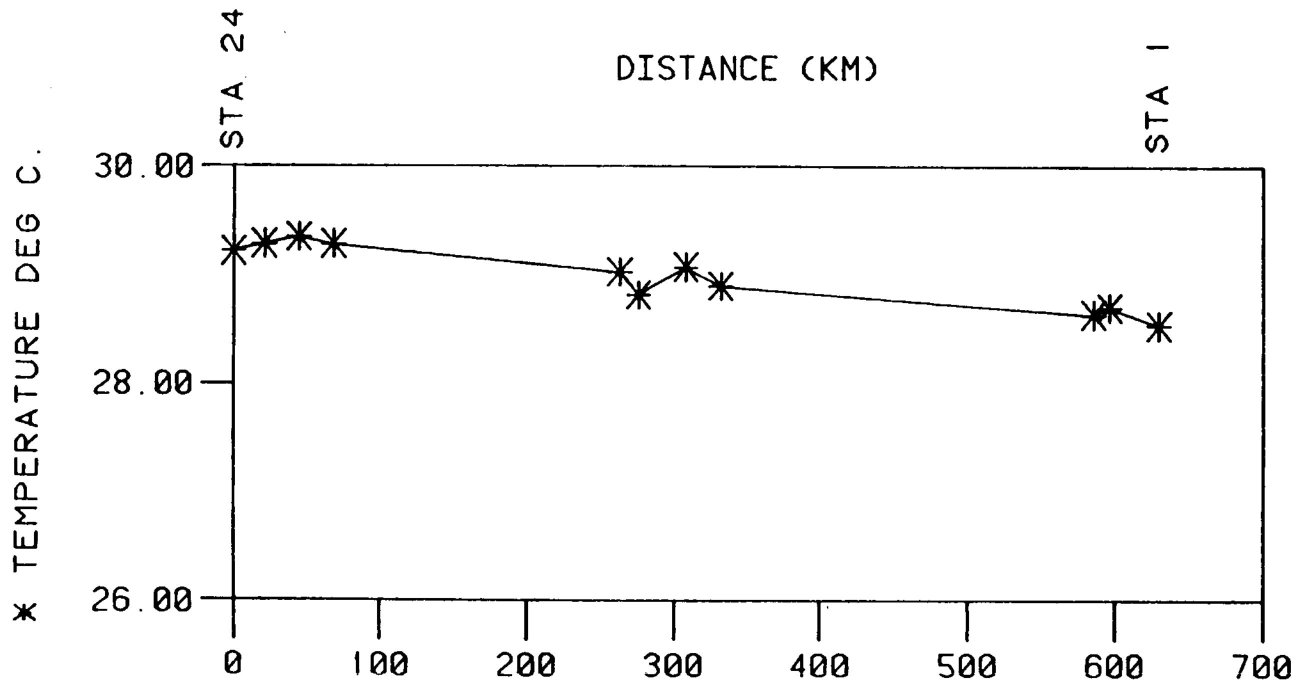


PARAMETERS AT SURFACE NESTOR I CRUISE 84-05

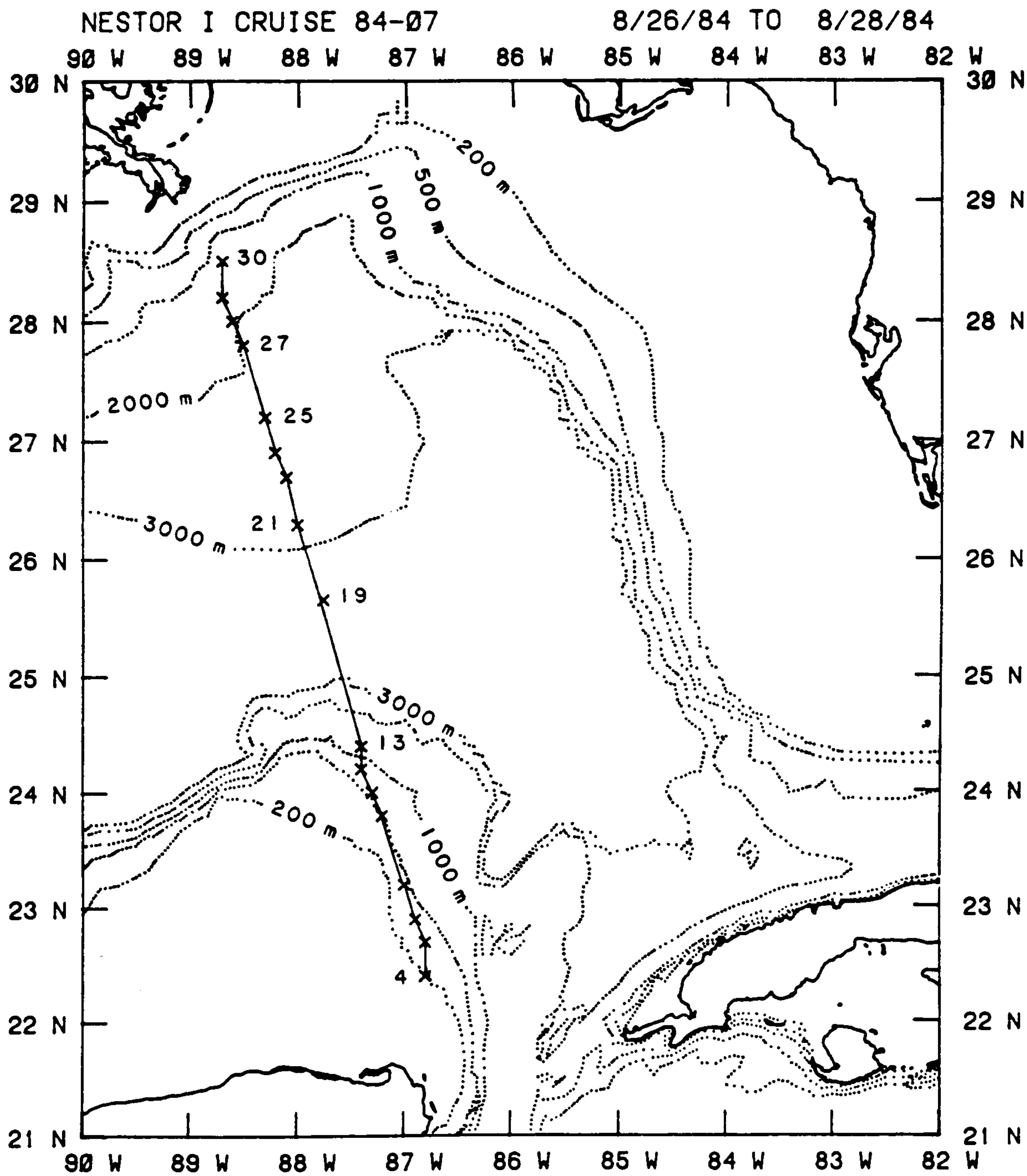

NESTOR I CRUISE 84-06
8/14/84 TO 8/15/84
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
24
21
12
9
3
1
3000 m
200 m
1000 m

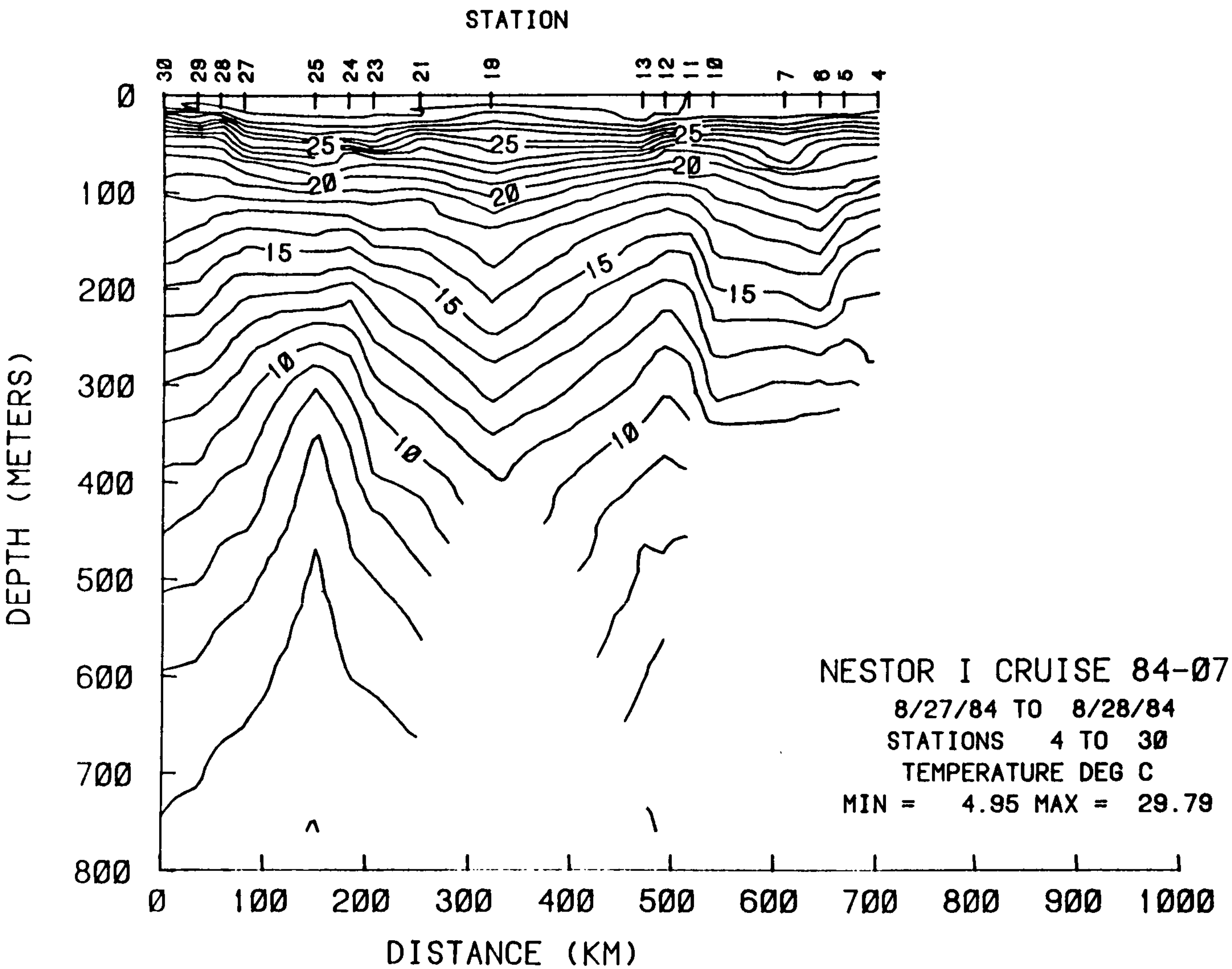

STATION
24 23 22 21 12 11 10 9 3 2 1
DEPTH (METERS)
DISTANCE (KM)
0
100
200
300
400
500
600
700
800
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
10
NESTOR I CRUISE 84-06
8/14/84 TO 8/15/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 5.35 MAX = 29.34

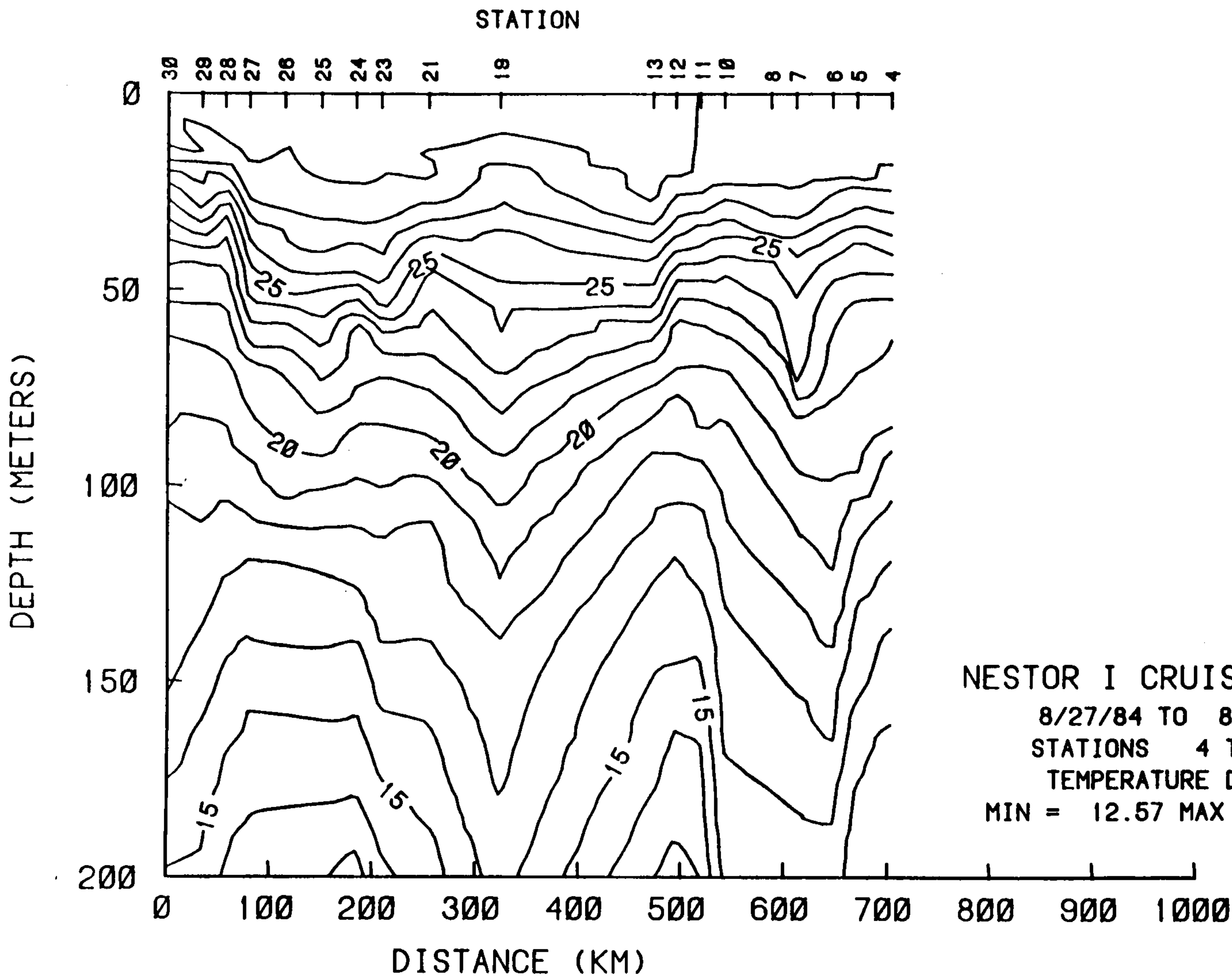

STATION
24 23 22 21 12 11 10 9 3 2 1
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
NESTOR I CRUISE 84-06
8/14/84 TO 8/15/84
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 13.39 MAX = 29.34



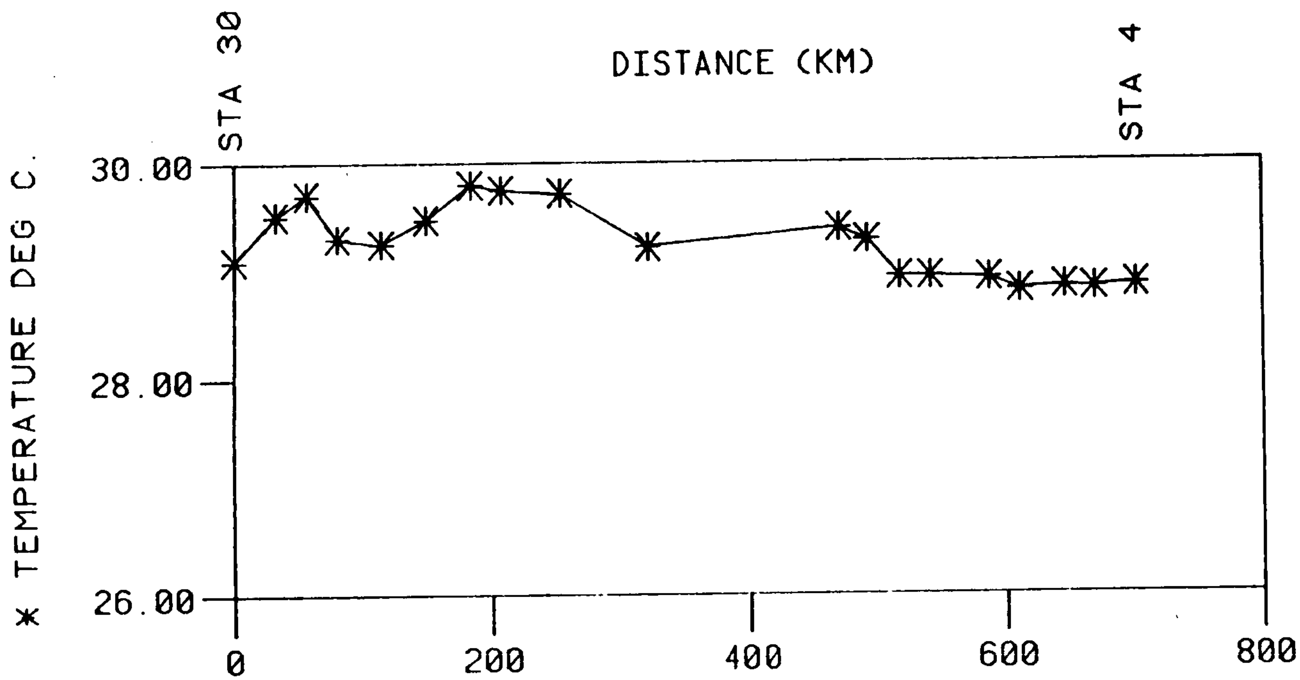
PARAMETERS AT SURFACE NESTOR I CRUISE 84-06


NESTOR I CRUISE 84-Ø7
8/26/84 TO 8/28/84
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
30
27
25
21
19
13
4


STATION
30 29 28 27 25 24 23 21 19 13 12 11 10 7 6 5 4
25
20
15
10
DEPTH (METERS)
0 100 200 300 400 500 600 700 800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
NESTOR I CRUISE 84-07
8/27/84 TO 8/28/84
STATIONS 4 TO 30
TEMPERATURE DEG C
MIN = 4.95 MAX = 29.79

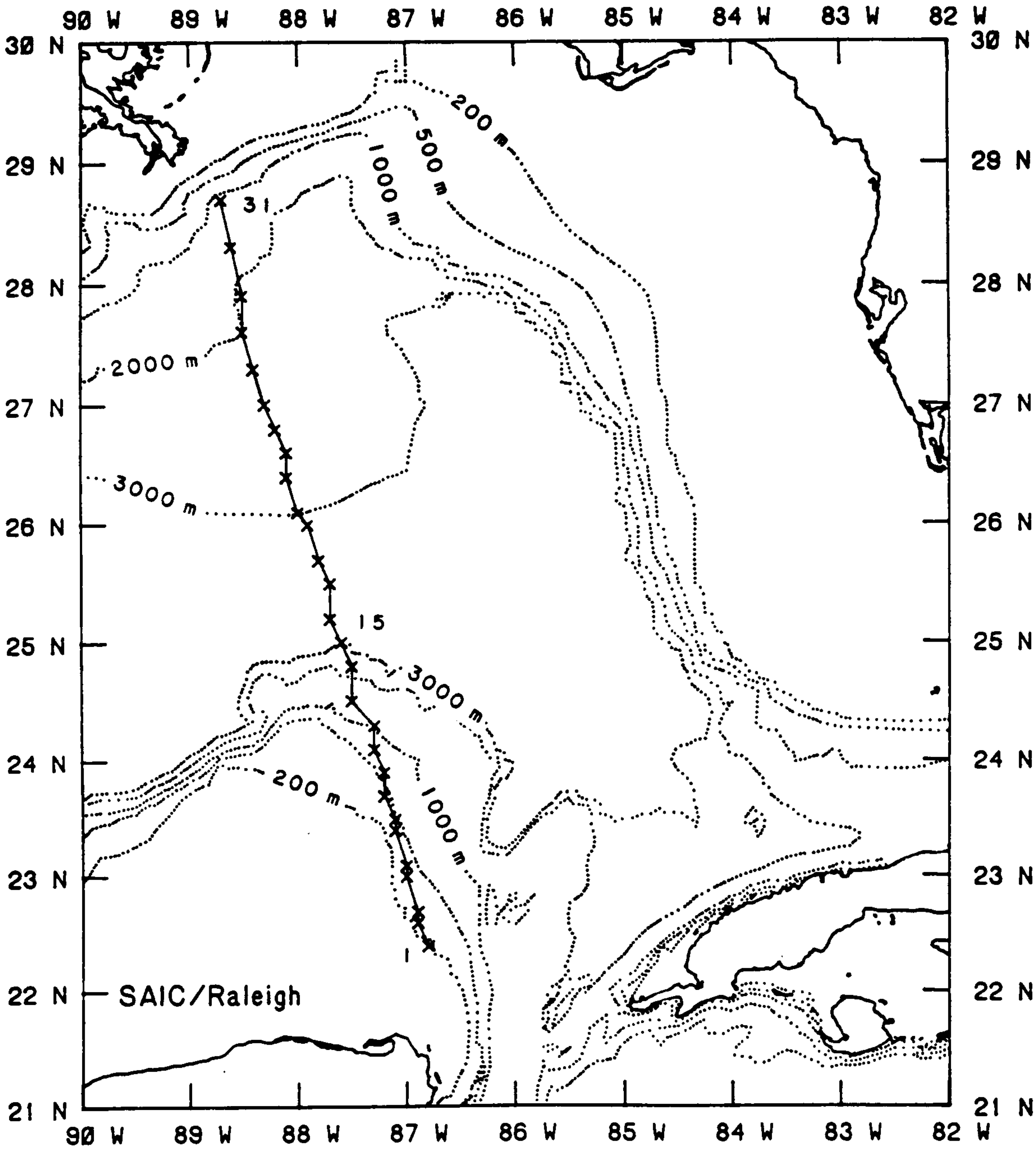


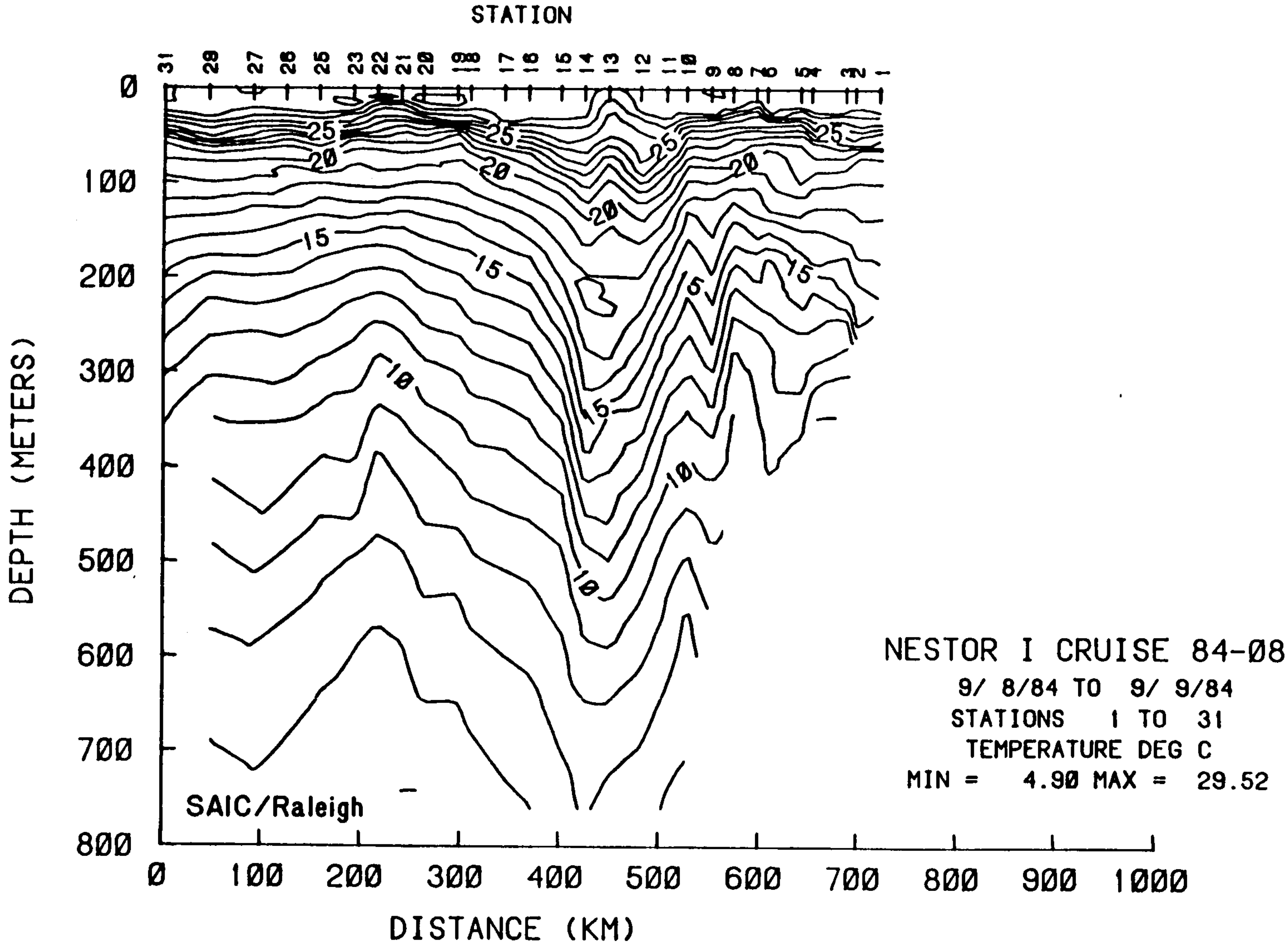
NESTOR I CRUISE 84-07
8/27/84 TO 8/28/84
STATIONS 4 TO 30
TEMPERATURE DEG C
MIN = 12.57 MAX = 29.79

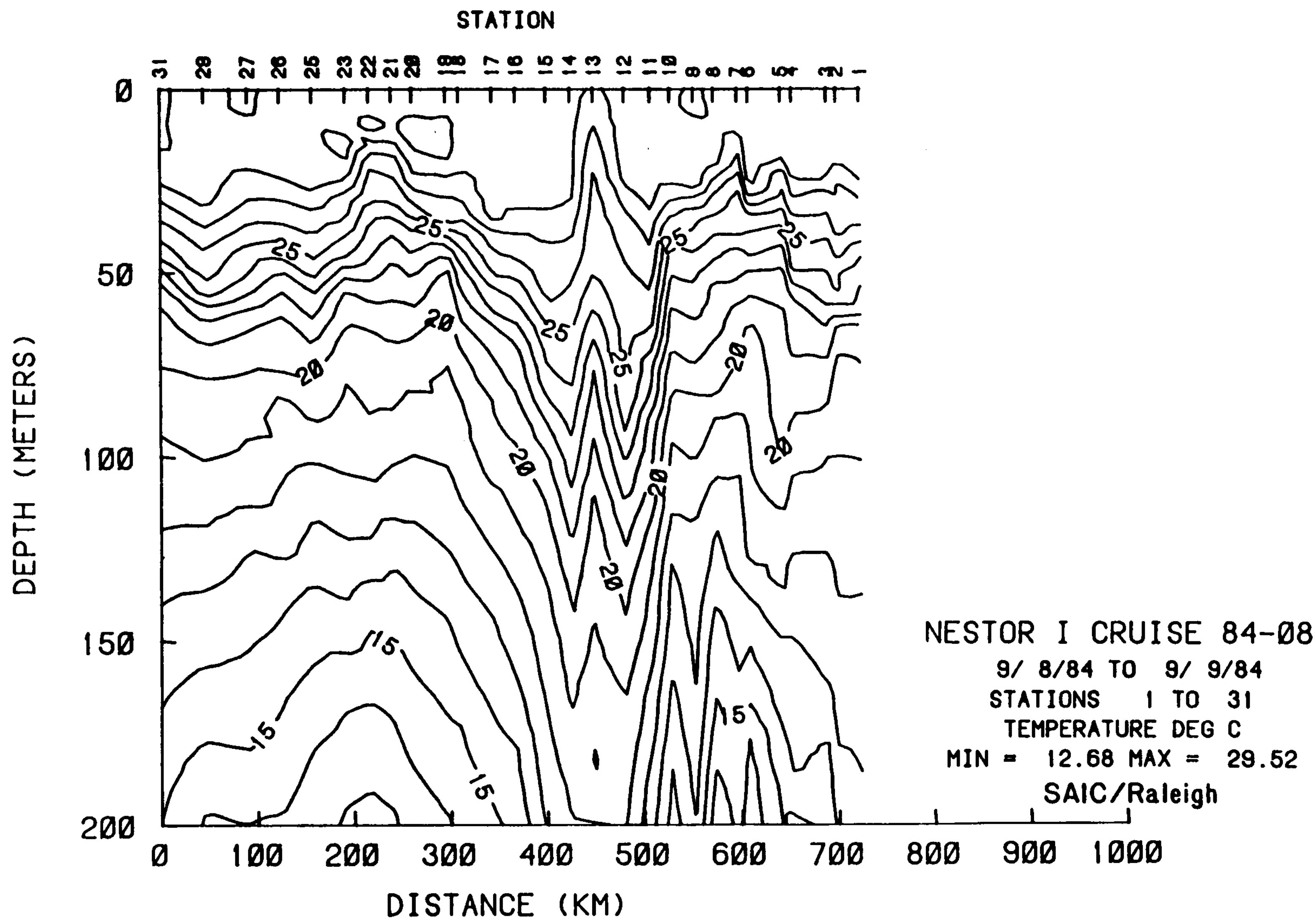


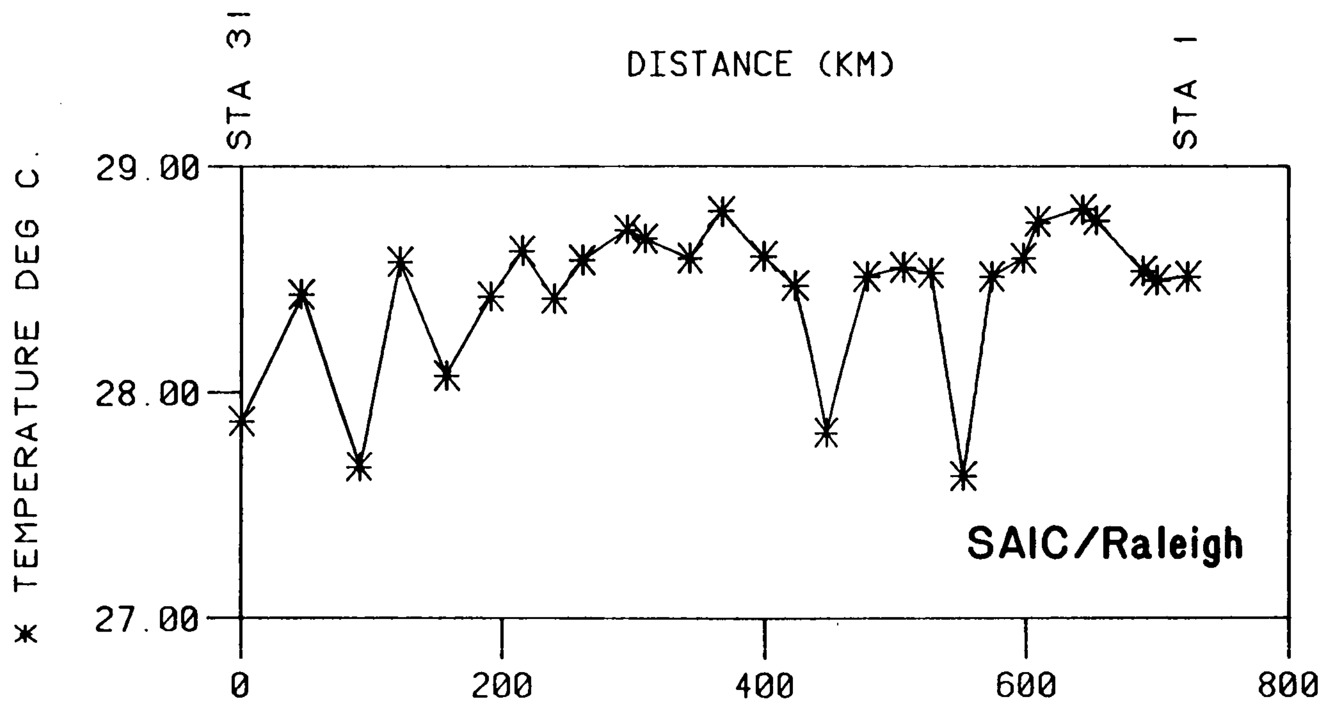
PARAMETERS AT SURFACE NESTOR I CRUISE 84-07

NESTOR I CRUISE 84-Ø8 9/ 8/84 TO 9/ 9/84



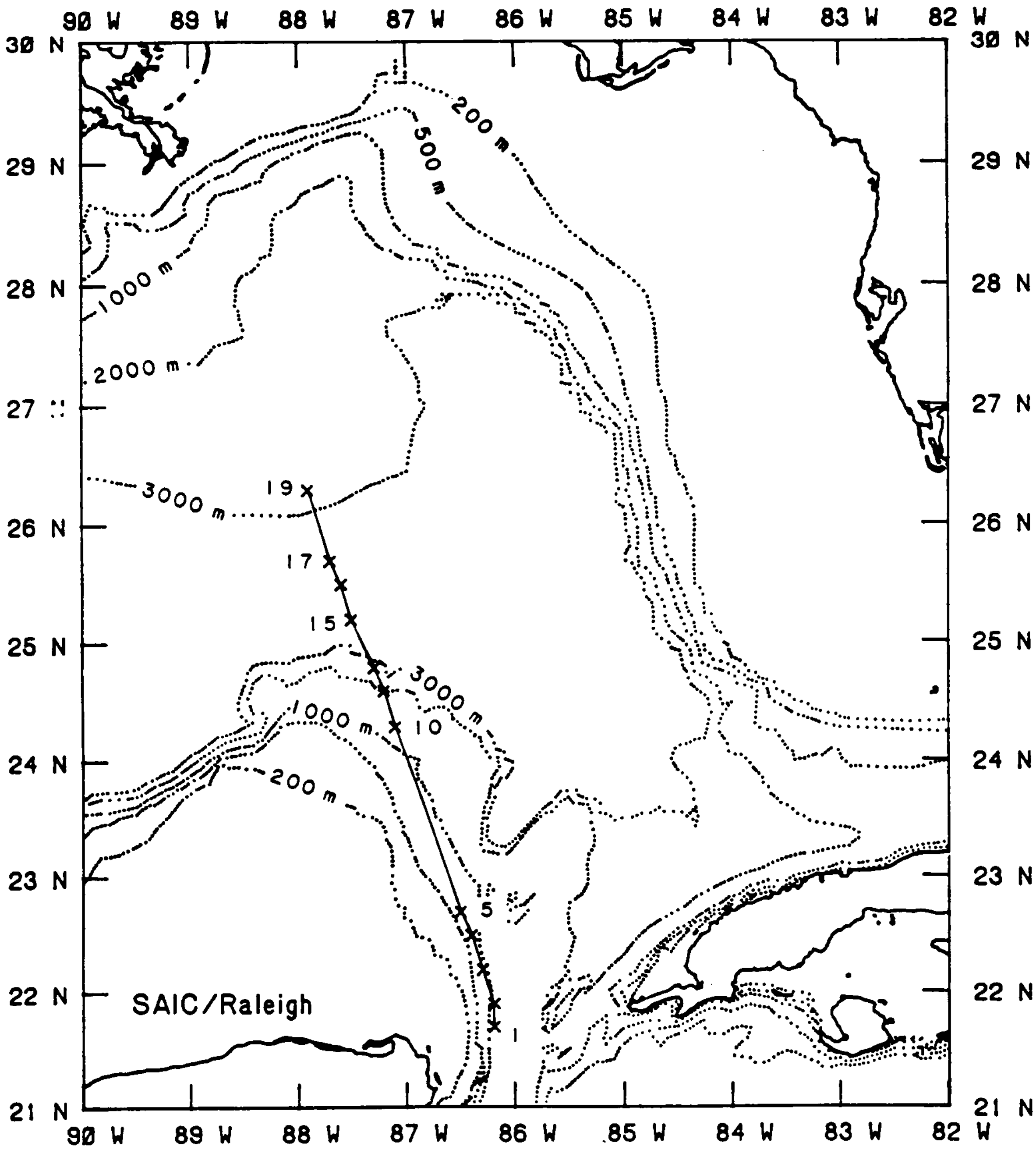

STATION
31 29 27 26 25 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0
100
200
300
400
500
600
700
800
900
1000
25
20
15
10
5
SAIC/Raleigh
NESTOR I CRUISE 84-08
9/ 8/84 TO 9/ 9/84
STATIONS 1 TO 31
TEMPERATURE DEG C
MIN = 4.90 MAX = 29.52

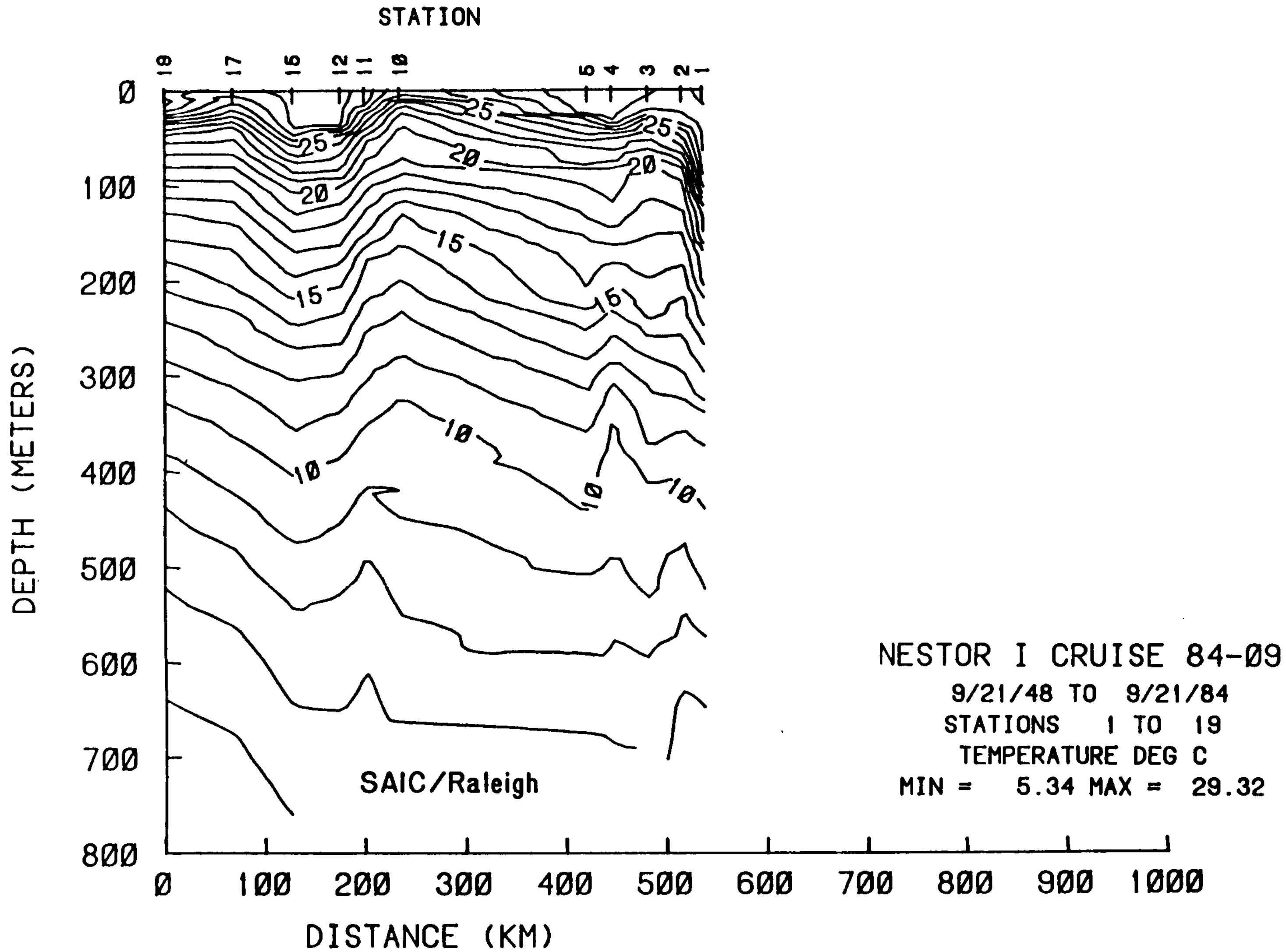

STATION
31 28 27 26 25 23 22 21 20 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
NESTOR I CRUISE 84-08
9/ 8/84 TO 9/ 9/84
STATIONS 1 TO 31
TEMPERATURE DEG C
MIN = 12.68 MAX = 29.52
SAIC/Raleigh

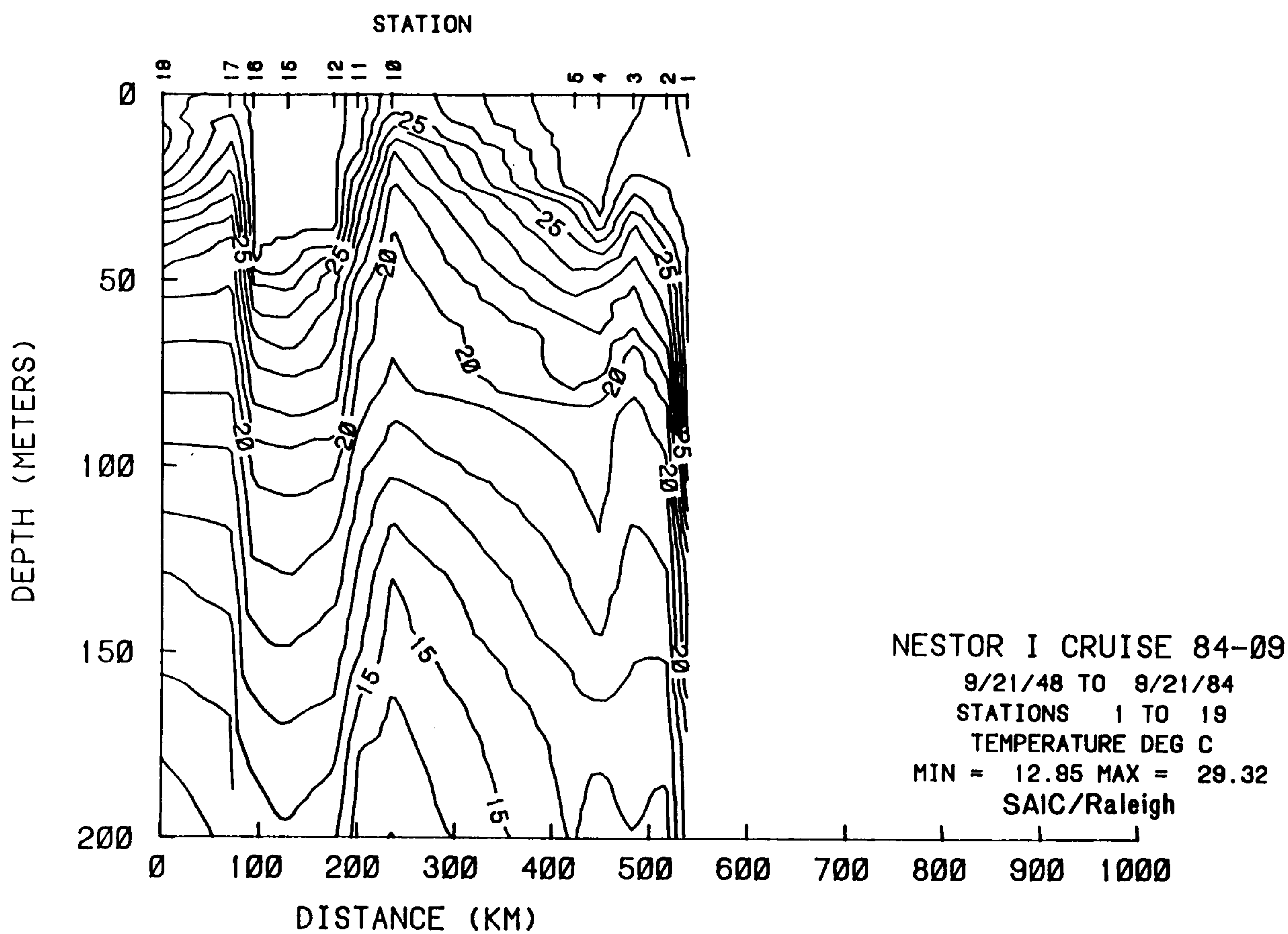


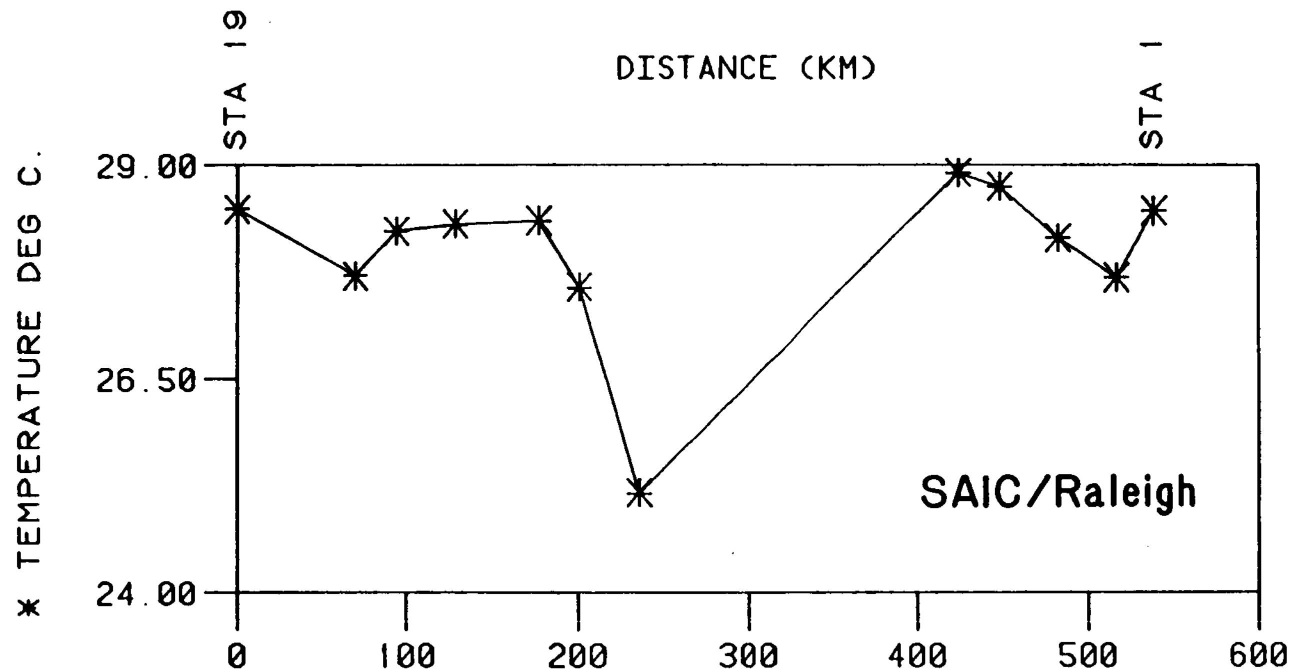
PARAMETERS AT SURFACE NESTOR I CRUISE 84-08

NESTOR I CRUISE 84-Ø9 9/21/84 TO 9/21/84

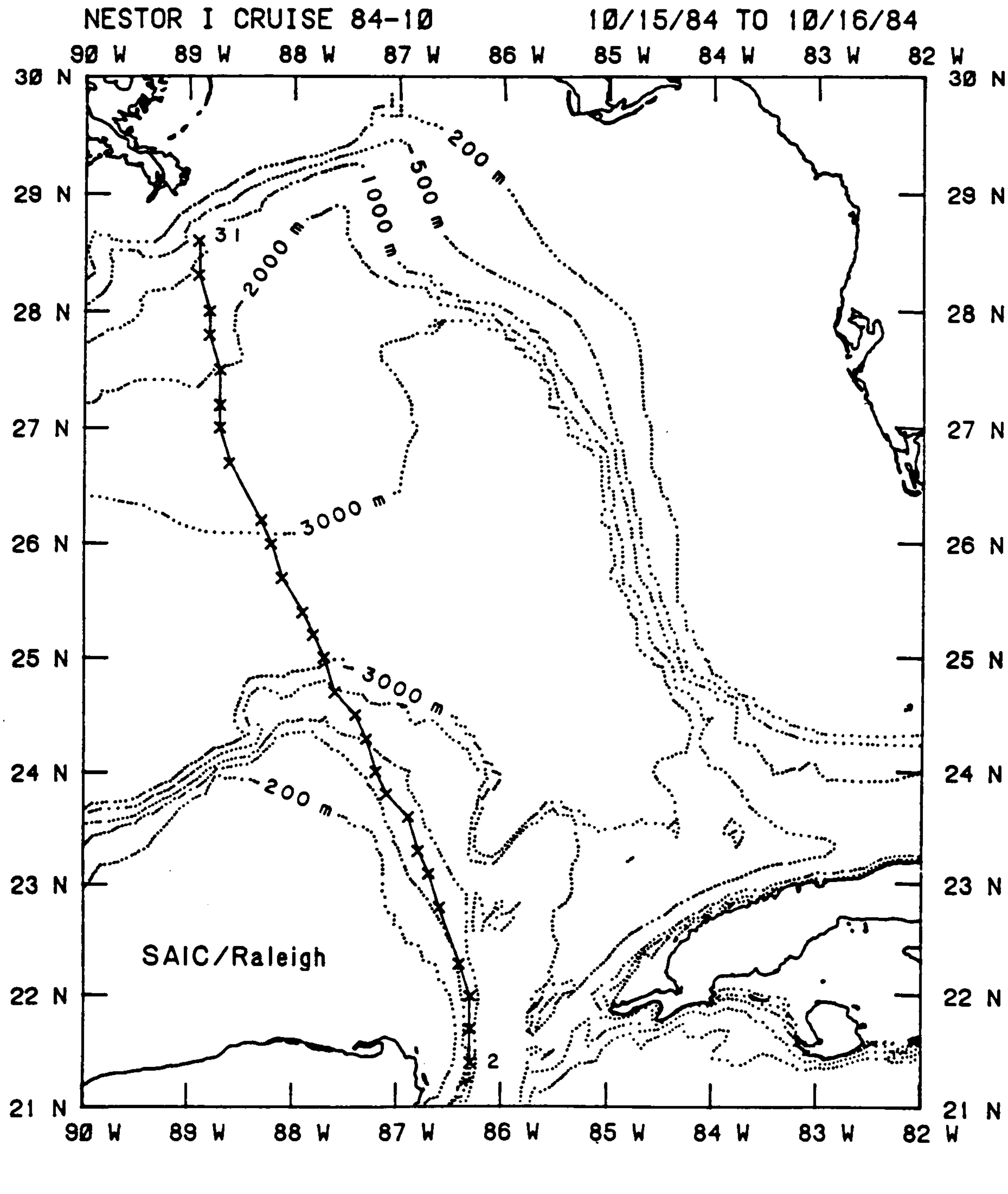



STATION
DEPTH (METERS)
DISTANCE (KM)
SAIC/Raleigh
NESTOR I CRUISE 84-09
9/21/48 TO 9/21/84
STATIONS 1 TO 19
TEMPERATURE DEG C
MIN = 5.34 MAX = 29.32

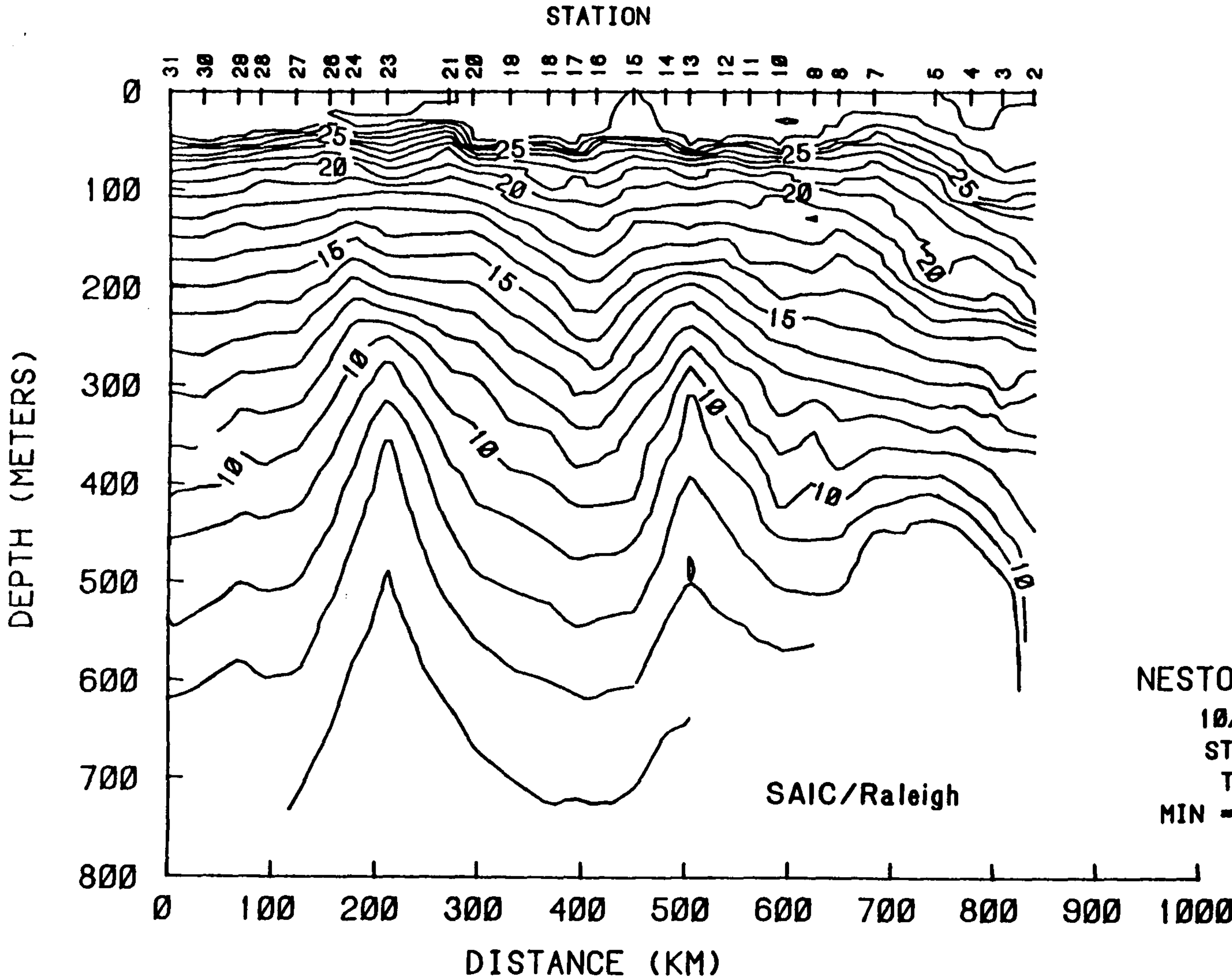

STATION
19
17
16
15
12
11
10
5
4
3
2
1
25
20
15
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0
100
200
300
400
500
600
700
800
900
1000
NESTOR I CRUISE 84-09
9/21/48 TO 9/21/84
STATIONS 1 TO 19
TEMPERATURE DEG C
MIN = 12.95 MAX = 29.32
SAIC/Raleigh



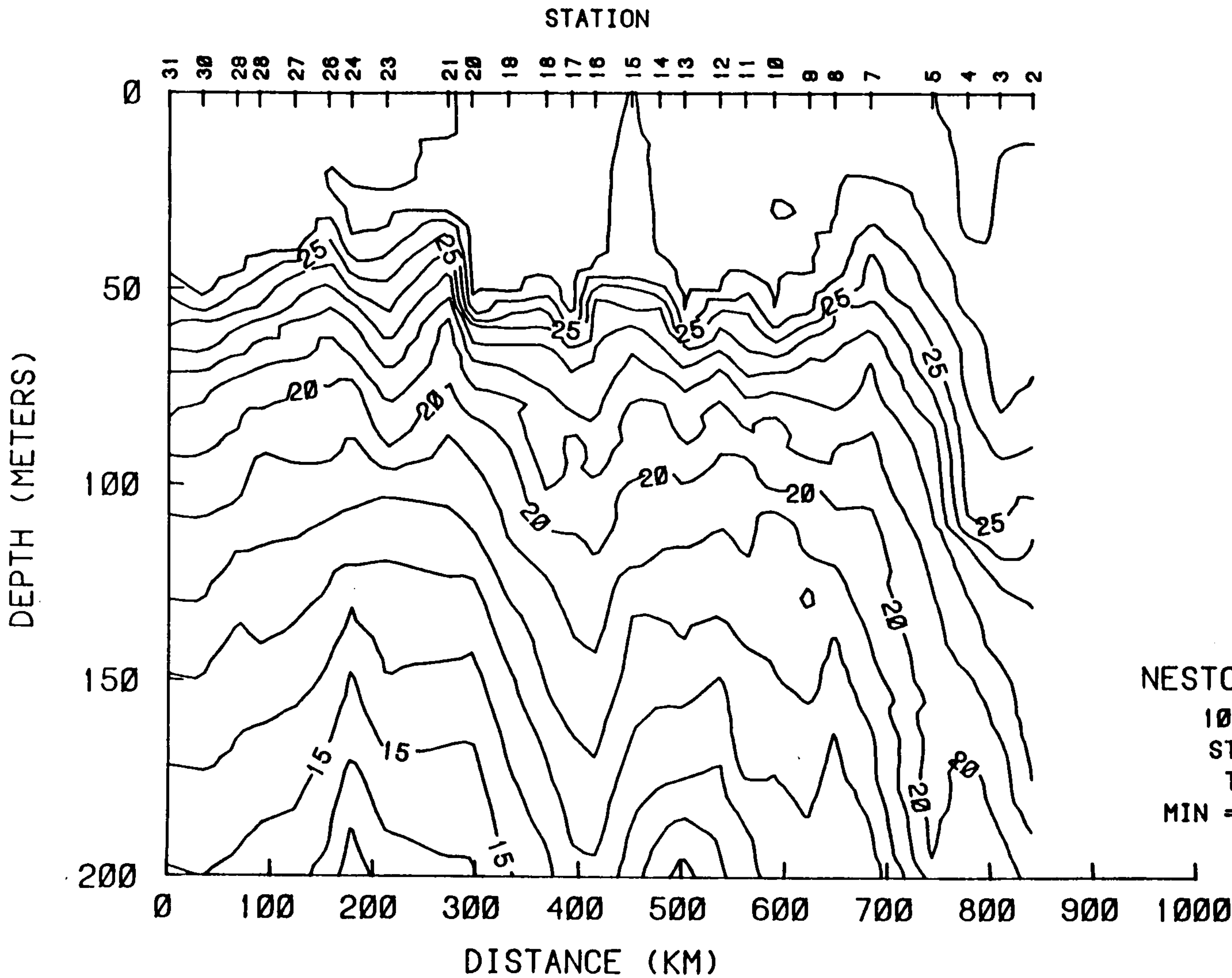
PARAMETERS AT SURFACE NESTOR I CRUISE 84-09



NESTOR I CRUISE 84-10
10/15/84 TO 10/16/84
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
200 m
31
2
SAIC/Raleigh



NESTOR I CRUISE 84-10
10/15/84 TO 10/16/84
STATIONS 2 TO 31
TEMPERATURE DEG C
MIN = 5.15 MAX = 28.62



NESTOR I CRUISE 84-1Ø

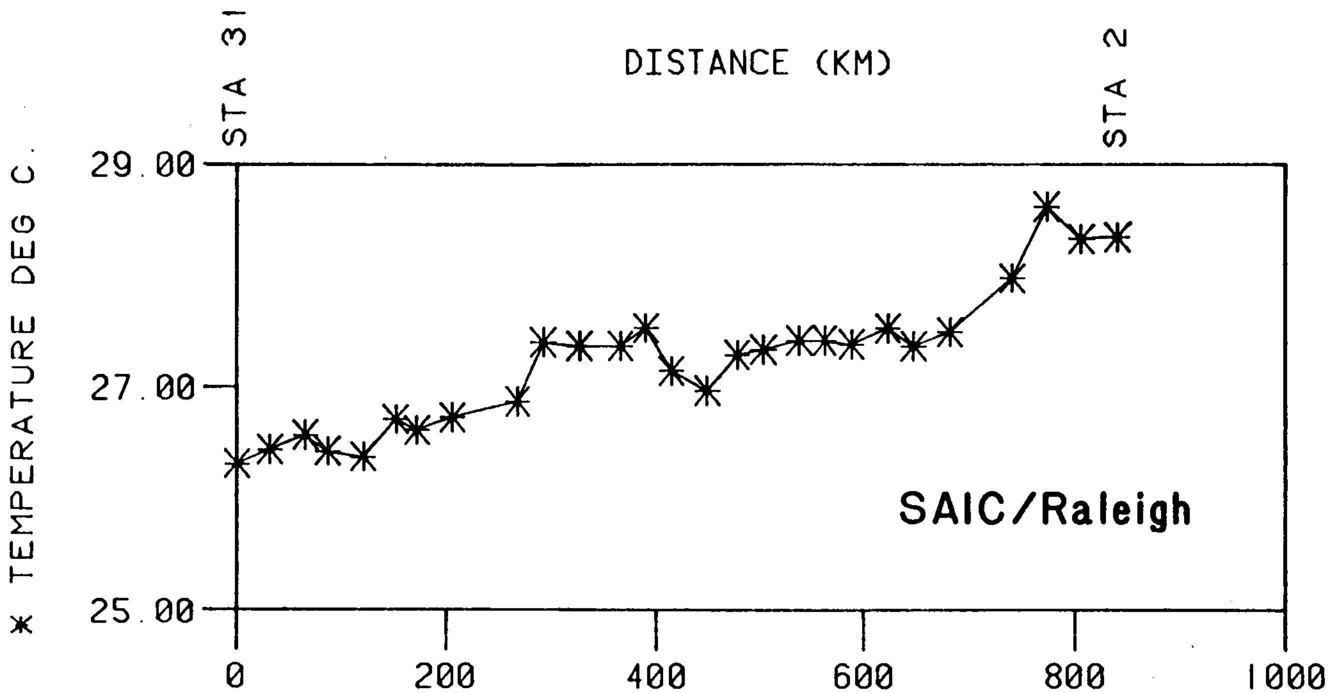
1Ø/15/84 TO 1Ø/16/84

STATIONS 2 TO 31

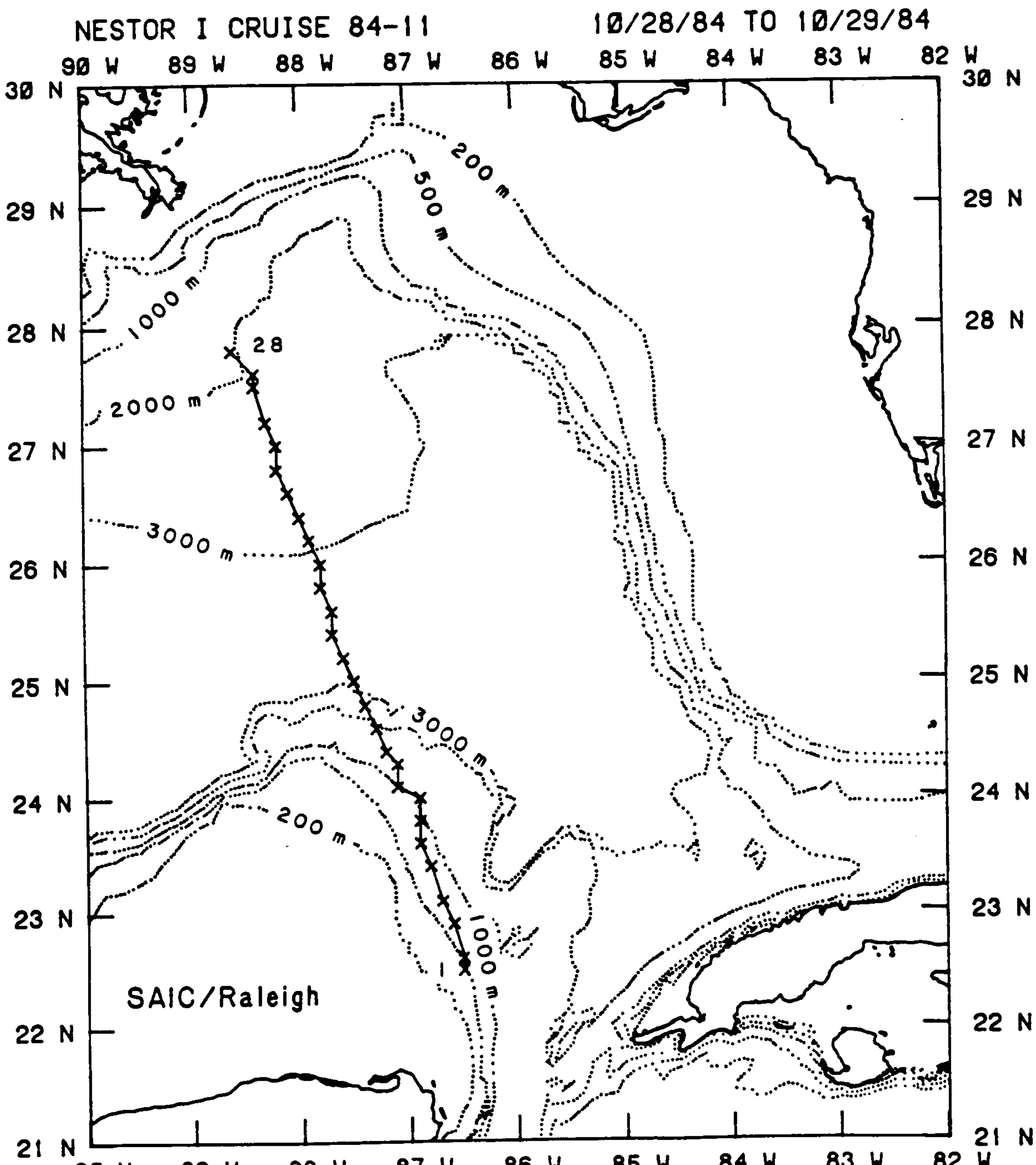
TEMPERATURE DEG C

MIN = 12.44 MAX = 28.62

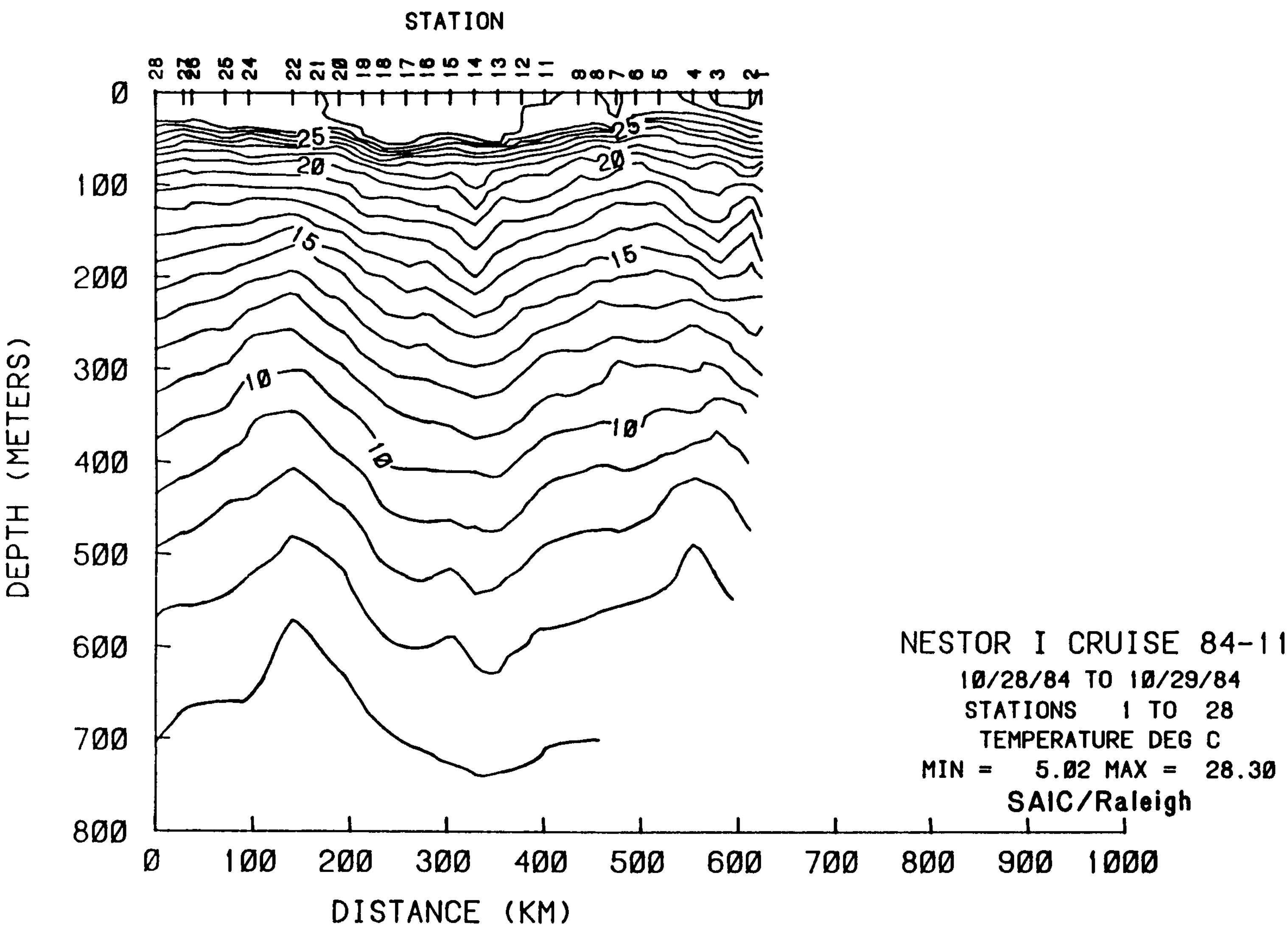
SAIC/Raleigh

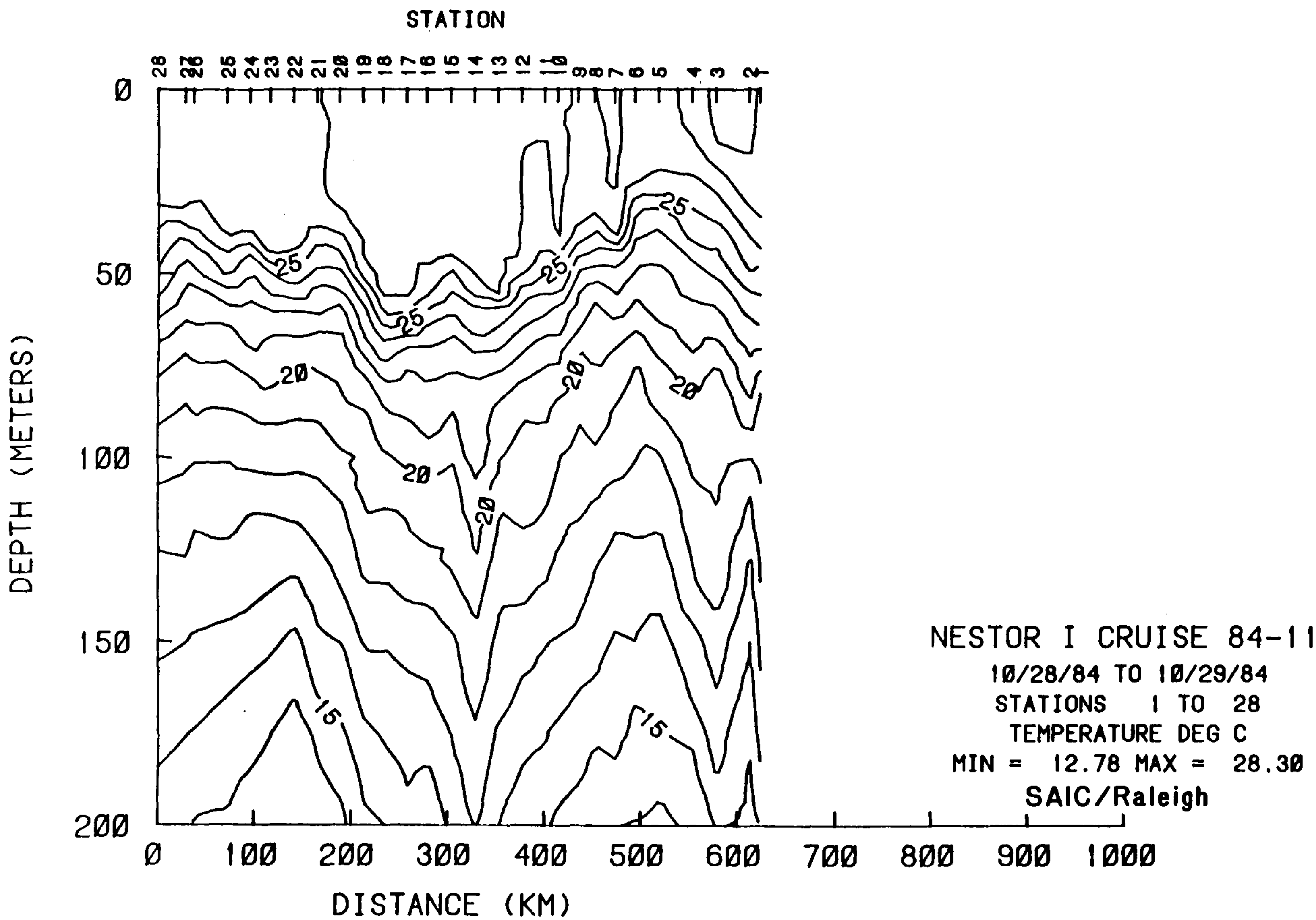


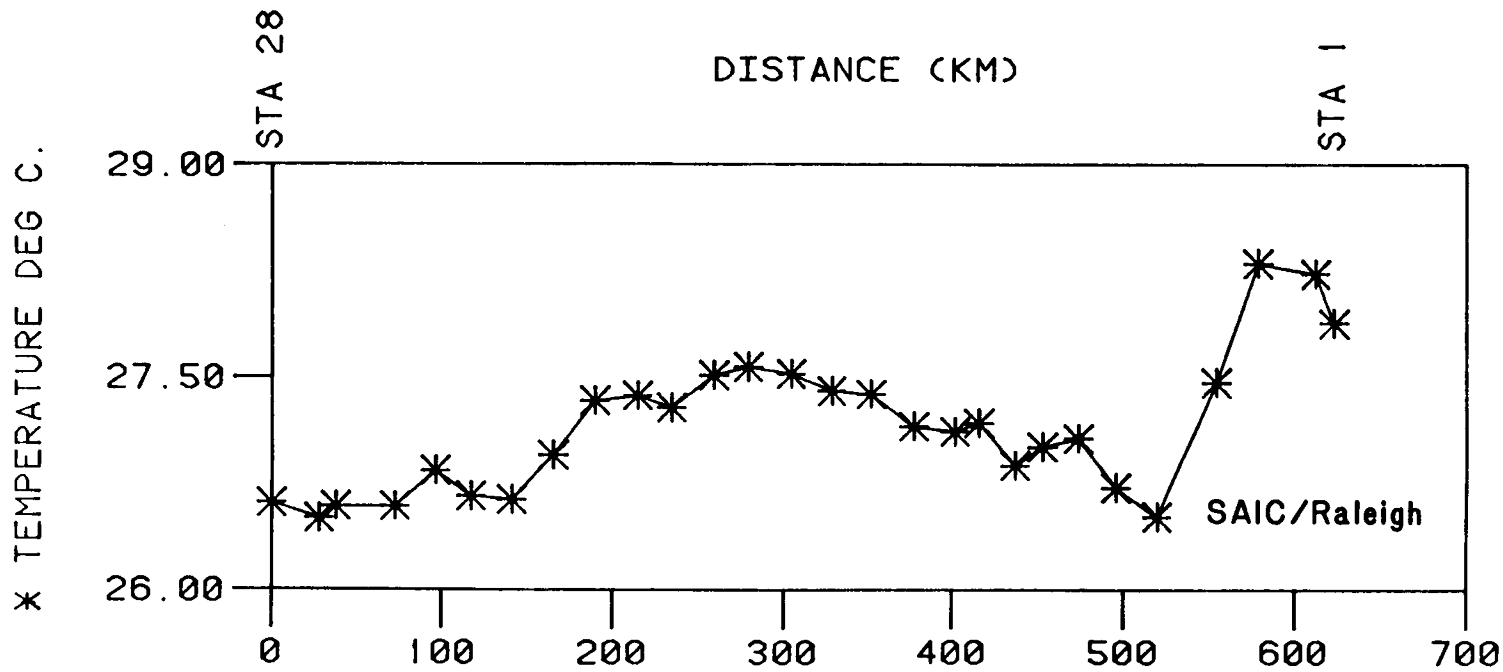
PARAMETERS AT SURFACE NESTOR I CRUISE 84-10



NESTOR I CRUISE 84-11
10/28/84 TO 10/29/84
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
200 m
1000 m
28
1
SAIC/Raleigh

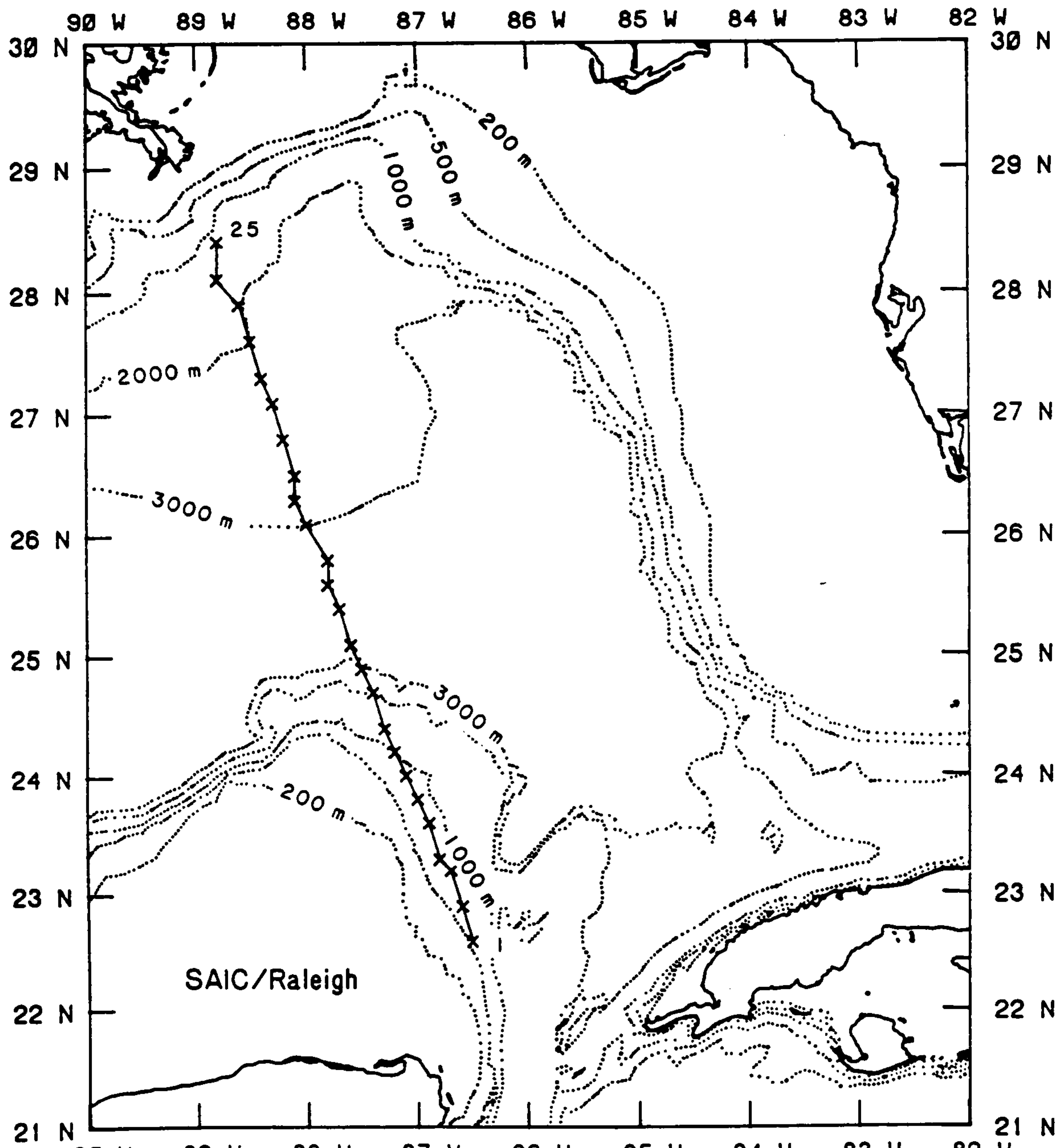

STATION
28 27 26 25 24 22 21 20 19 18 17 16 15 14 13 12 11 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
DISTANCE (KM)
25
20
15
10
NESTOR I CRUISE 84-11
10/28/84 TO 10/29/84
STATIONS 1 TO 28
TEMPERATURE DEG C
MIN = 5.02 MAX = 28.30
SAIC/Raleigh

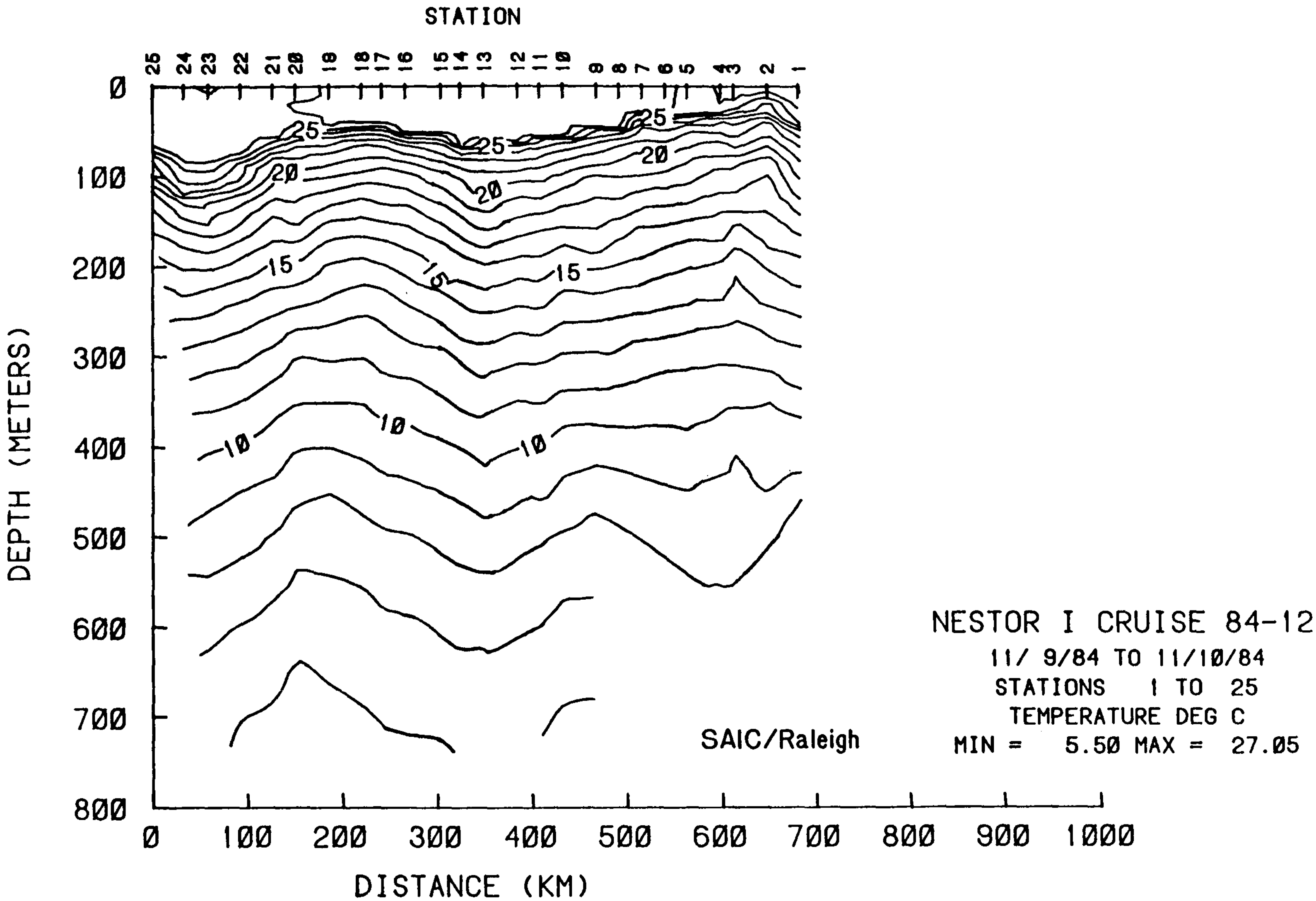

STATION
28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
50
100
150
200
25
20
15
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)
NESTOR I CRUISE 84-11
10/28/84 TO 10/29/84
STATIONS 1 TO 28
TEMPERATURE DEG C
MIN = 12.78 MAX = 28.30
SAIC/Raleigh

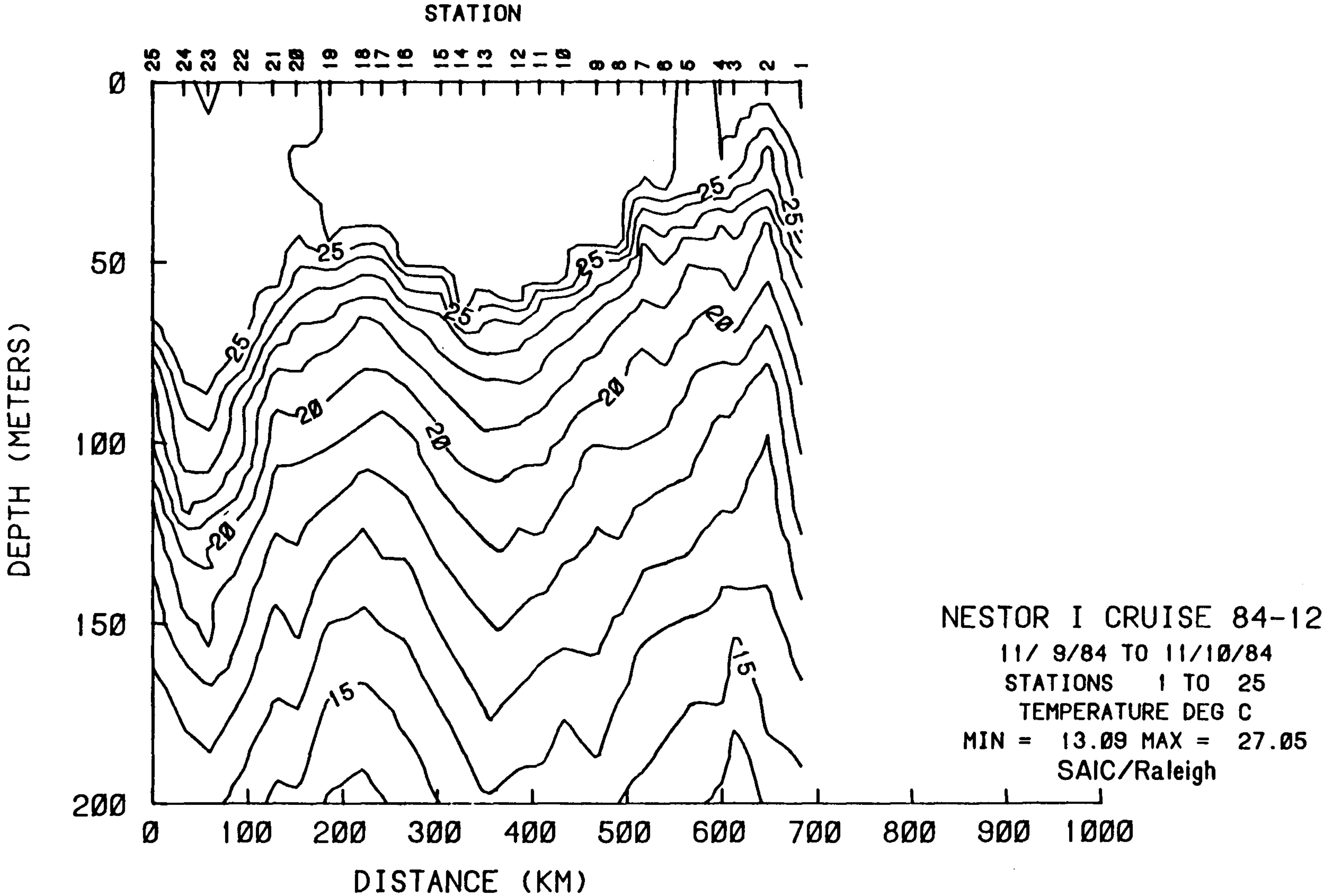


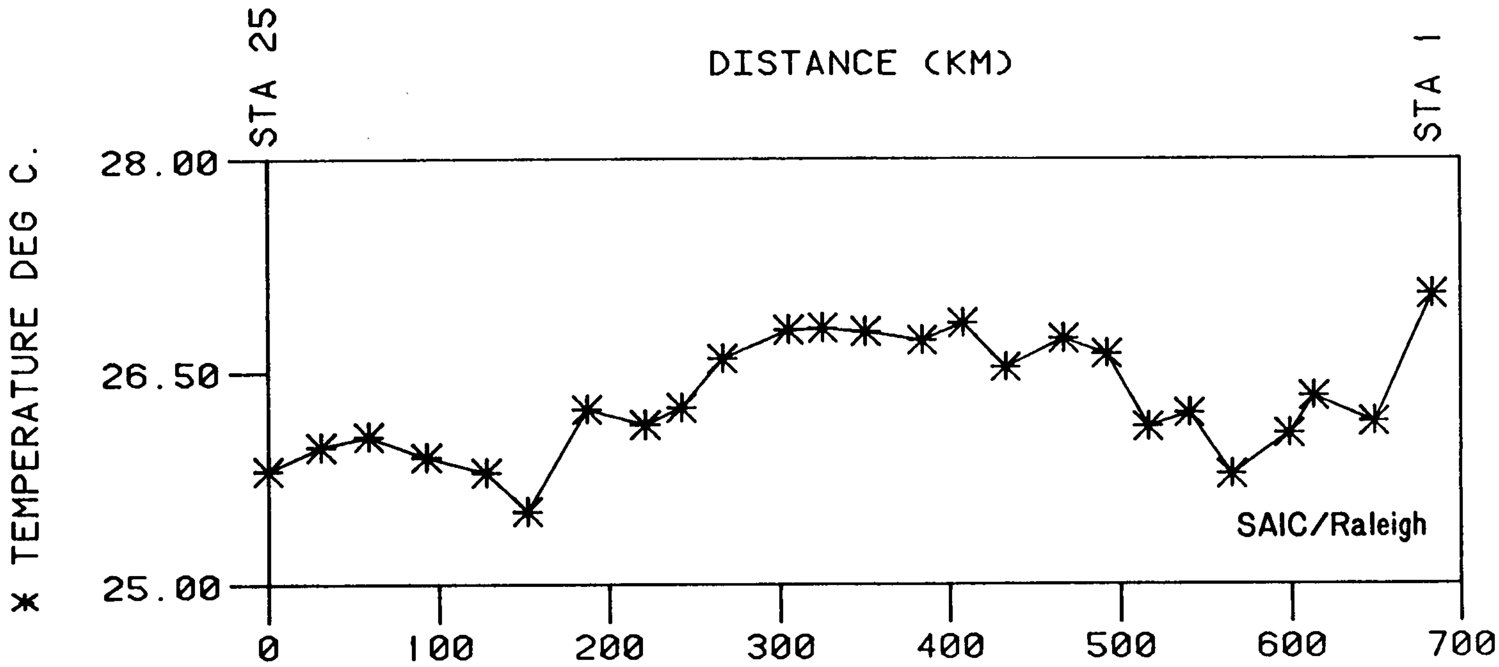
PARAMETERS AT SURFACE NESTOR I CRUISE 84-11

NESTOR I CRUISE 84-12 11/ 9/84 TO 11/10/84

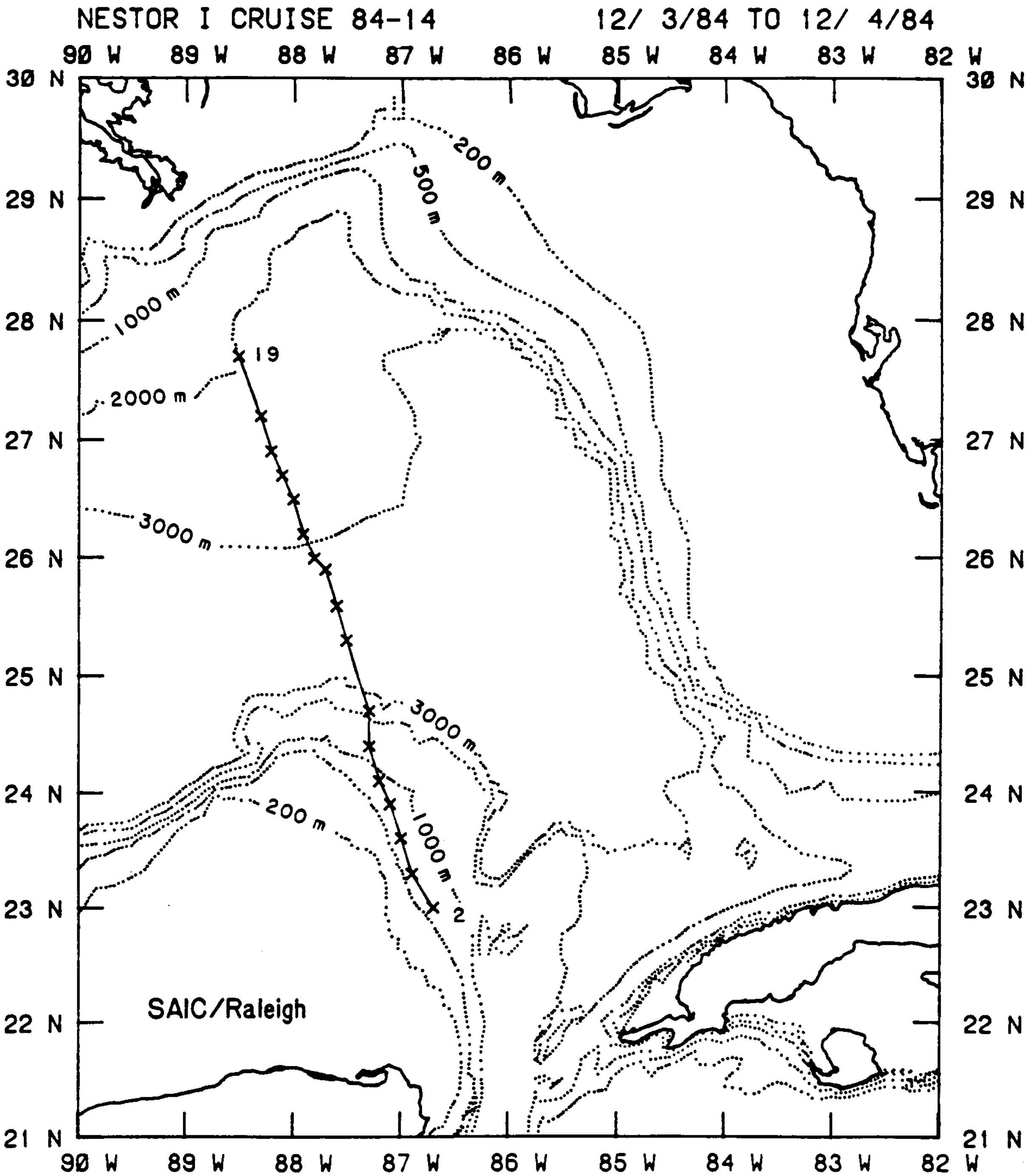



STATION
25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
Ø
100
200
300
400
500
600
700
800
DISTANCE (KM)
Ø 100 200 300 400 500 600 700 800 900 1000
25
20
15
10
SAIC/Raleigh
NESTOR I CRUISE 84-12
11/ 9/84 TO 11/10/84
STATIONS 1 TO 25
TEMPERATURE DEG C
MIN = 5.50 MAX = 27.05

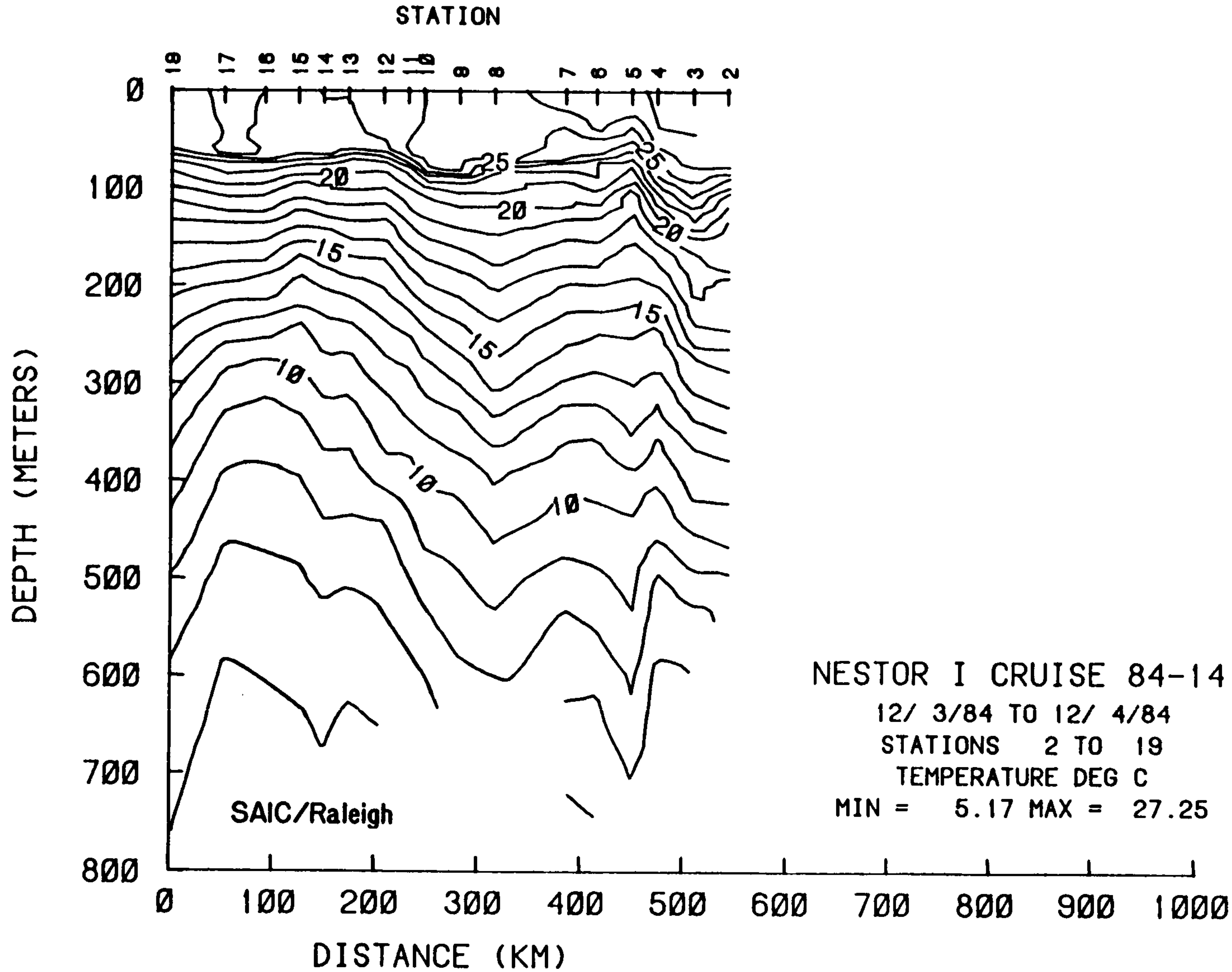

STATION
25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
50
100
150
200
25
20
15
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)
NESTOR I CRUISE 84-12
11/ 9/84 TO 11/10/84
STATIONS 1 TO 25
TEMPERATURE DEG C
MIN = 13.09 MAX = 27.05
SAIC/Raleigh



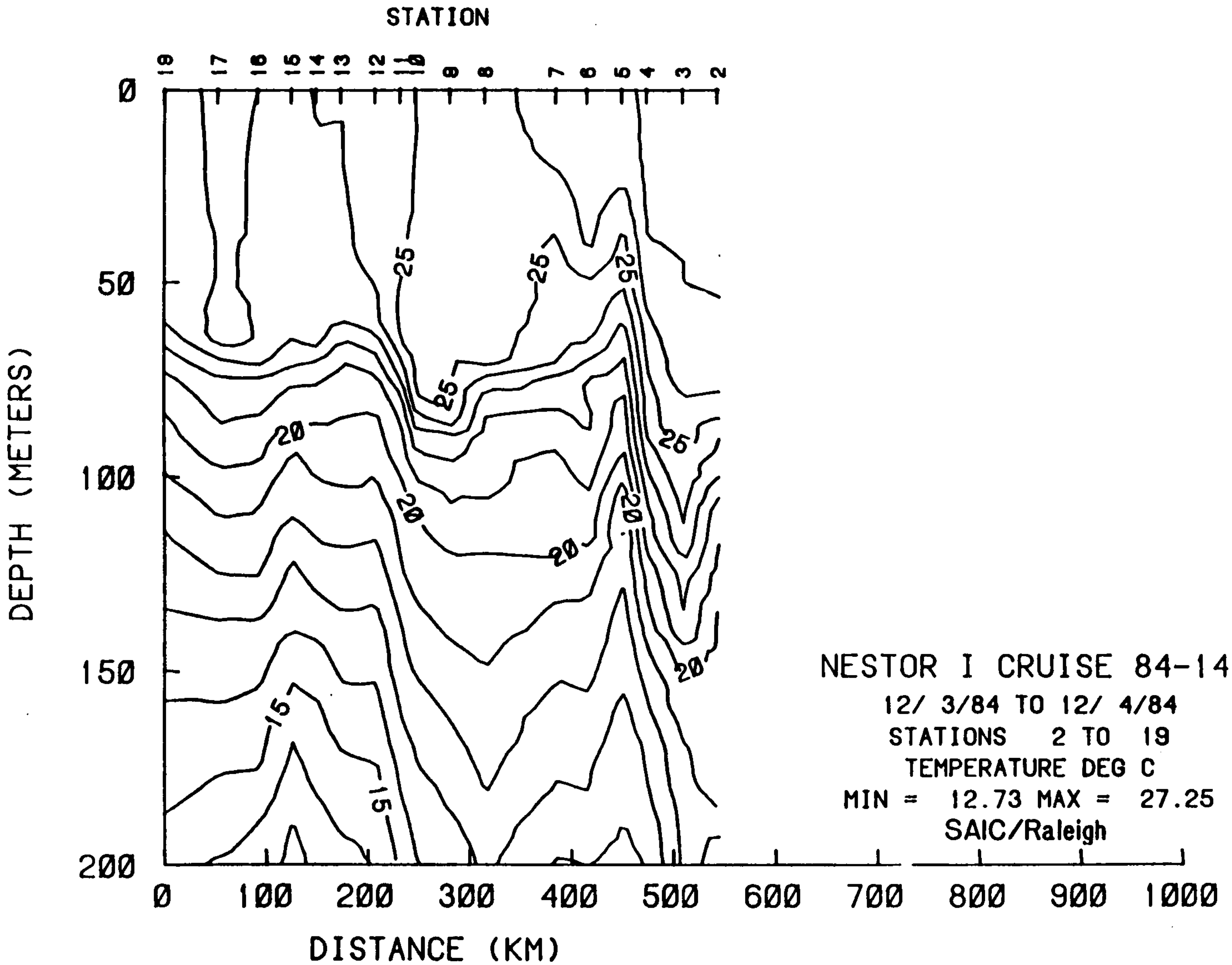
PARAMETERS AT SURFACE NESTOR I CRUISE 84-12

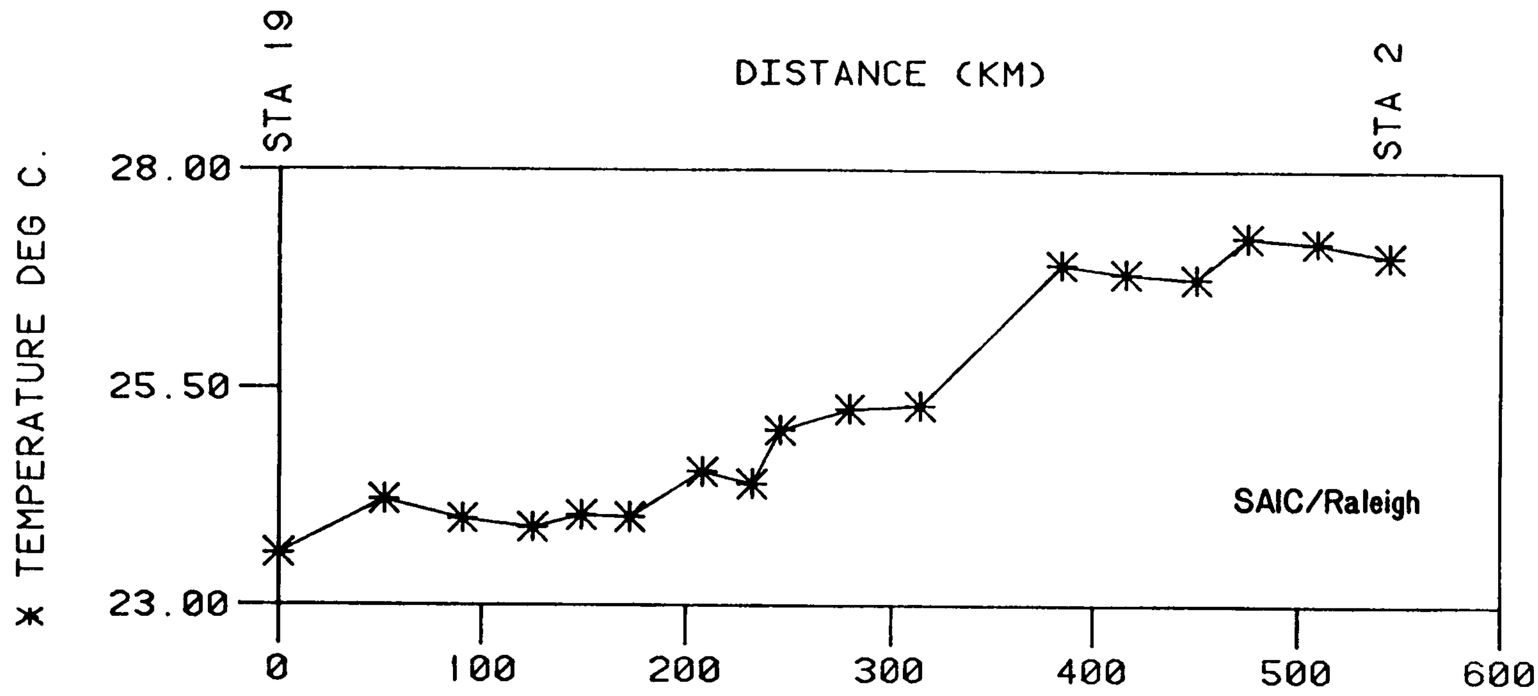


NESTOR I CRUISE 84-14
12/ 3/84 TO 12/ 4/84
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
1000 m
200 m
19
2
SAIC/Raleigh

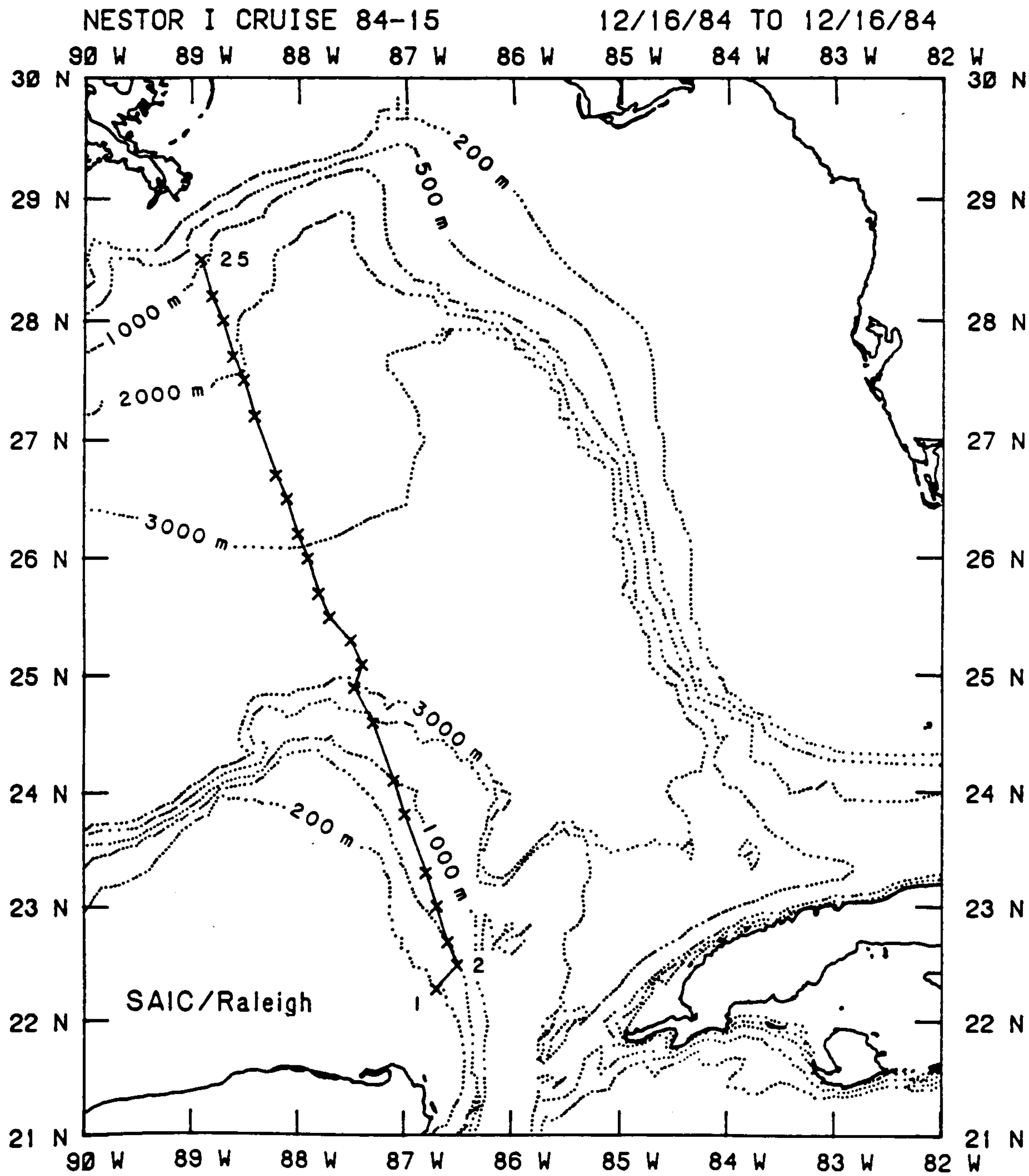


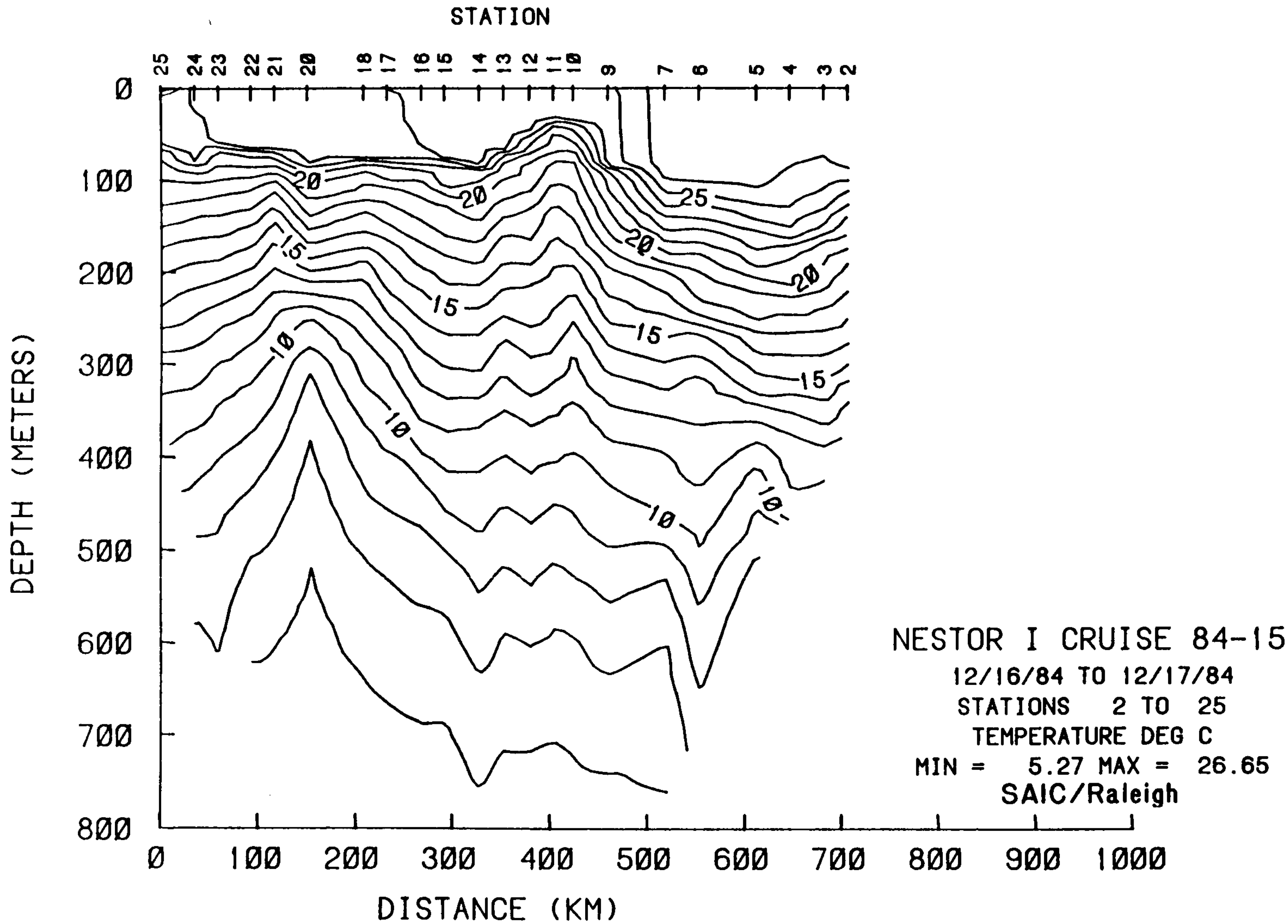
STATION
19 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
25
20
15
10
SAIC/Raleigh
NESTOR I CRUISE 84-14
12/ 3/84 TO 12/ 4/84
STATIONS 2 TO 19
TEMPERATURE DEG C
MIN = 5.17 MAX = 27.25
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)

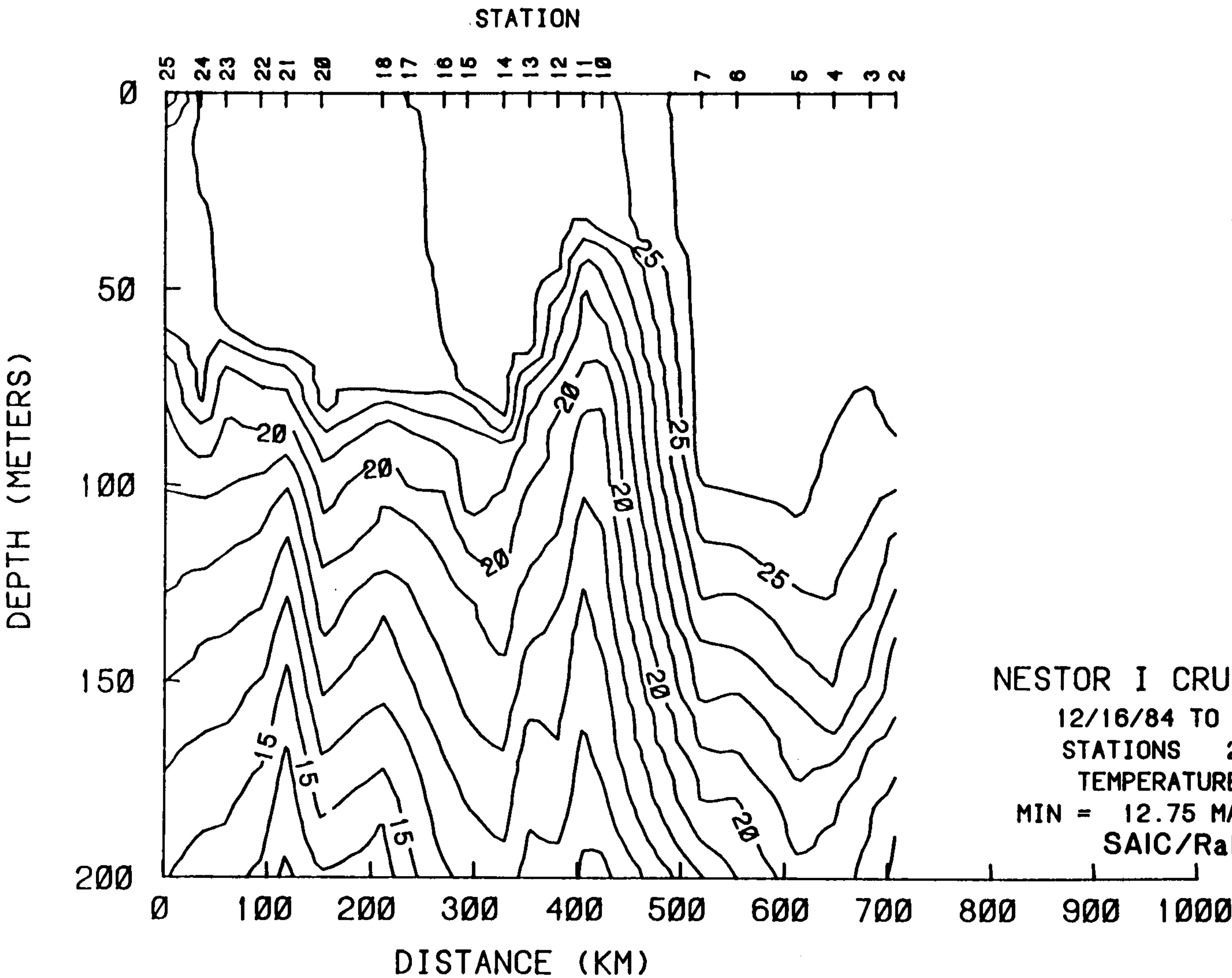

STATION
19 17 16 15 14 13 12 10 9 8 7 6 5 4 3 2
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
NESTOR I CRUISE 84-14
12/ 3/84 TO 12/ 4/84
STATIONS 2 TO 19
TEMPERATURE DEG C
MIN = 12.73 MAX = 27.25
SAIC/Raleigh



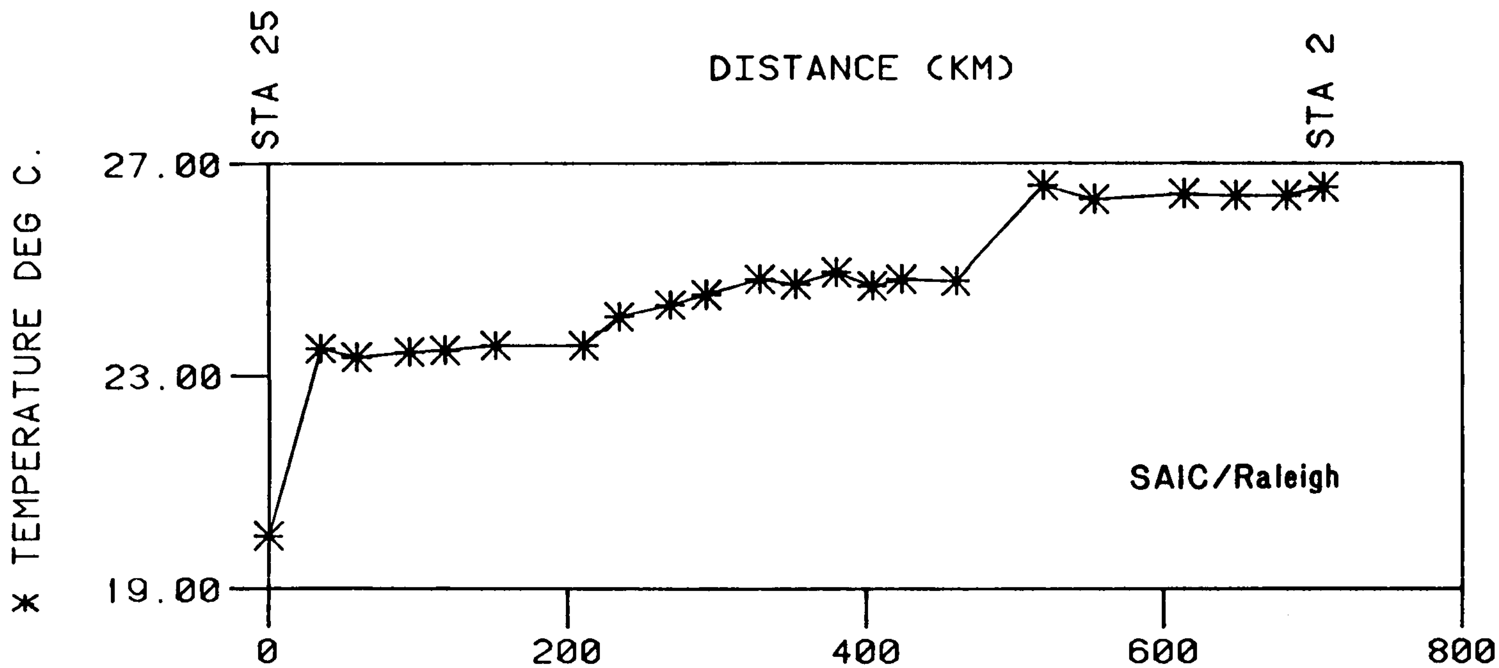
PARAMETERS AT SURFACE NESTOR I CRUISE 84-14


NESTOR I CRUISE 84-15
12/16/84 TO 12/16/84
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
1000 m
200 m
25
2
1
SAIC/Raleigh

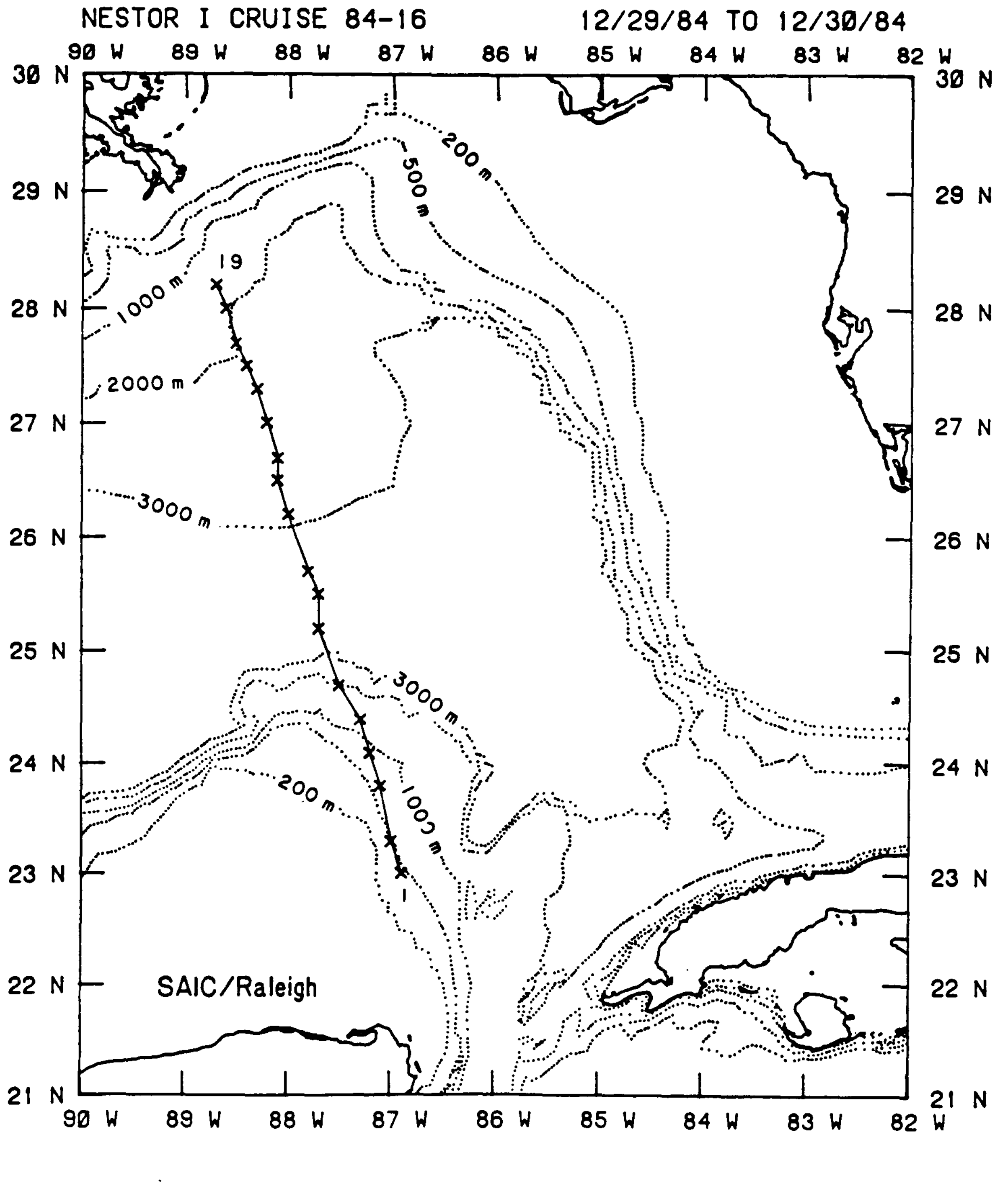

STATION
25 24 23 22 21 20 18 17 16 15 14 13 12 11 10 9 7 6 5 4 3 2
DEPTH (METERS)
0 100 200 300 400 500 600 700 800
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)
25
20
15
10
NESTOR I CRUISE 84-15
12/16/84 TO 12/17/84
STATIONS 2 TO 25
TEMPERATURE DEG C
MIN = 5.27 MAX = 26.65
SAIC/Raleigh

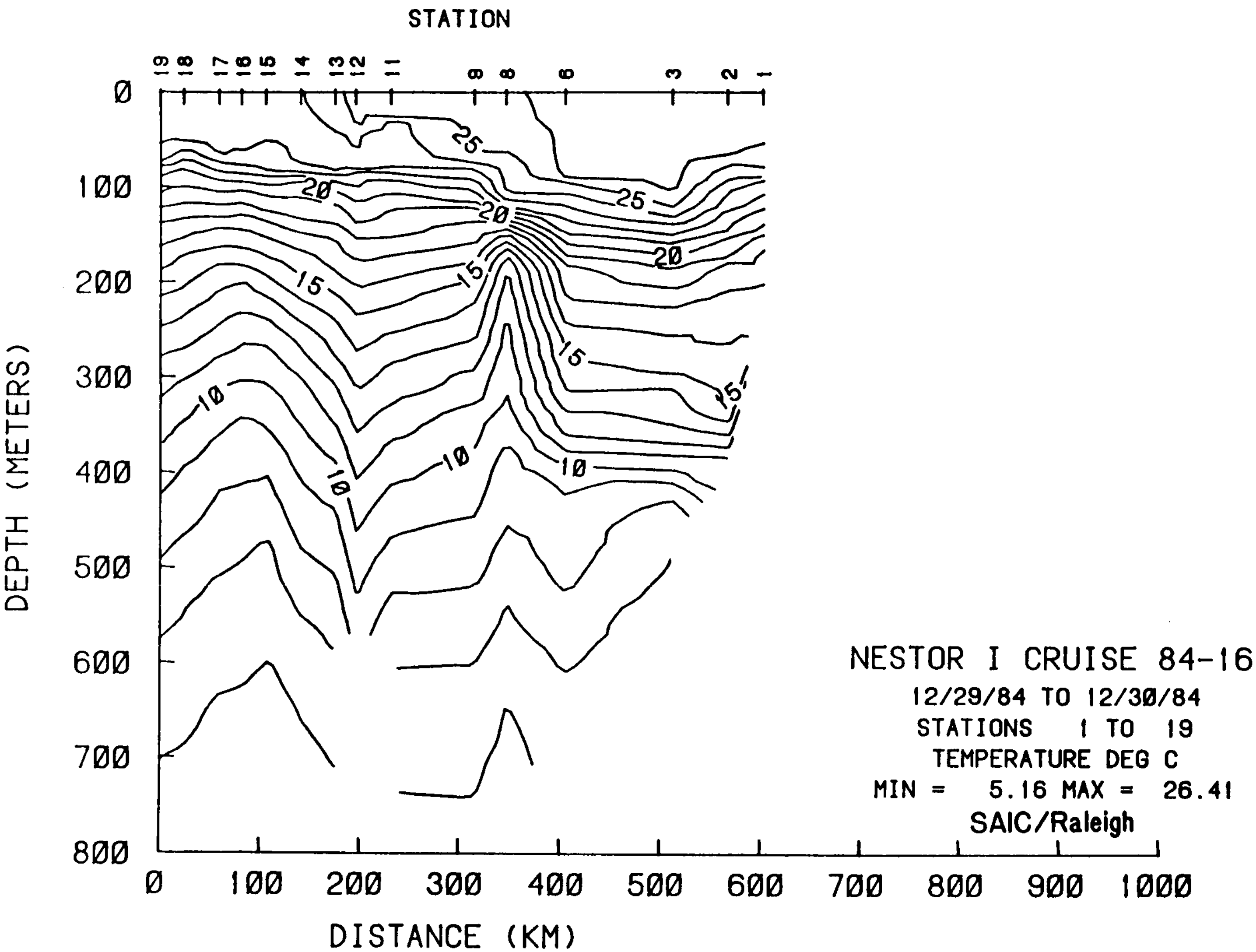


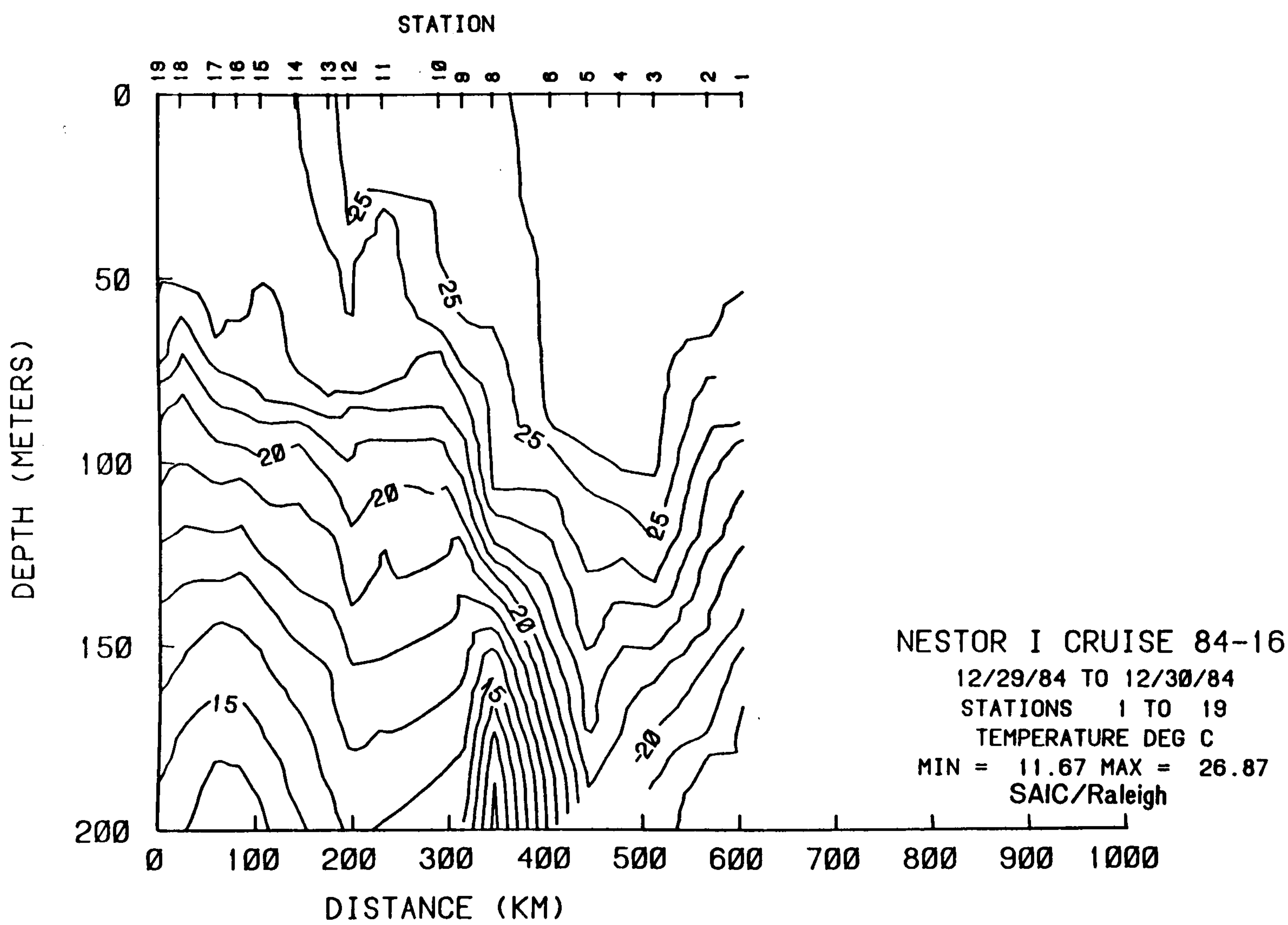
NESTOR I CRUISE 84-15
12/16/84 TO 12/17/84
STATIONS 2 TO 25
TEMPERATURE DEG C
MIN = 12.75 MAX = 26.65
SAIC/Raleigh

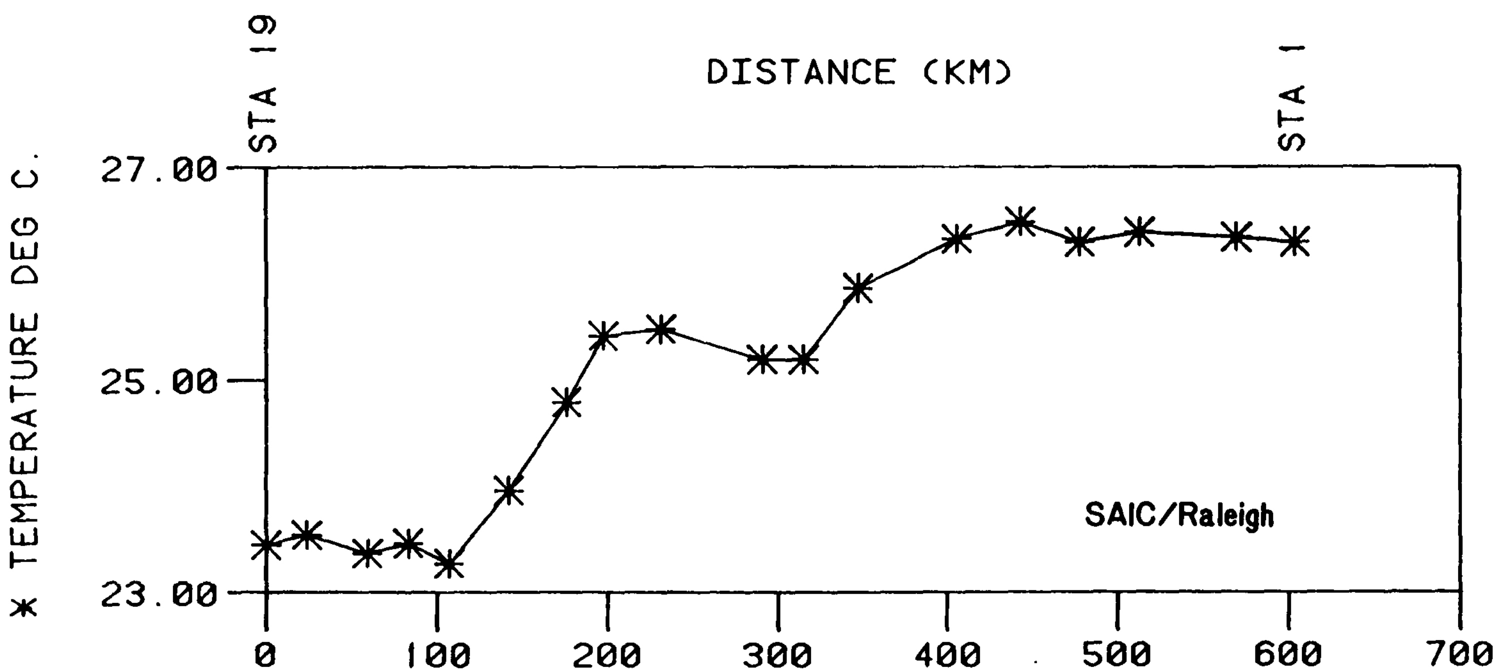


PARAMETERS AT SURFACE NESTOR I CRUISE 84-15

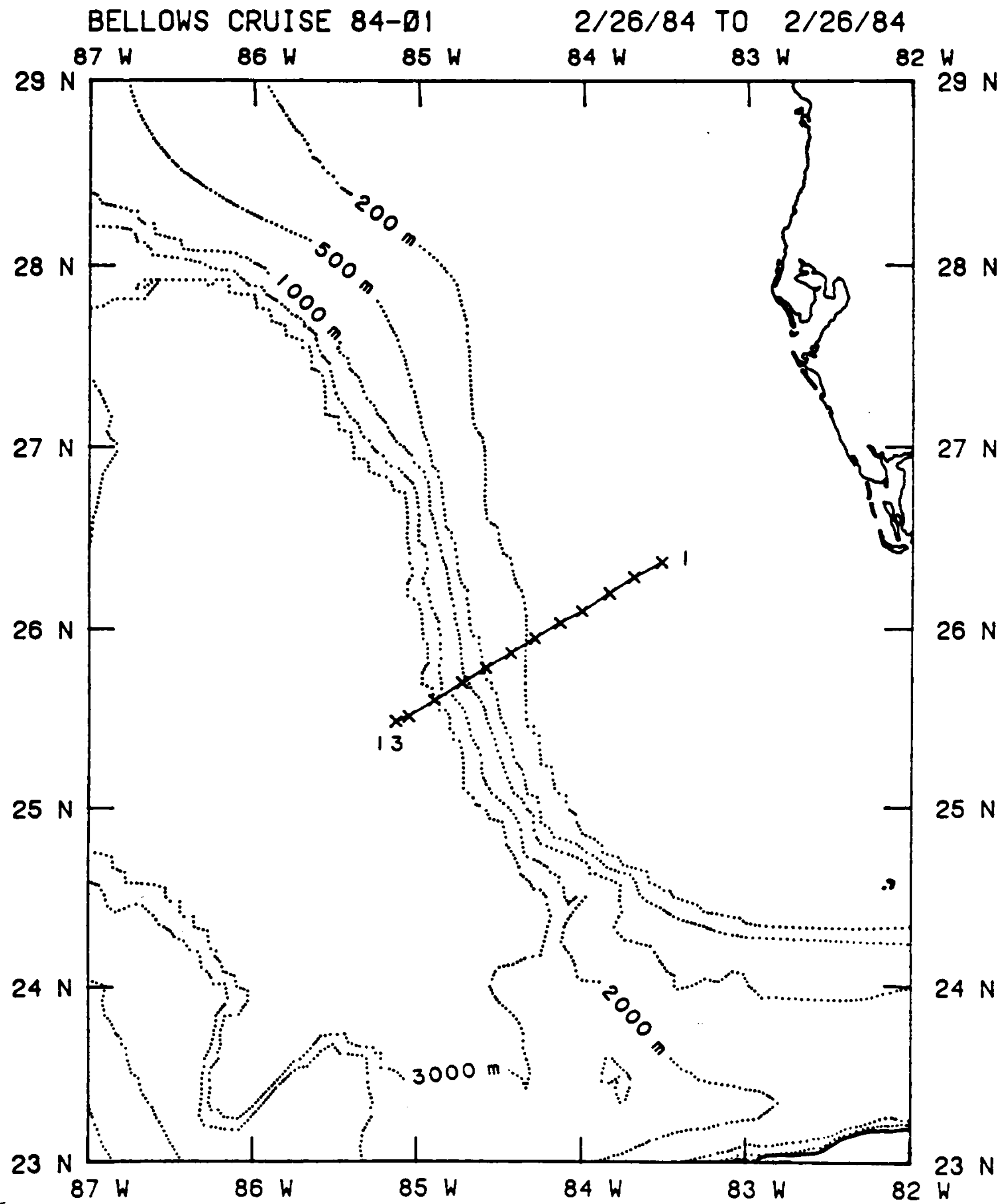

NESTOR I CRUISE 84-16
12/29/84 TO 12/30/84
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
19
1
SAIC/Raleigh


STATION
19 18 17 16 15 14 13 12 11 9 8 6 3 2 1
DEPTH (METERS)
Ø
100
200
300
400
500
600
700
800
DISTANCE (KM)
Ø 100 200 300 400 500 600 700 800 900 1000
25
20
15
10
NESTOR I CRUISE 84-16
12/29/84 TO 12/30/84
STATIONS 1 TO 19
TEMPERATURE DEG C
MIN = 5.16 MAX = 26.41
SAIC/Raleigh

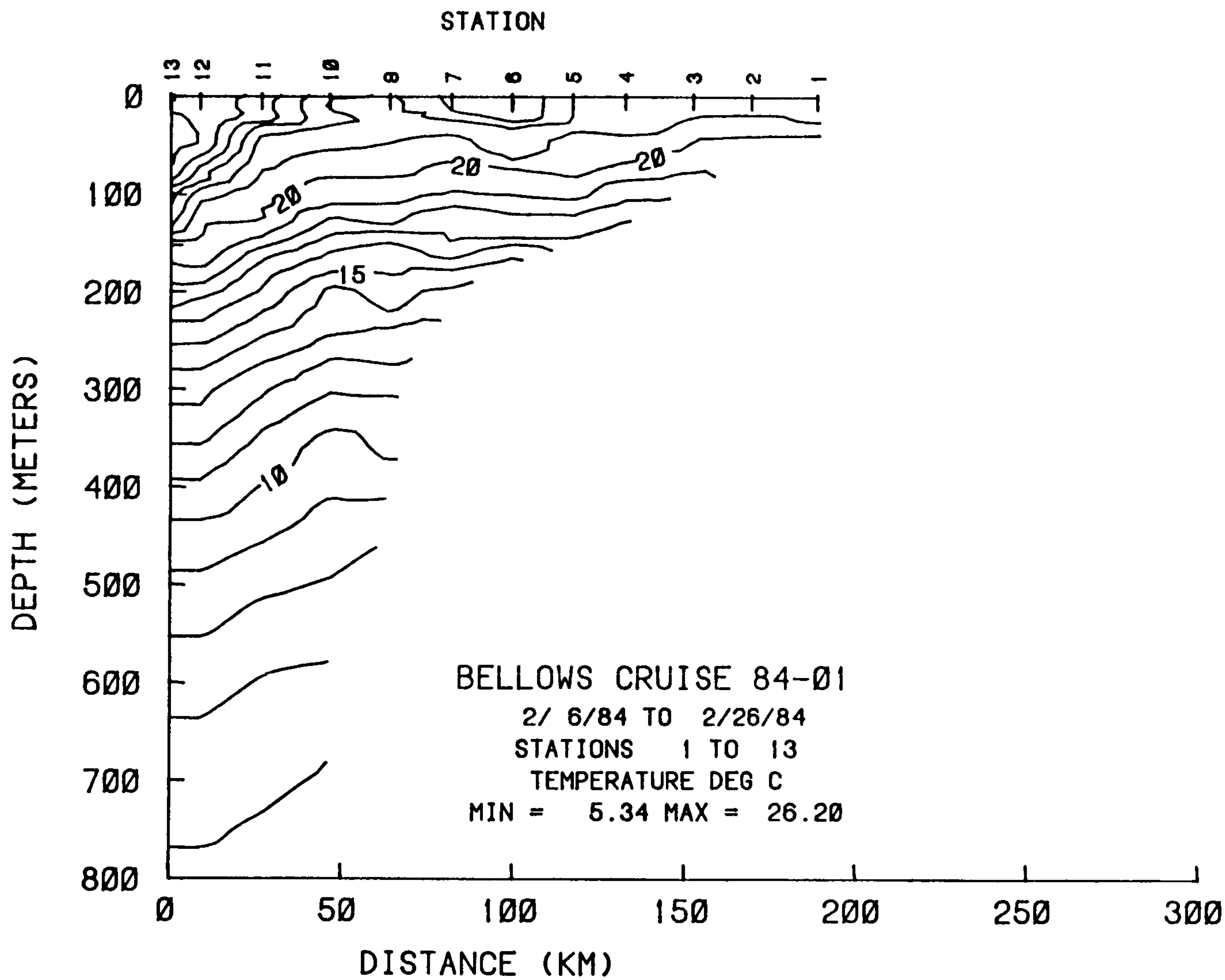

STATION
19 18 17 16 15 14 13 12 11 10 9 8 6 5 4 3 2 1
DEPTH (METERS)
DISTANCE (KM)
0 50 100 150 200
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
NESTOR I CRUISE 84-16
12/29/84 TO 12/30/84
STATIONS 1 TO 19
TEMPERATURE DEG C
MIN = 11.67 MAX = 26.87
SAIC/Raleigh

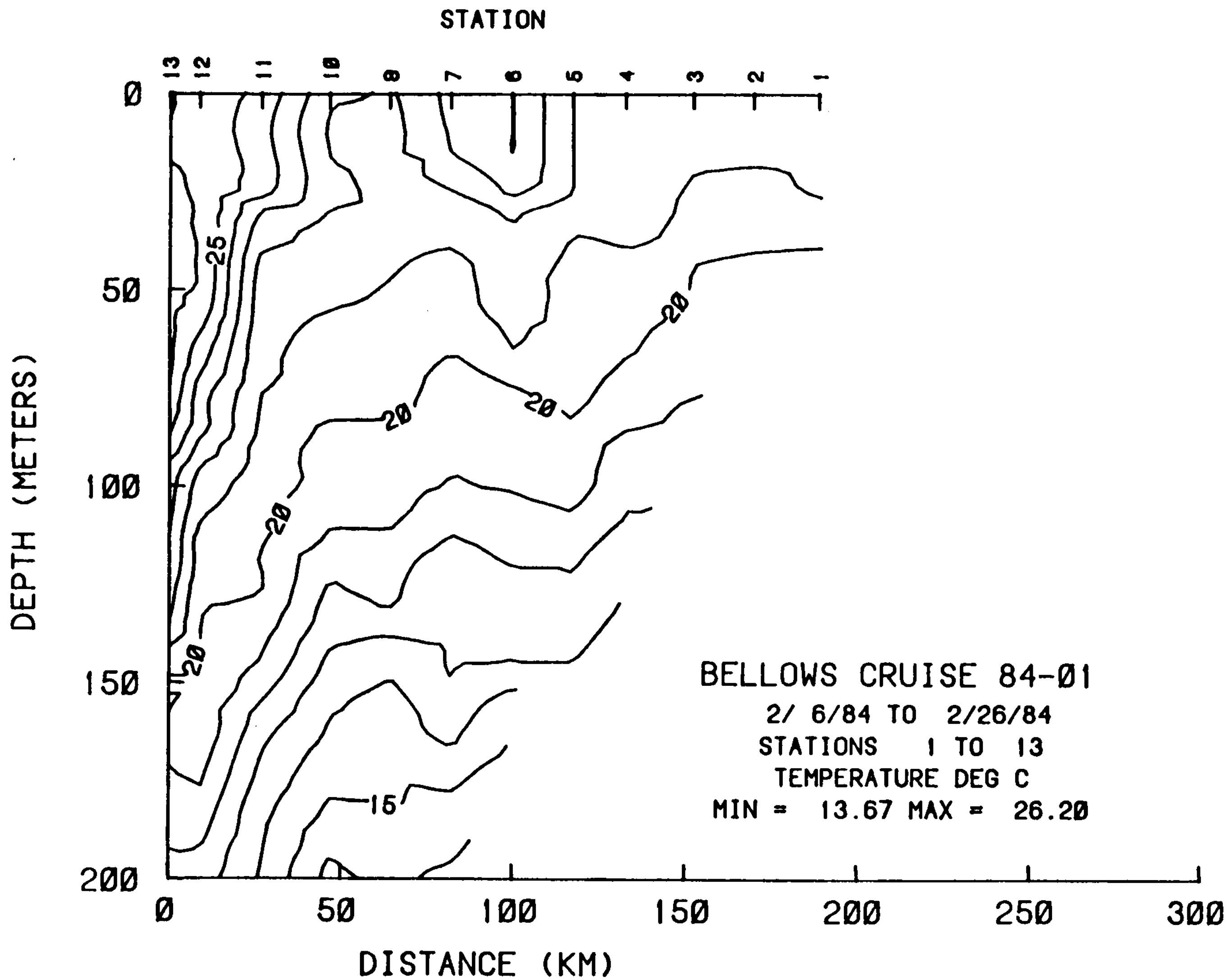


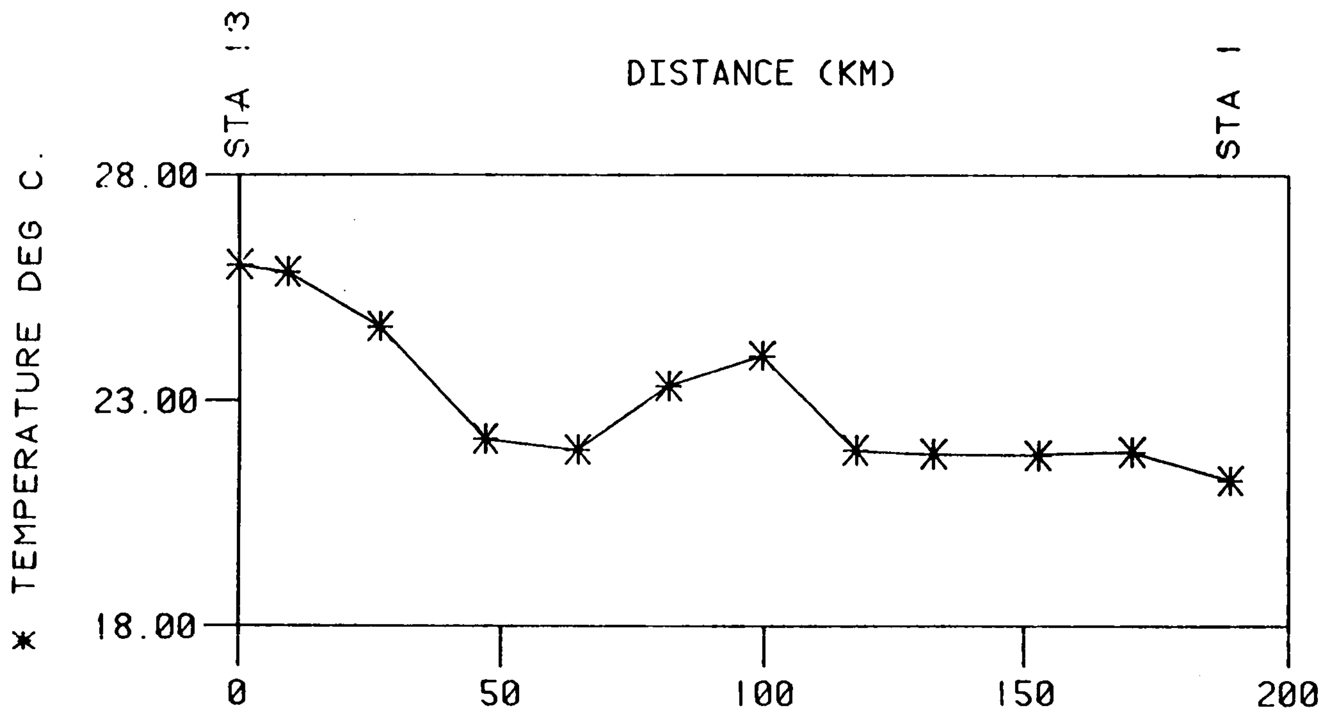
PARAMETERS AT SURFACE NESTOR I CRUISE 84-16



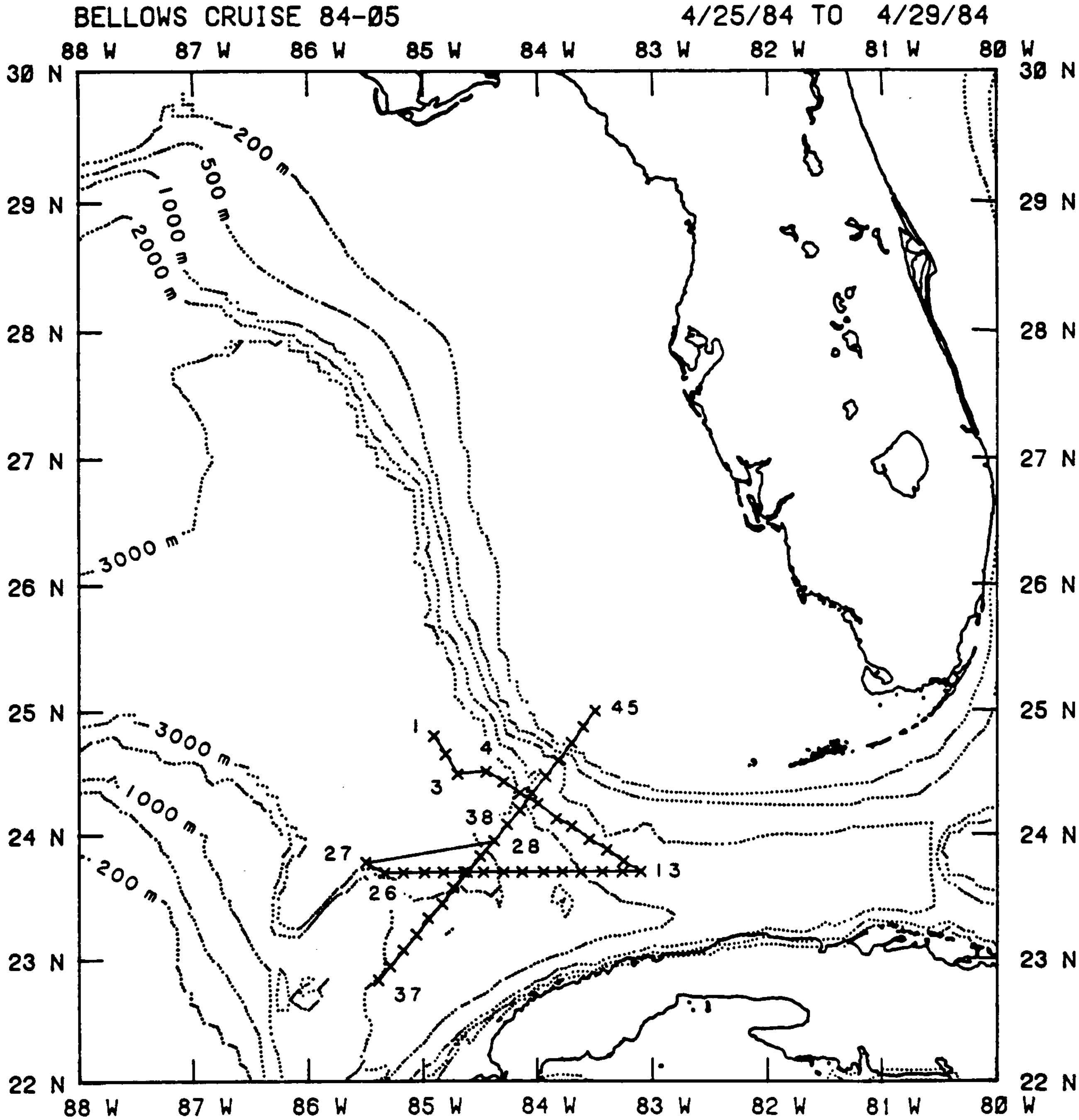
BELLOWS CRUISE 84-Ø1
2/26/84 TO 2/26/84
87 W
86 W
85 W
84 W
83 W
82 W
29 N
28 N
27 N
26 N
25 N
24 N
23 N
200 m
500 m
1000 m
2000 m
3000 m
1
13

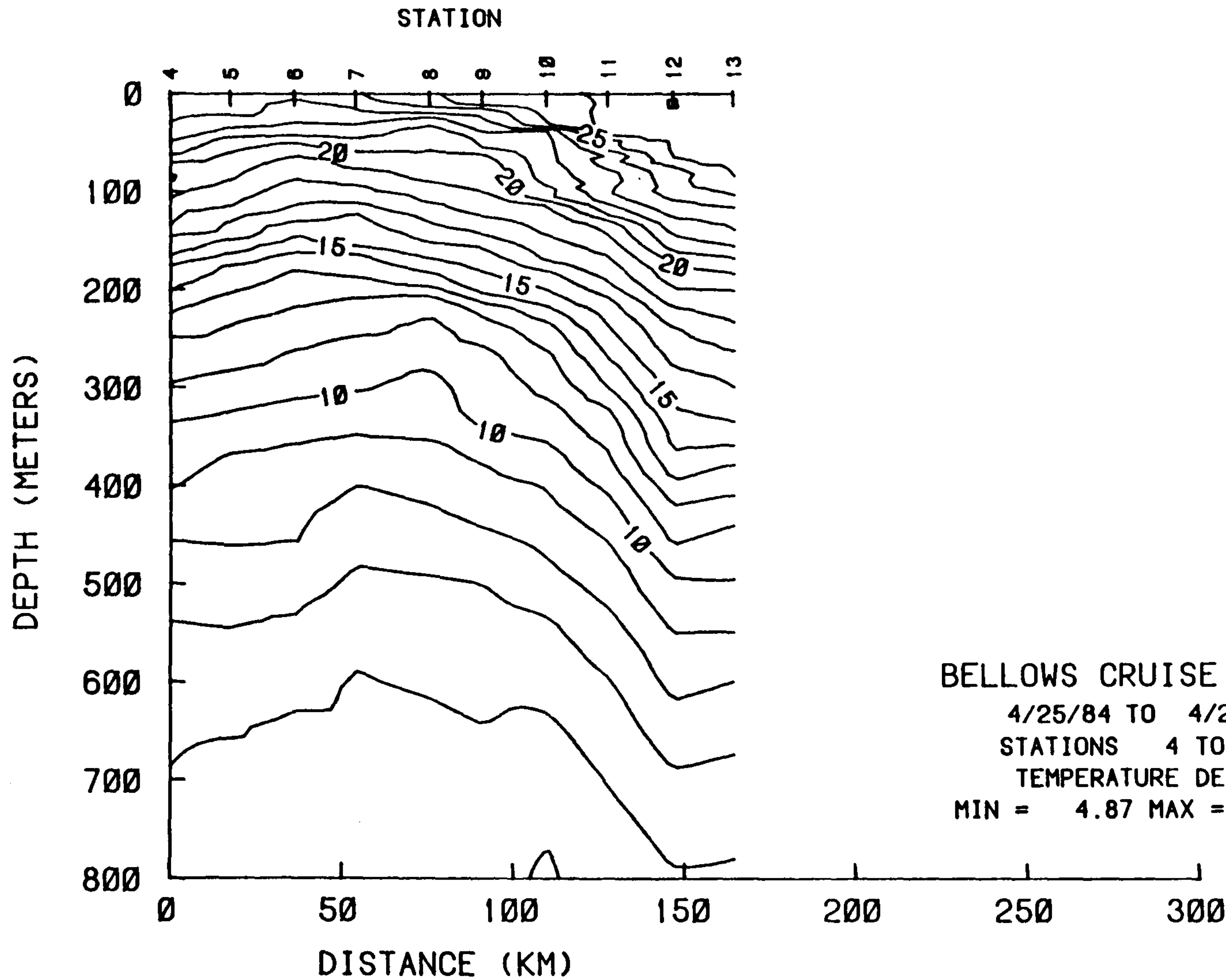

STATION
13 12 11 10 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 50 100 150 200 250 300
20
20
20
15
10
BELLOWS CRUISE 84-01
2/ 6/84 TO 2/26/84
STATIONS 1 TO 13
TEMPERATURE DEG C
MIN = 5.34 MAX = 26.20


STATION
13 12 11 10 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 50 100 150 200 250 300
25
20
15
BELLOWS CRUISE 84-01
2/ 6/84 TO 2/26/84
STATIONS 1 TO 13
TEMPERATURE DEG C
MIN = 13.67 MAX = 26.20

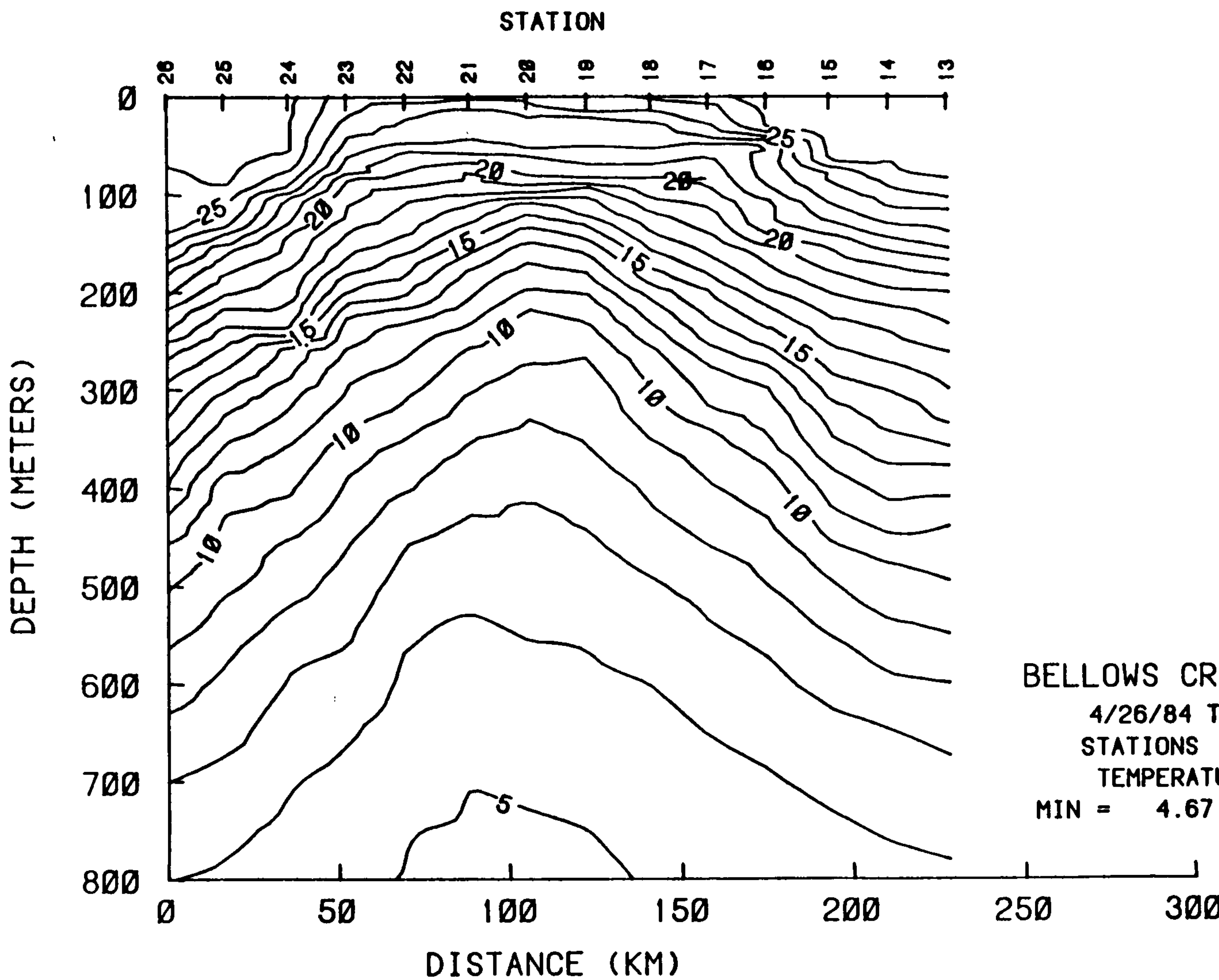


PARAMETERS AT SURFACE BELLOWS CRUISE 84-01

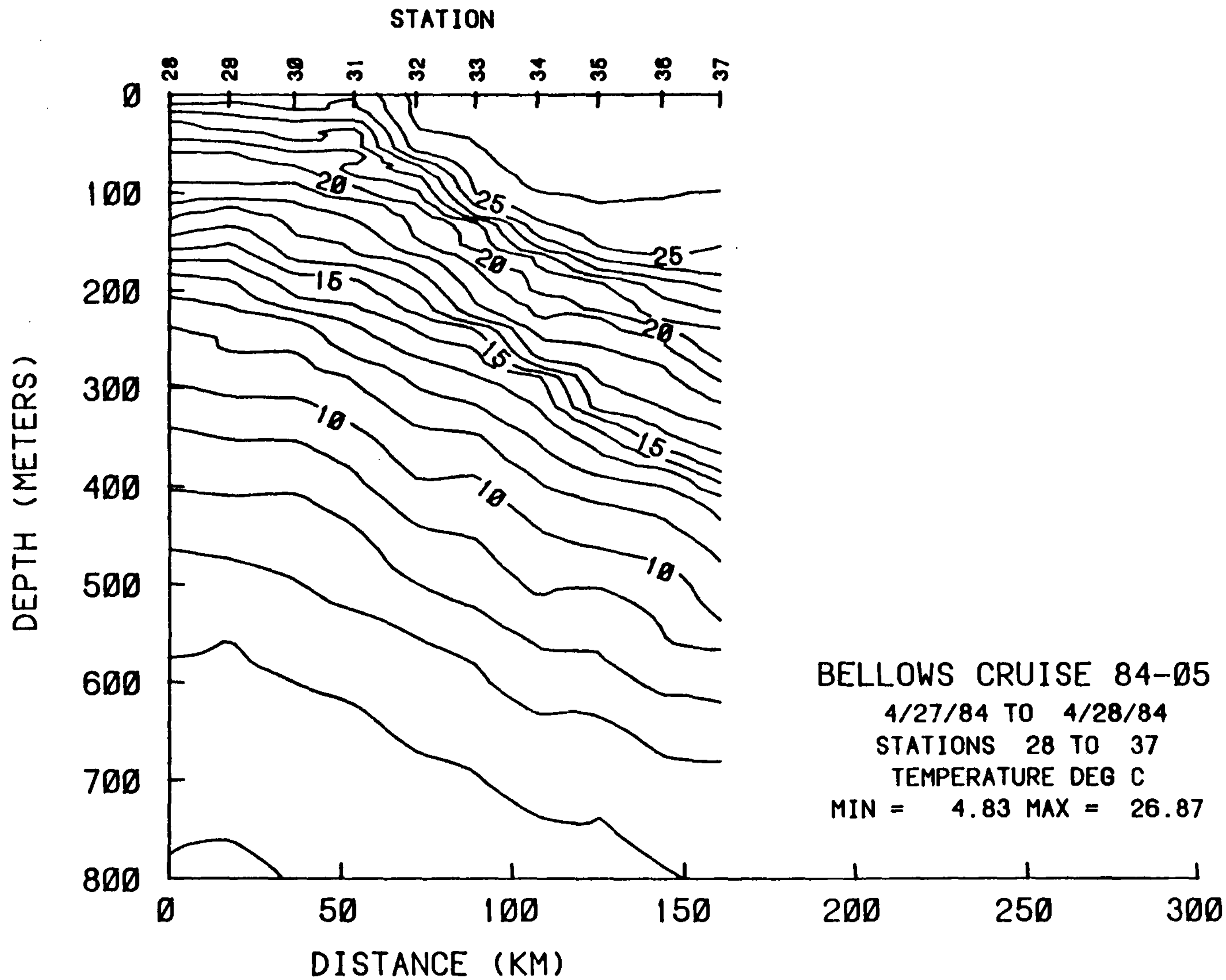

BELLOWS CRUISE 84-Ø5
4/25/84 TO 4/29/84
88 W
87 W
86 W
85 W
84 W
83 W
82 W
81 W
8Ø W
3Ø N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
1000 m
200 m
1
3
4
45
38
28
27
26
13
37

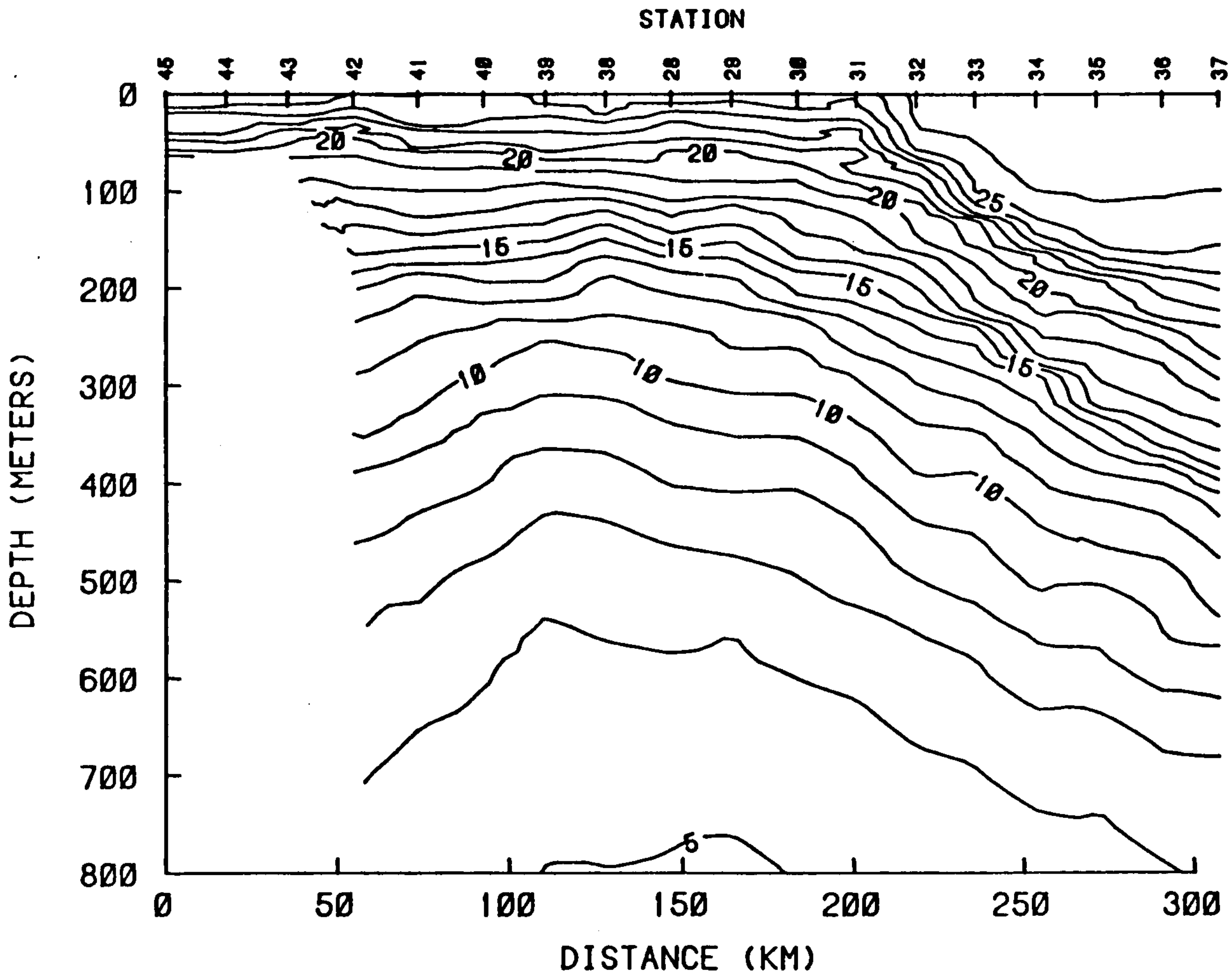


BELLOWS CRUISE 84-05
4/25/84 TO 4/26/84
STATIONS 4 TO 13
TEMPERATURE DEG C
MIN = 4.87 MAX = 26.70

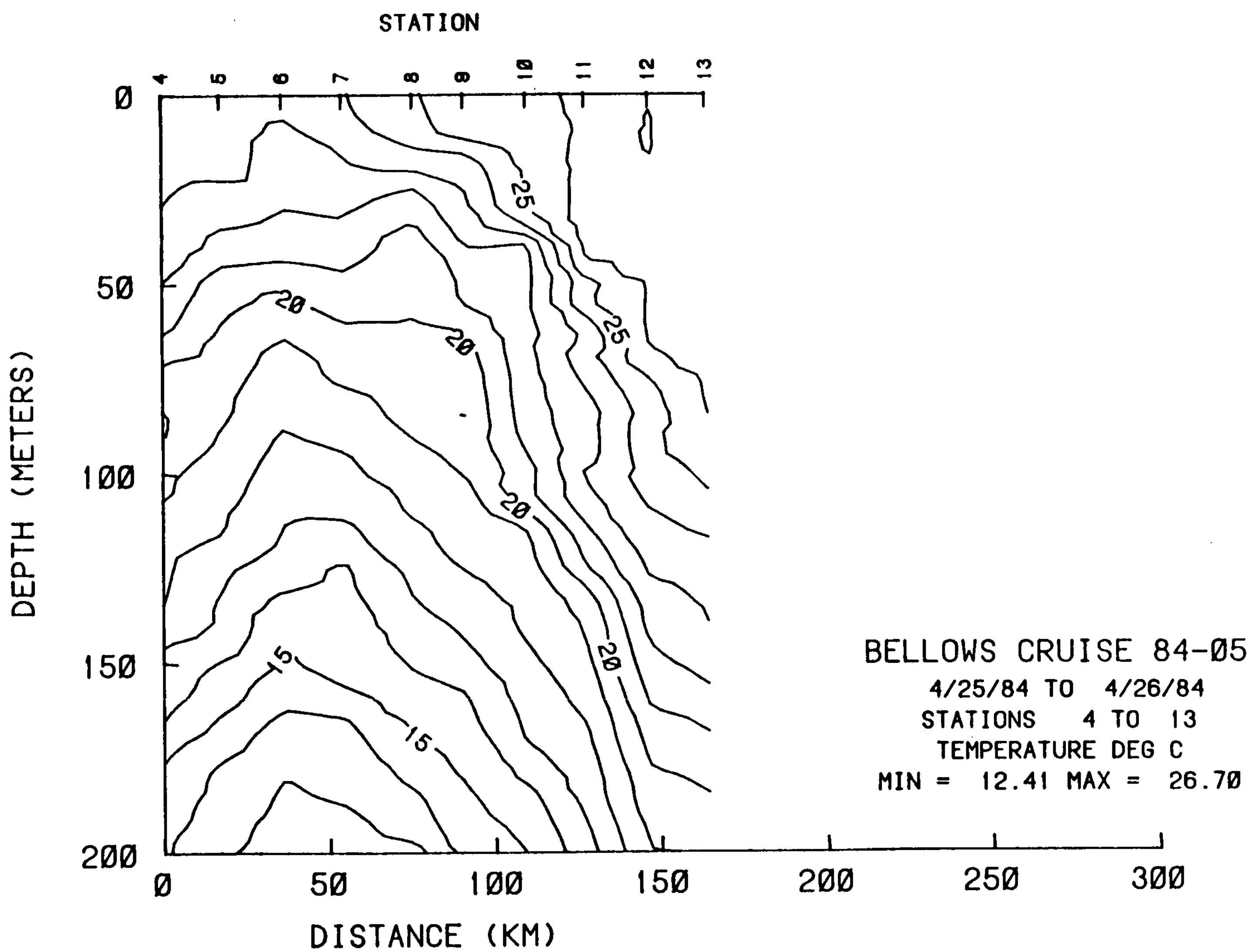


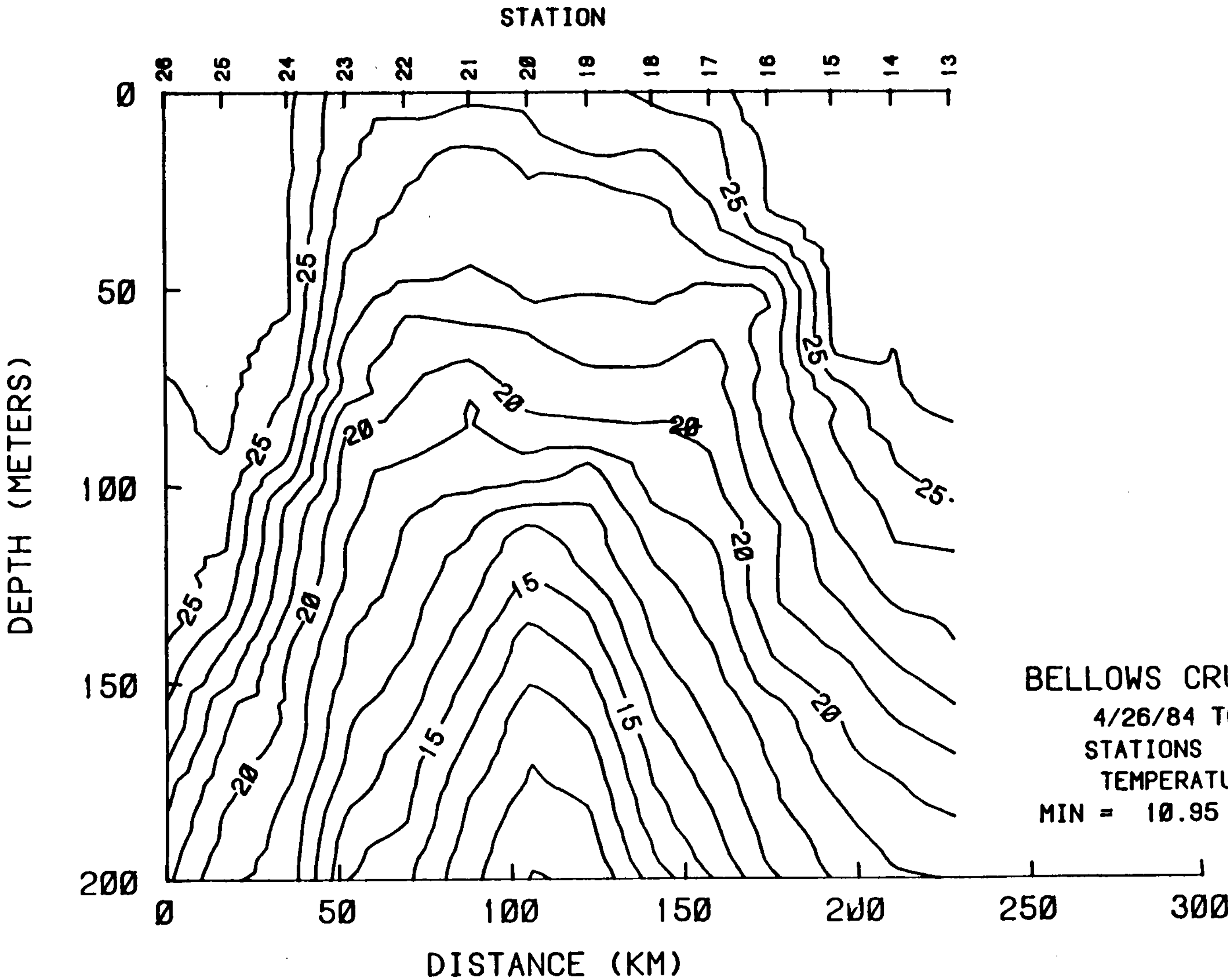
BELLOWS CRUISE 84-05
4/26/84 TO 4/27/84
STATIONS 13 TO 26
TEMPERATURE DEG C
MIN = 4.67 MAX = 26.87


STATION
28
29
30
31
32
33
34
35
36
37
DEPTH (METERS)
DISTANCE (KM)
BELLOWS CRUISE 84-05
4/27/84 TO 4/28/84
STATIONS 28 TO 37
TEMPERATURE DEG C
MIN = 4.83 MAX = 26.87

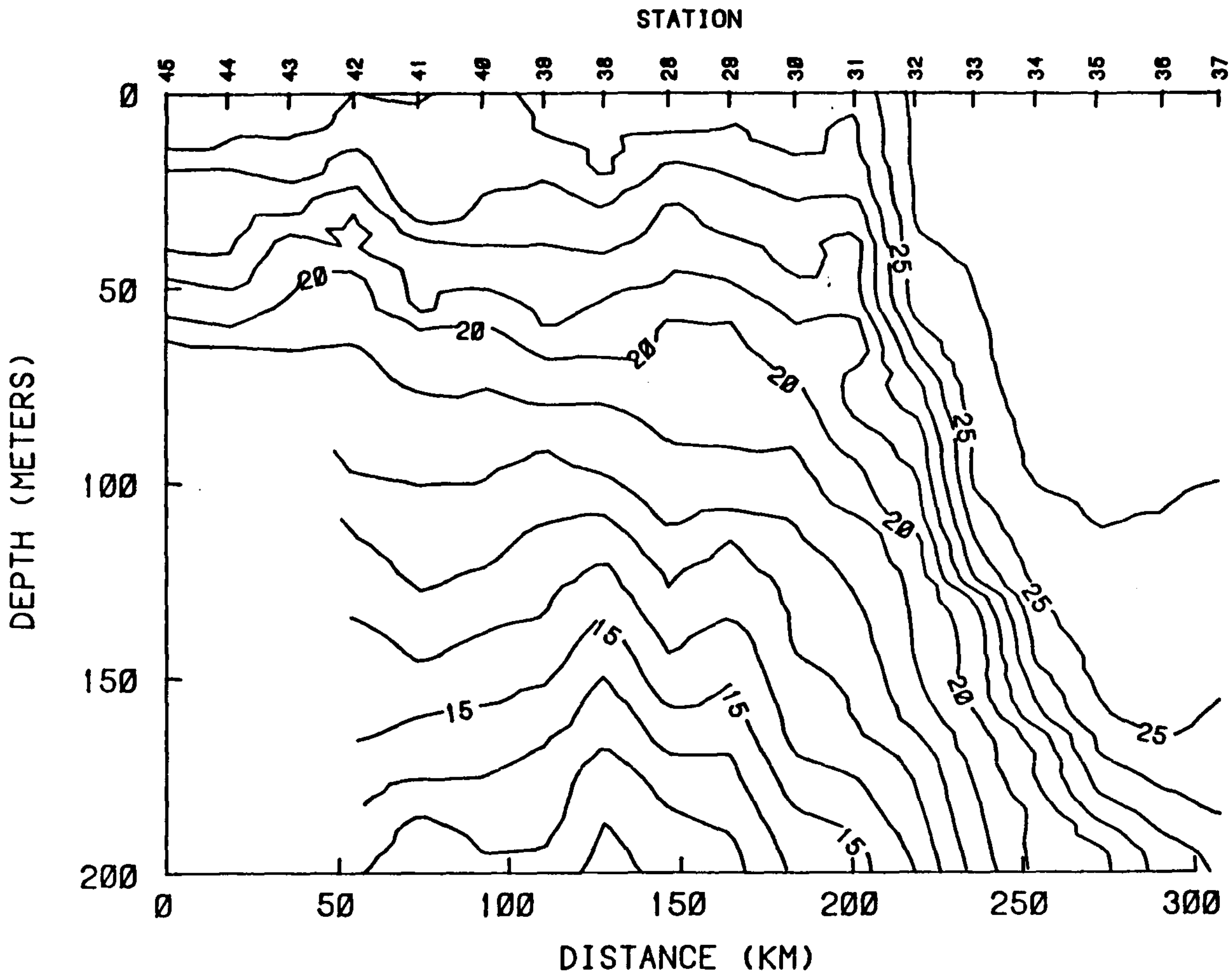


BELLOWS CRUISE 84-Ø5
4/27/84 TO 4/29/84
STATIONS 37 TO 45
TEMPERATURE DEG C
MIN = 4.83 MAX = 26.87

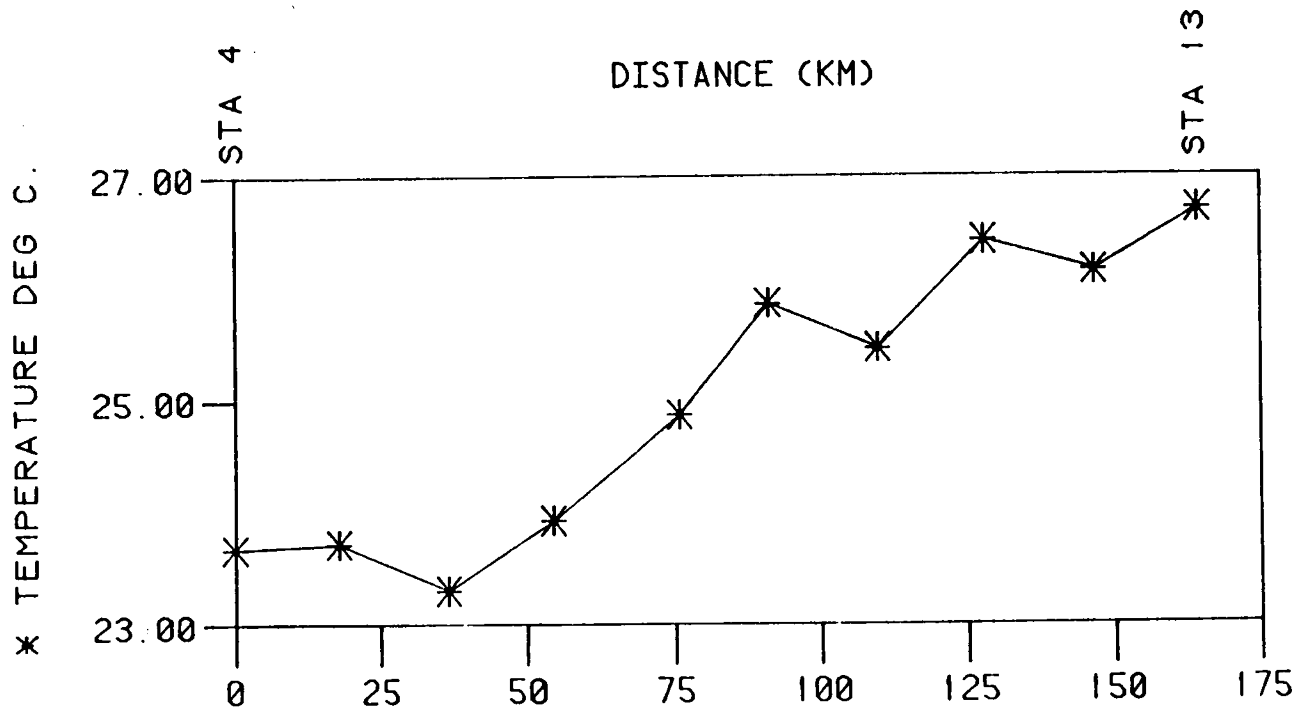

STATION
4 5 6 7 8 9 10 11 12 13
DEPTH (METERS)
0
50
100
150
200
25
25
20
20
20
20
15
15
0 50 100 150 200 250 300
DISTANCE (KM)
BELLOWS CRUISE 84-05
4/25/84 TO 4/26/84
STATIONS 4 TO 13
TEMPERATURE DEG C
MIN = 12.41 MAX = 26.70



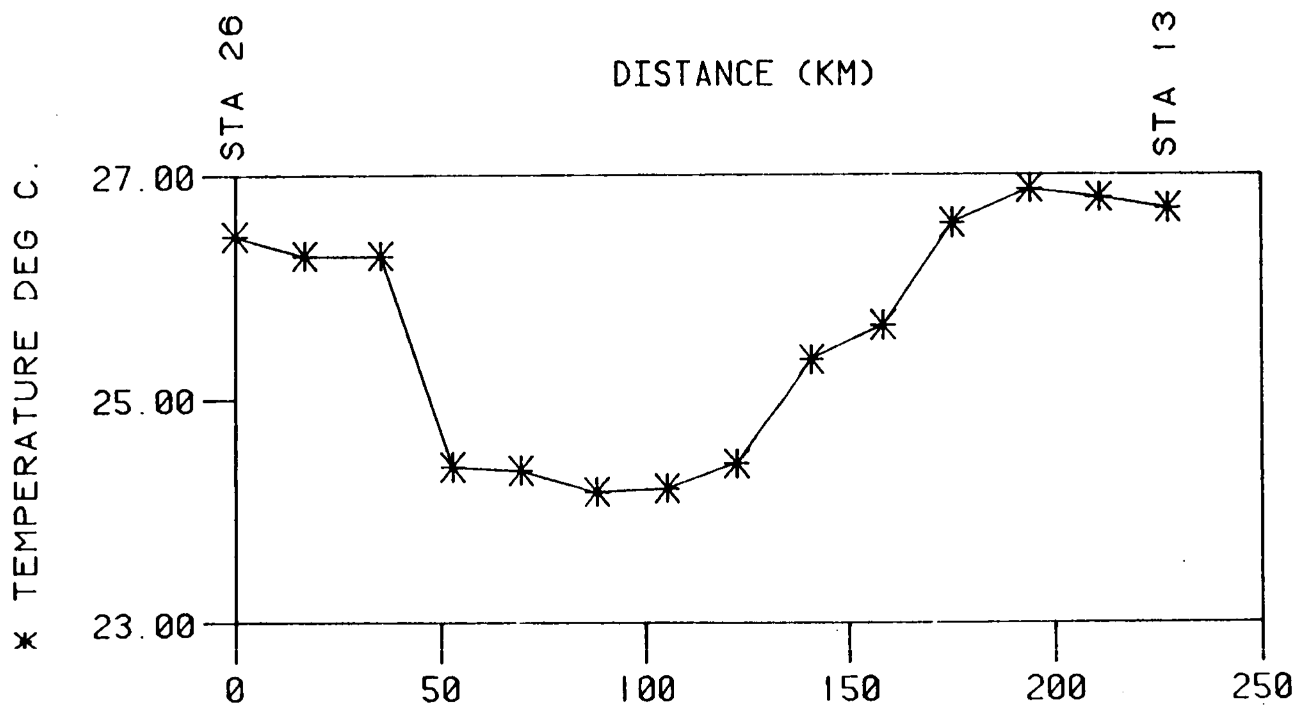
BELLOWS CRUISE 84-05
4/26/84 TO 4/27/84
STATIONS 13 TO 26
TEMPERATURE DEG C
MIN = 10.95 MAX = 26.87



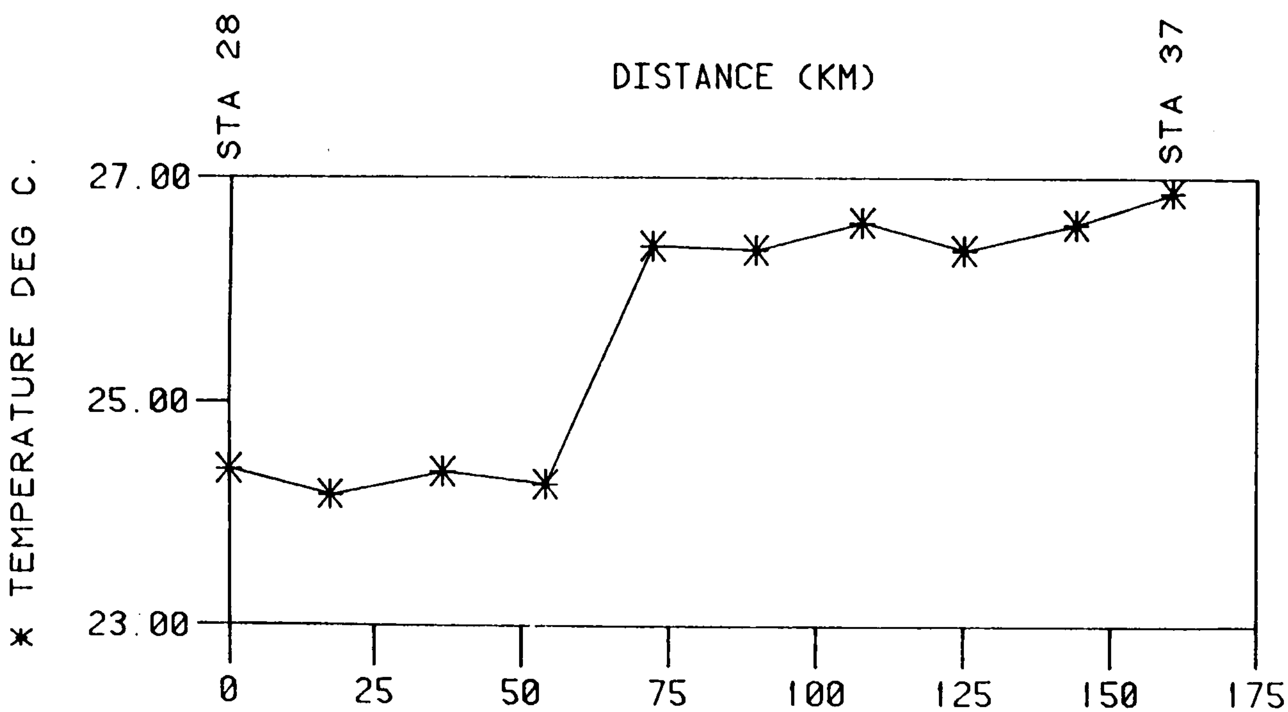
BELLOWS CRUISE 84-Ø5
4/27/84 TO 4/29/84
STATIONS 37 TO 45
TEMPERATURE DEG C
MIN = 11.52 MAX = 26.87



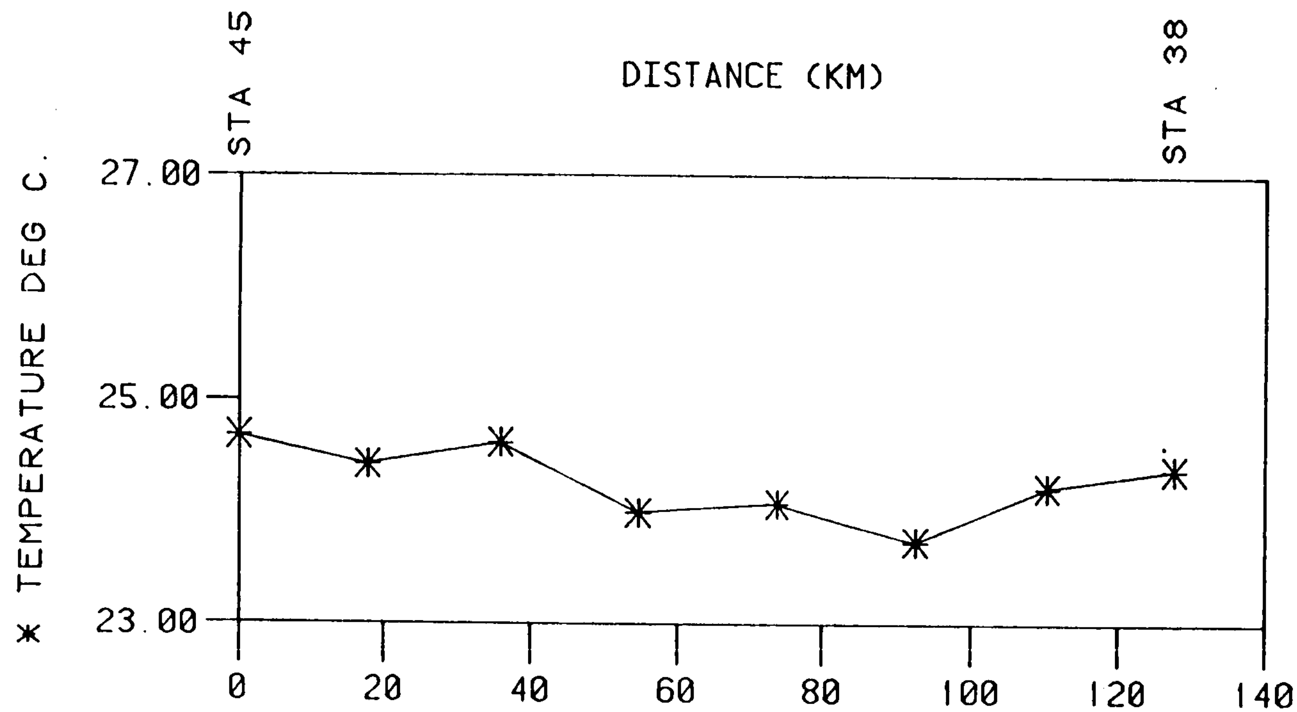
PARAMETERS AT SURFACE BELLOWS CRUISE 84-05



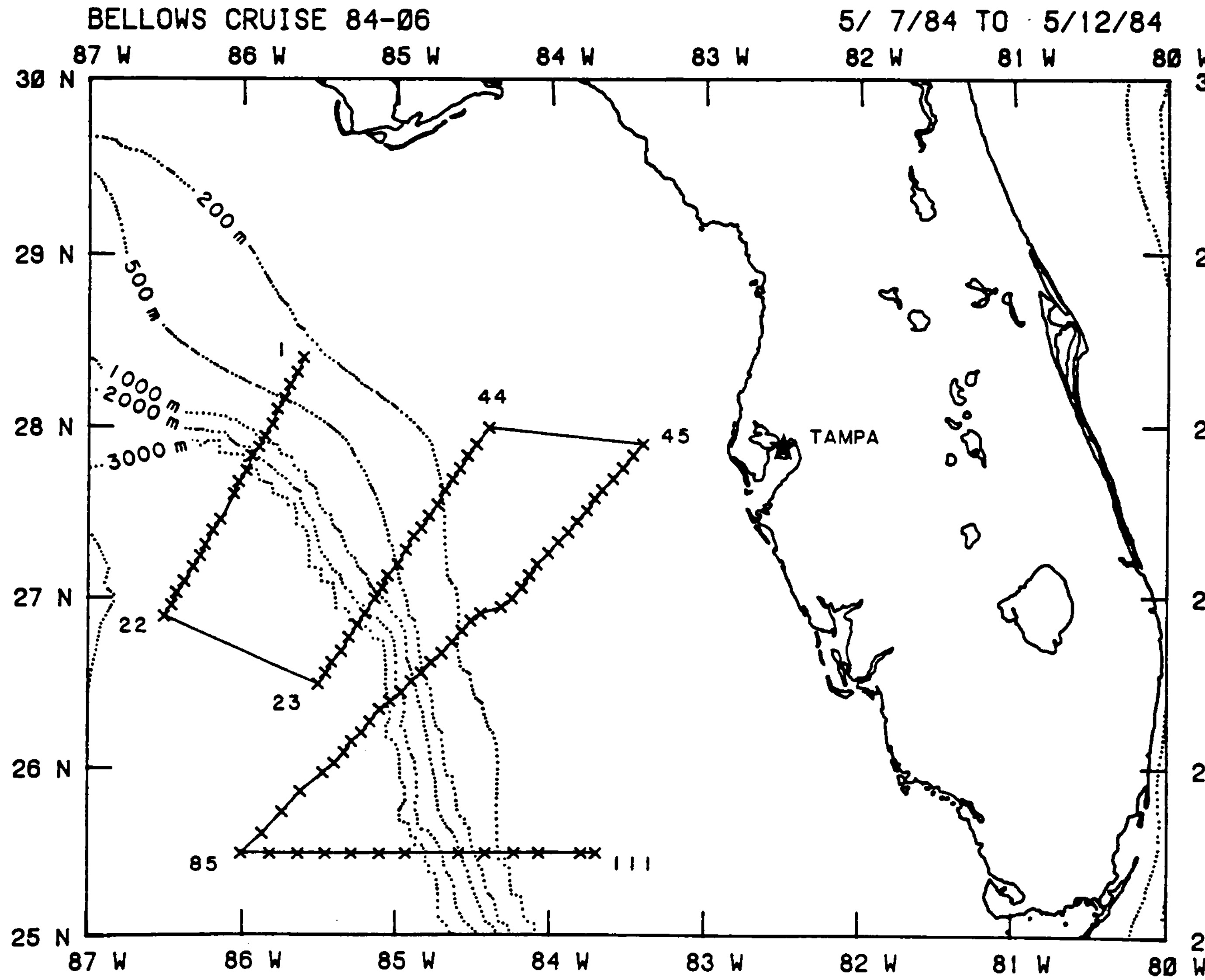
PARAMETERS AT SURFACE BELLOWS CRUISE 84-05



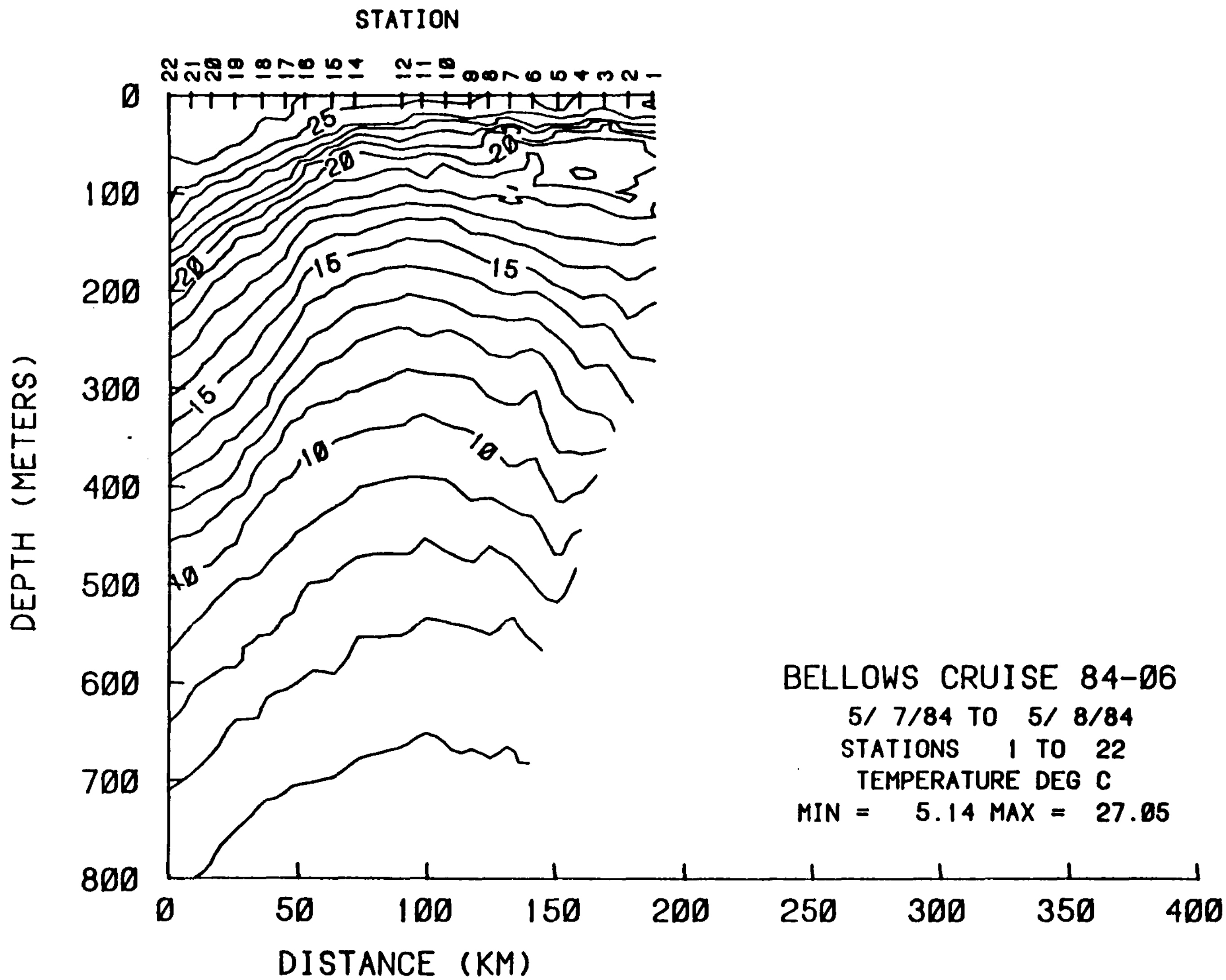
PARAMETERS AT SURFACE BELLOWS CRUISE 84-05

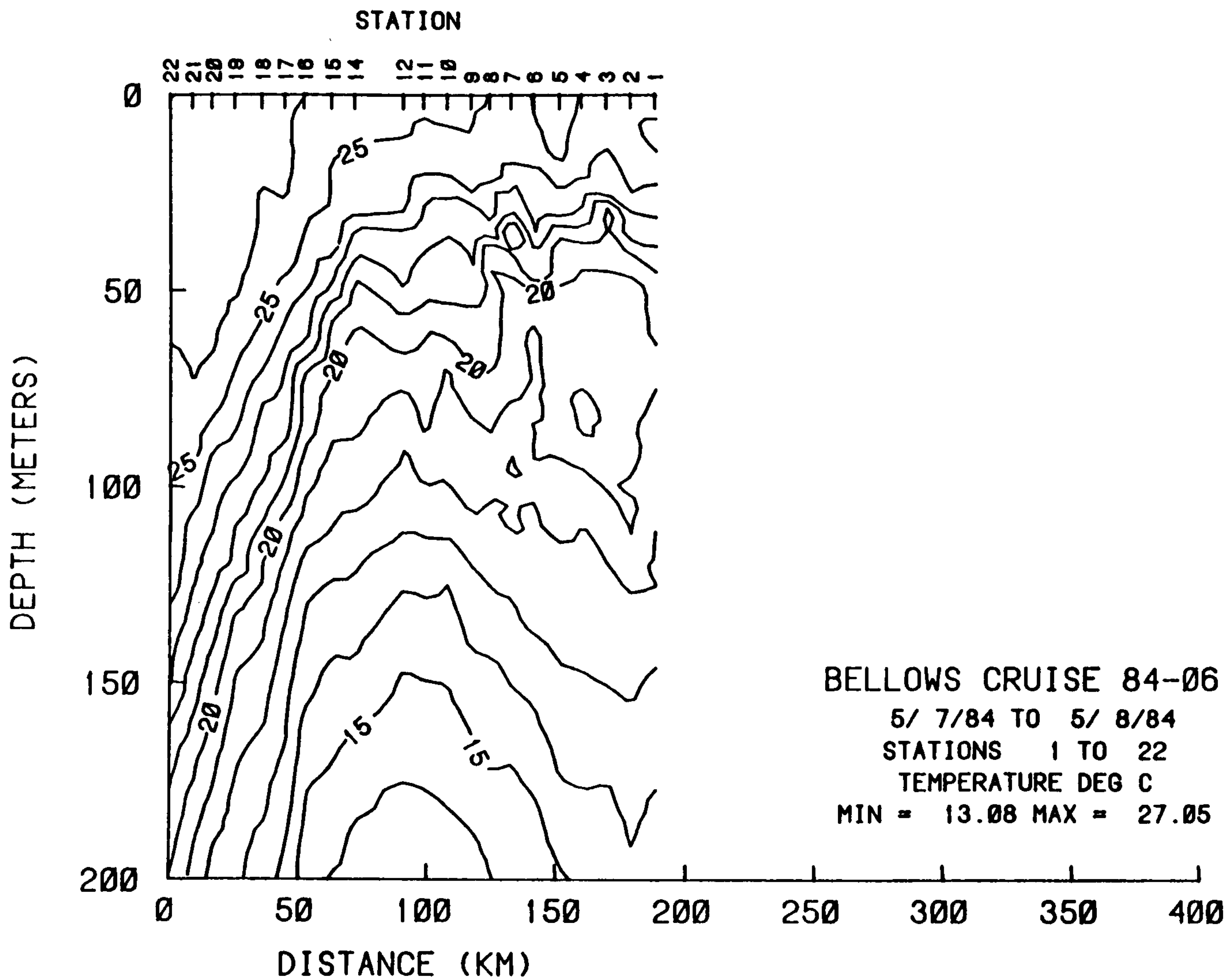


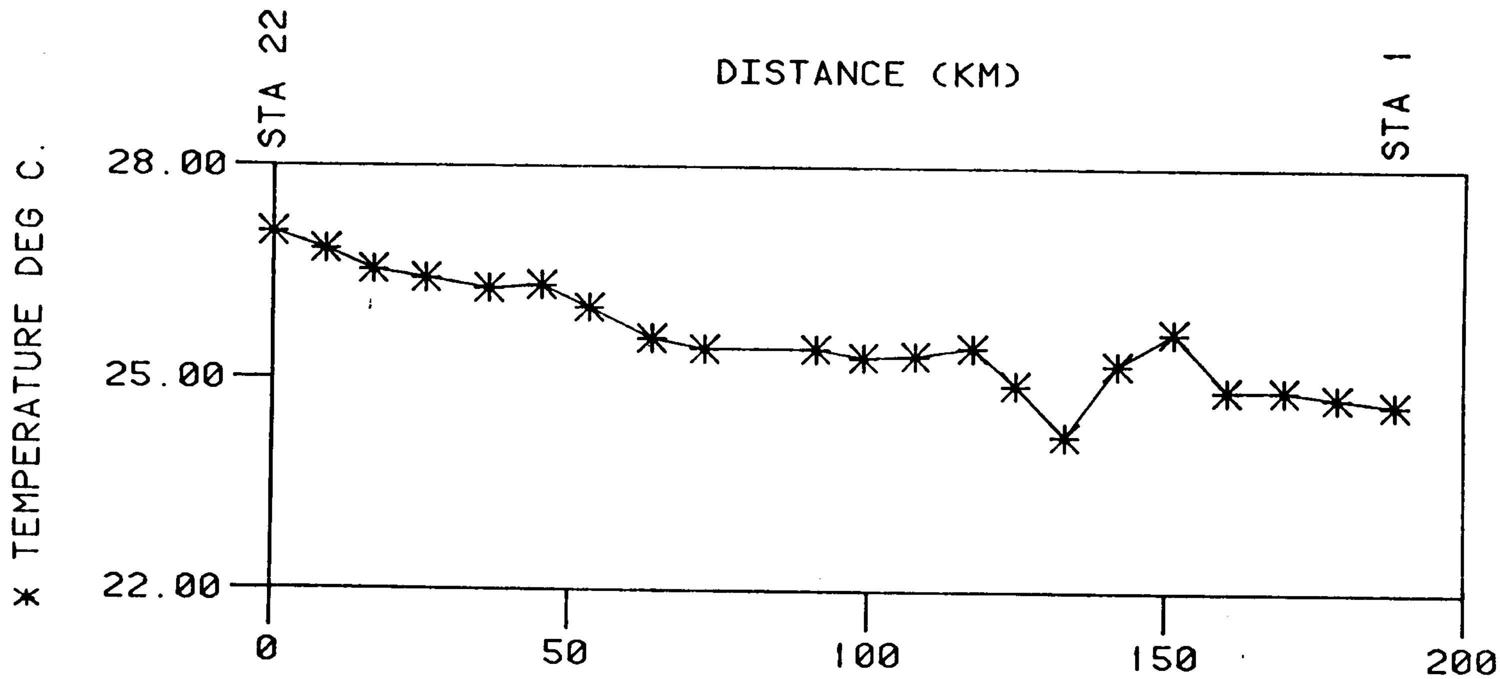
PARAMETERS AT SURFACE BELLOWS CRUISE 84-05



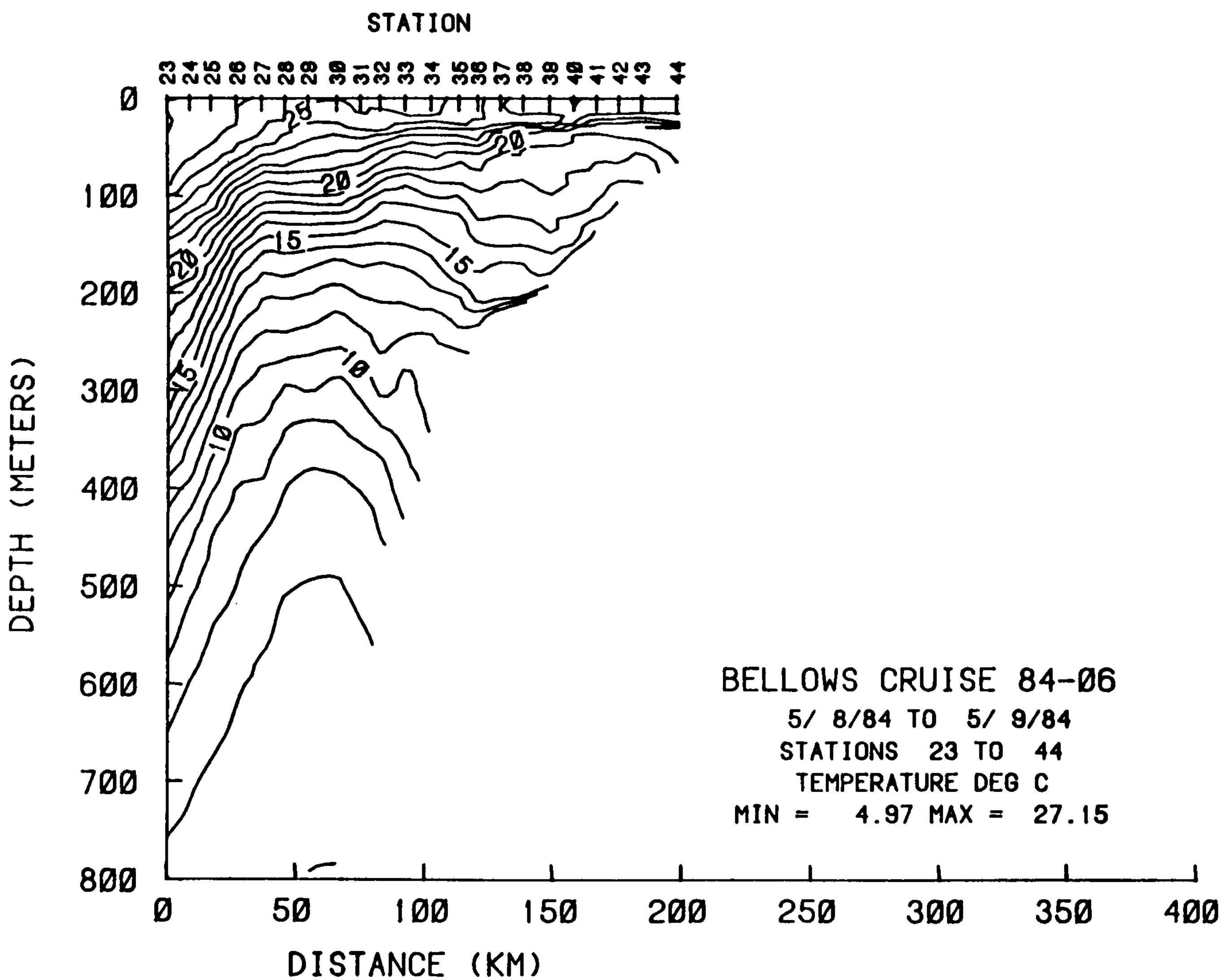
BELLOWS CRUISE 84-Ø6
5/ 7/84 TO 5/12/84
87 W
86 W
85 W
84 W
83 W
82 W
81 W
8Ø W
3Ø N
29 N
28 N
27 N
26 N
25 N
3Ø
29
28
27
26
25
200 m
500 m
1000 m
2000 m
3000 m
1
44
45
22
23
85
111
TAMPA

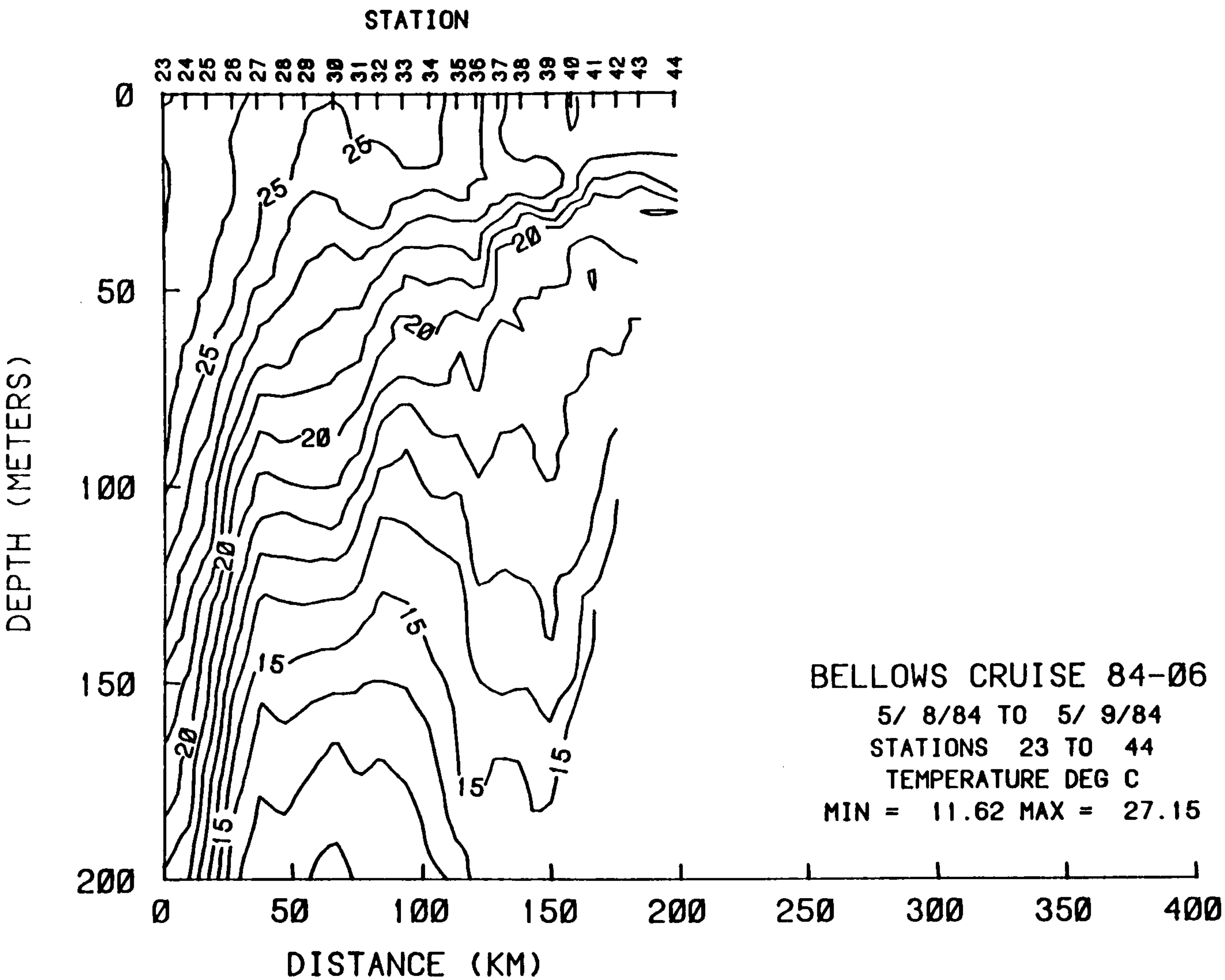

STATION
22 21 20 19 18 17 16 15 14 12 11 10 9 8 7 6 5 4 3 2 1
25
20
15
10
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
0 50 100 150 200 250 300 350 400
DISTANCE (KM)
BELLOWS CRUISE 84-06
5/ 7/84 TO 5/ 8/84
STATIONS 1 TO 22
TEMPERATURE DEG C
MIN = 5.14 MAX = 27.05

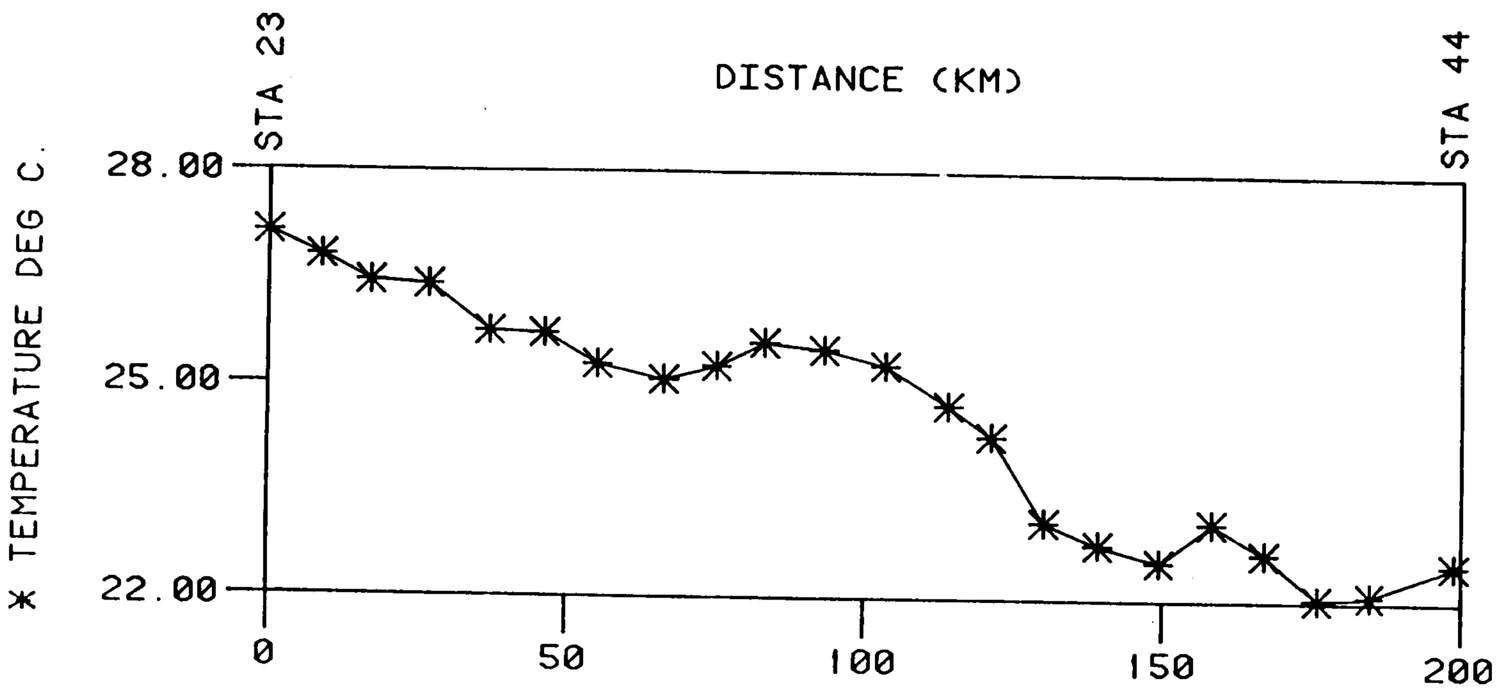

STATION
22 21 20 19 18 17 16 15 14 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 50 100 150 200 250 300 350 400
25
20
15
BELLOWS CRUISE 84-06
5/ 7/84 TO 5/ 8/84
STATIONS 1 TO 22
TEMPERATURE DEG C
MIN = 13.08 MAX = 27.05



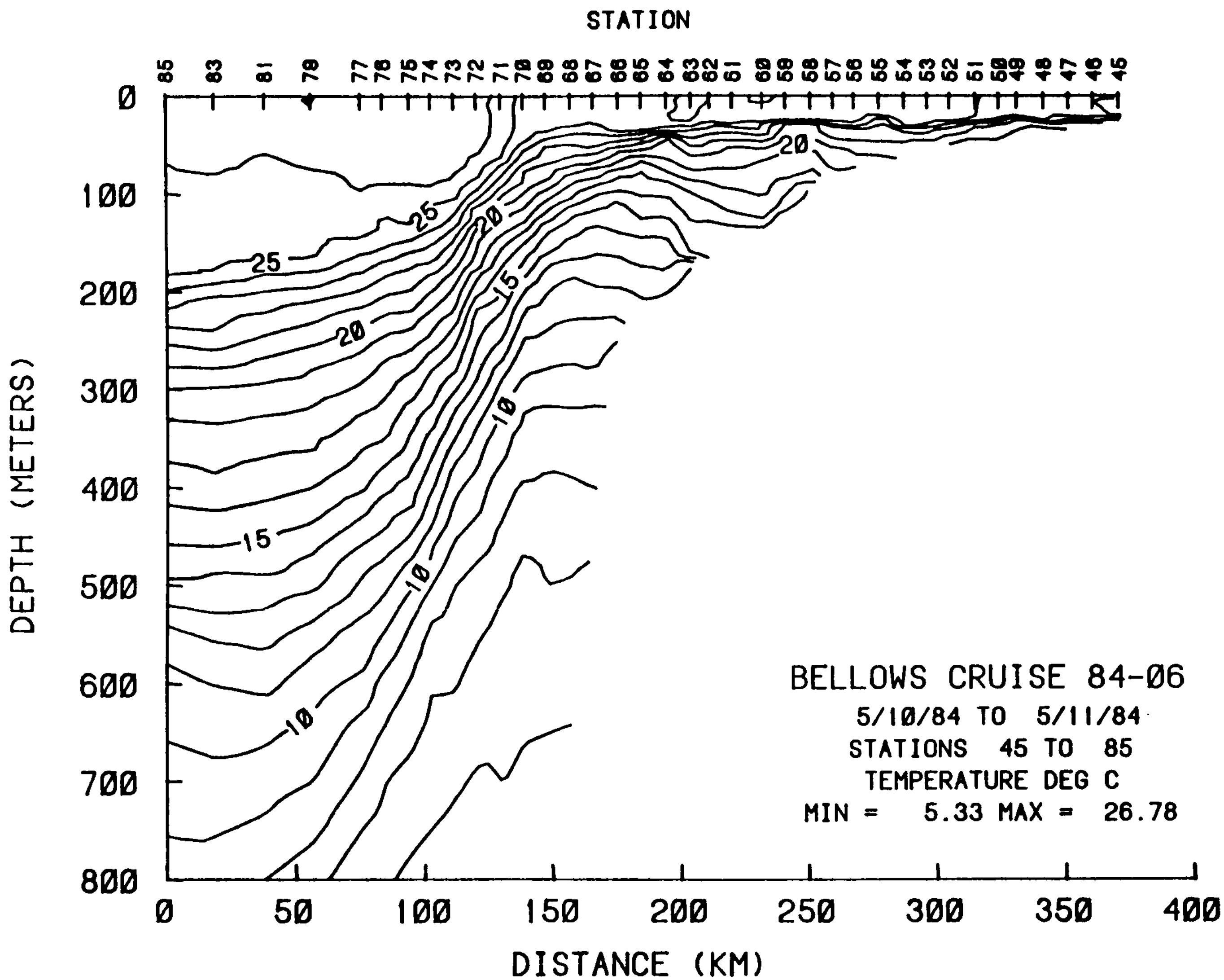
PARAMETERS AT SURFACE BELLOWS CRUISE 84-06

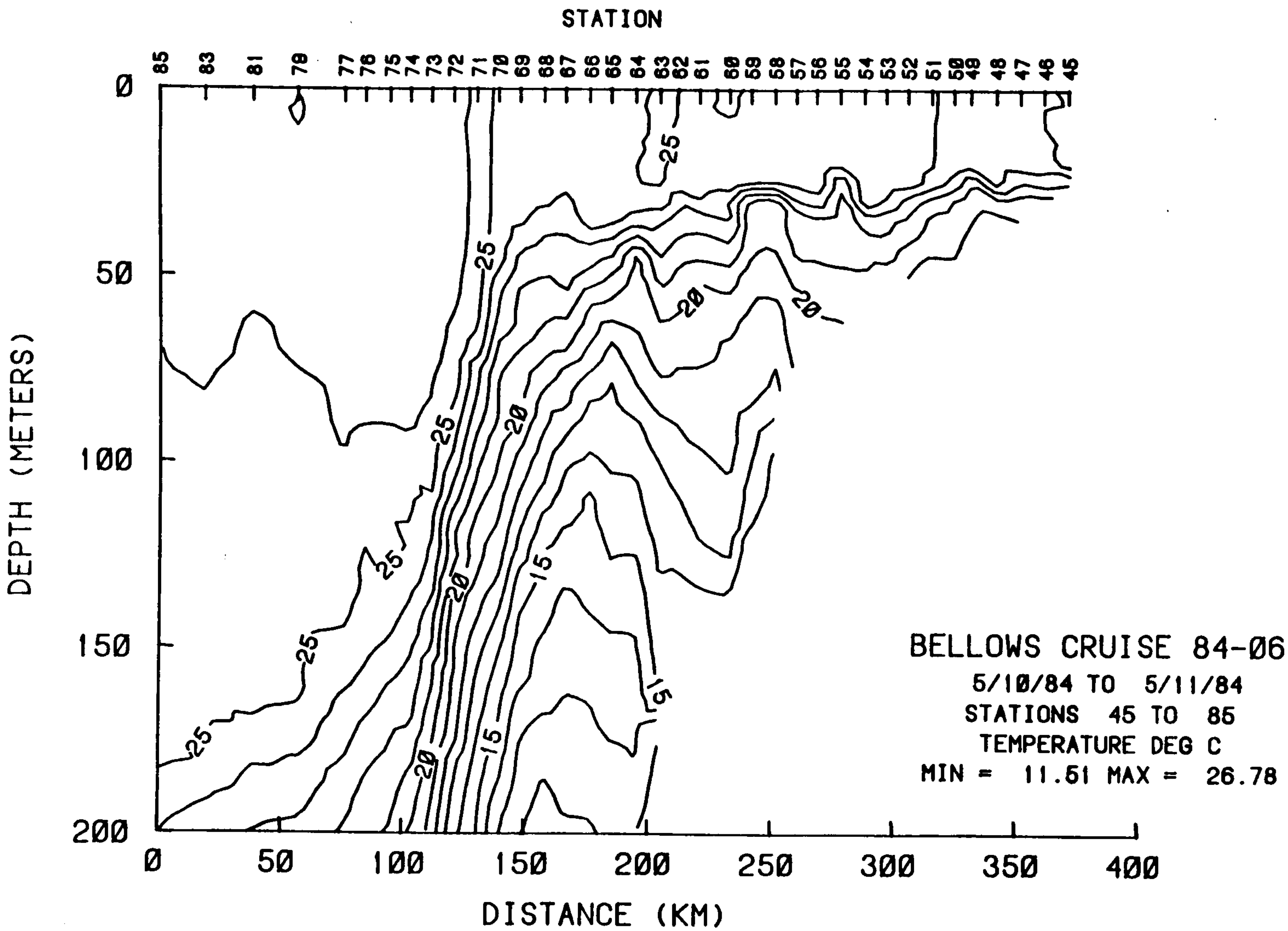

STATION
23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44
DEPTH (METERS)
DISTANCE (KM)
BELLOWS CRUISE 84-06
5/ 8/84 TO 5/ 9/84
STATIONS 23 TO 44
TEMPERATURE DEG C
MIN = 4.97 MAX = 27.15

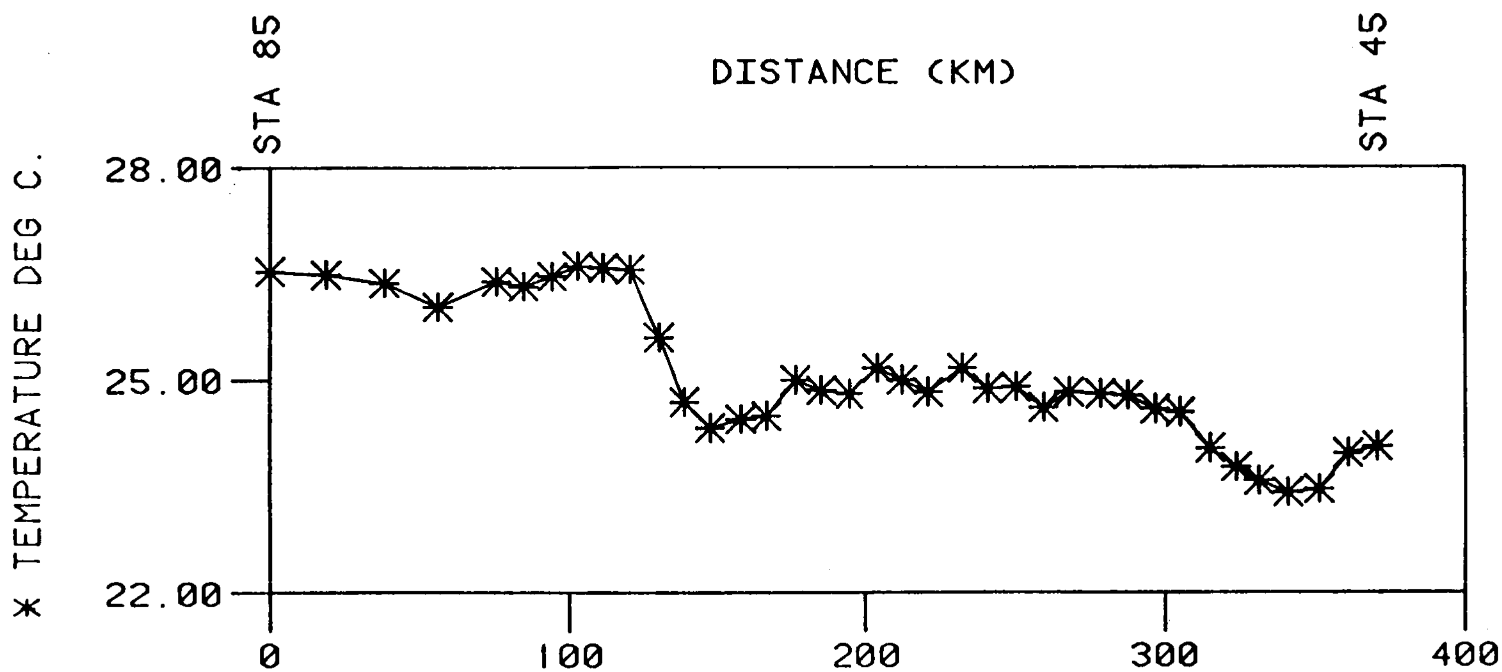

STATION
23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 50 100 150 200 250 300 350 400
25
20
15
BELLOWS CRUISE 84-06
5/ 8/84 TO 5/ 9/84
STATIONS 23 TO 44
TEMPERATURE DEG C
MIN = 11.62 MAX = 27.15



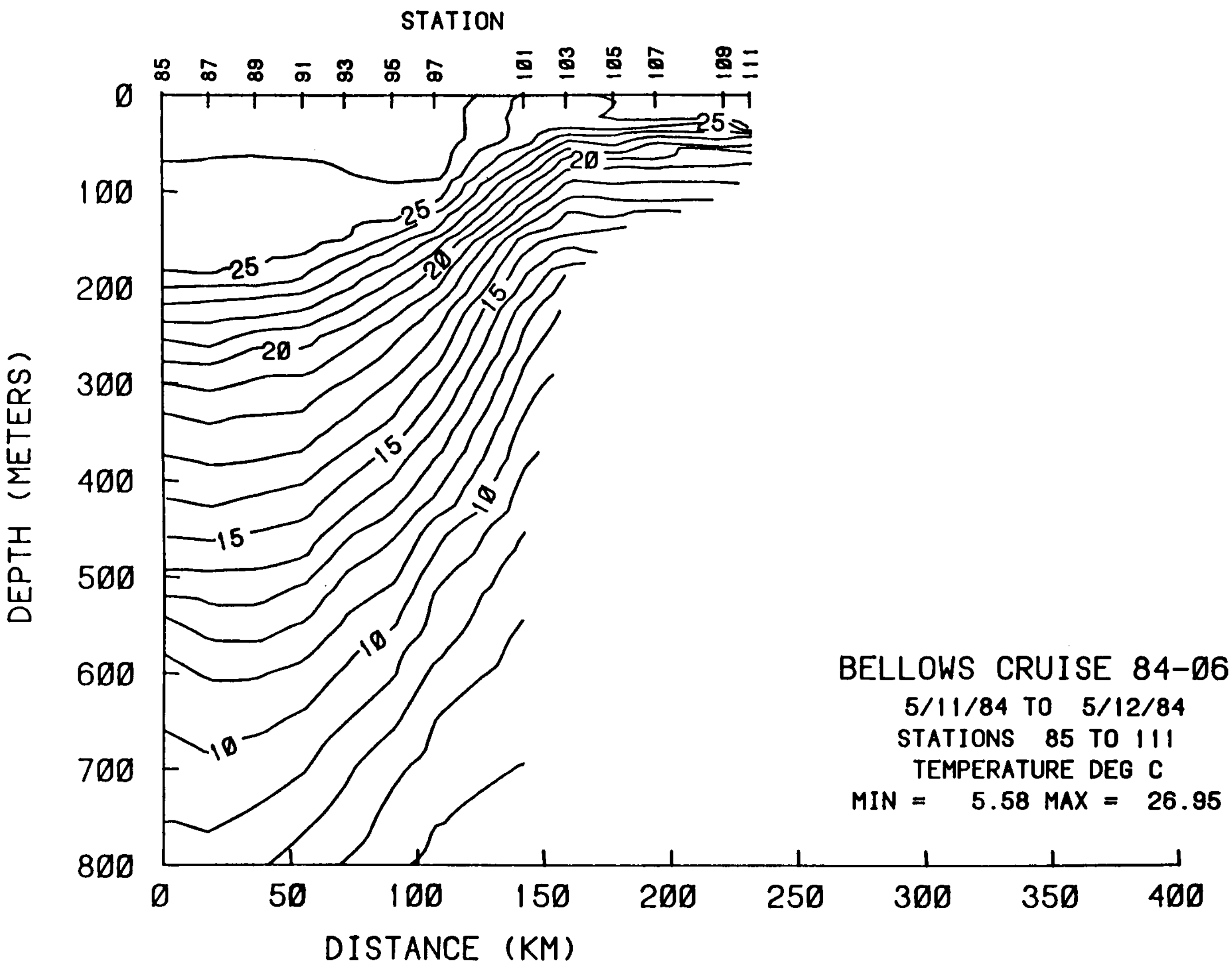
PARAMETERS AT SURFACE BELLOWS CRUISE 84-06

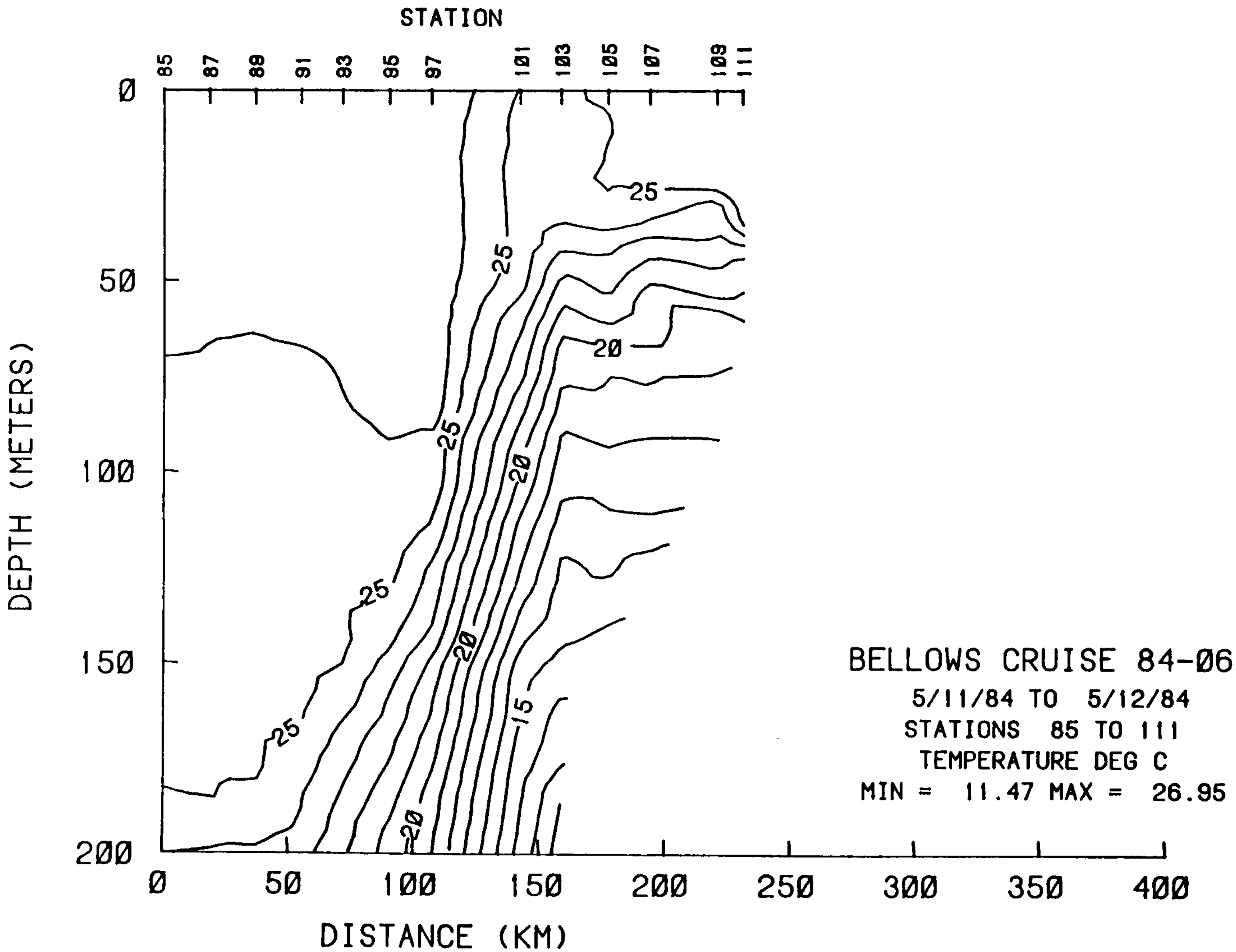

STATION
85 83 81 79 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45
DEPTH (METERS)
DISTANCE (KM)
BELLOWS CRUISE 84-06
5/10/84 TO 5/11/84
STATIONS 45 TO 85
TEMPERATURE DEG C
MIN = 5.33 MAX = 26.78

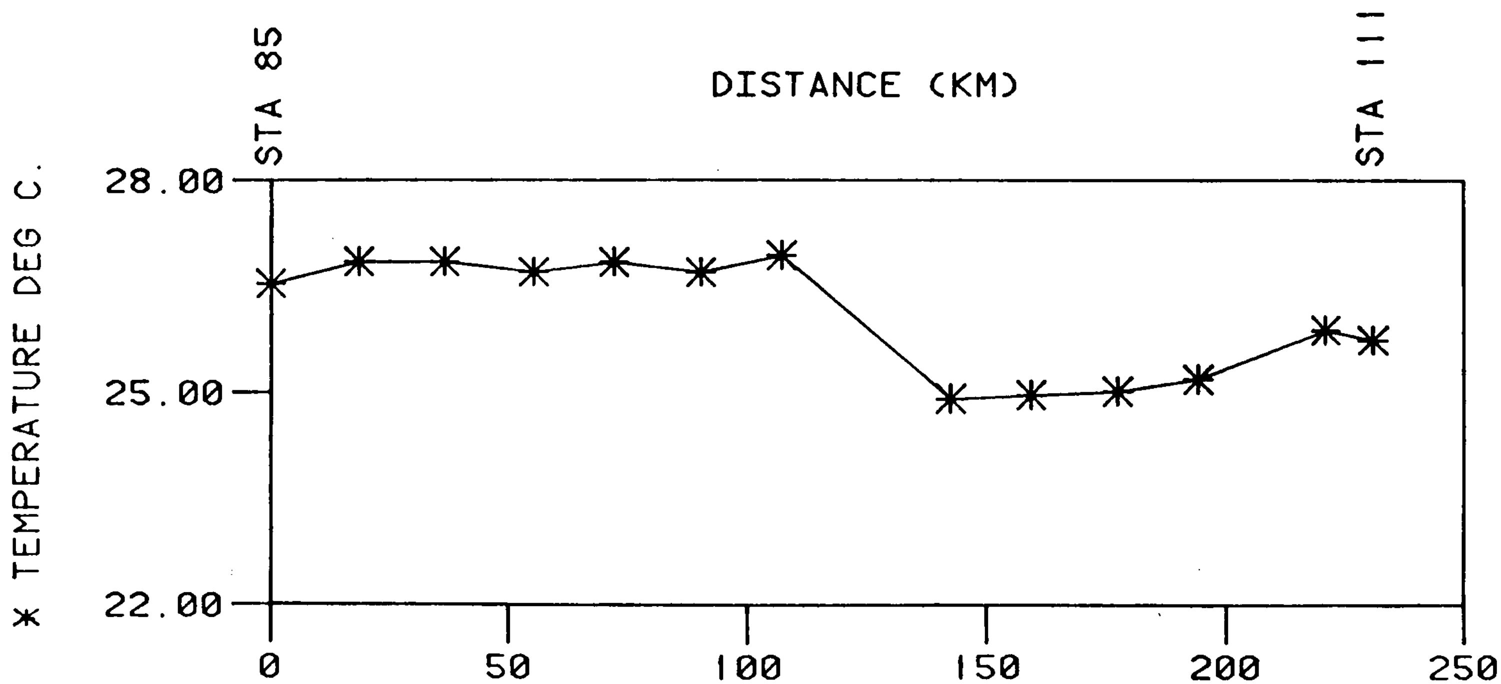

STATION
85 83 81 79 77 76 75 74 73 72 71 70 69 68 67 66 65 64 63 62 61 60 59 58 57 56 55 54 53 52 51 50 49 48 47 46 45
DEPTH (METERS)
DISTANCE (KM)
0
50
100
150
200
250
300
350
400
25
20
15
BELLOWS CRUISE 84-06
5/10/84 TO 5/11/84
STATIONS 45 TO 85
TEMPERATURE DEG C
MIN = 11.51 MAX = 26.78



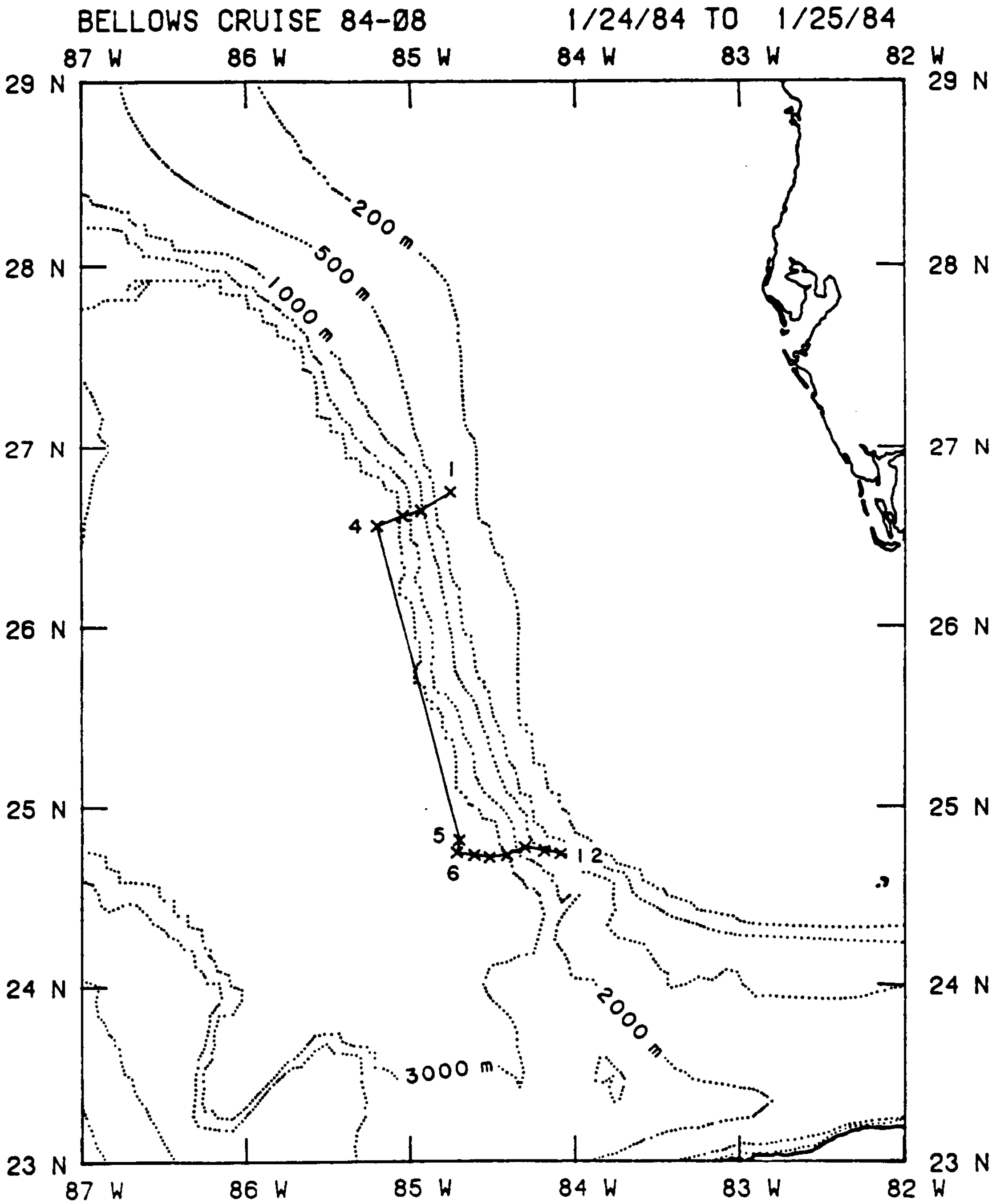
PARAMETERS AT SURFACE BELLOWS CRUISE 84-06

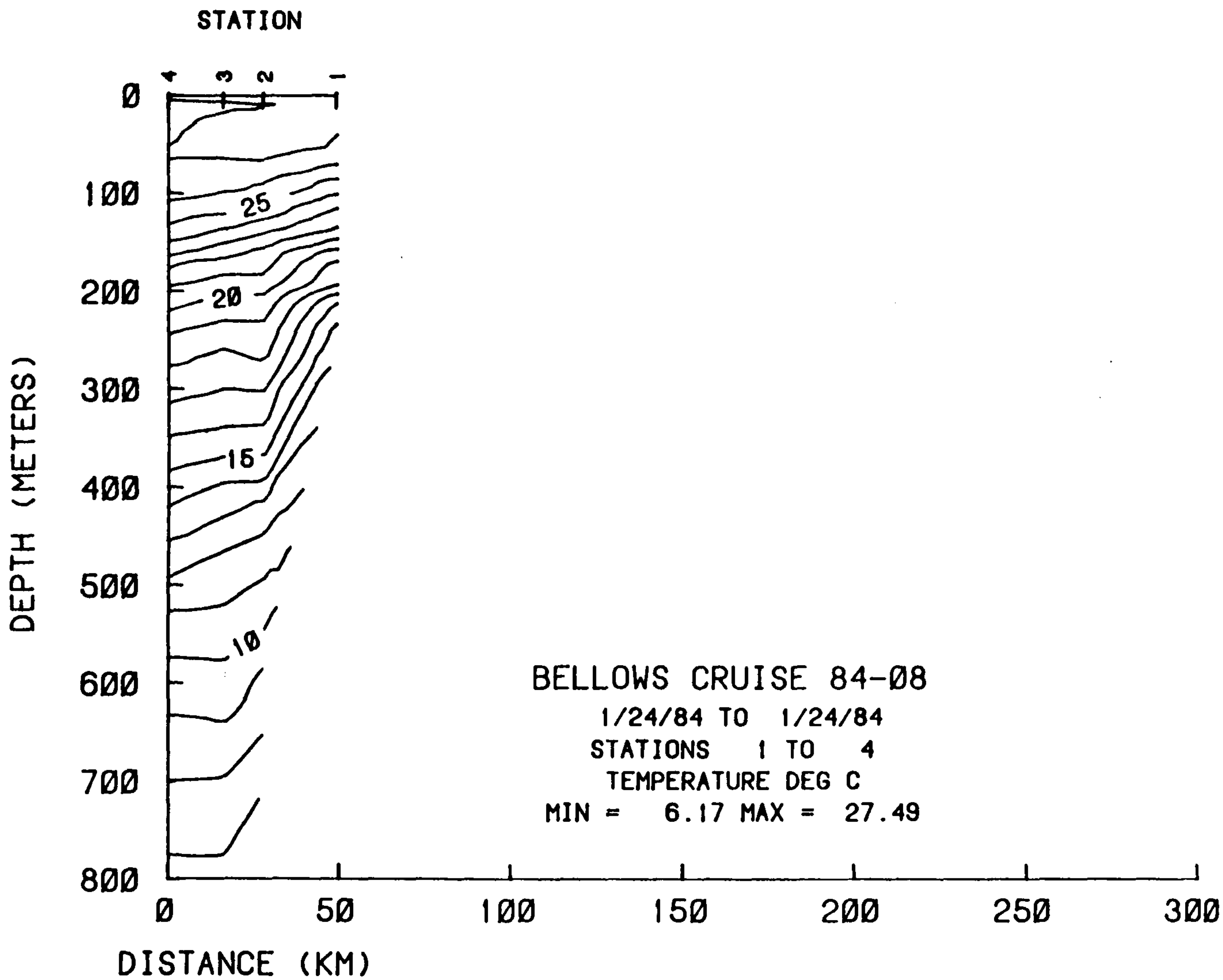

STATION
85 87 89 91 93 95 97 101 103 105 107 109 111
DEPTH (METERS)
Ø 100 200 300 400 500 600 700 800
DISTANCE (KM)
Ø 50 100 150 200 250 300 350 400
25 20 15 10
BELLOWS CRUISE 84-06
5/11/84 TO 5/12/84
STATIONS 85 TO 111
TEMPERATURE DEG C
MIN = 5.58 MAX = 26.95

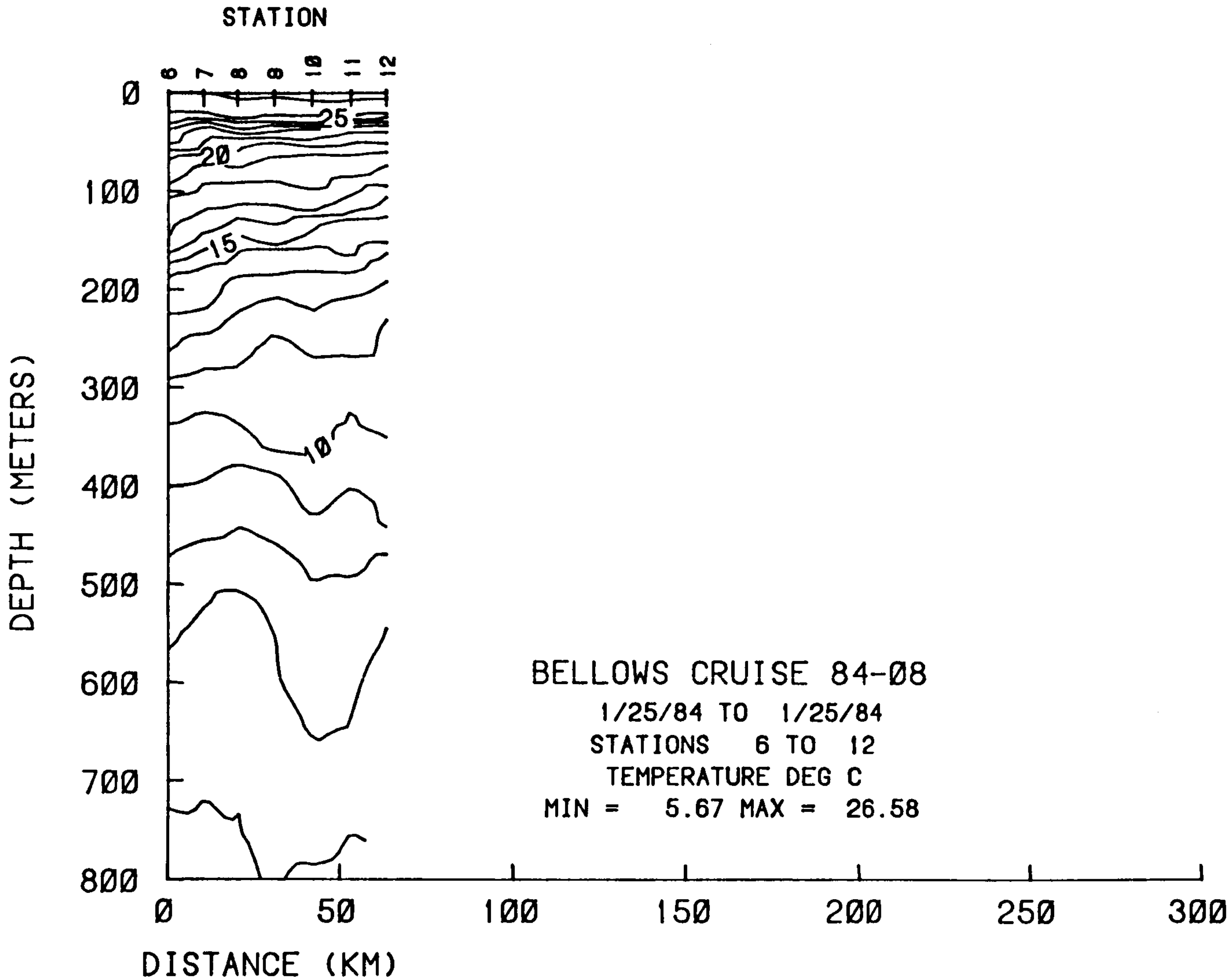

STATION
85 87 89 91 93 95 97 101 103 105 107 109 111
DEPTH (METERS)
0
50
100
150
200
25
20
15
DISTANCE (KM)
0 50 100 150 200 250 300 350 400
BELLOWS CRUISE 84-06
5/11/84 TO 5/12/84
STATIONS 85 TO 111
TEMPERATURE DEG C
MIN = 11.47 MAX = 26.95

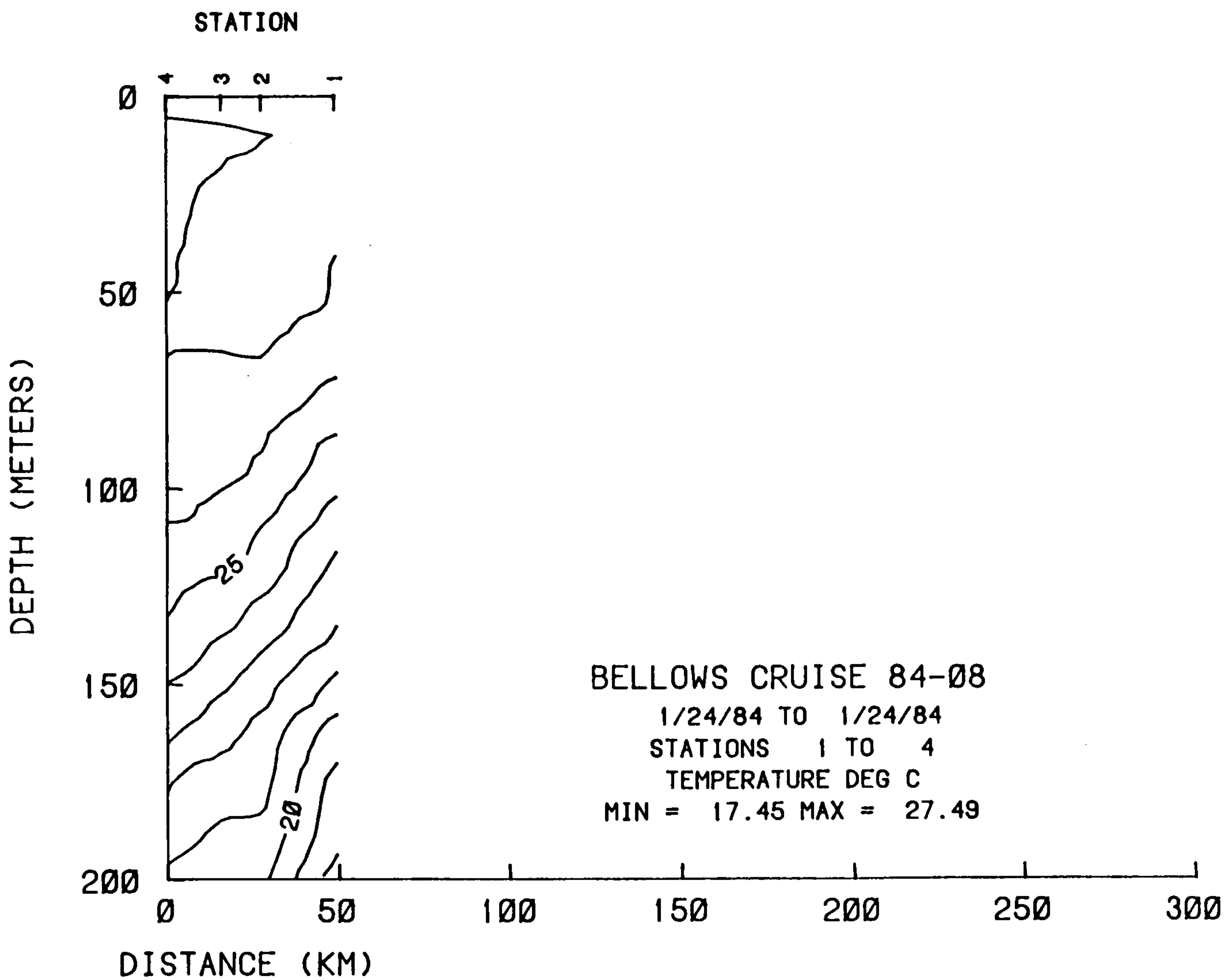


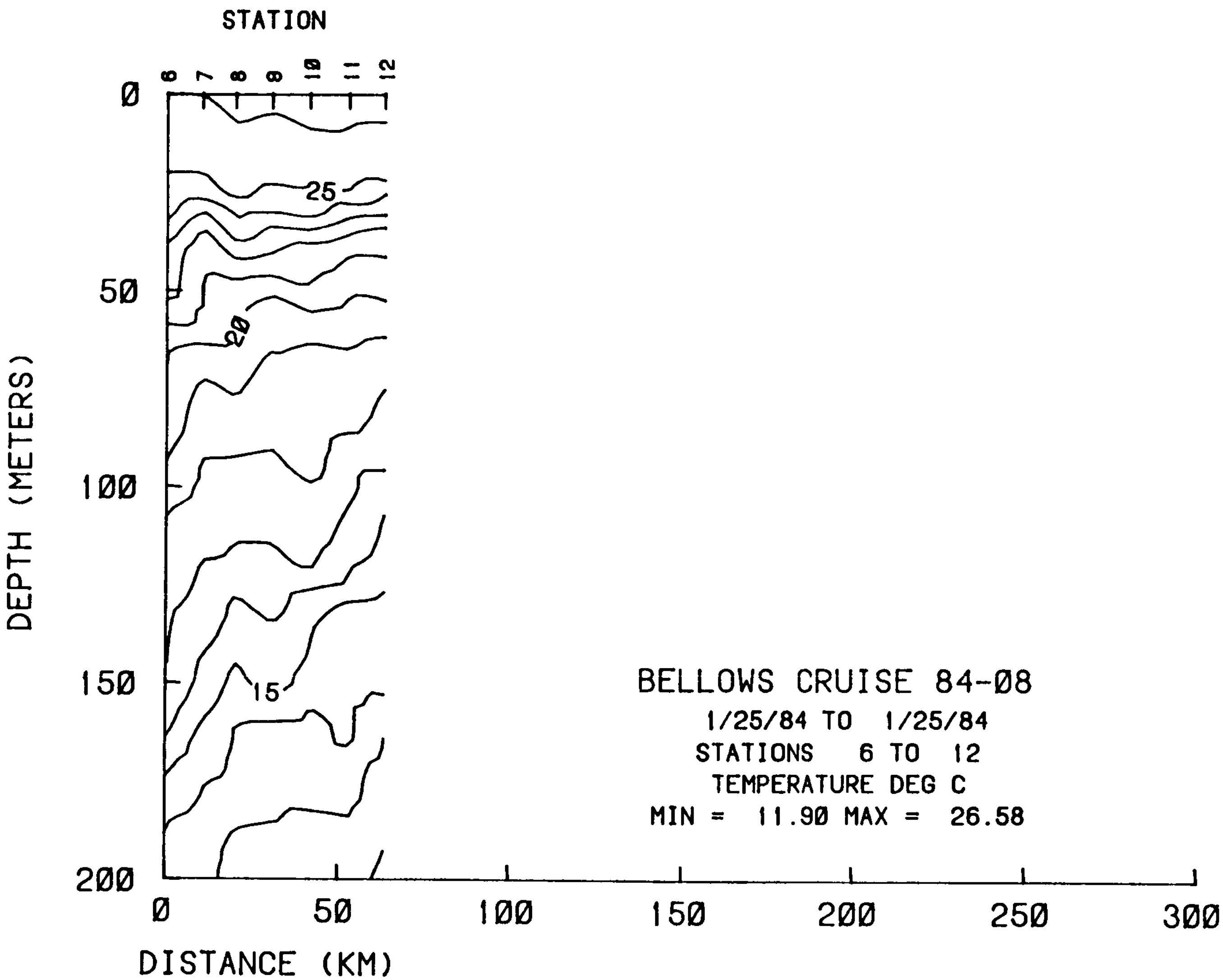
PARAMETERS AT SURFACE BELLOWS CRUISE 84-06


BELLOWS CRUISE 84-Ø8
1/24/84 TO 1/25/84
87 W
86 W
85 W
84 W
83 W
82 W
29 N
28 N
27 N
26 N
25 N
24 N
23 N
200 m
500 m
1000 m
2000 m
3000 m
1
4
5
6
12

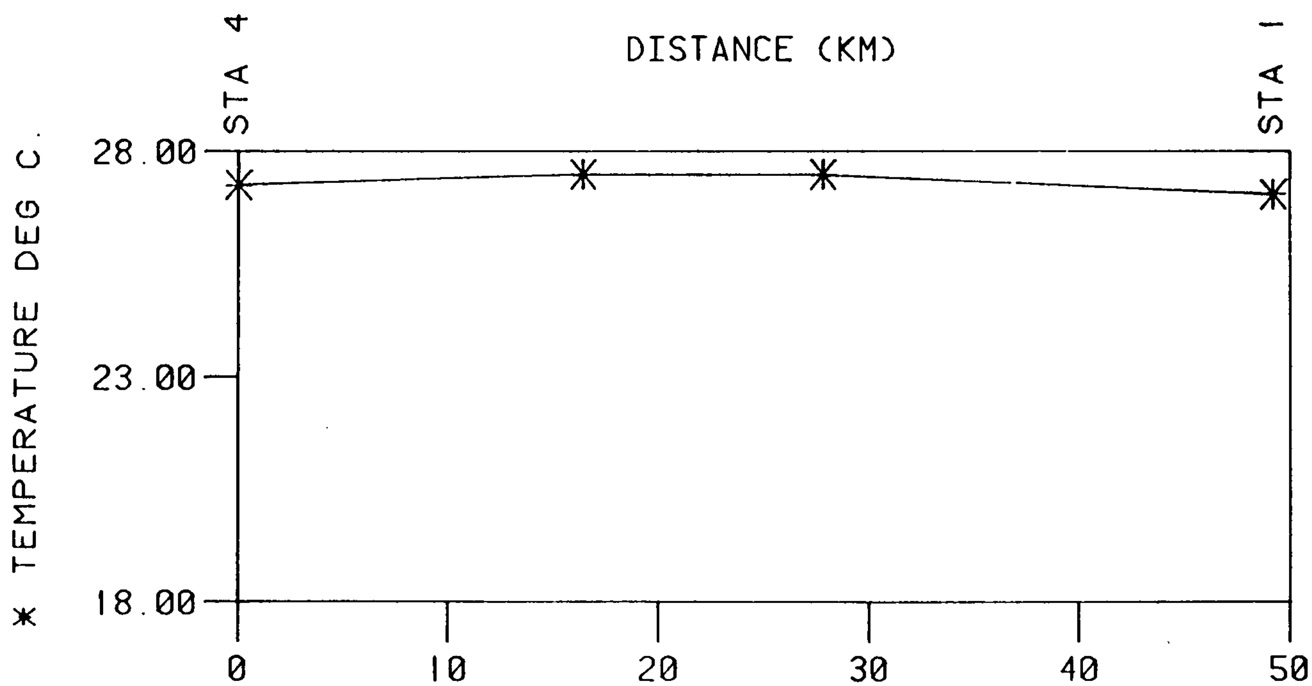

STATION
4 3 2 1
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
25
20
15
10
DISTANCE (KM)
0
50
100
150
200
250
300
BELLOWS CRUISE 84-08
1/24/84 TO 1/24/84
STATIONS 1 TO 4
TEMPERATURE DEG C
MIN = 6.17 MAX = 27.49


STATION
6 7 8 9 10 11 12
25
20
15
10
0
100
200
300
400
500
600
700
800
DEPTH (METERS)
0
50
100
150
200
250
300
DISTANCE (KM)
BELLOWS CRUISE 84-08
1/25/84 TO 1/25/84
STATIONS 6 TO 12
TEMPERATURE DEG C
MIN = 5.67 MAX = 26.58

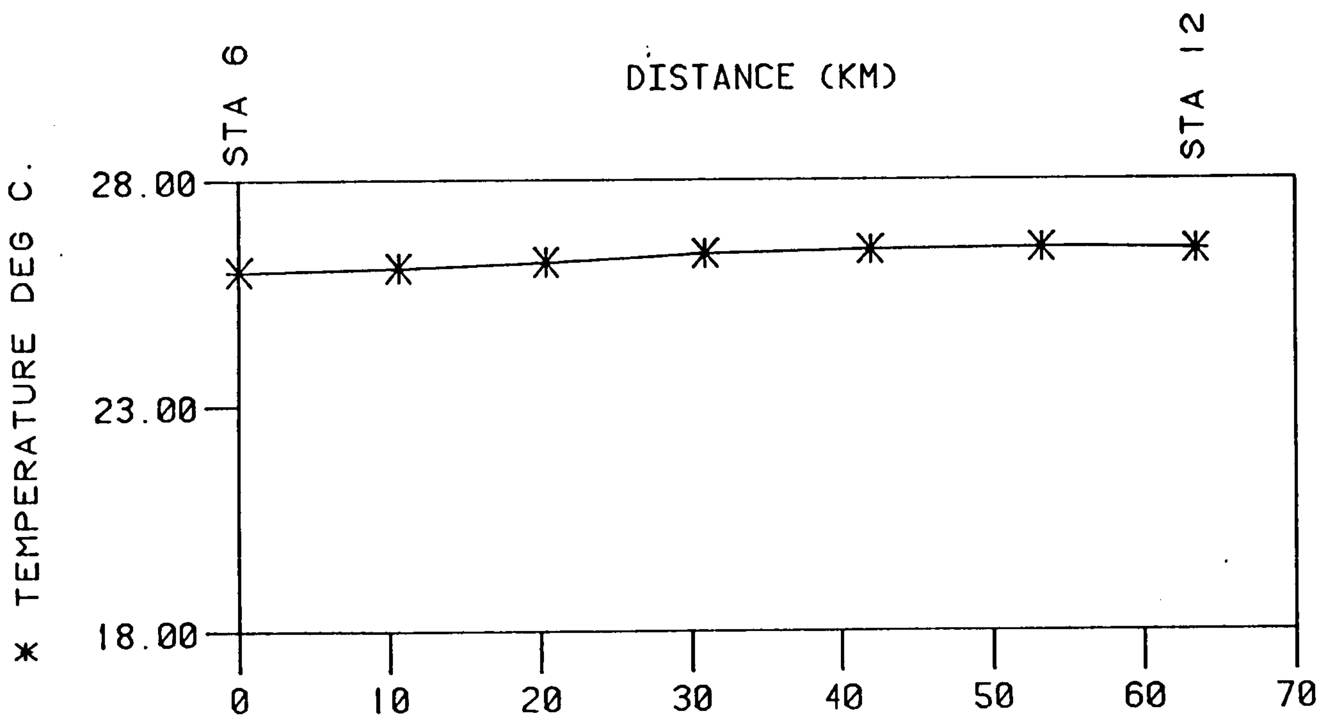

STATION
4 3 2 1
DEPTH (METERS)
0
50
100
150
200
25
20
0
50
100
150
200
250
300
DISTANCE (KM)
BELLOWS CRUISE 84-08
1/24/84 TO 1/24/84
STATIONS 1 TO 4
TEMPERATURE DEG C
MIN = 17.45 MAX = 27.49


STATION
6
7
8
9
10
11
12
0
50
100
150
200
DEPTH (METERS)
25
20
15
0
50
100
150
200
250
300
DISTANCE (KM)
BELLOWS CRUISE 84-08
1/25/84 TO 1/25/84
STATIONS 6 TO 12
TEMPERATURE DEG C
MIN = 11.90 MAX = 26.58

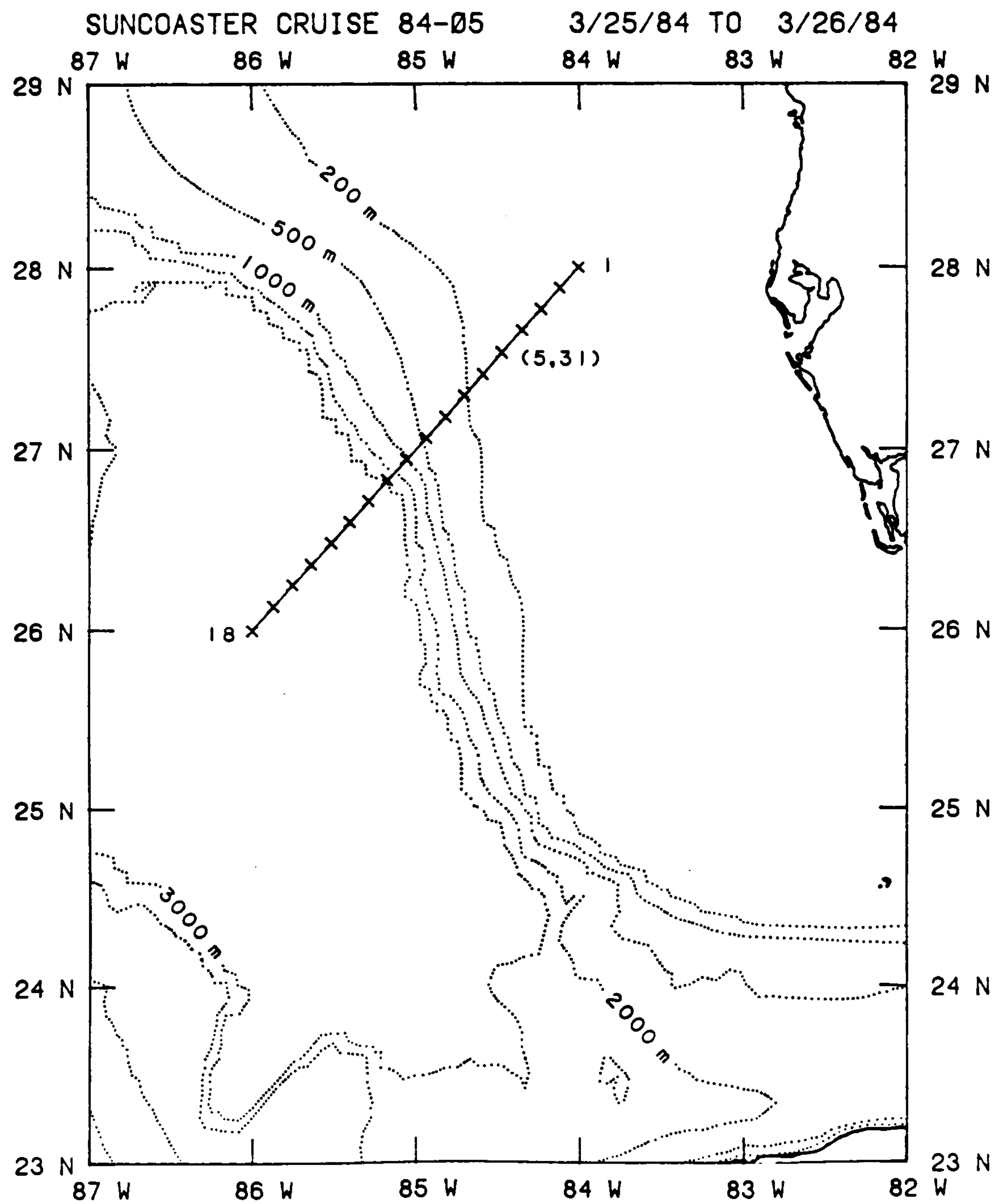
355

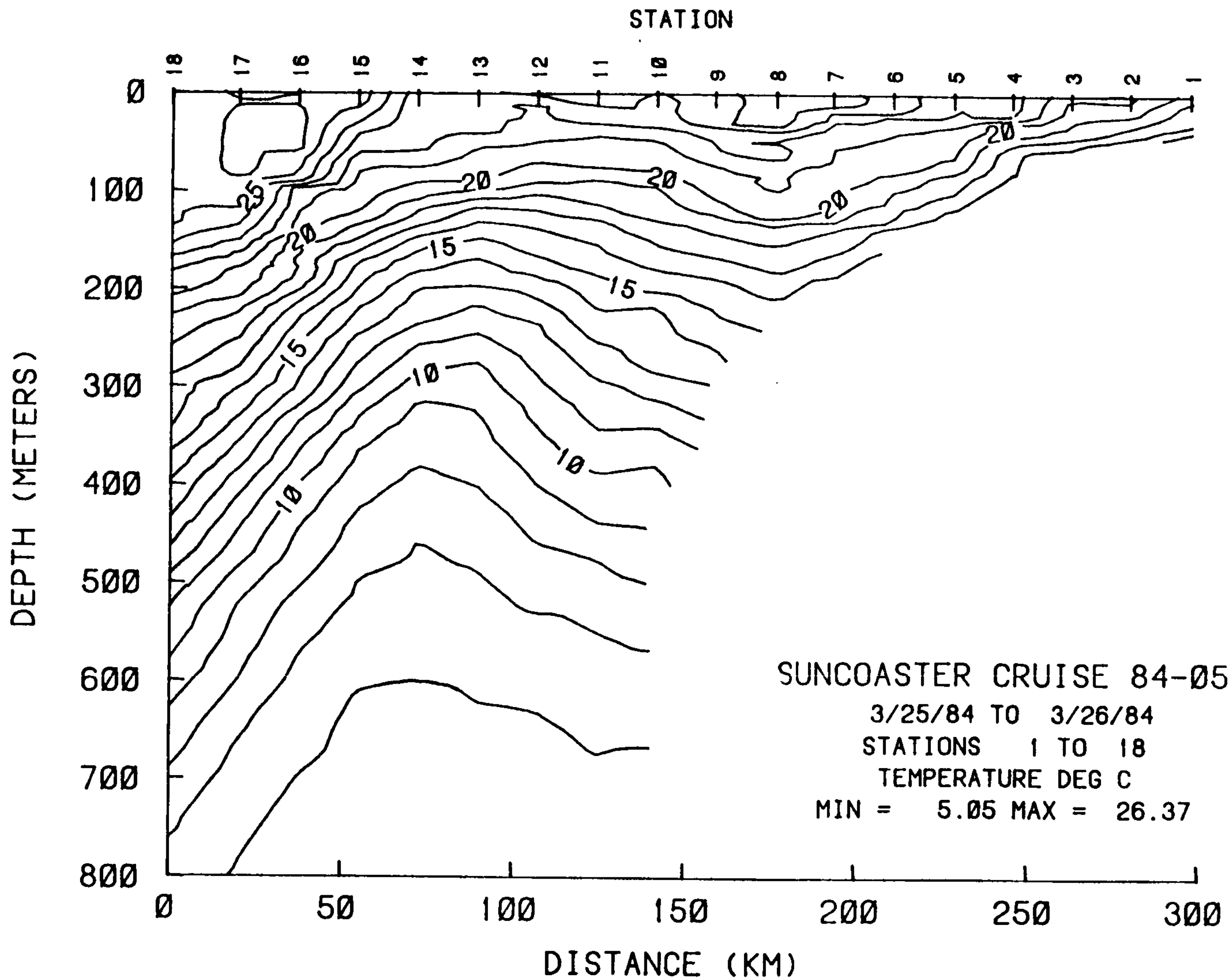


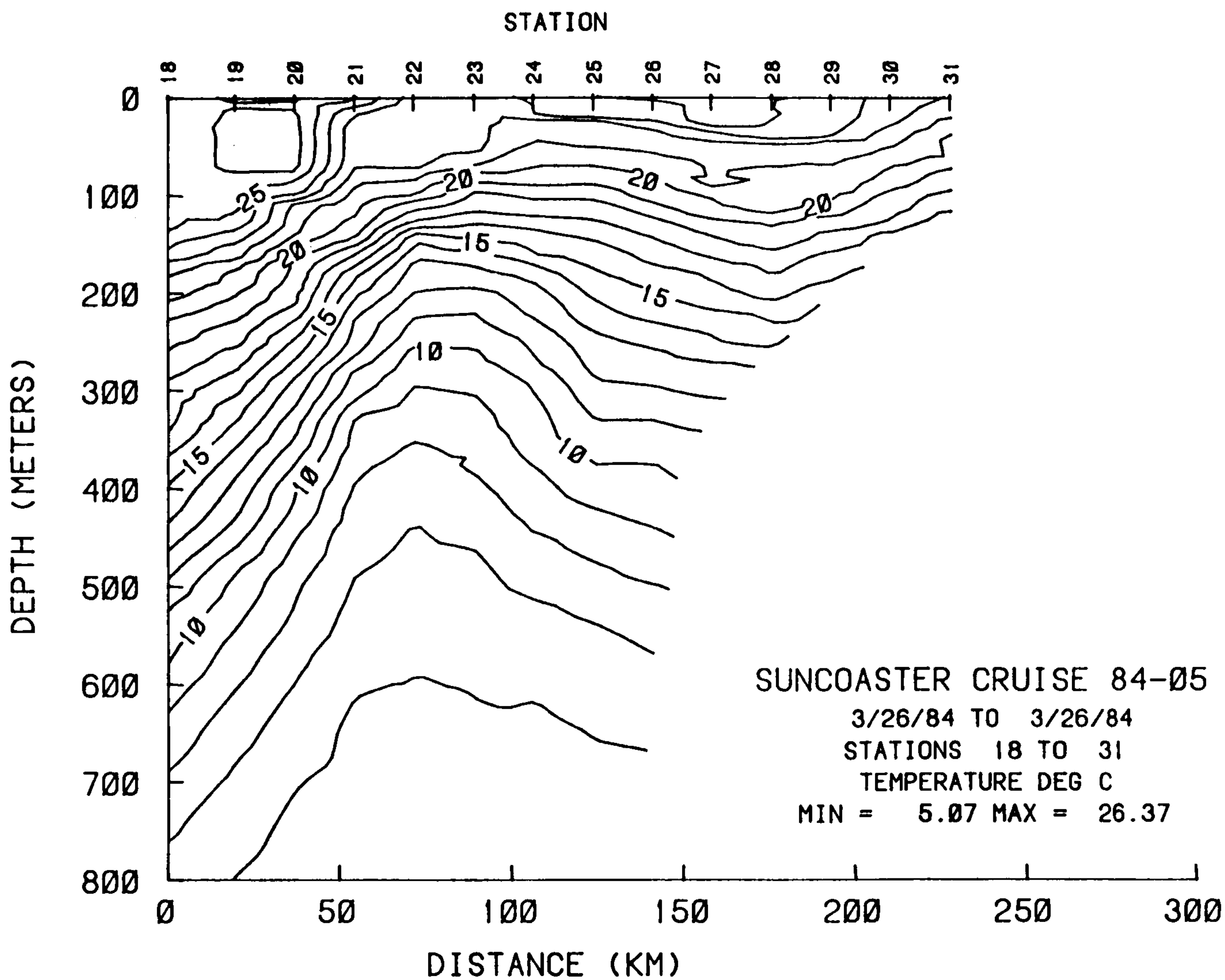
PARAMETERS AT SURFACE BELLOWS CRUISE 84-08

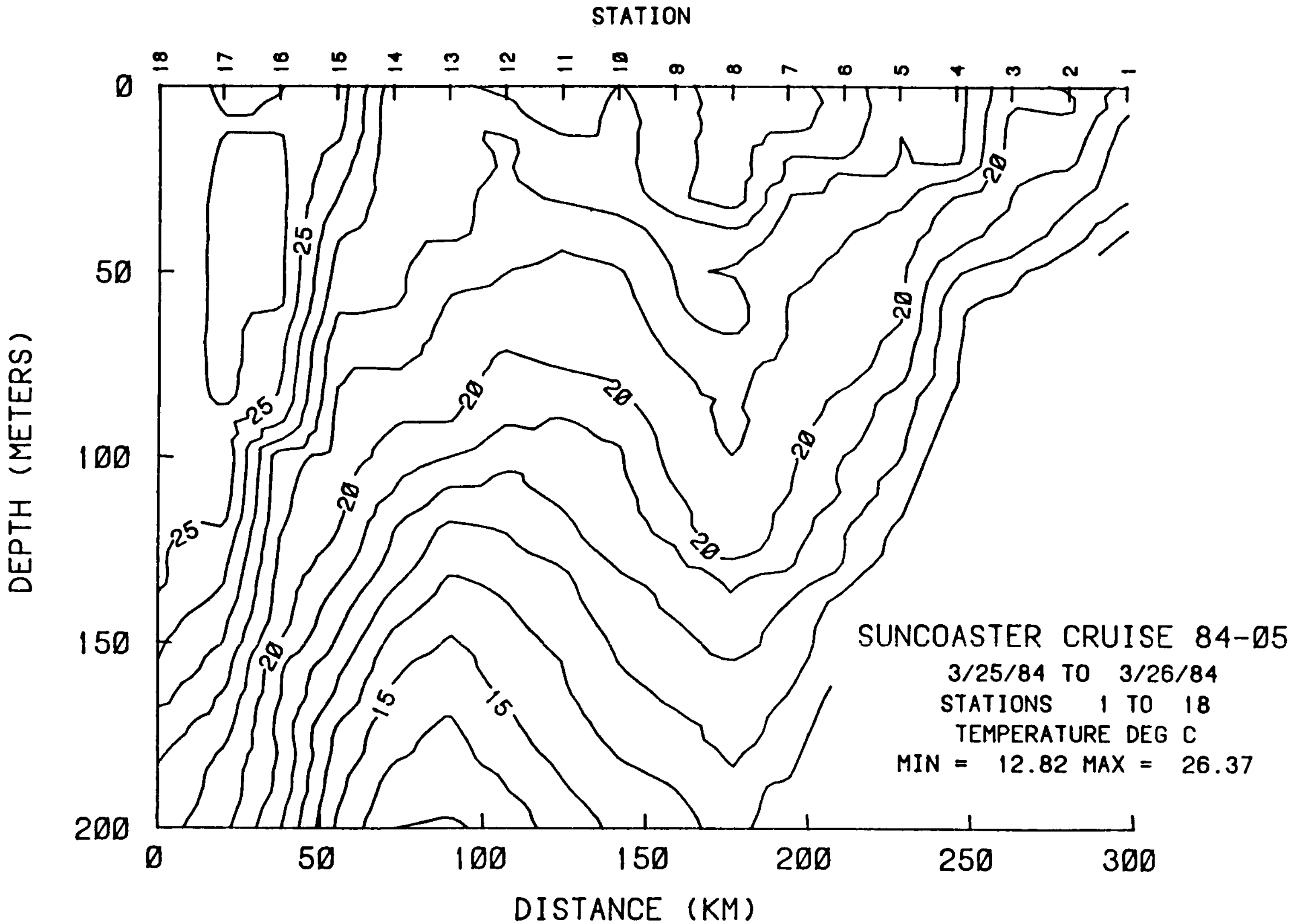


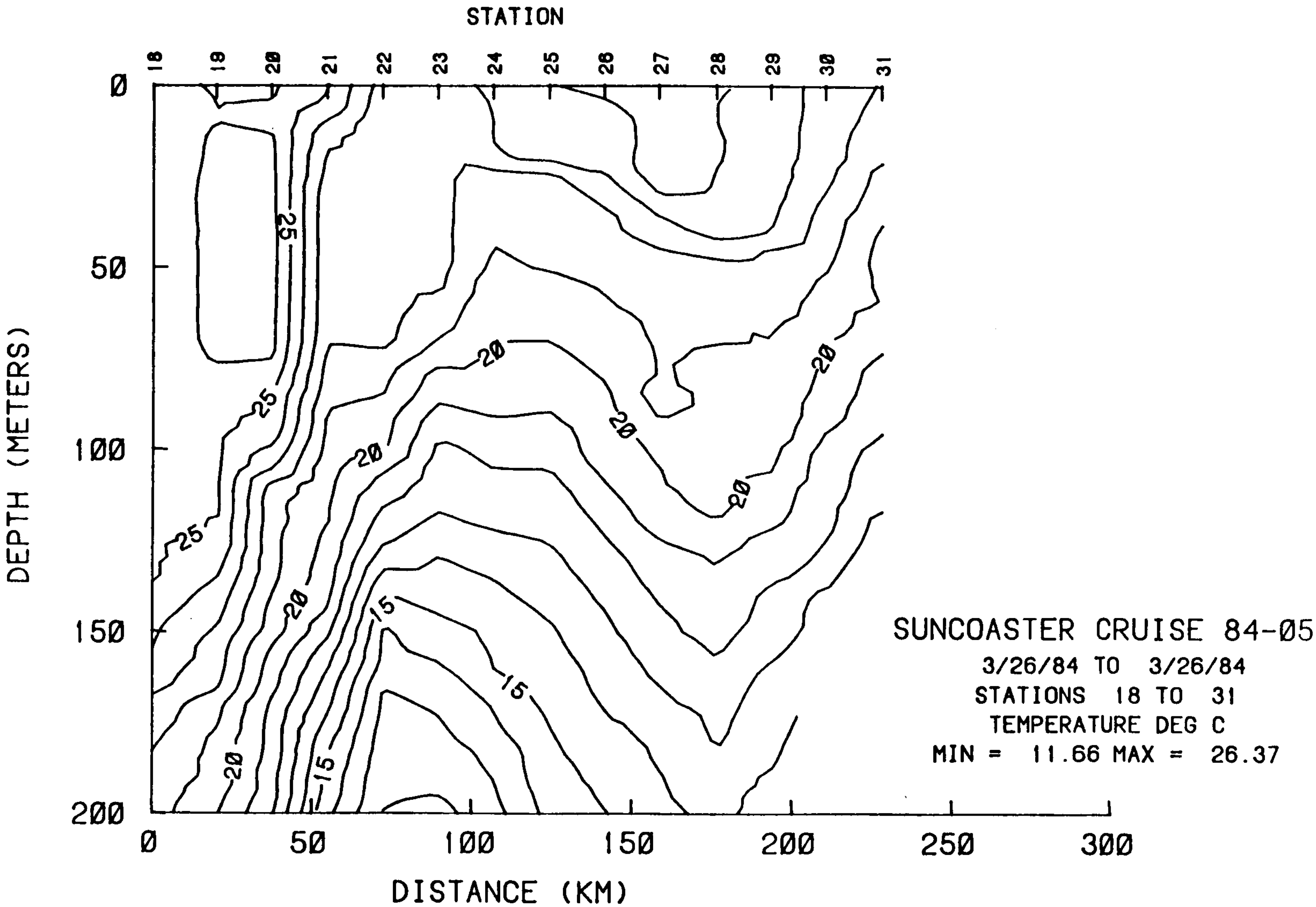
PARAMETERS AT SURFACE BELLOWS CRUISE 84-08

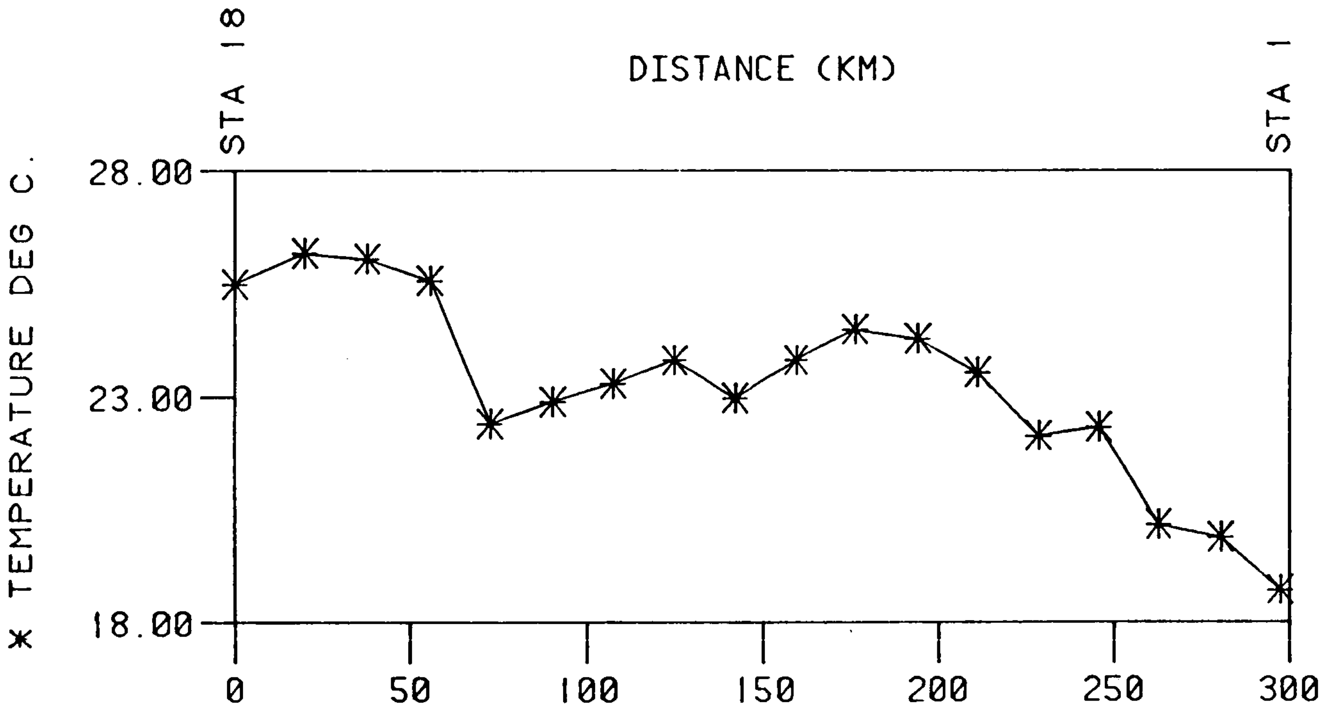

SUNCOASTER CRUISE 84-Ø5 3/25/84 TO 3/26/84
87 W
86 W
85 W
84 W
83 W
82 W
29 N
28 N
27 N
26 N
25 N
24 N
23 N
200 m
500 m
1000 m
2000 m
3000 m
1
(5,31)
18


STATION
18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
0 50 100 150 200 250 300
DISTANCE (KM)
25
20
15
10
SUNCOASTER CRUISE 84-05
3/25/84 TO 3/26/84
STATIONS 1 TO 18
TEMPERATURE DEG C
MIN = 5.05 MAX = 26.37

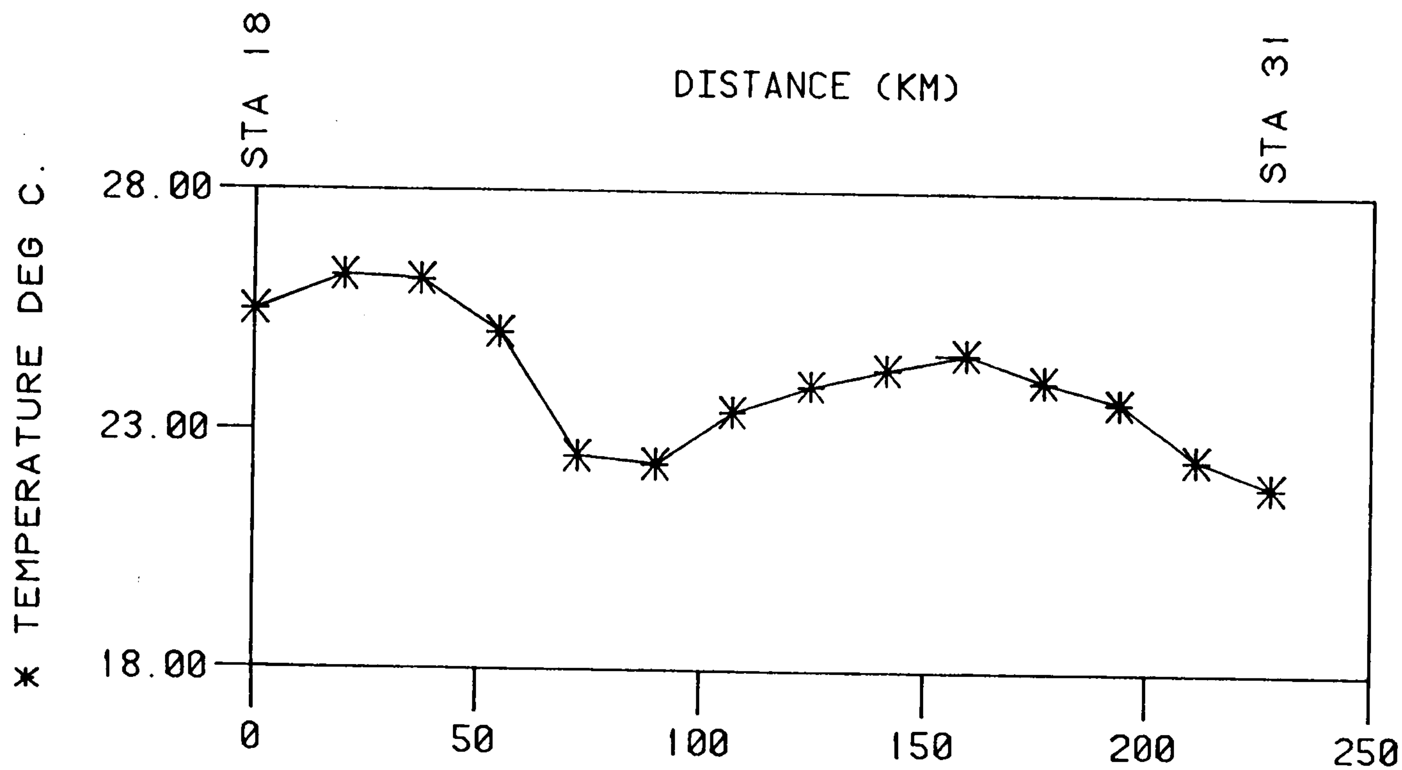

STATION
18 19 20 21 22 23 24 25 26 27 28 29 30 31
DEPTH (METERS)
0 100 200 300 400 500 600 700 800
DISTANCE (KM)
0 50 100 150 200 250 300
25
20
15
10
SUNCOASTER CRUISE 84-05
3/26/84 TO 3/26/84
STATIONS 18 TO 31
TEMPERATURE DEG C
MIN = 5.07 MAX = 26.37


STATION
18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
50
100
150
200
25
20
15
DISTANCE (KM)
0 50 100 150 200 250 300
SUNCOASTER CRUISE 84-05
3/25/84 TO 3/26/84
STATIONS 1 TO 18
TEMPERATURE DEG C
MIN = 12.82 MAX = 26.37

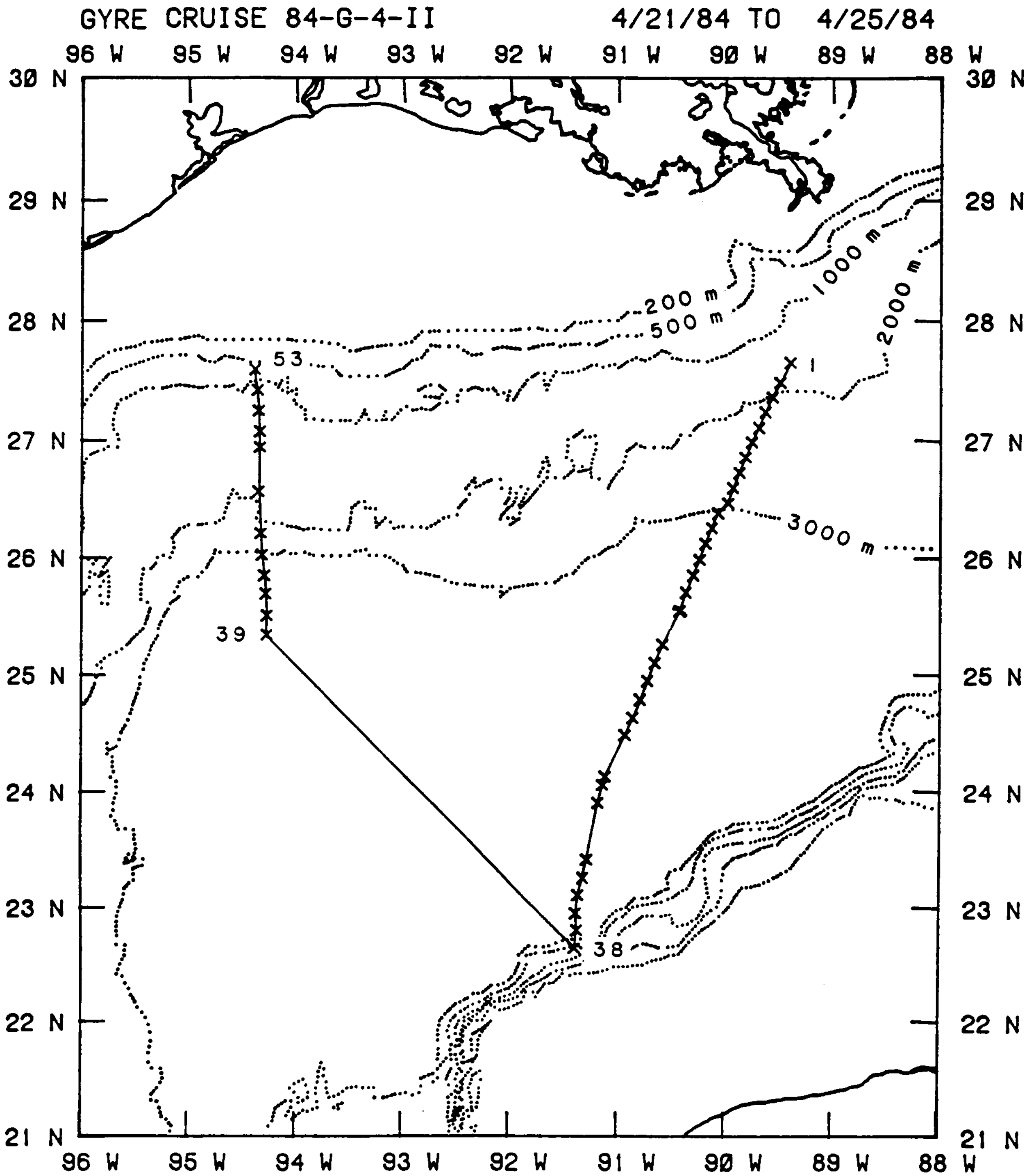

STATION
18 19 20 21 22 23 24 25 26 27 28 29 30 31
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 50 100 150 200 250 300
25
20
15
SUNCOASTER CRUISE 84-05
3/26/84 TO 3/26/84
STATIONS 18 TO 31
TEMPERATURE DEG C
MIN = 11.66 MAX = 26.37



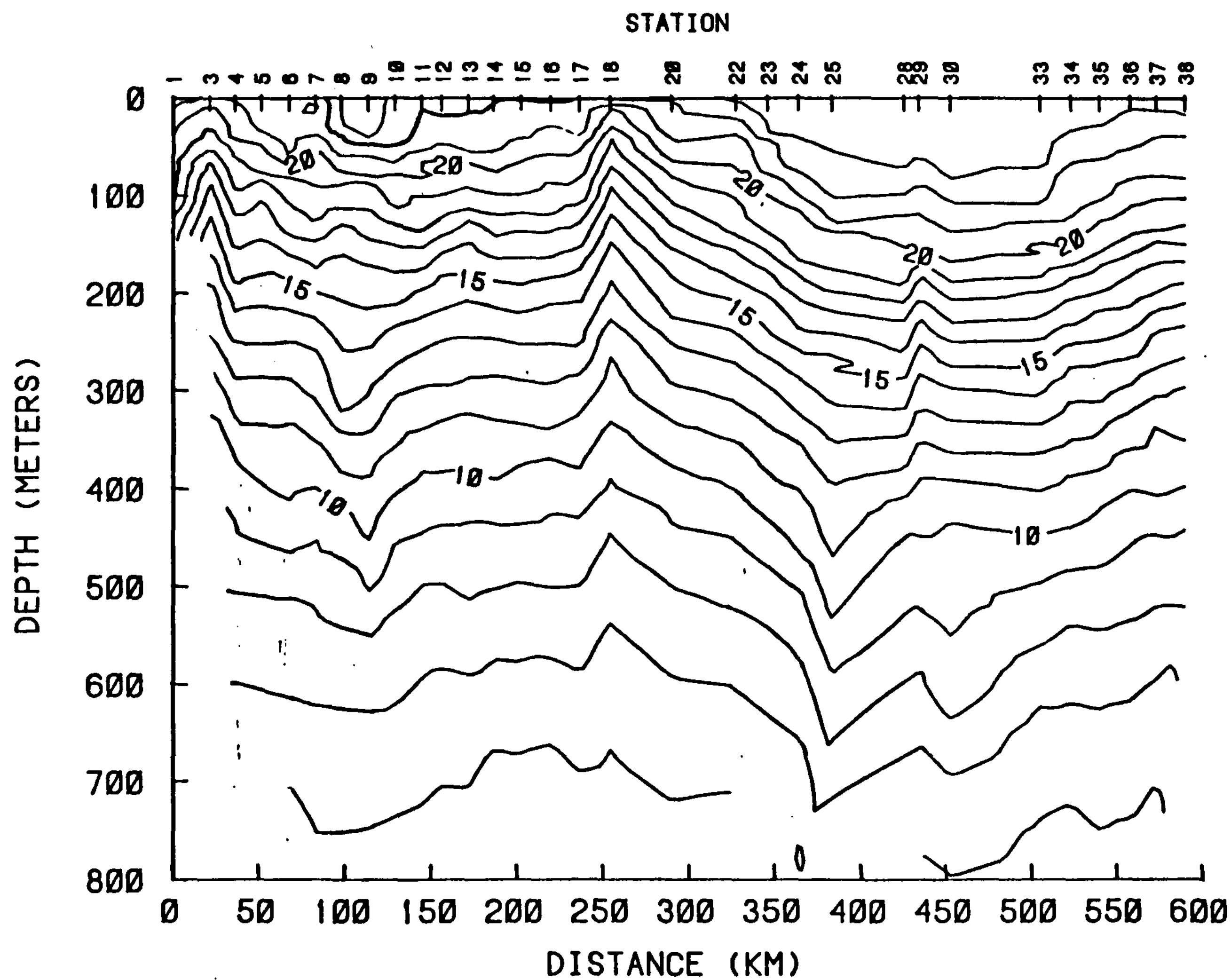
PARAMETERS AT SURFACE SUNCOASTER CRUISE 84-05



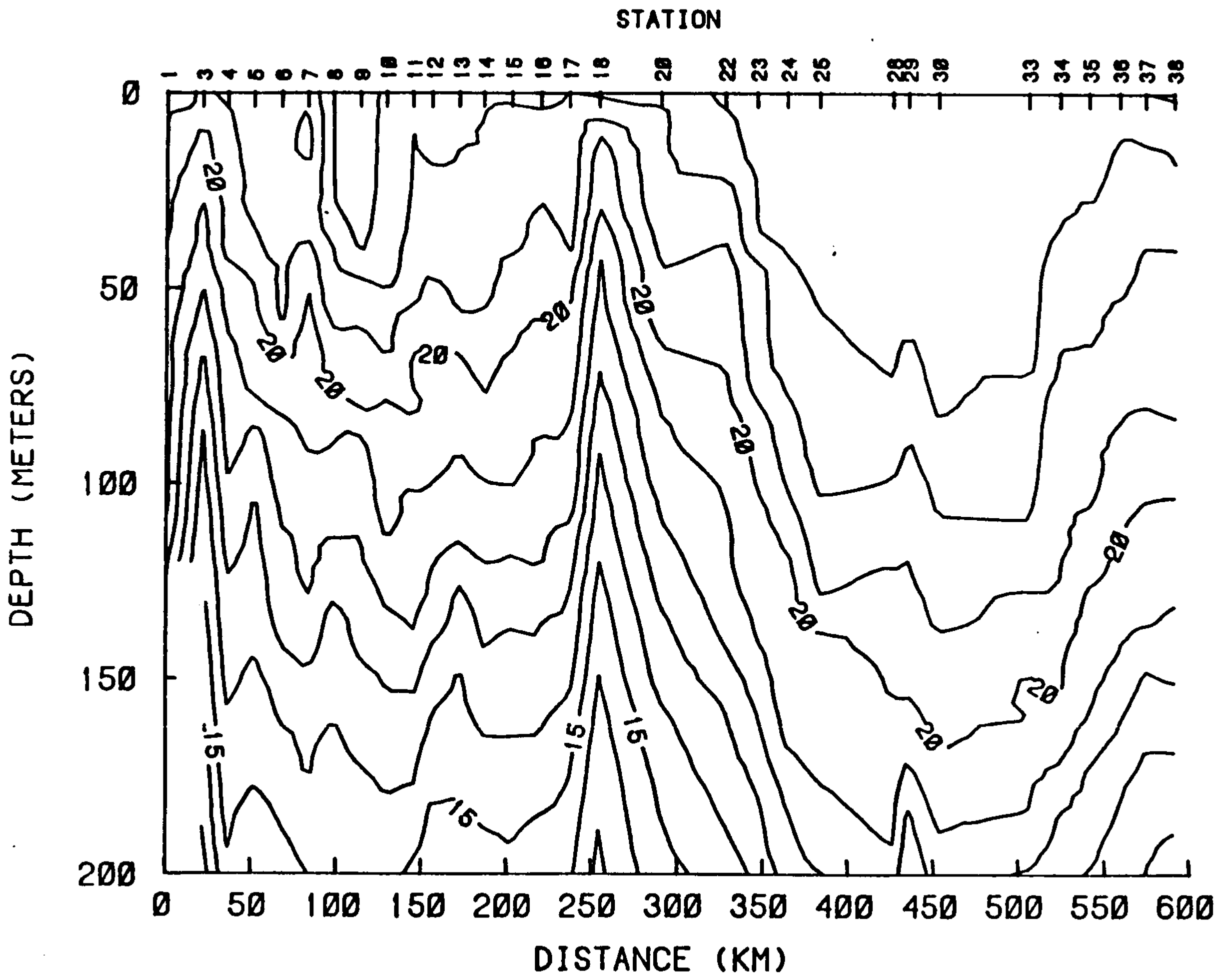
PARAMETERS AT SURFACE SUNCOASTER CRUISE 84-05



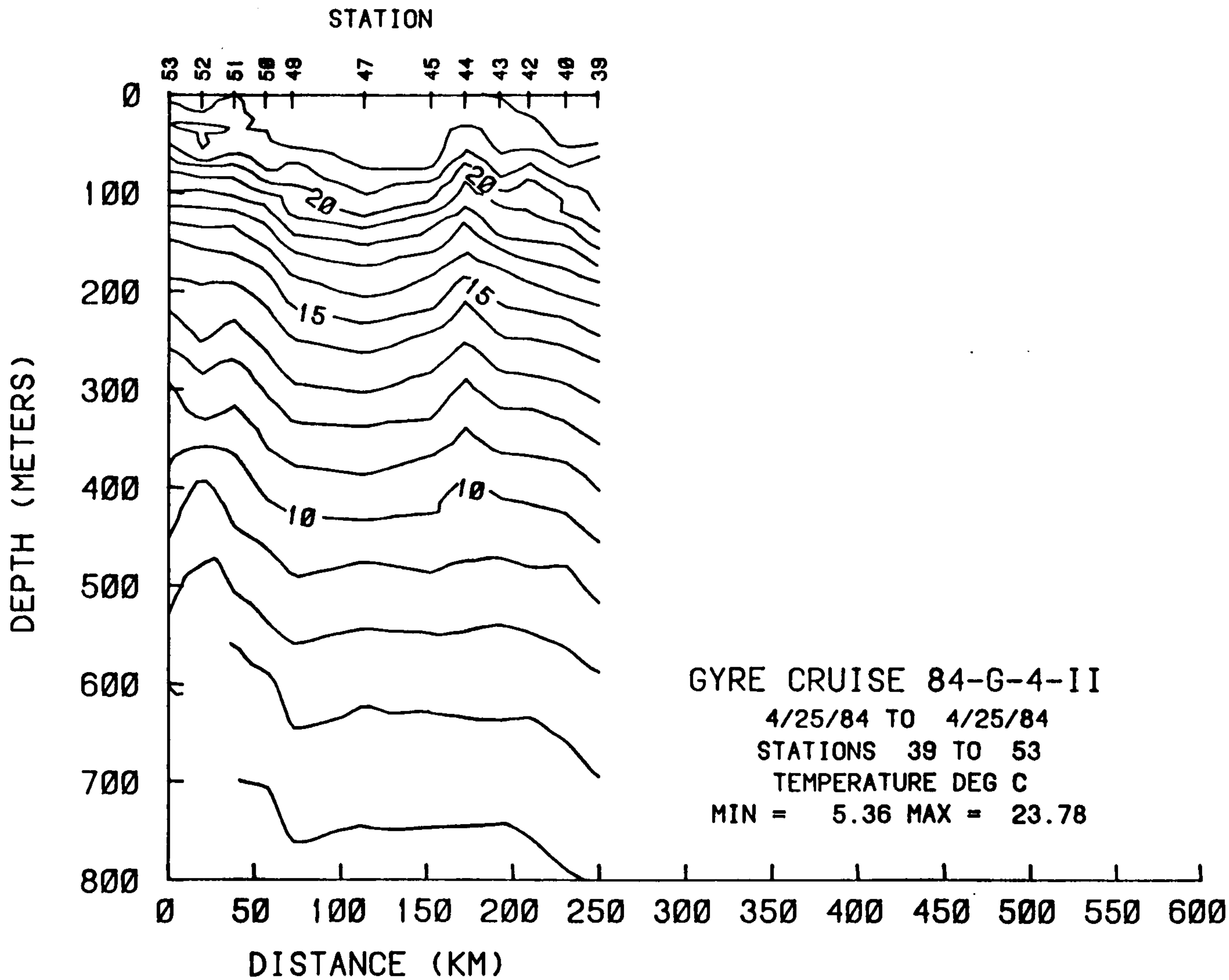
GYRE CRUISE 84-G-4-II
4/21/84 TO 4/25/84
96 W
95 W
94 W
93 W
92 W
91 W
90 W
89 W
88 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
53
1
39
38

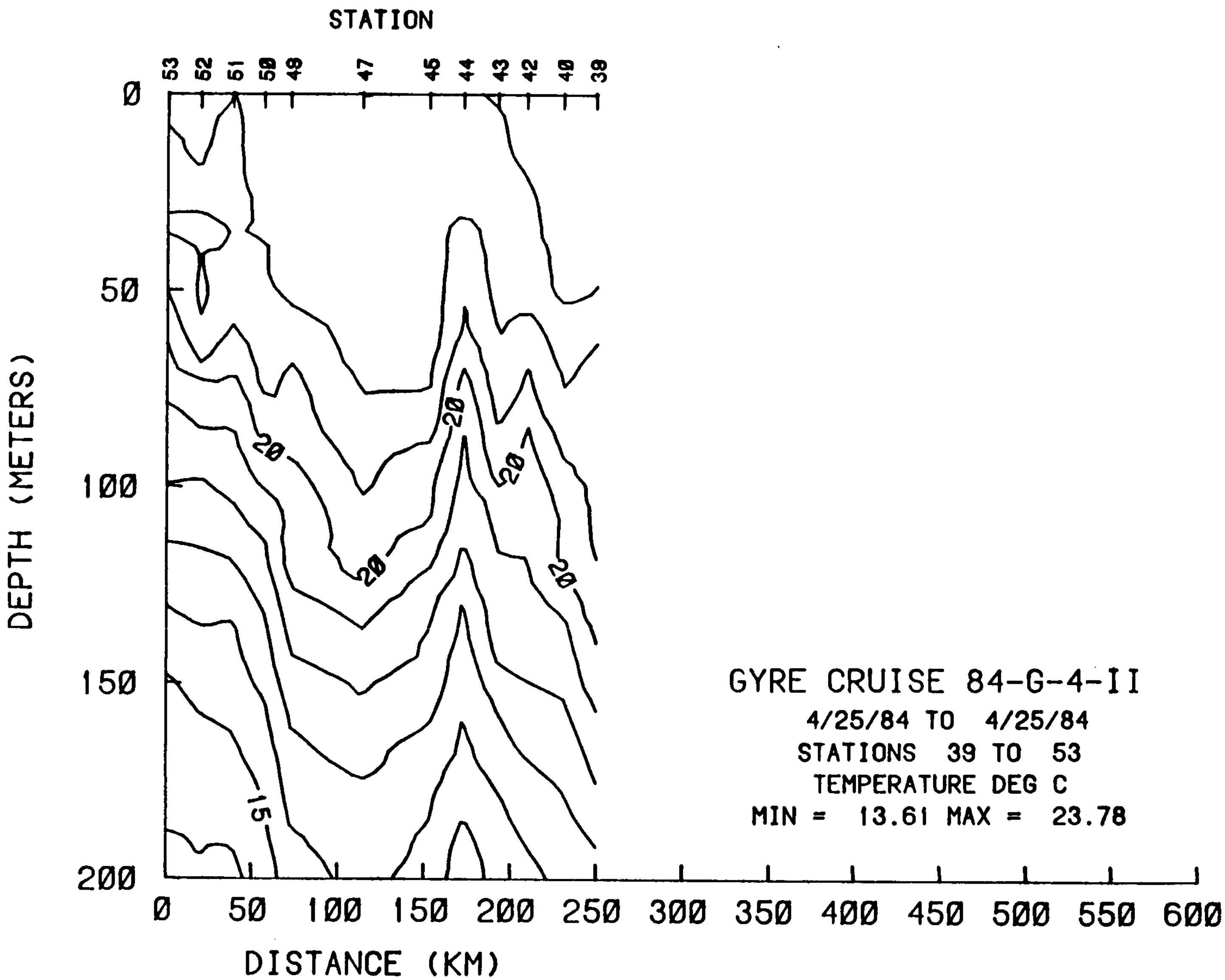


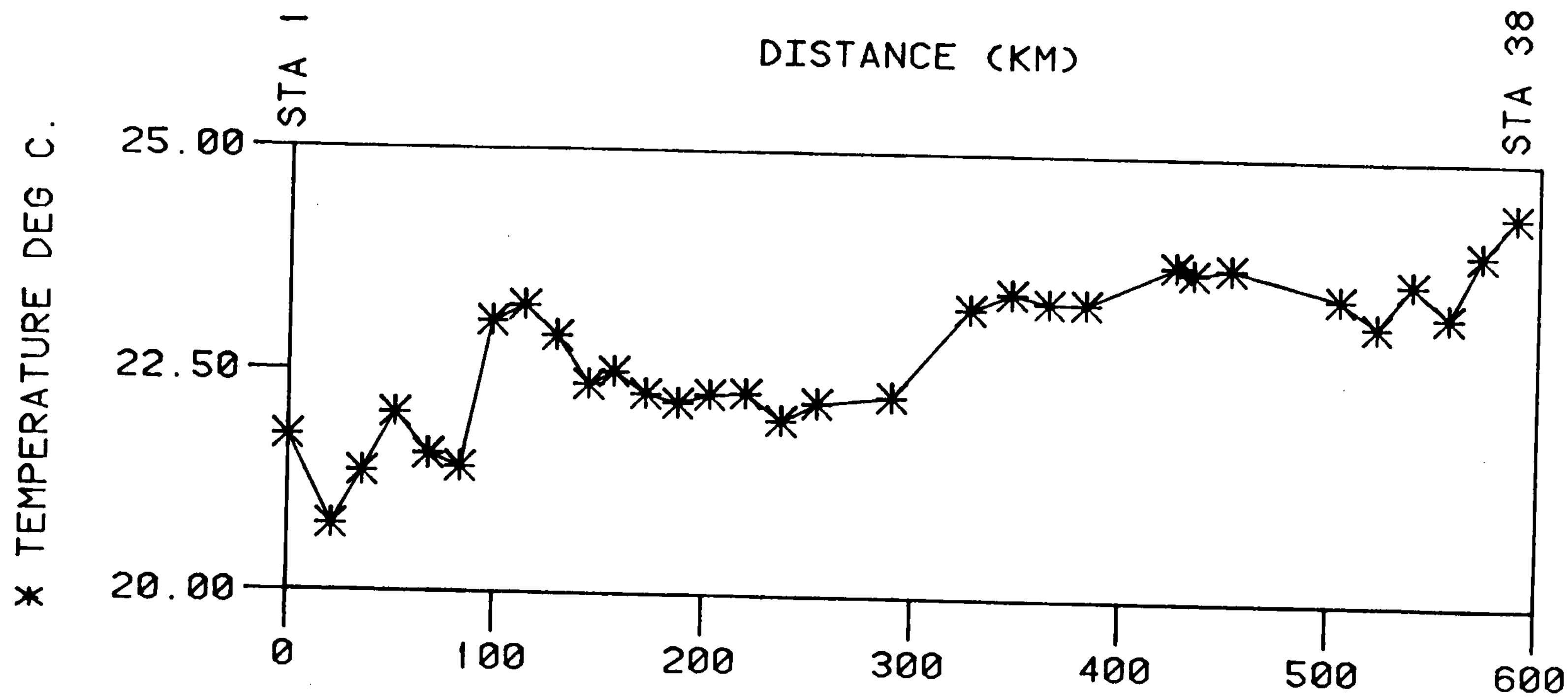
GYRE CRUISE 84-G-4-II
4/21/84 TO 4/23/84
STATIONS 1 TO 38
TEMPERATURE DEG C
MIN = 5.16 MAX = 24.41



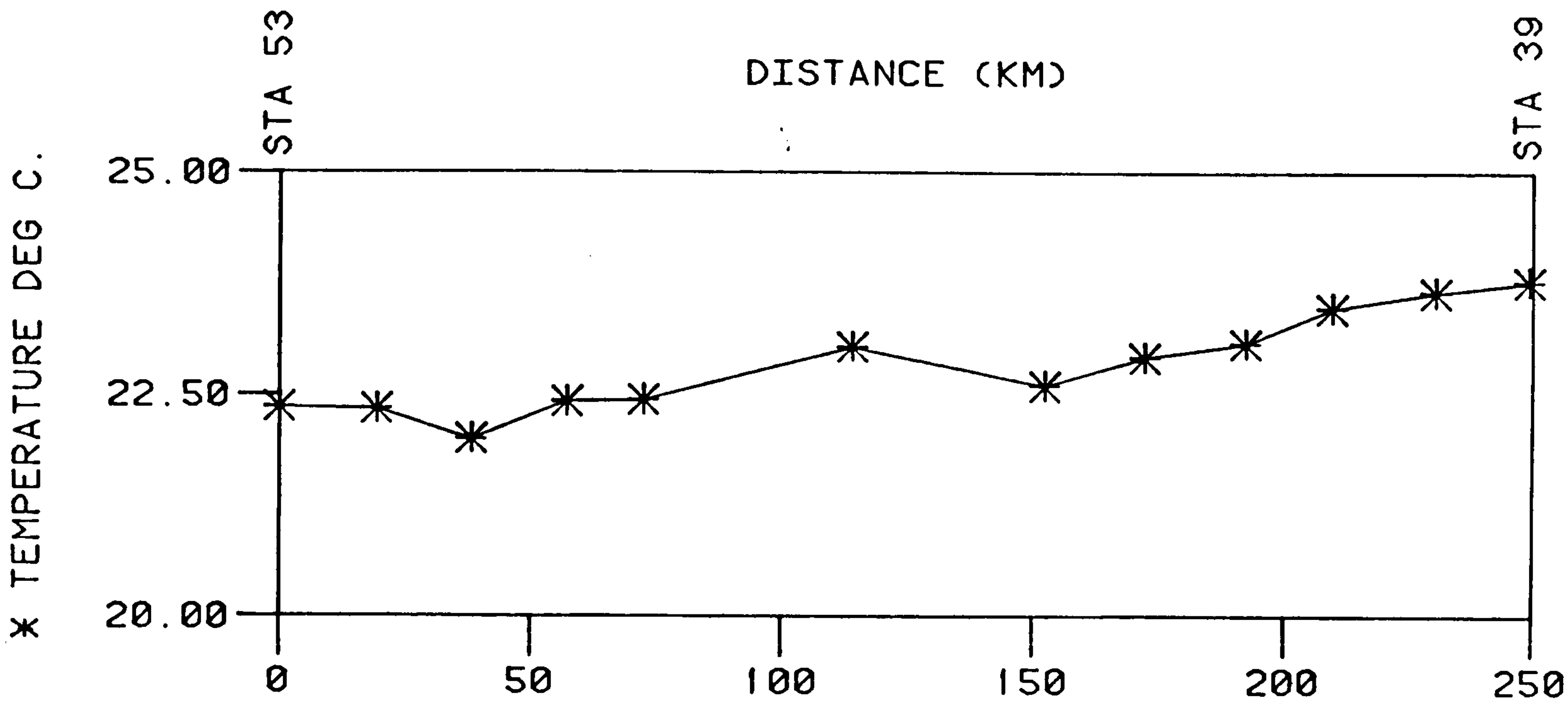
GYRE CRUISE 84-G-4-II
4/21/84 TO 4/23/84
STATIONS 1 TO 38
TEMPERATURE DEG C
MIN = 12.48 MAX = 24.41


STATION
53 52 51 50 49 47 45 44 43 42 40 39
DEPTH (METERS)
DISTANCE (KM)
0 50 100 150 200 250 300 350 400 450 500 550 600
0 100 200 300 400 500 600 700 800
20
15
10
GYRE CRUISE 84-G-4-II
4/25/84 TO 4/25/84
STATIONS 39 TO 53
TEMPERATURE DEG C
MIN = 5.36 MAX = 23.78

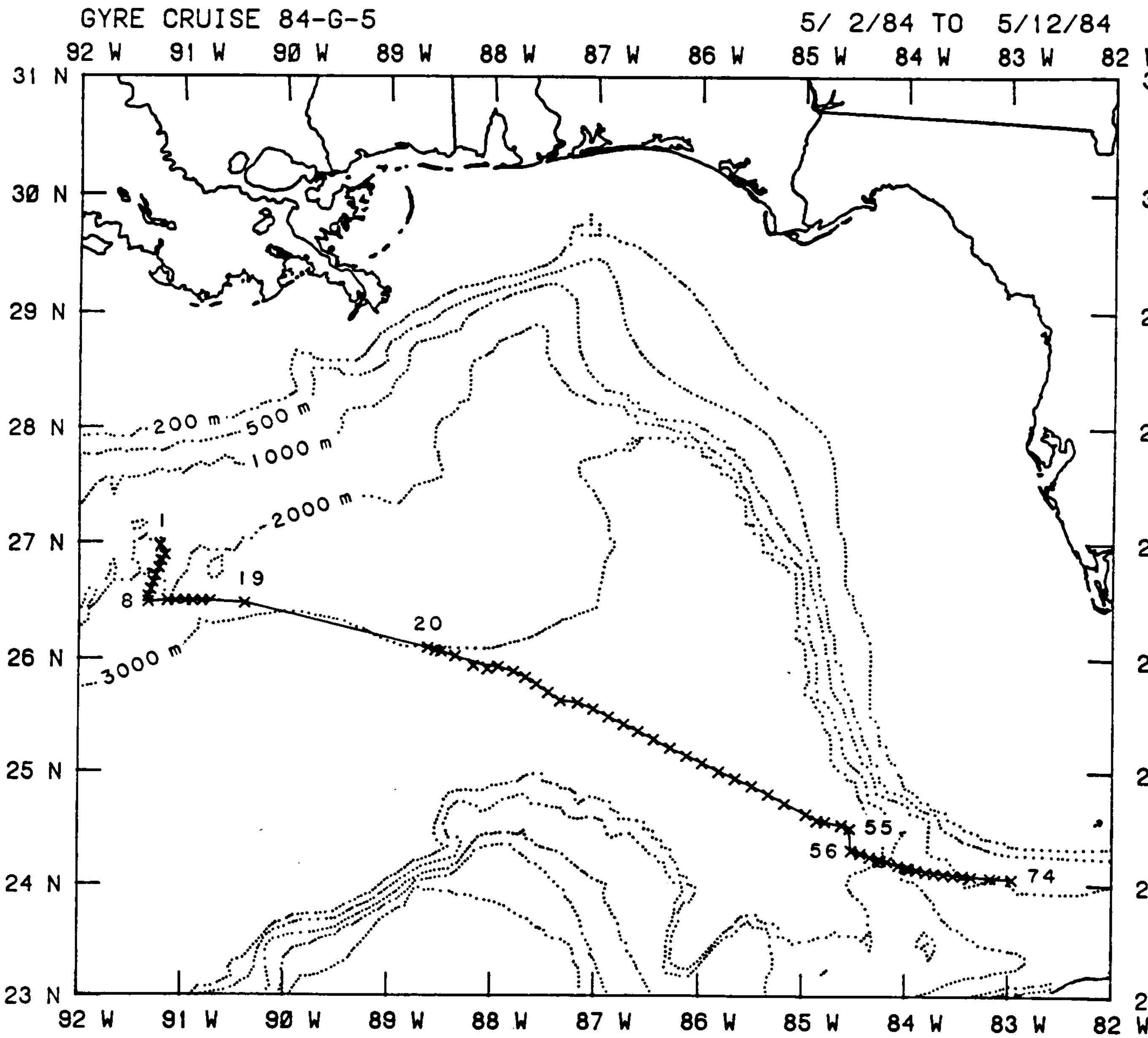

STATION
53 52 51 50 49 47 45 44 43 42 40 39
DEPTH (METERS)
0
50
100
150
200
20
20
20
20
20
15
0 50 100 150 200 250 300 350 400 450 500 550 600
DISTANCE (KM)
GYRE CRUISE 84-G-4-II
4/25/84 TO 4/25/84
STATIONS 39 TO 53
TEMPERATURE DEG C
MIN = 13.61 MAX = 23.78

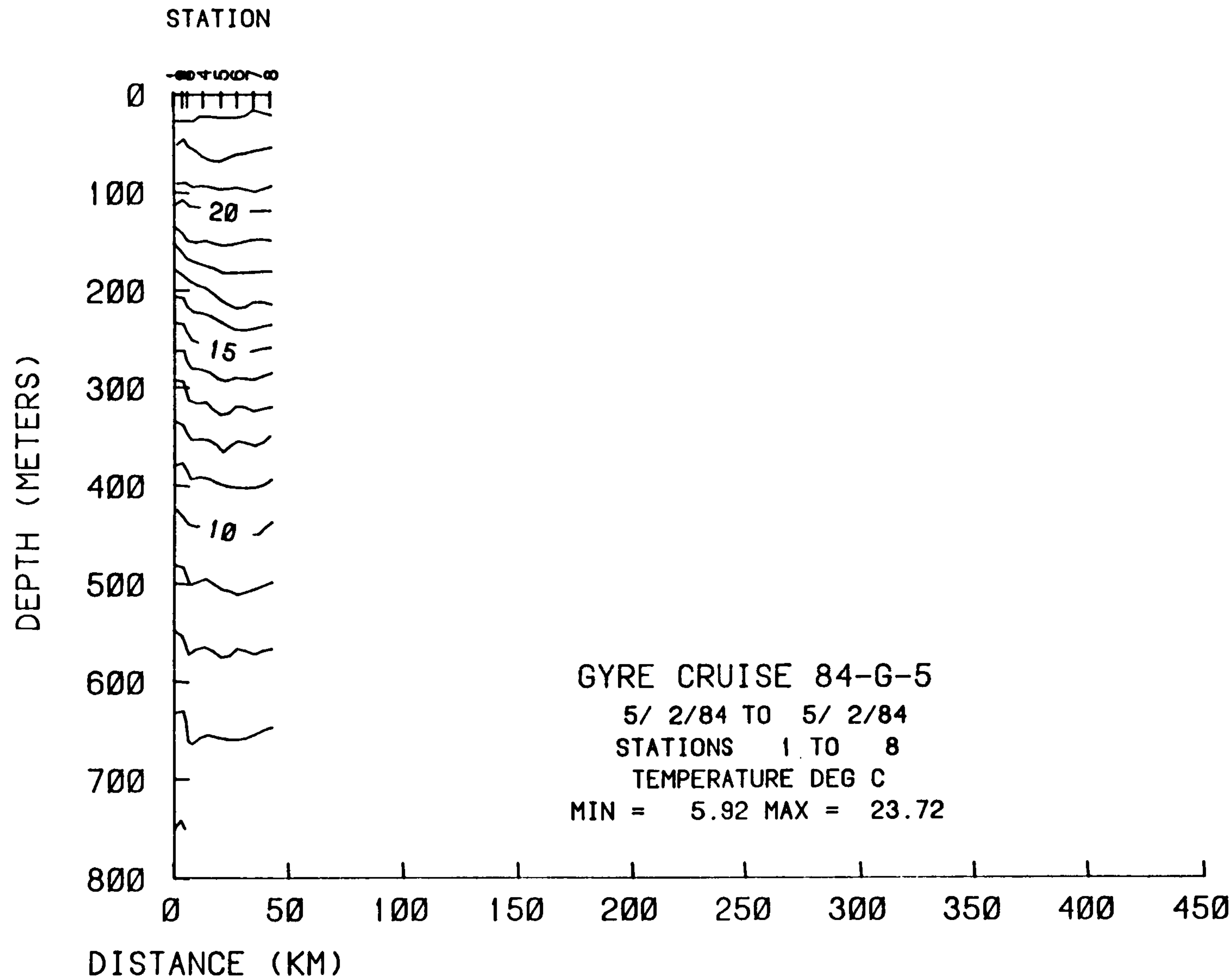


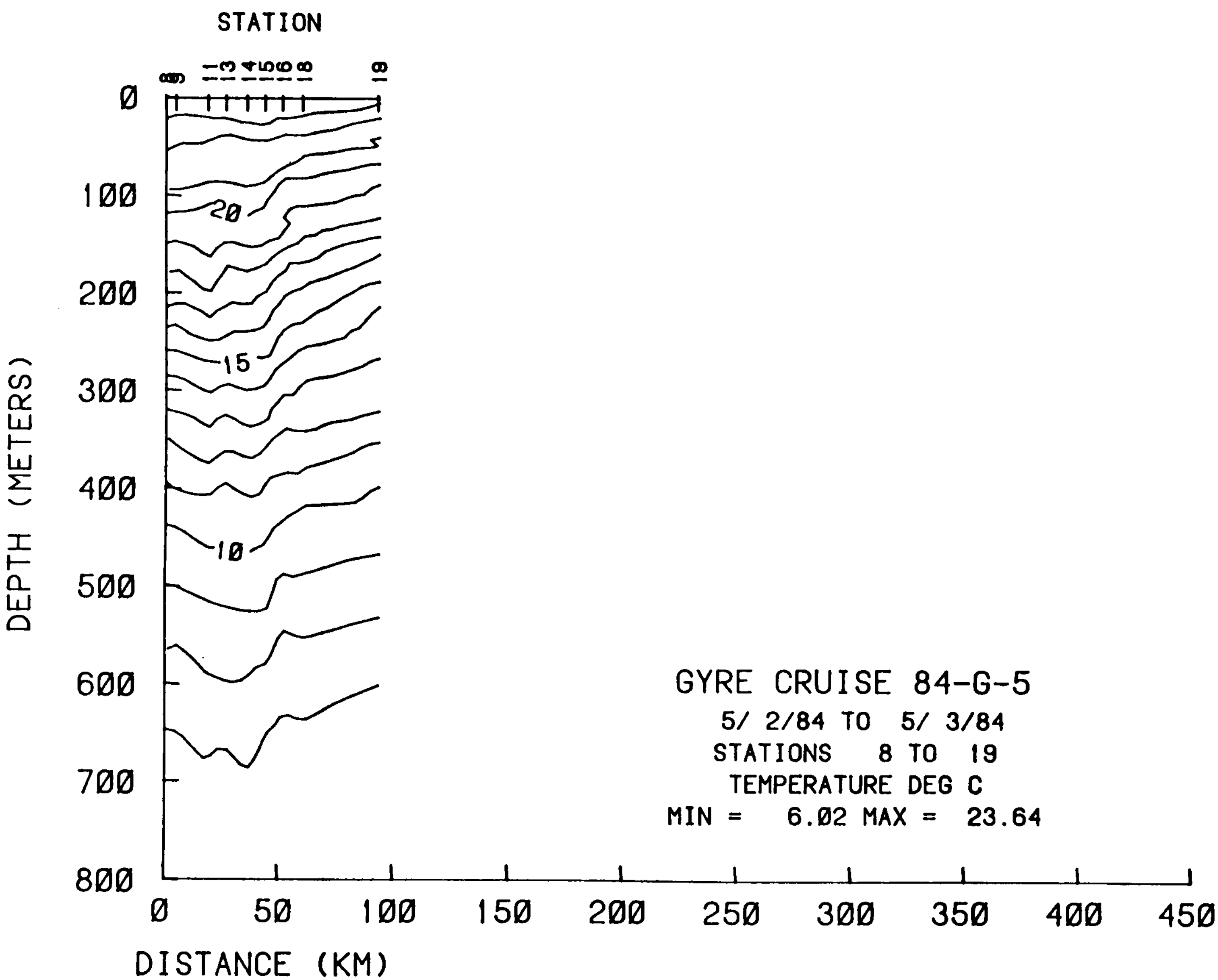
PARAMETERS AT SURFACE GYRE CRUISE 84-G-4-II

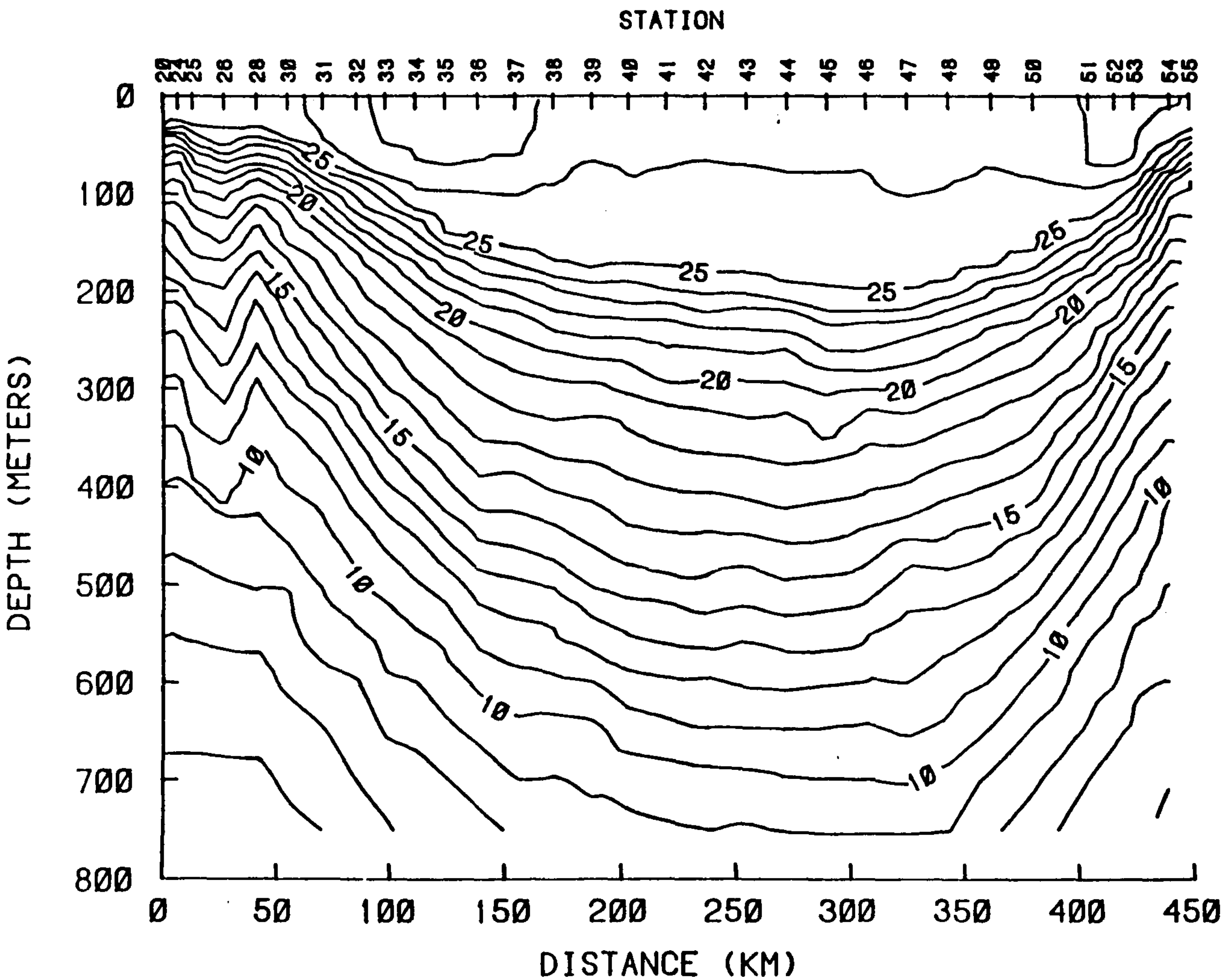


PARAMETERS AT SURFACE GYRE CRUISE 84-G-4-II

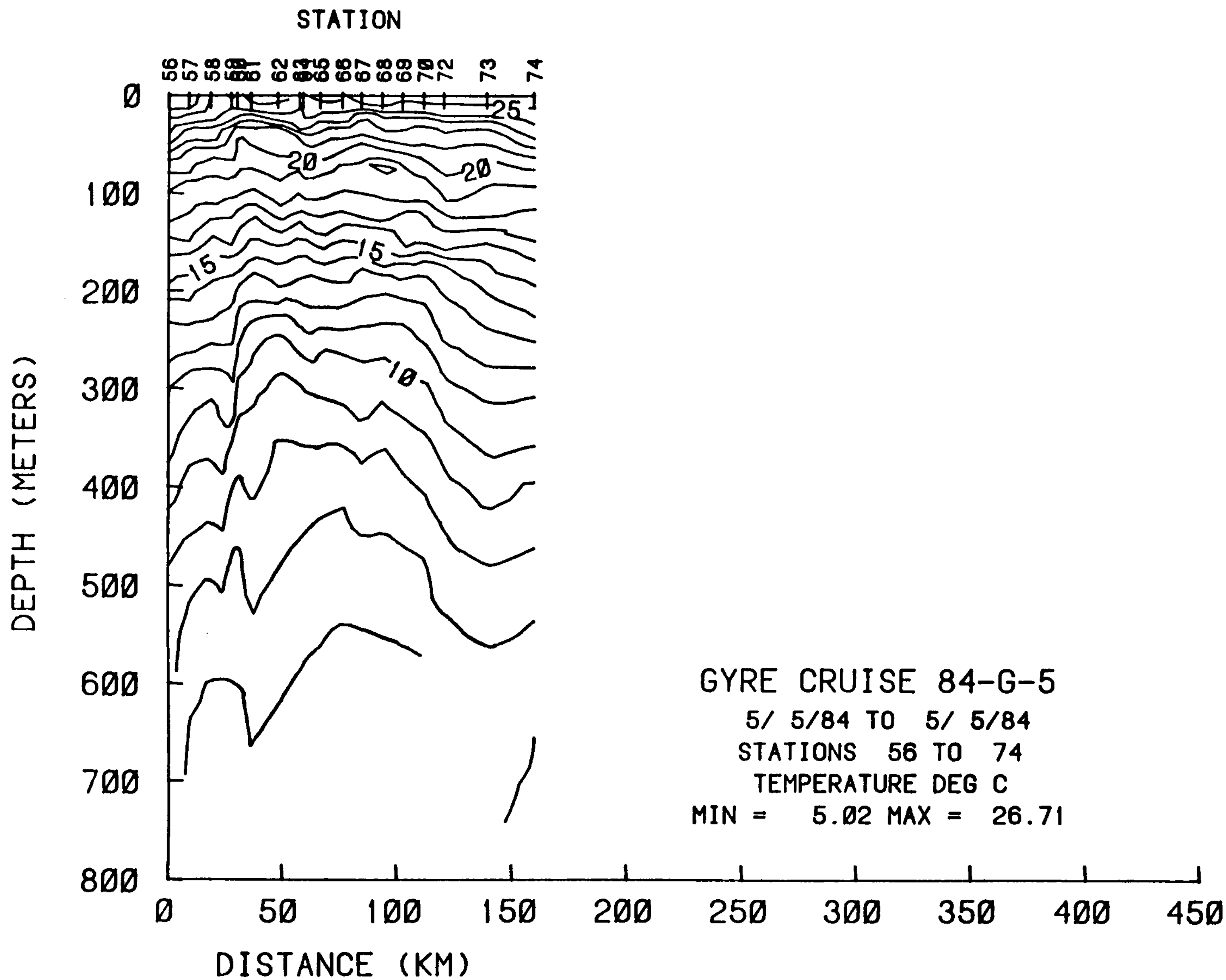

GYRE CRUISE 84-G-5
5/ 2/84 TO 5/12/84
92 W
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
31 N
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
200 m
500 m
1000 m
2000 m
3000 m
1
8
19
20
55
56
74


STATION
DEPTH (METERS)
DISTANCE (KM)
20
15
10
GYRE CRUISE 84-G-5
5/ 2/84 TO 5/ 2/84
STATIONS 1 TO 8
TEMPERATURE DEG C
MIN = 5.92 MAX = 23.72

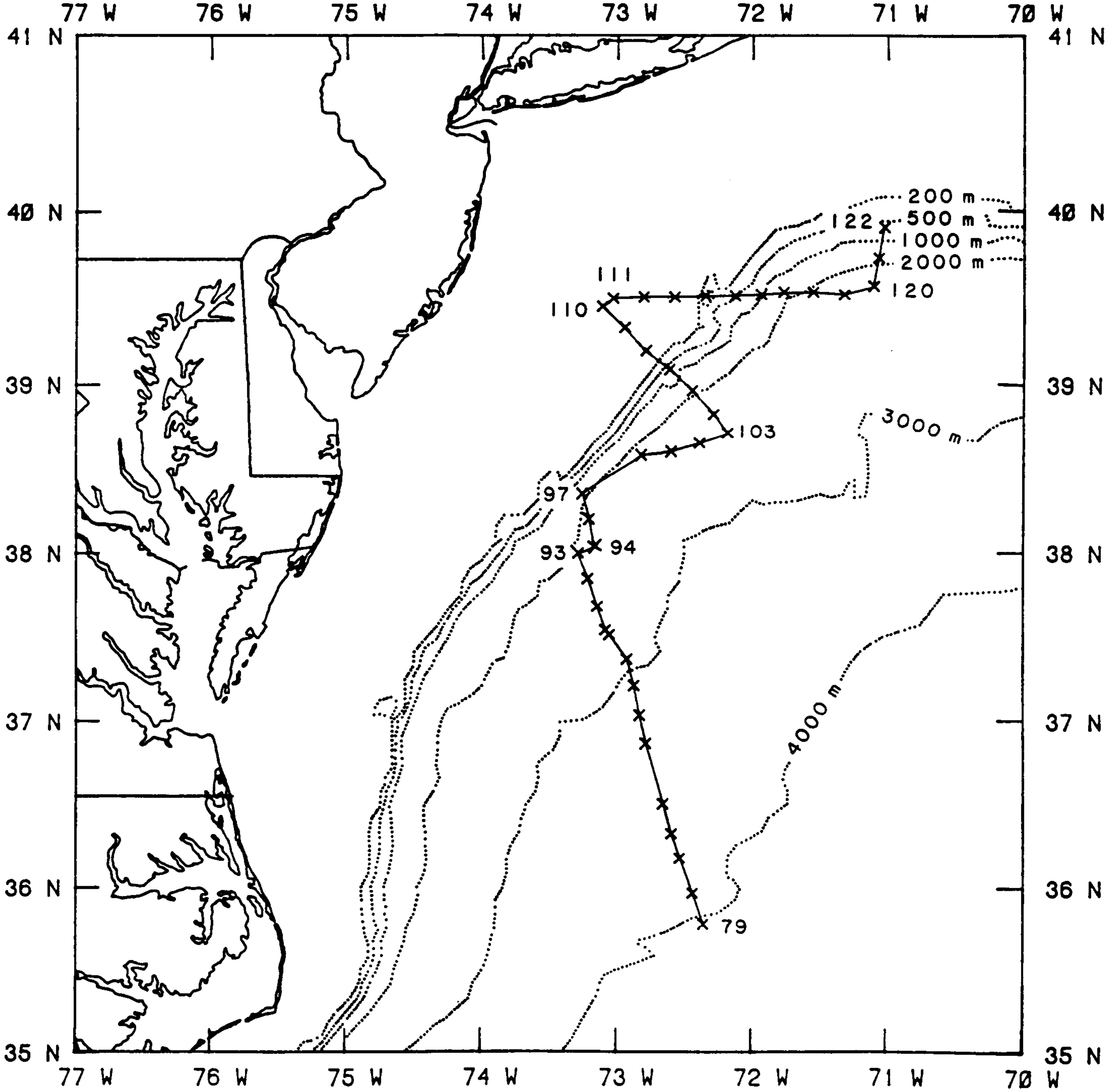

STATION
19
0
100
200
300
400
500
600
700
800
DEPTH (METERS)
20
15
10
0
50
100
150
200
250
300
350
400
450
DISTANCE (KM)
GYRE CRUISE 84-G-5
5/ 2/84 TO 5/ 3/84
STATIONS 8 TO 19
TEMPERATURE DEG C
MIN = 6.02 MAX = 23.64

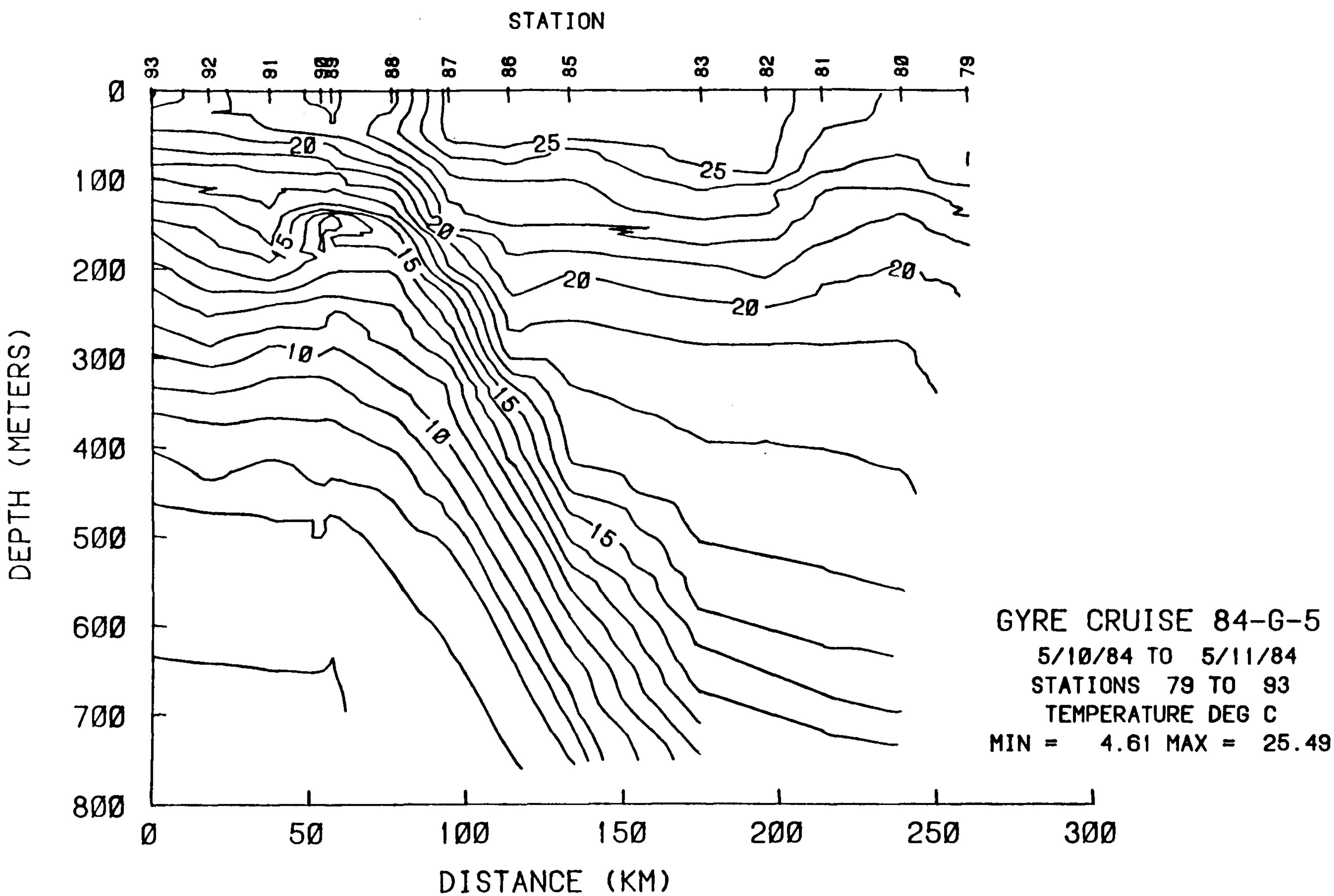


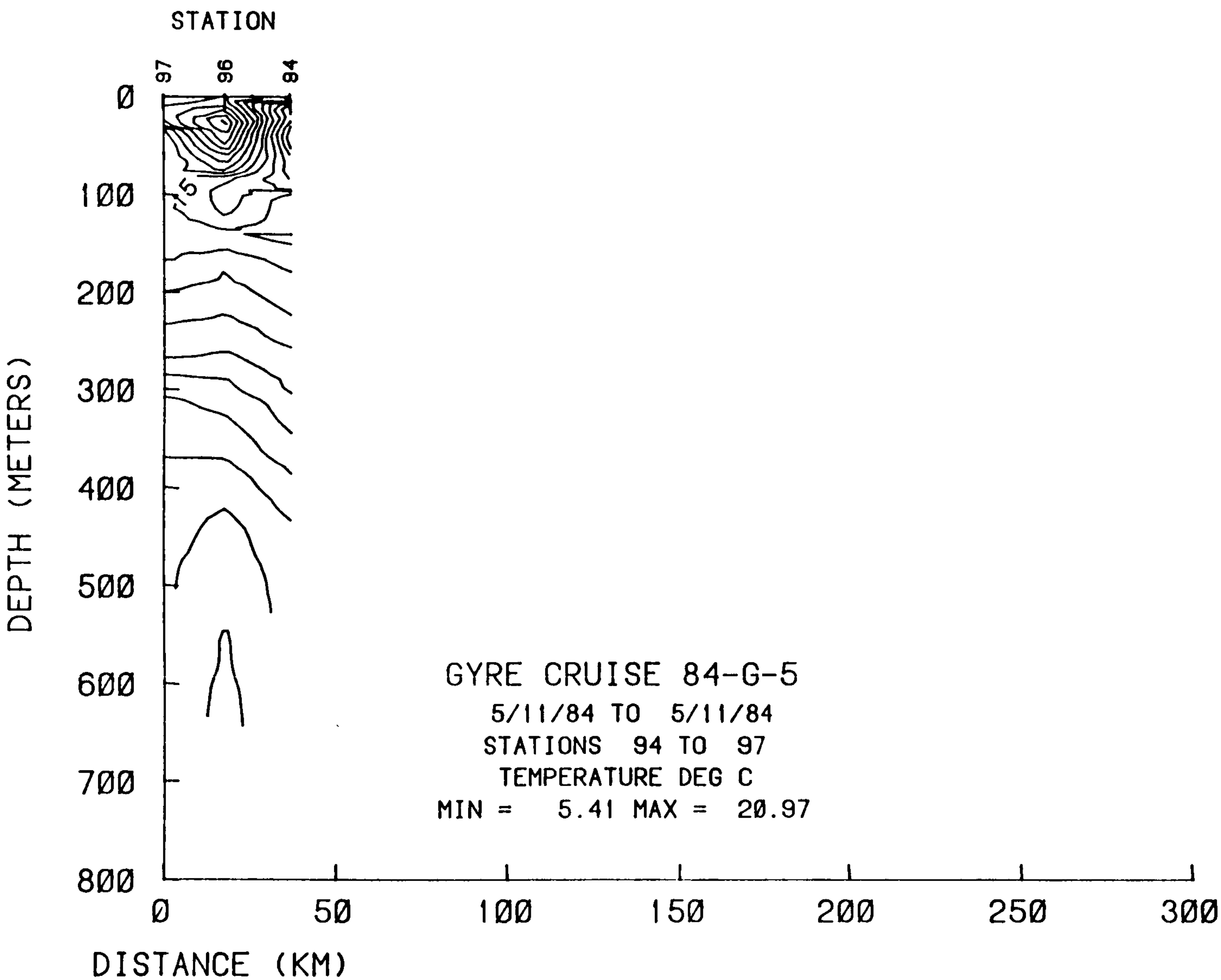
GYRE CRUISE 84-G-5
5/ 2/84 TO 5/ 4/84
STATIONS 20 TO 55
TEMPERATURE DEG C
MIN = 5.49 MAX = 27.24

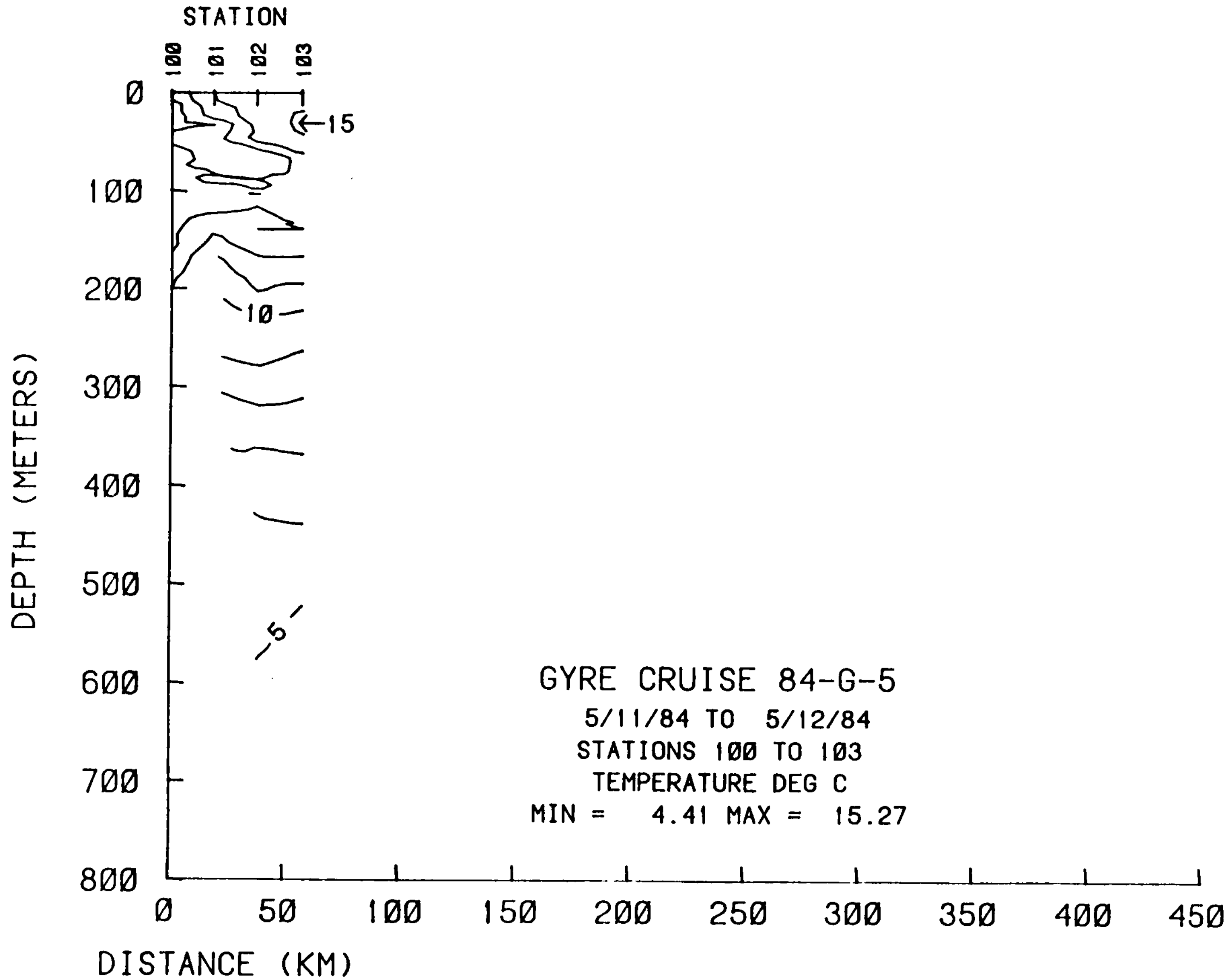

STATION
56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 72 73 74
25
20
20
15
15
10
0
100
200
300
400
500
600
700
800
DEPTH (METERS)
0 50 100 150 200 250 300 350 400 450
DISTANCE (KM)
GYRE CRUISE 84-G-5
5/ 5/84 TO 5/ 5/84
STATIONS 56 TO 74
TEMPERATURE DEG C
MIN = 5.02 MAX = 26.71

GYRE CRUISE 84-G-5 5/ 2/84 TO 5/12/84

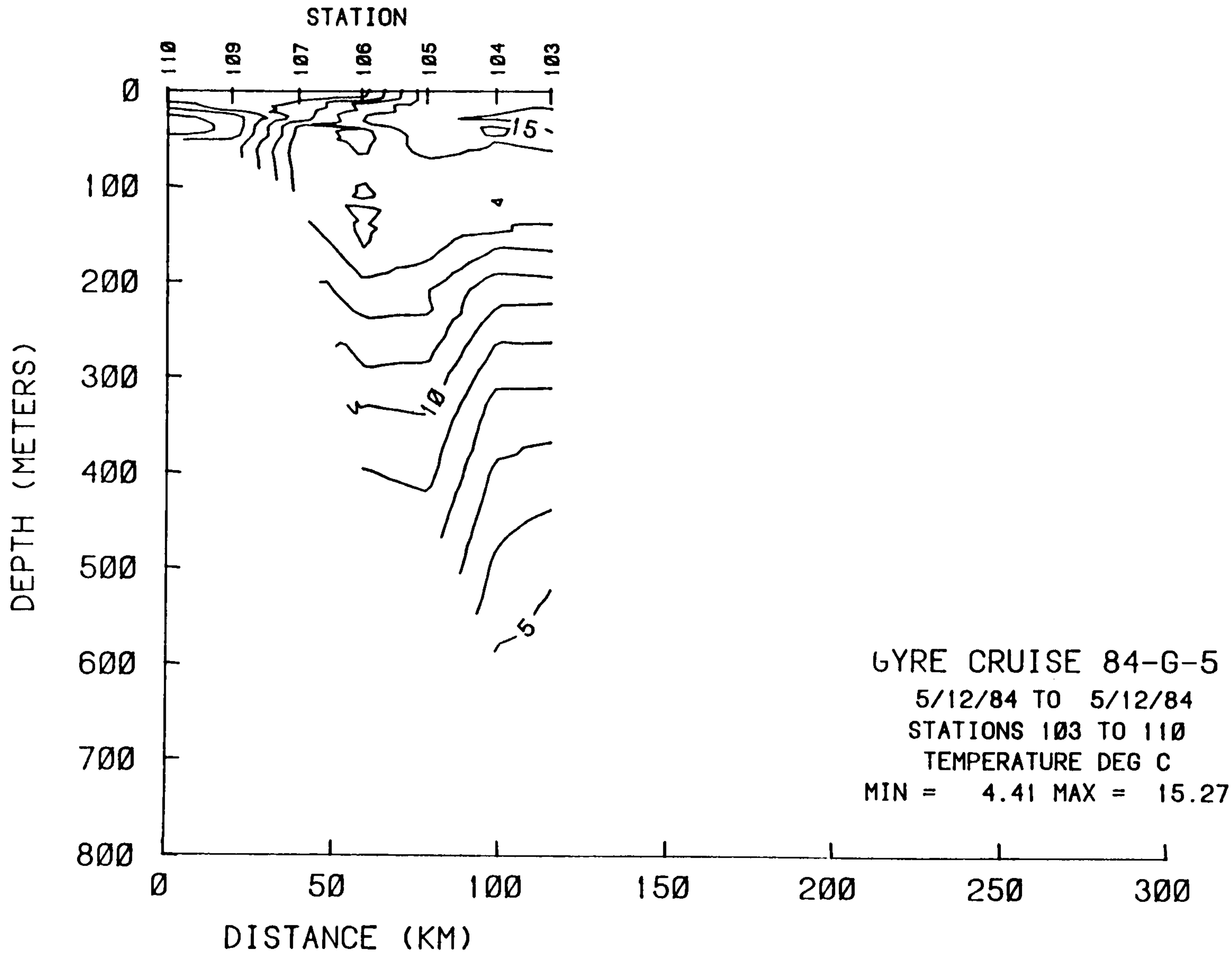


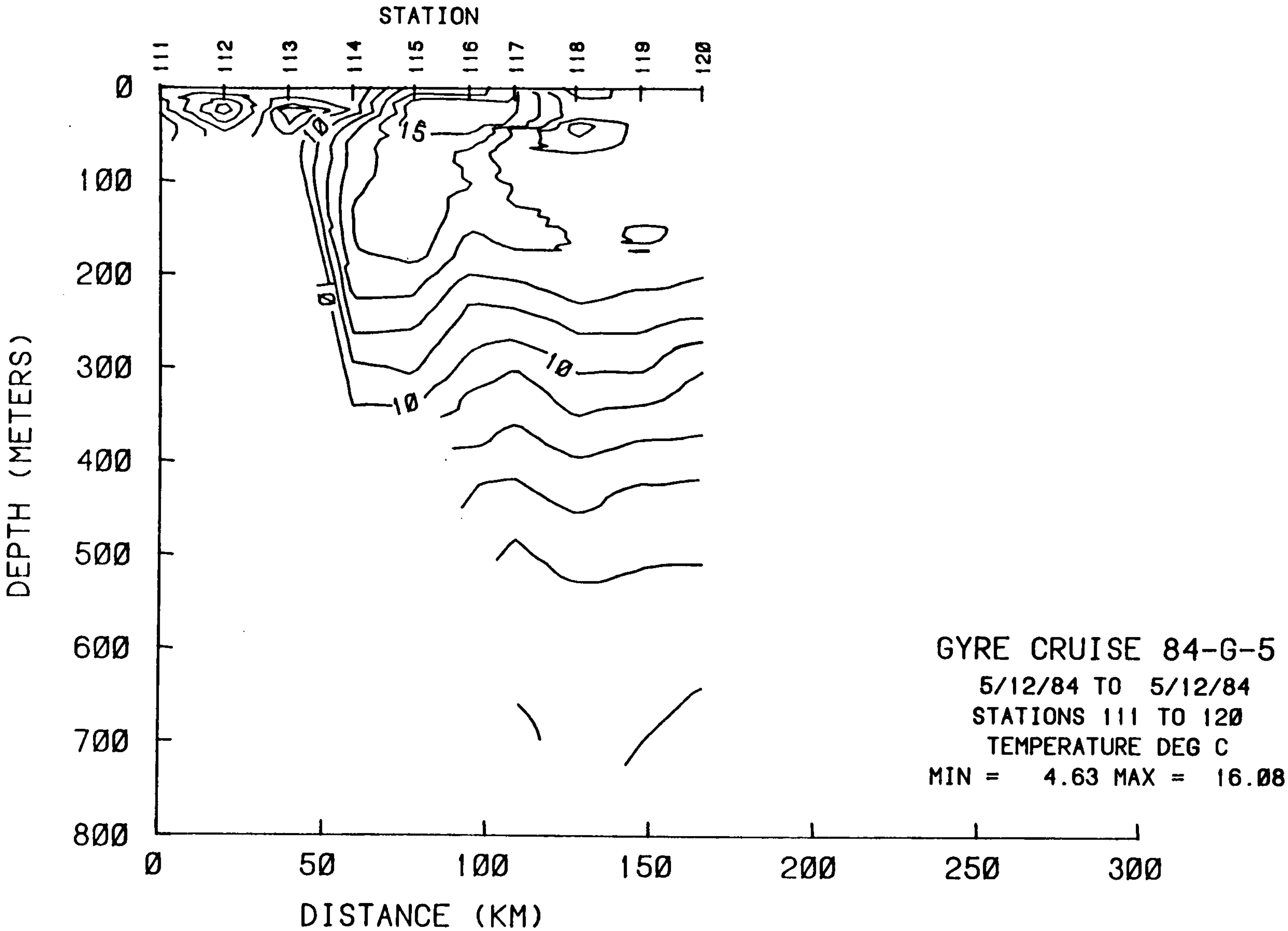

STATION
93
92
91
90
89
88
87
86
85
83
82
81
80
79
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0
50
100
150
200
250
300
25
20
15
10
GYRE CRUISE 84-G-5
5/10/84 TO 5/11/84
STATIONS 79 TO 93
TEMPERATURE DEG C
MIN = 4.61 MAX = 25.49

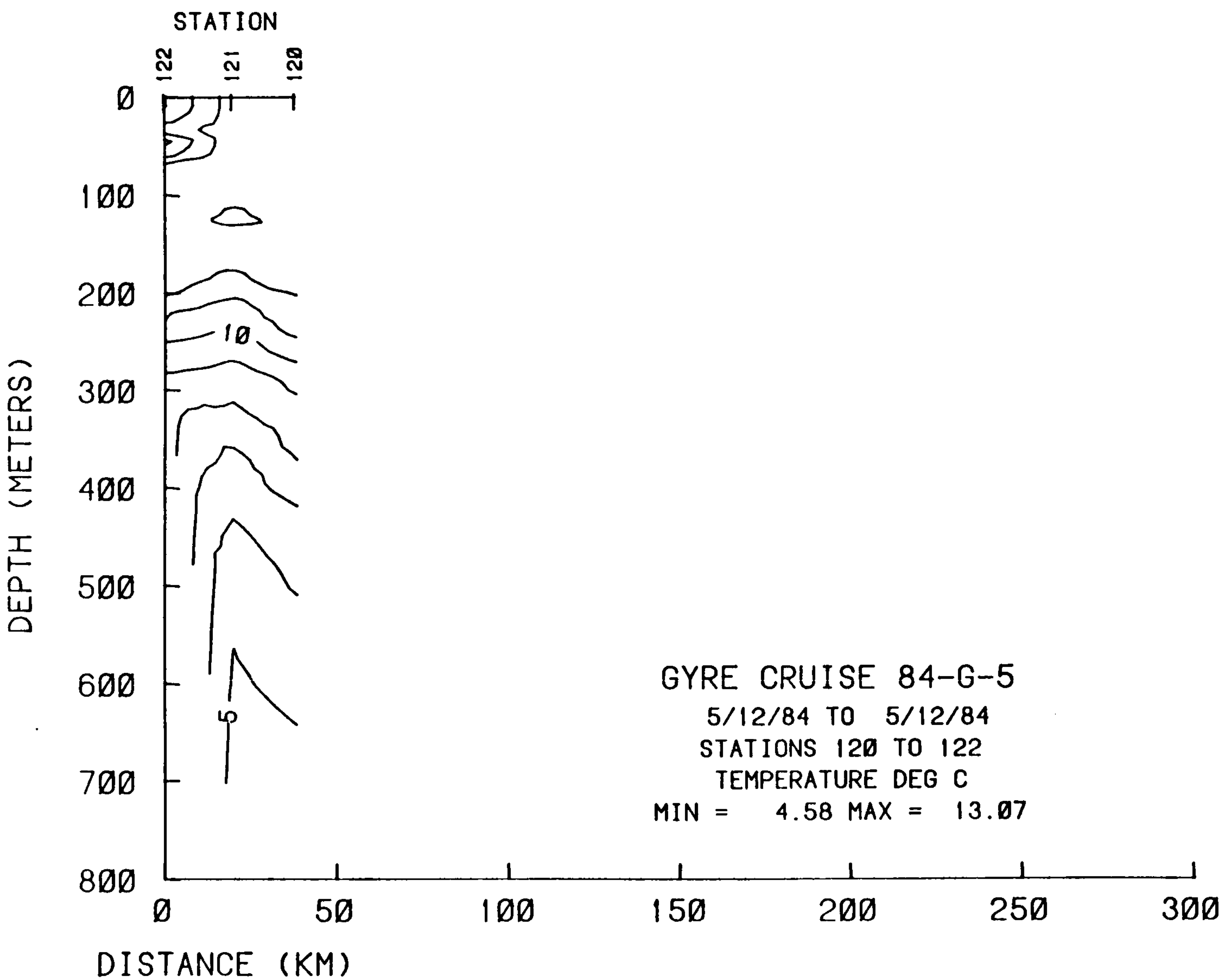

STATION
97
96
94
DEPTH (METERS)
Ø
100
200
300
400
500
600
700
800
DISTANCE (KM)
Ø
50
100
150
200
250
300
GYRE CRUISE 84-G-5
5/11/84 TO 5/11/84
STATIONS 94 TO 97
TEMPERATURE DEG C
MIN = 5.41 MAX = 20.97



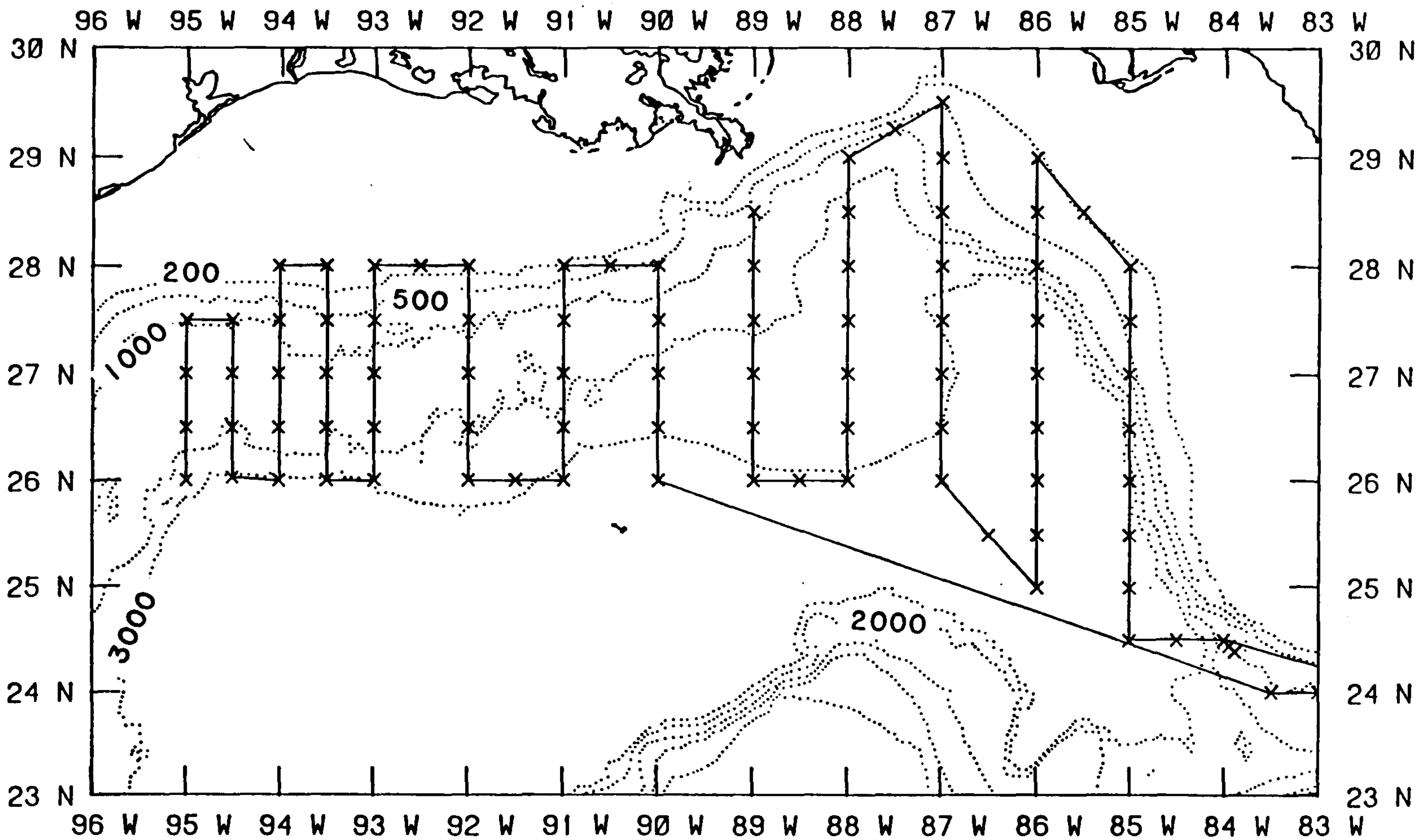
STATION
100
101
102
103
15
10
5
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0
50
100
150
200
250
300
350
400
450
GYRE CRUISE 84-G-5
5/11/84 TO 5/12/84
STATIONS 100 TO 103
TEMPERATURE DEG C
MIN = 4.41 MAX = 15.27

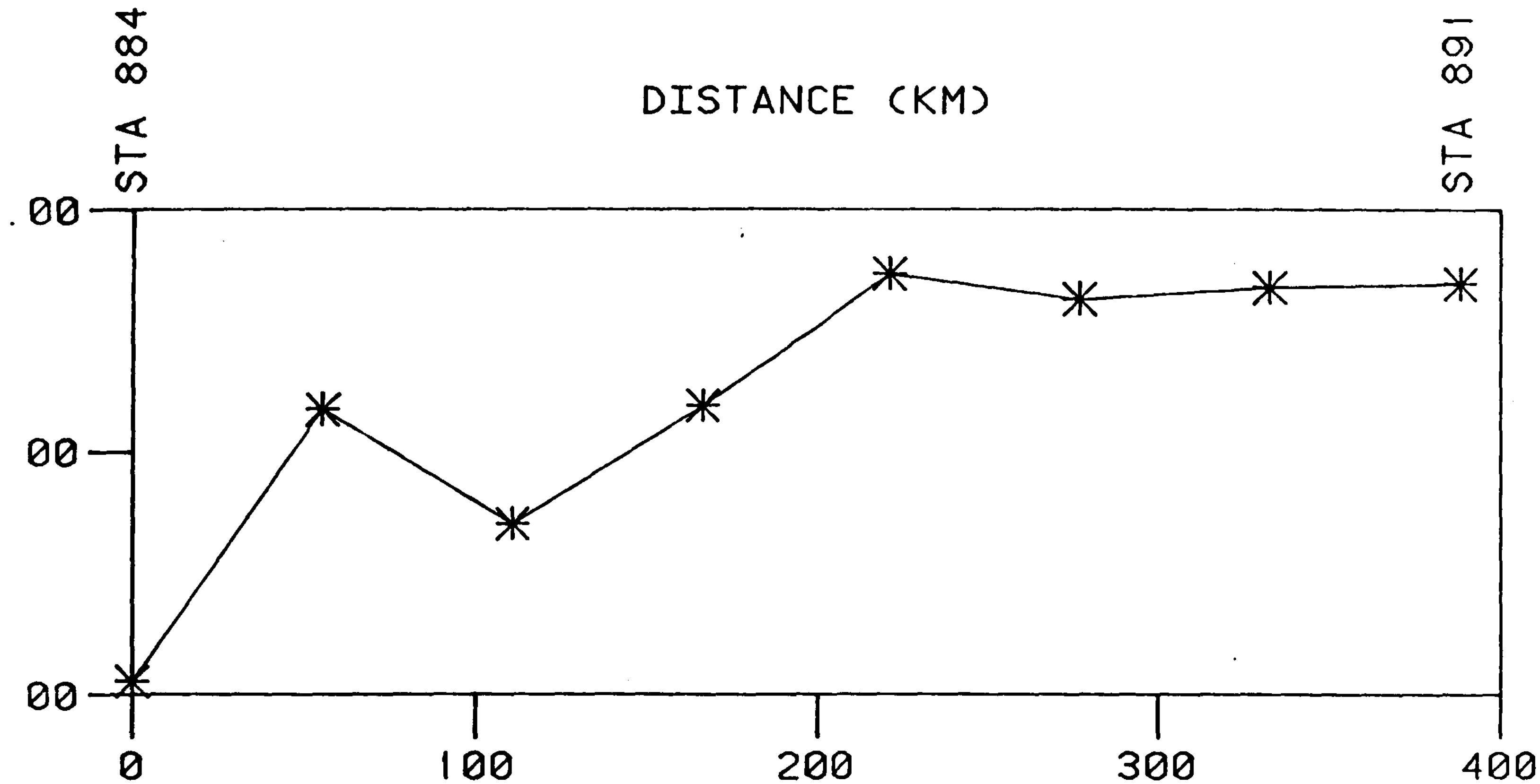

STATION
110
109
107
106
105
104
103
15
4
10
5
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0
50
100
150
200
250
300
GYRE CRUISE 84-G-5
5/12/84 TO 5/12/84
STATIONS 103 TO 110
TEMPERATURE DEG C
MIN = 4.41 MAX = 15.27


STATION
111
112
113
114
115
116
117
118
119
120
15
10
10
10
10
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0
50
100
150
200
250
300
GYRE CRUISE 84-G-5
5/12/84 TO 5/12/84
STATIONS 111 TO 120
TEMPERATURE DEG C
MIN = 4.63 MAX = 16.08

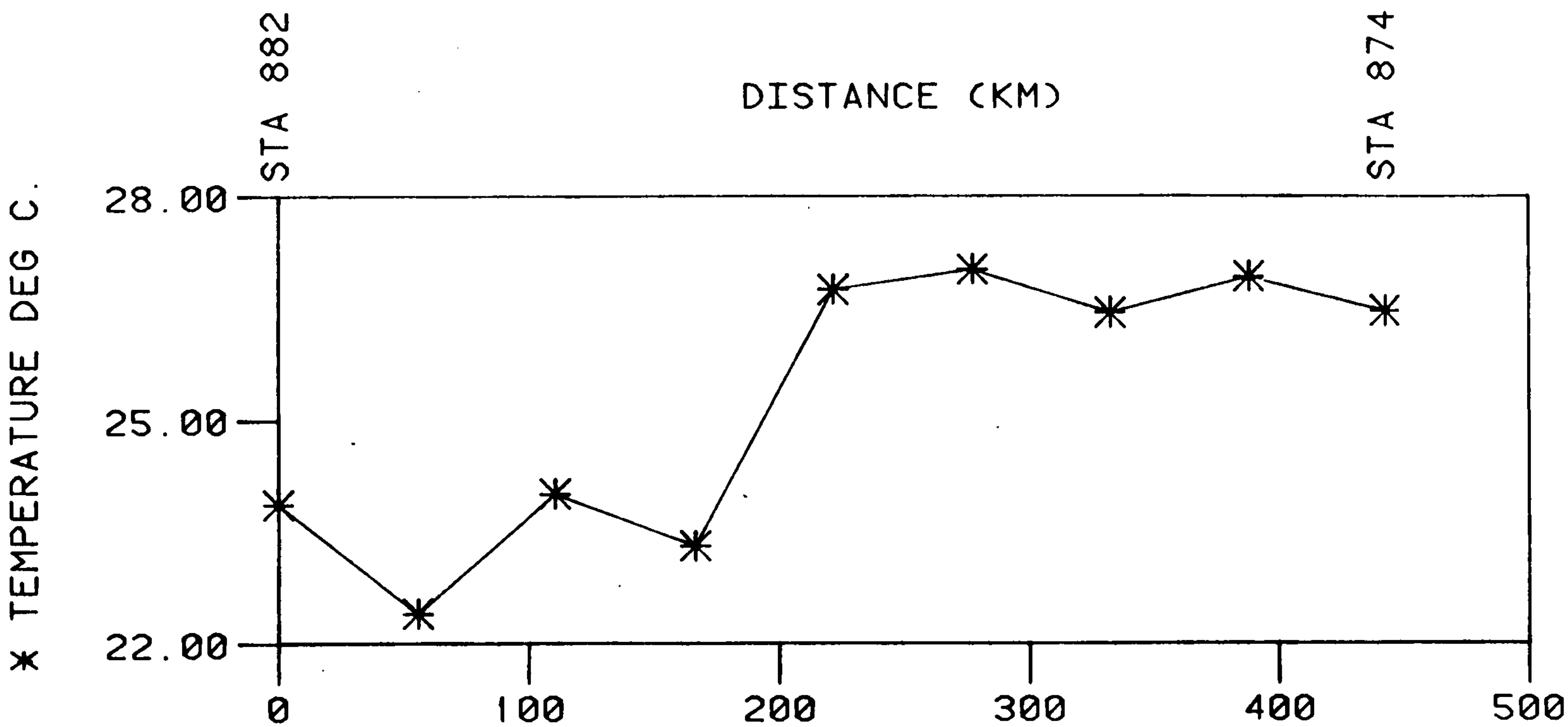

STATION
122
121
120
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
10
5
GYRE CRUISE 84-G-5
5/12/84 TO 5/12/84
STATIONS 120 TO 122
TEMPERATURE DEG C
MIN = 4.58 MAX = 13.07
0
50
100
150
200
250
300
DISTANCE (KM)

ORFGON II CRUISE 143 4/21/84 TO 5/14/84

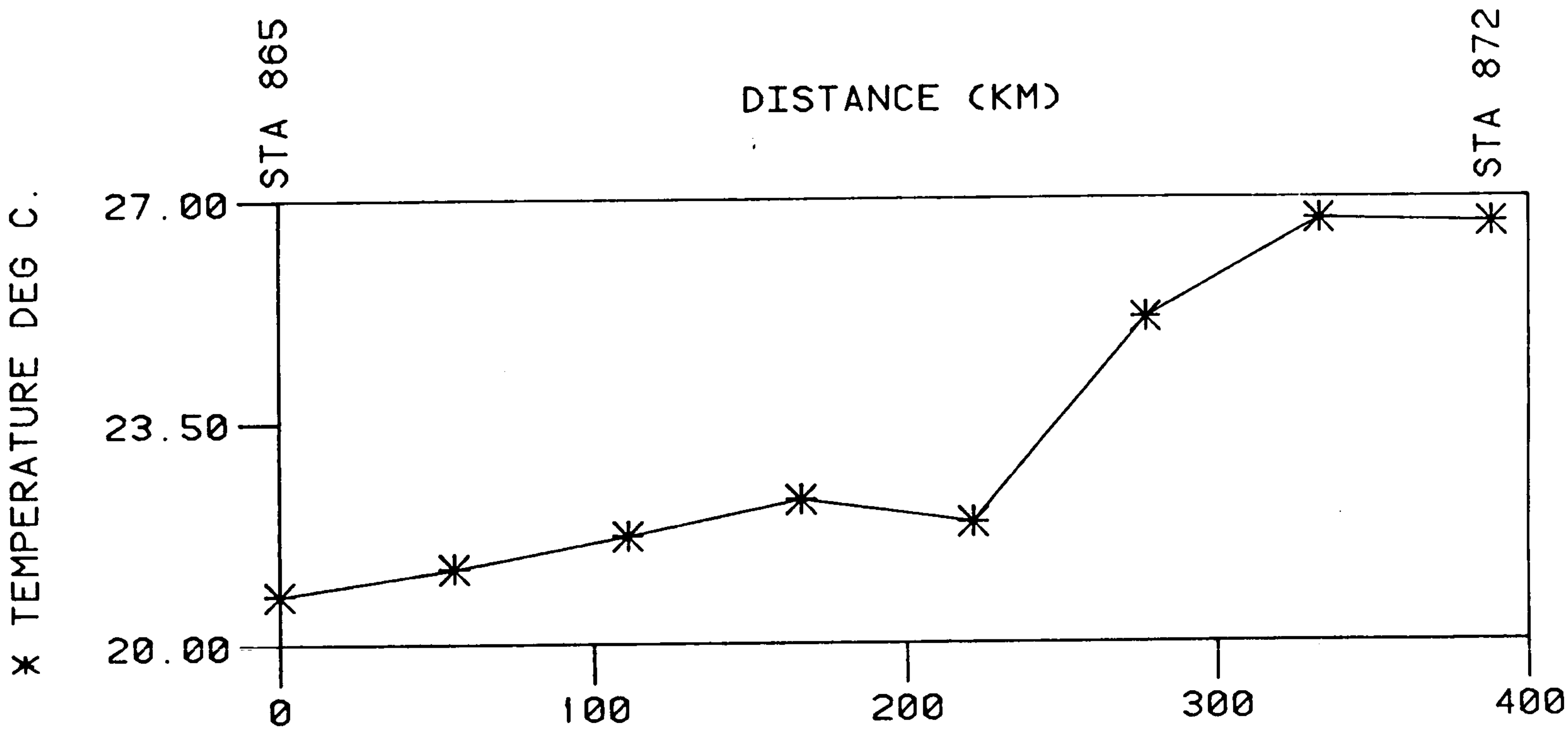




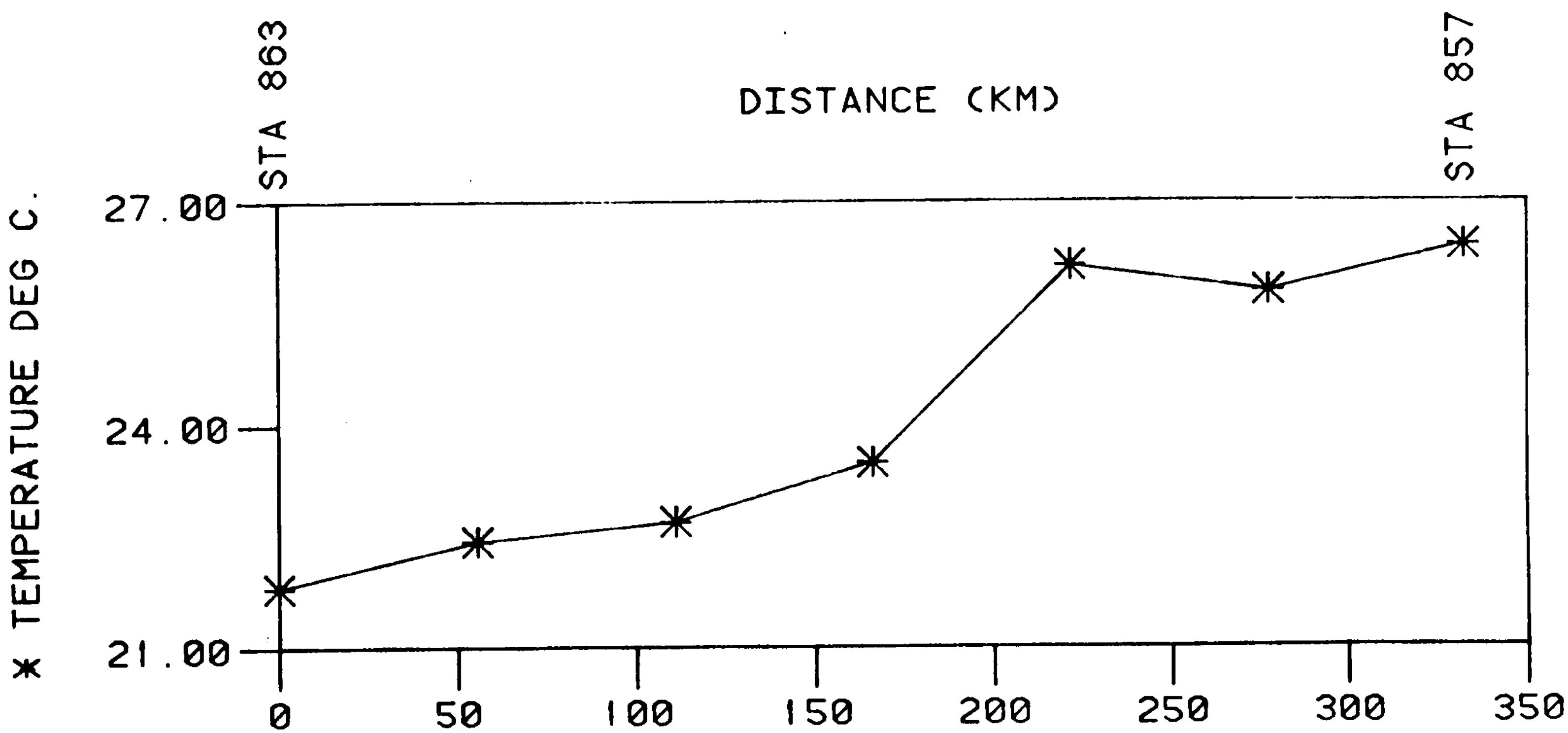
PARAMETERS AT SURFACE OREGON II CRUISE 143



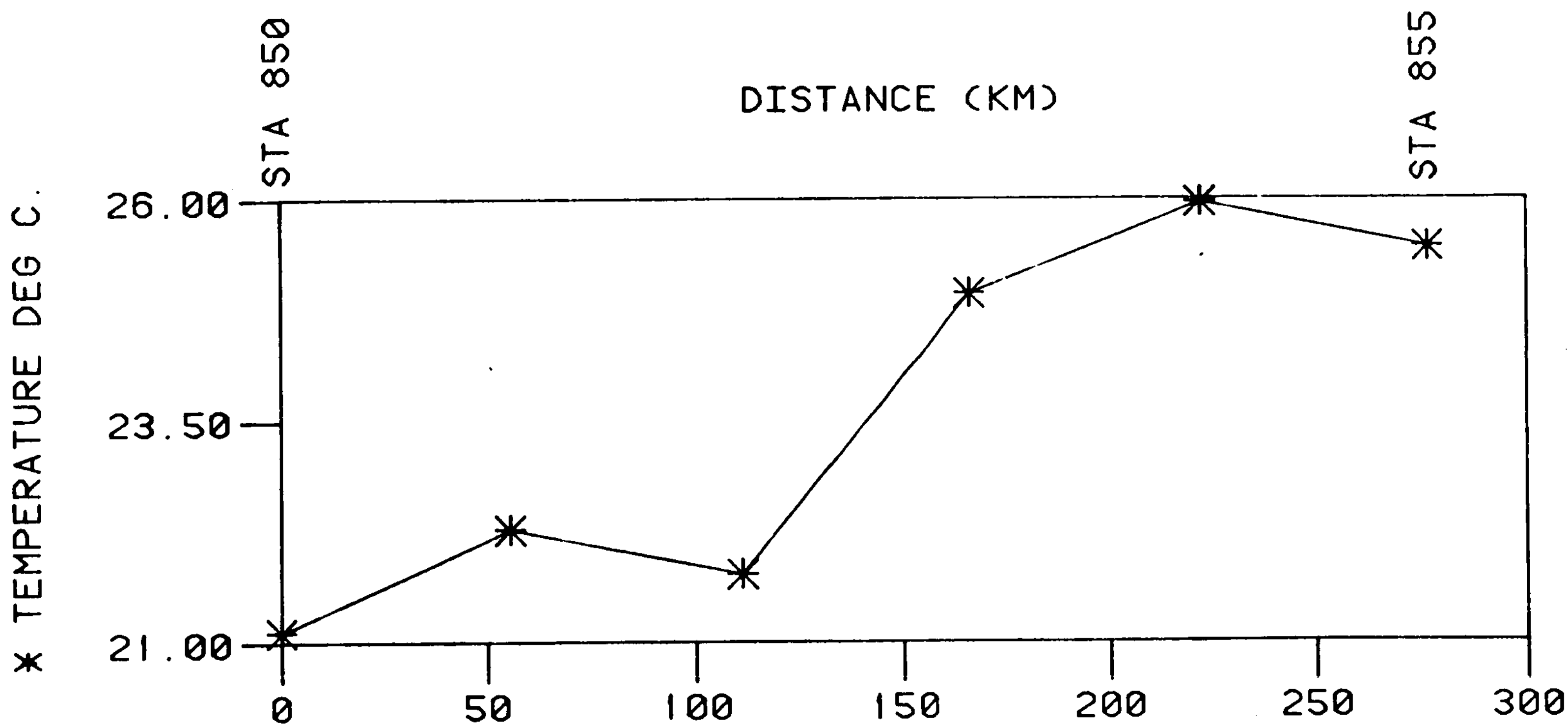
PARAMETERS AT SURFACE OREGON II CRUISE 143



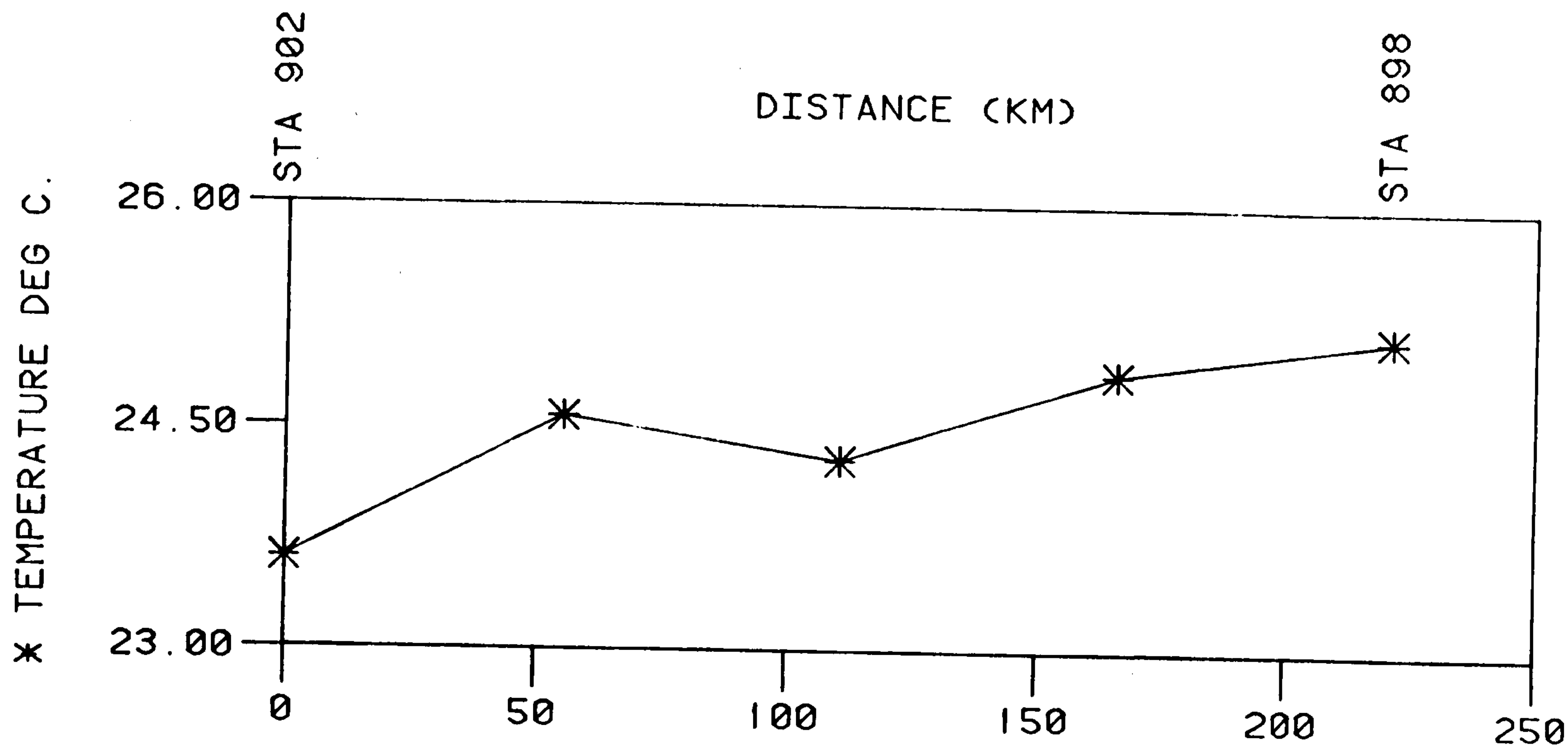
PARAMETERS AT SURFACE OREGON II CRUISE 143



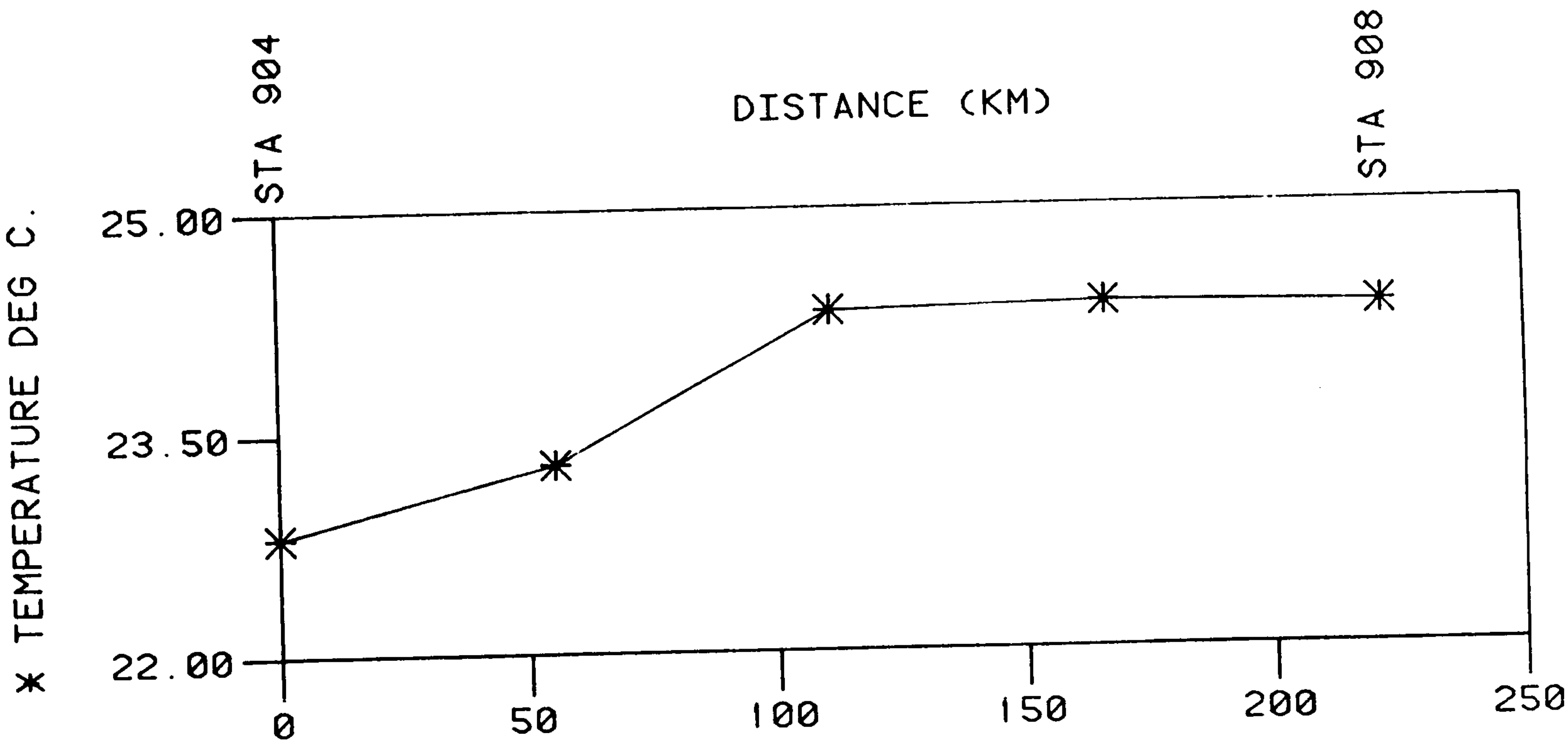
PARAMETERS AT SURFACE OREGON II CRUISE 143



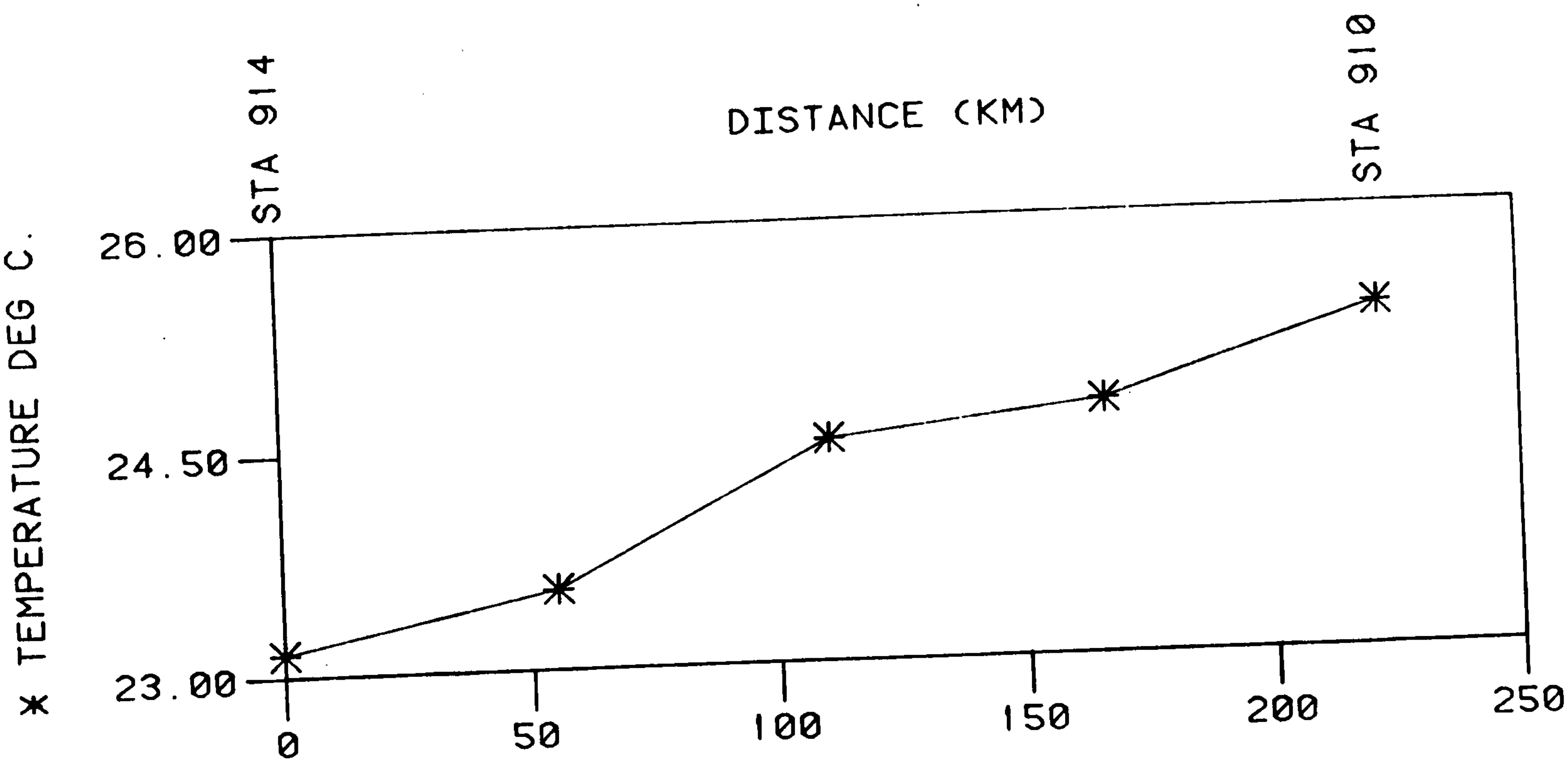
PARAMETERS AT SURFACE OREGON II CRUISE 143



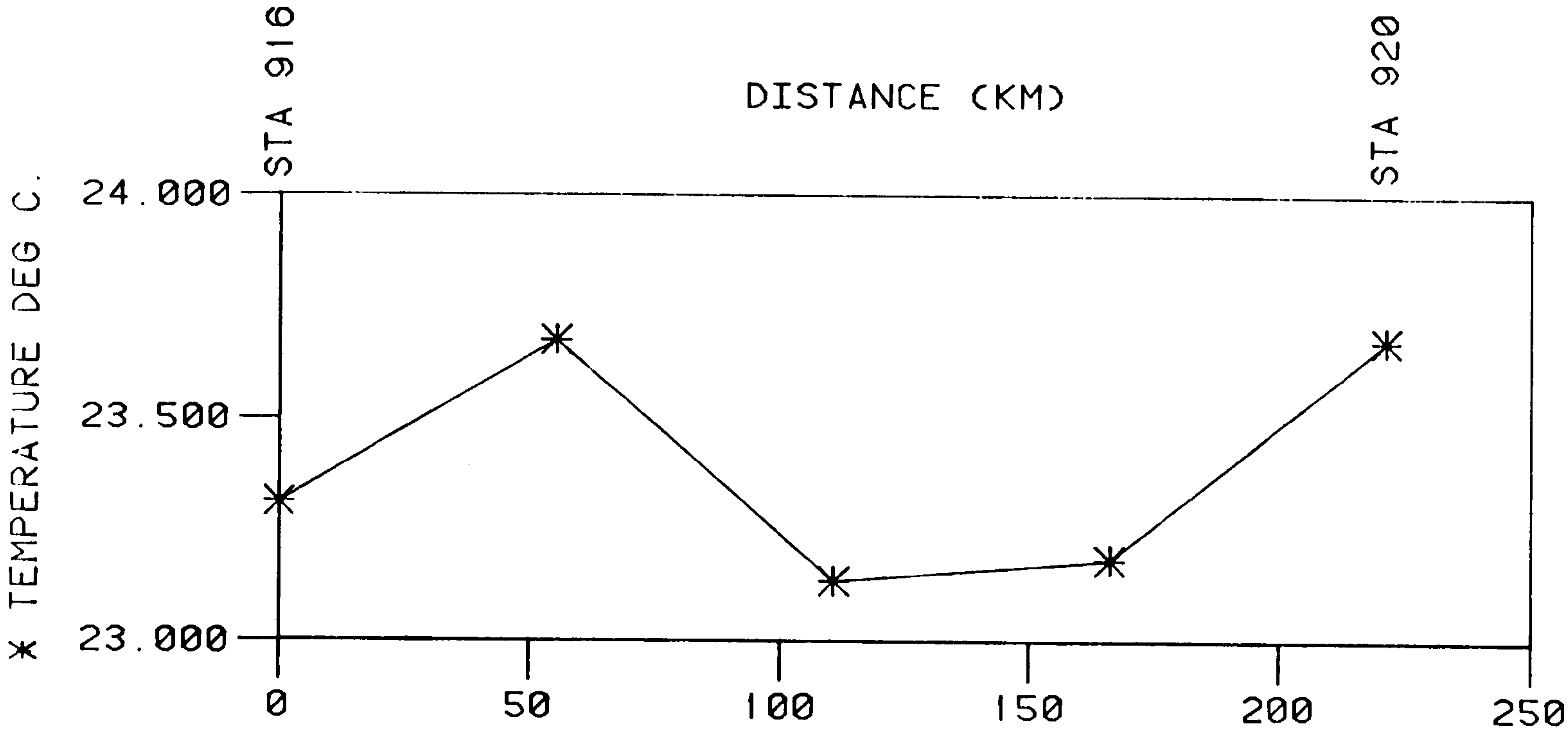
PARAMETERS AT SURFACE OREGON II CRUISE 143



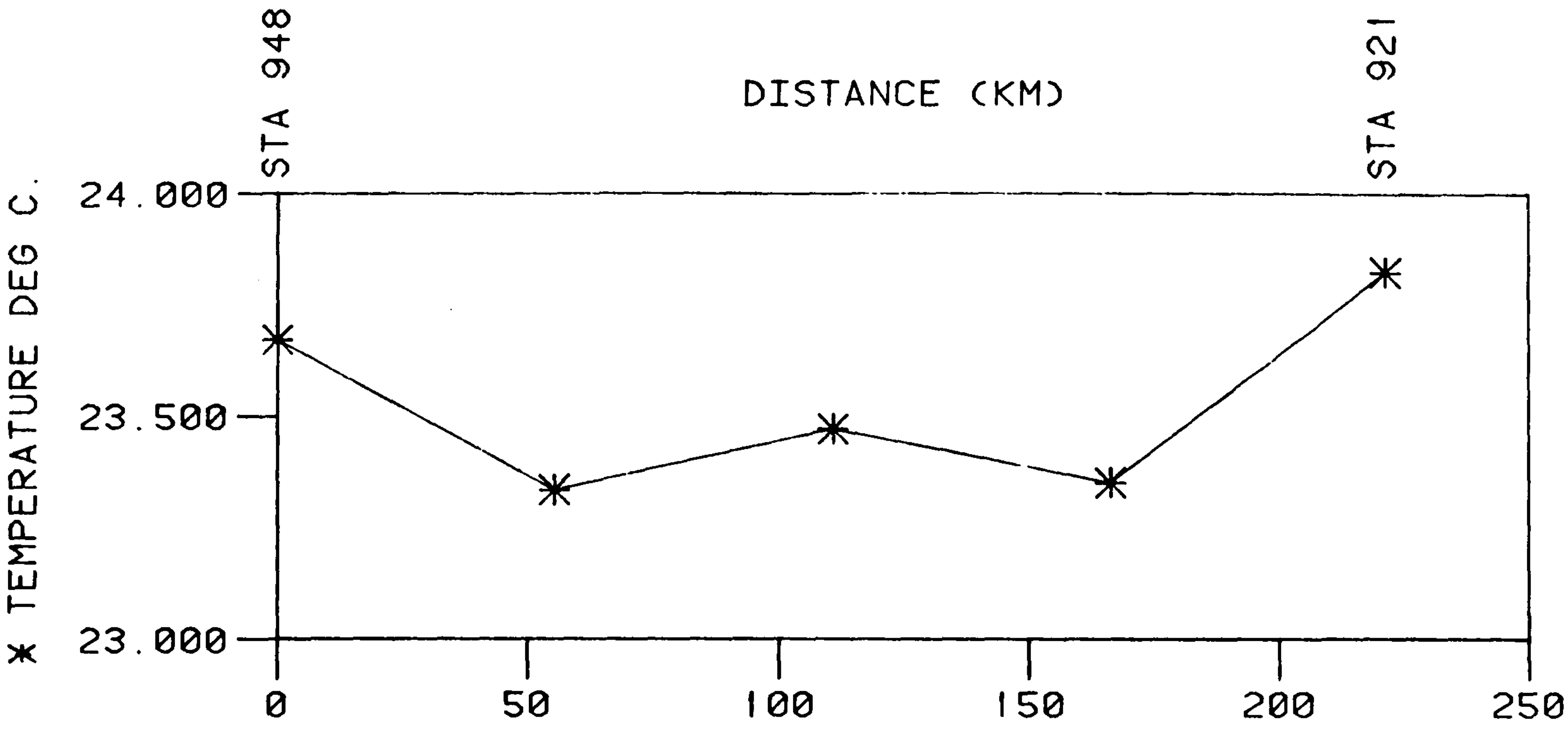
PARAMETERS AT SURFACE OREGON II CRUISE 143



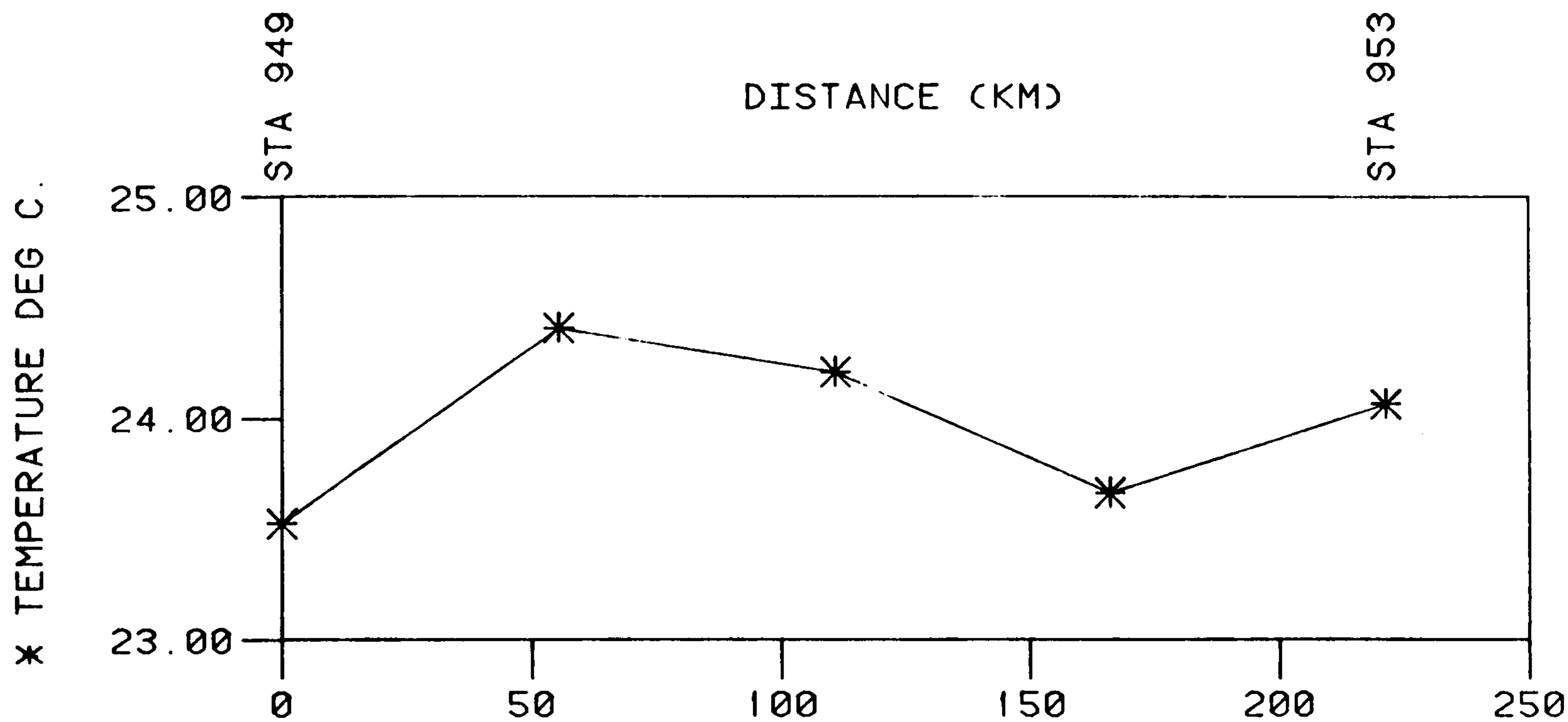
PARAMETERS AT SURFACE OREGON II CRUISE 143



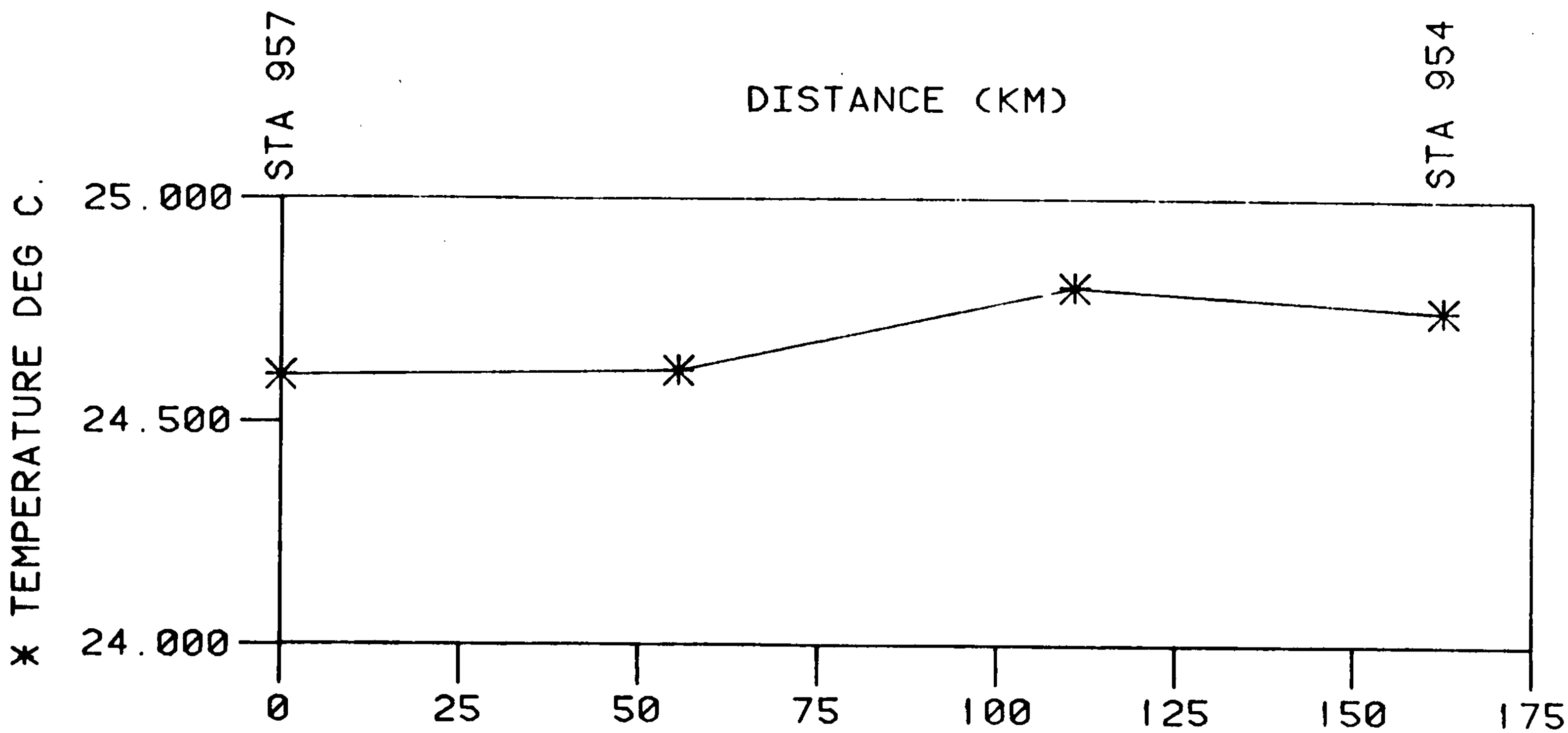
PARAMETERS AT SURFACE OREGON II CRUISE 143



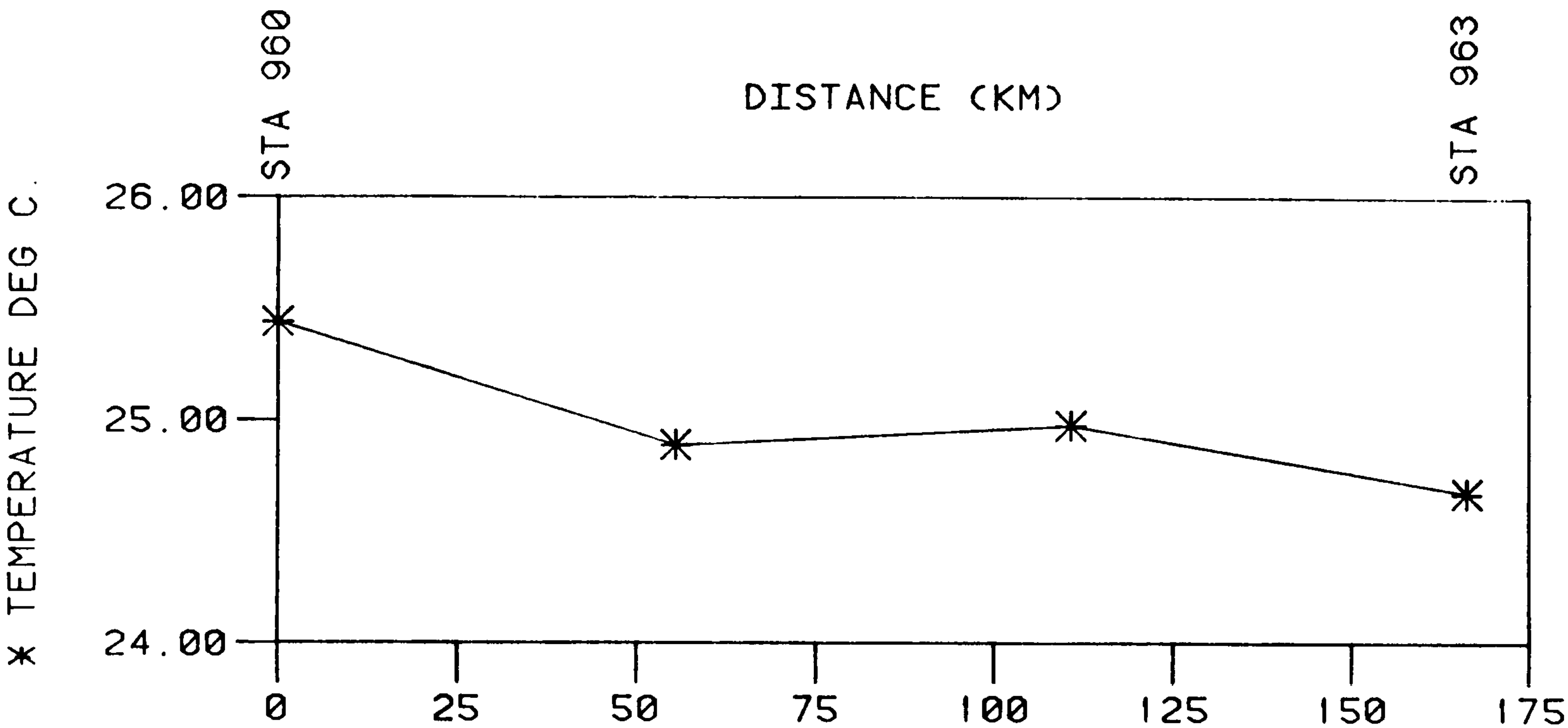
PARAMETERS AT SURFACE OREGON II CRUISE 143



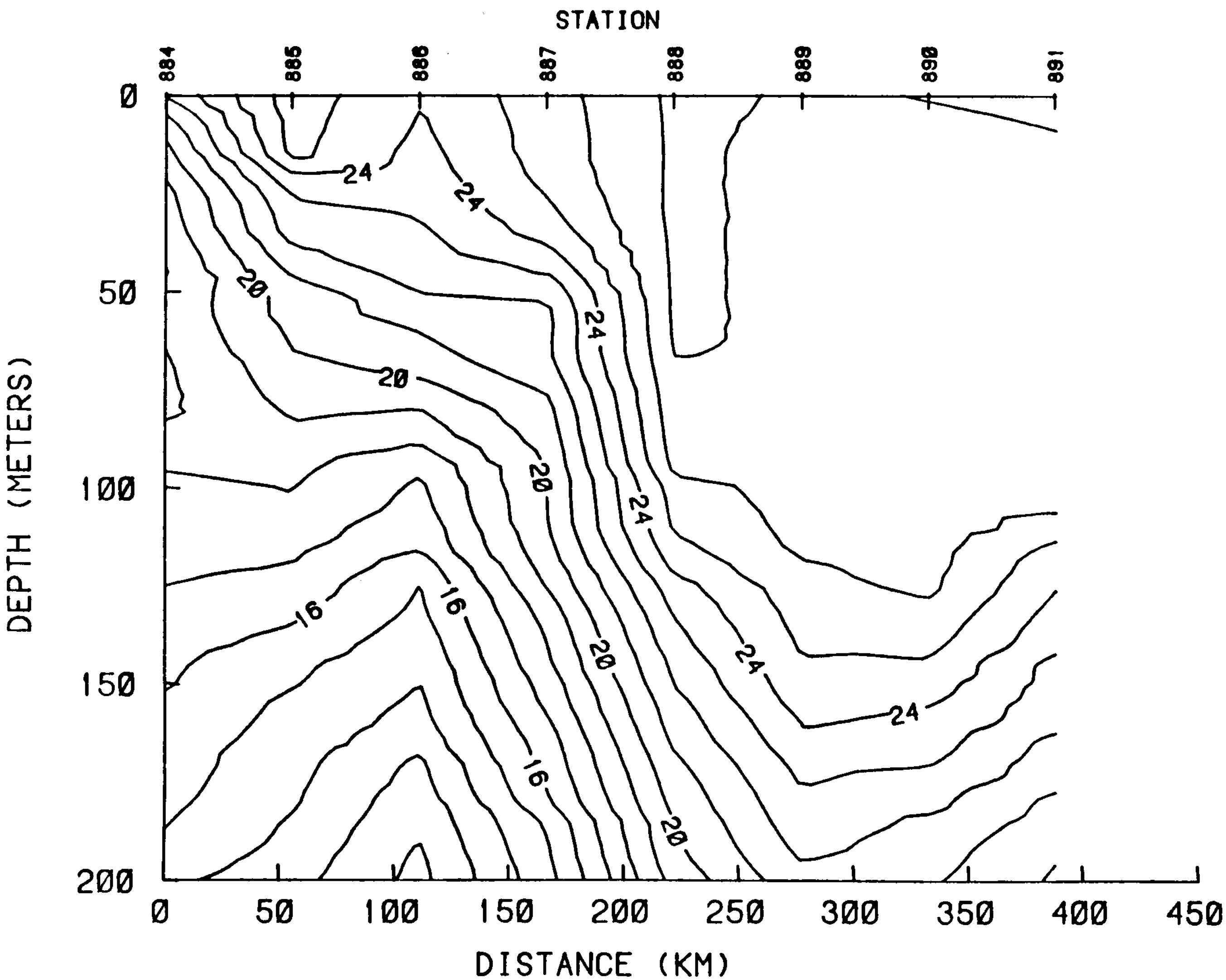
PARAMETERS AT SURFACE OREGON II CRUISE 143



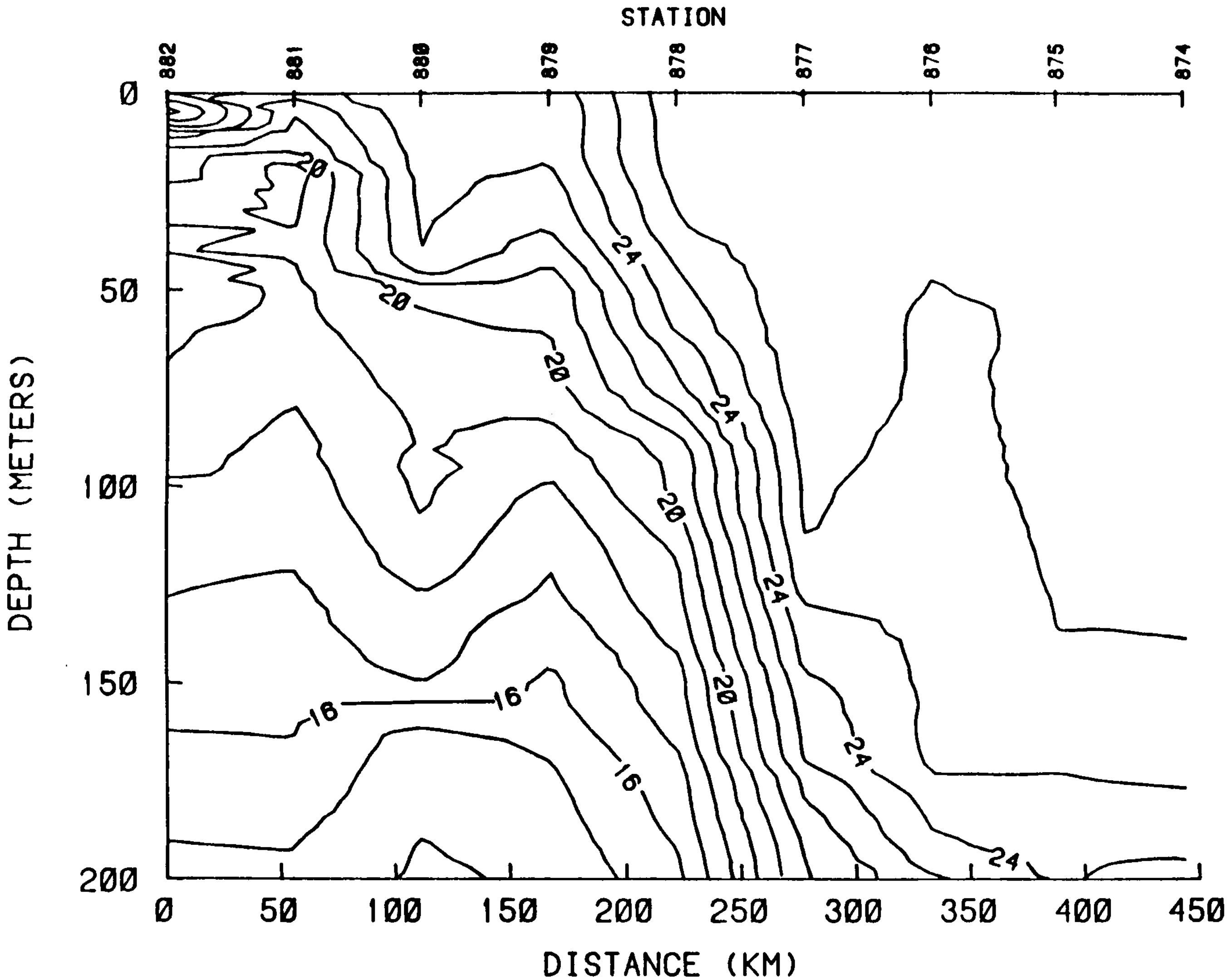
PARAMETERS AT SURFACE OREGON II CRUISE 143



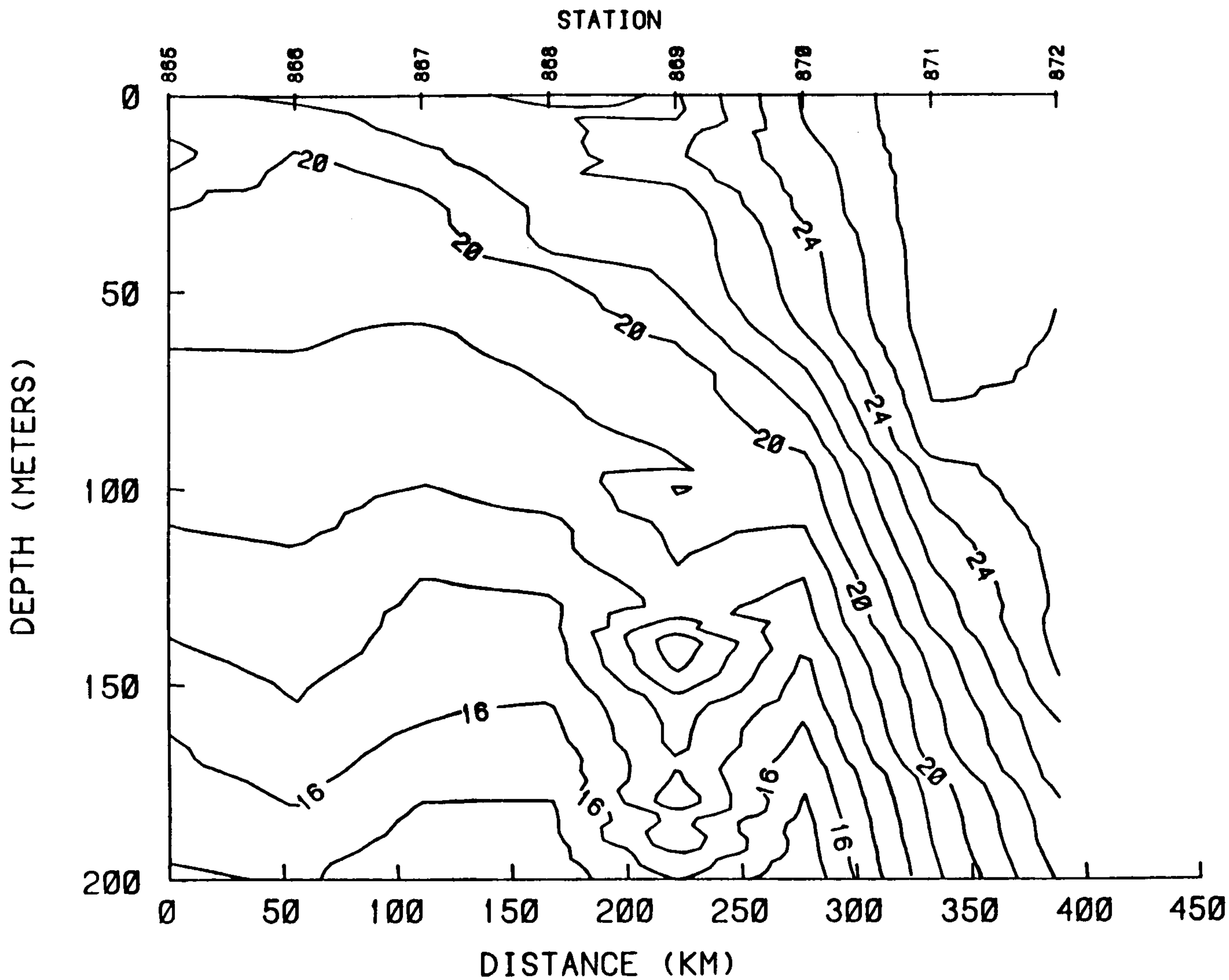
PARAMETERS AT SURFACE OREGON II CRUISE 143



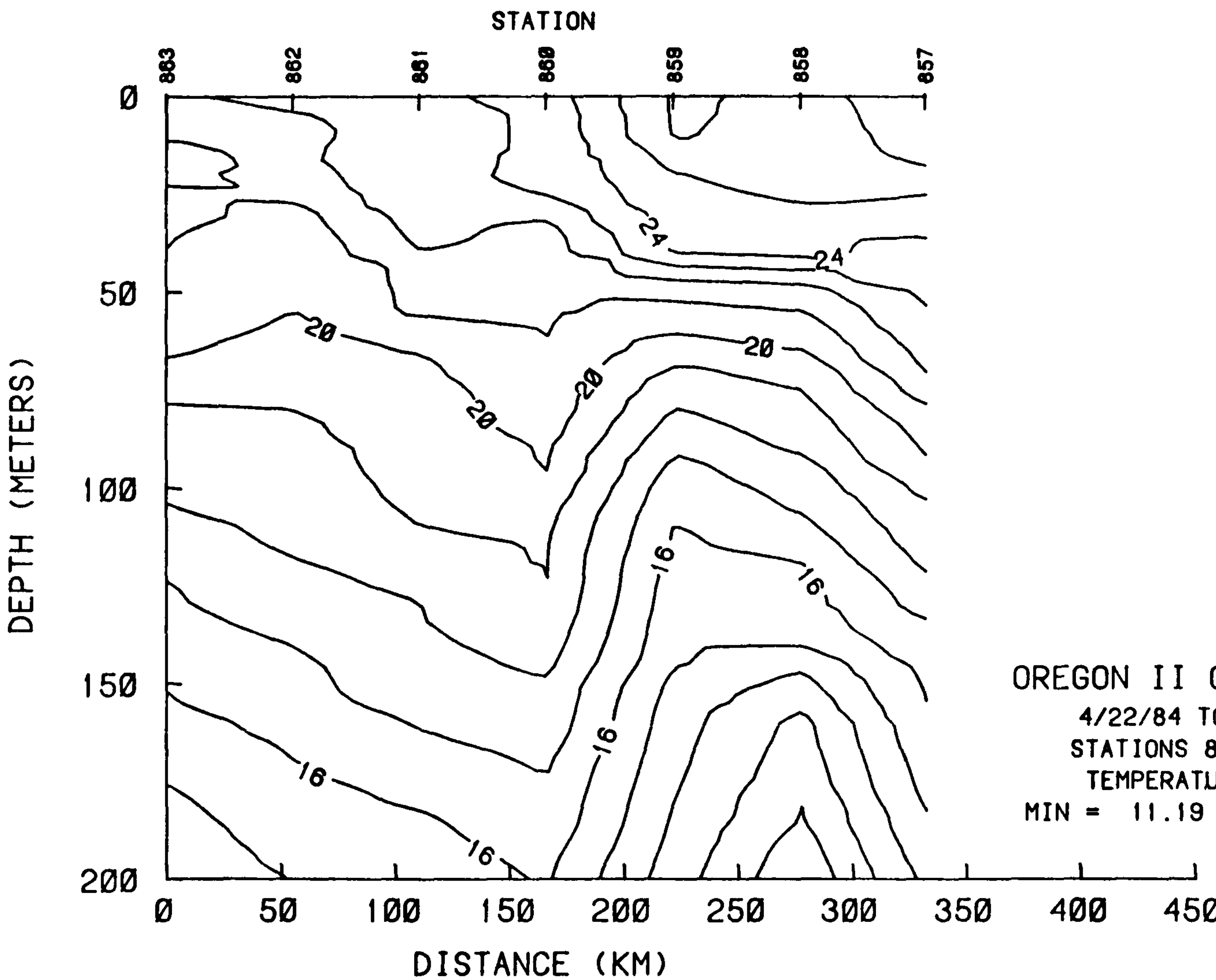
OREGON II CRUISE 143
4/28/84 TO 4/29/84
STATIONS 884 TO 891
TEMPERATURE DEG C
MIN = 11.71 MAX = 27.21



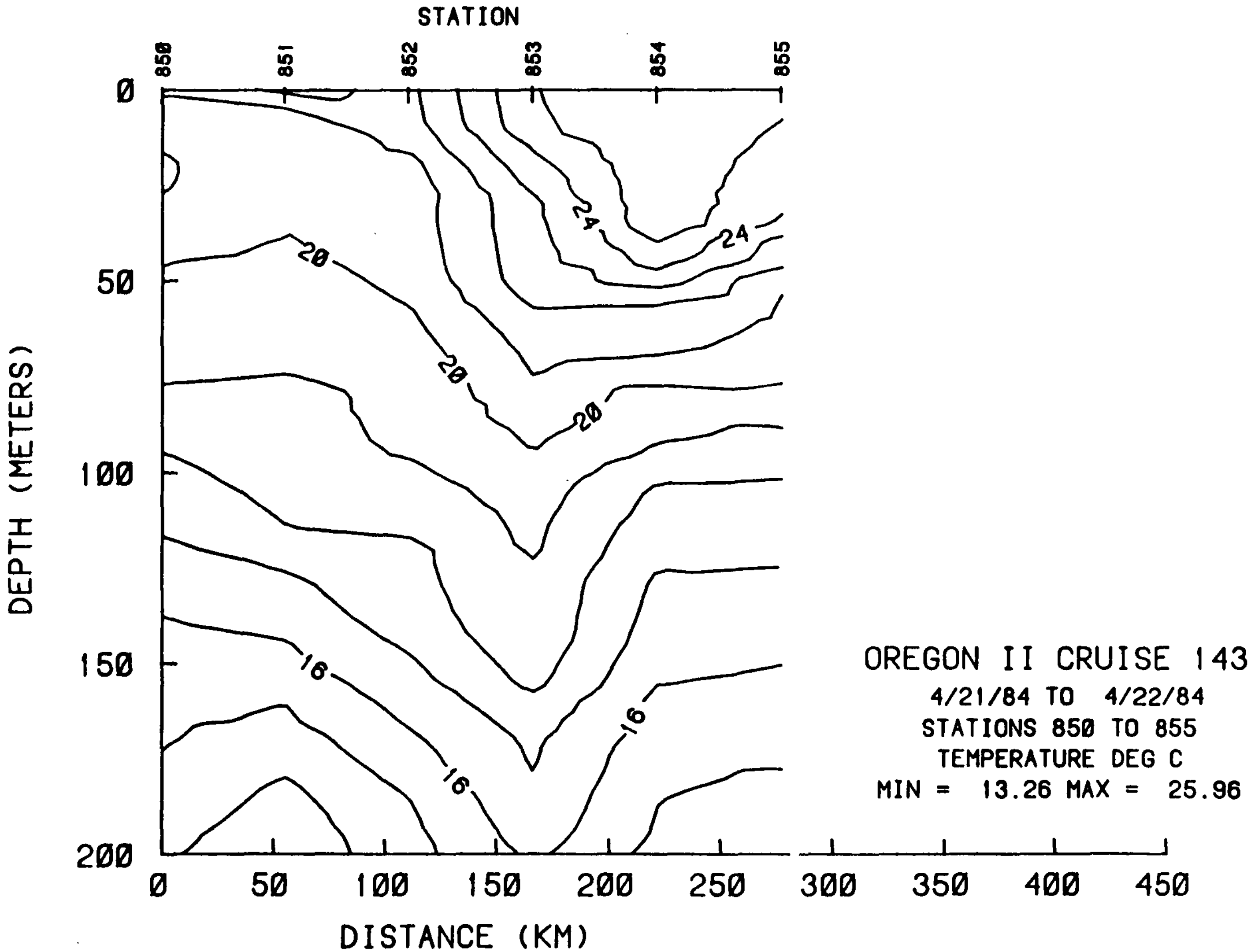
OREGON II CRUISE 143
4/26/84 TO 4/28/84
STATIONS 874 TO 882
TEMPERATURE DEG C
MIN = 13.83 MAX = 27.02

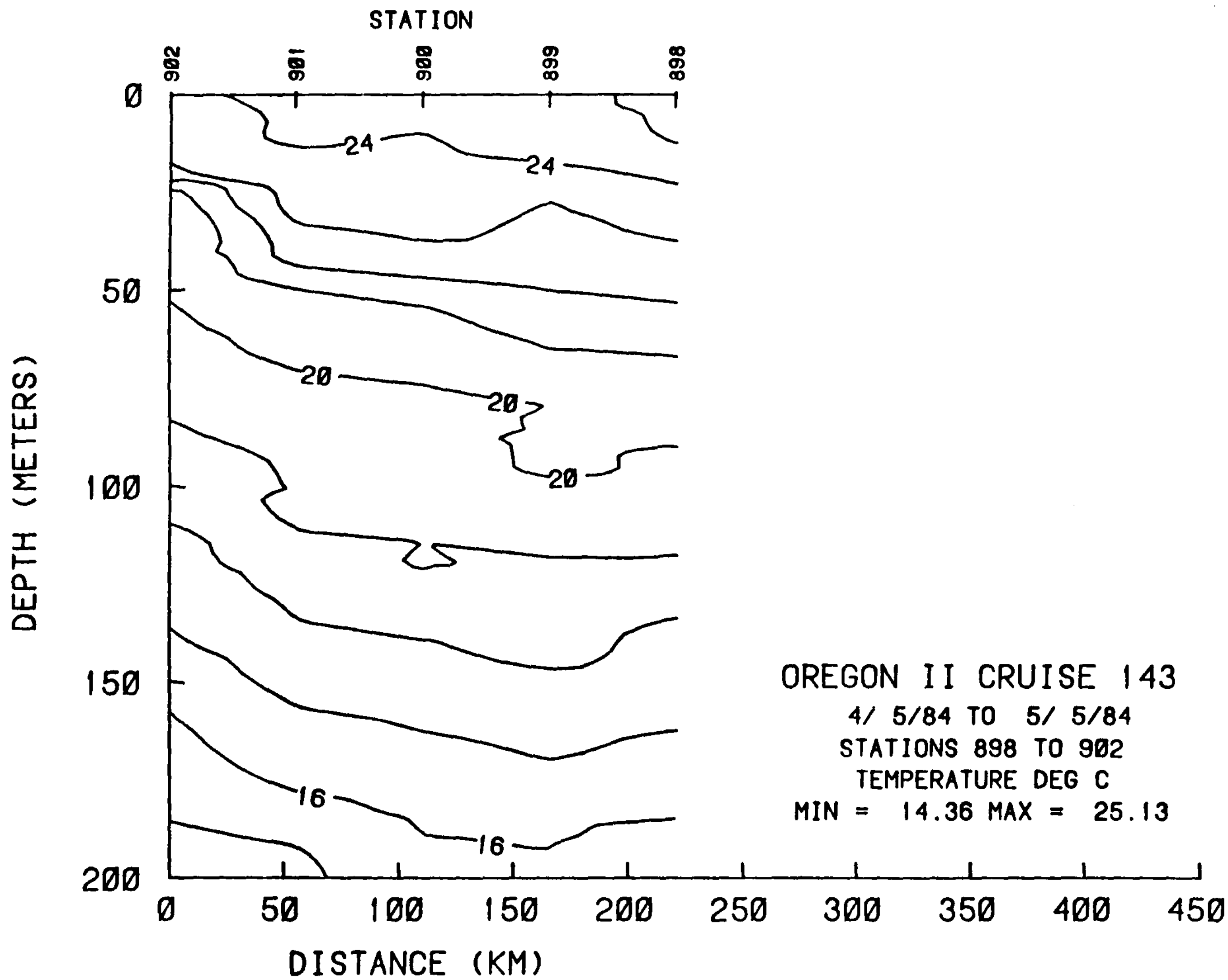


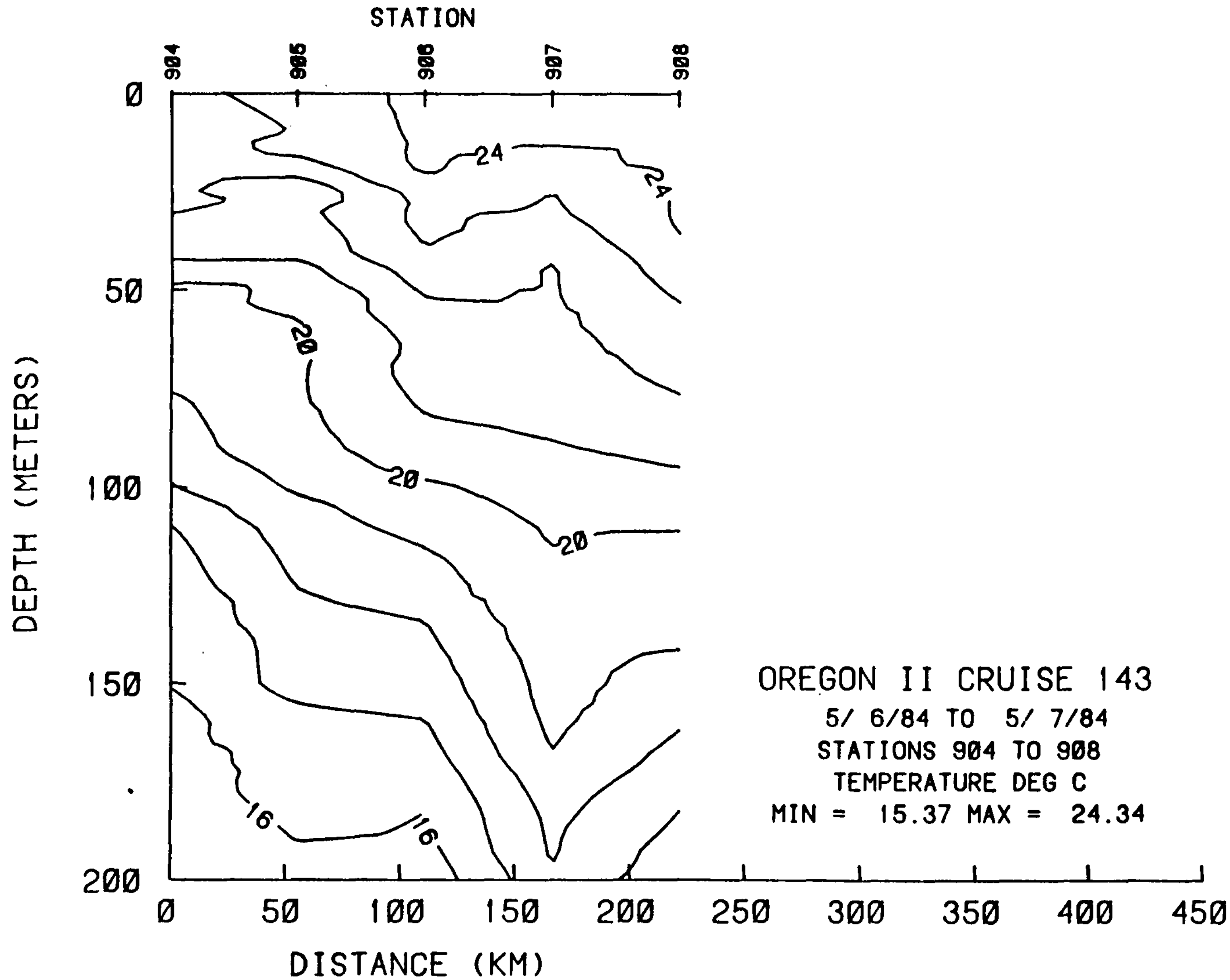
OREGON II CRUISE 143
4/24/84 TO 4/26/84
STATIONS 865 TO 872
TEMPERATURE DEG C
MIN = 14.24 MAX = 26.67

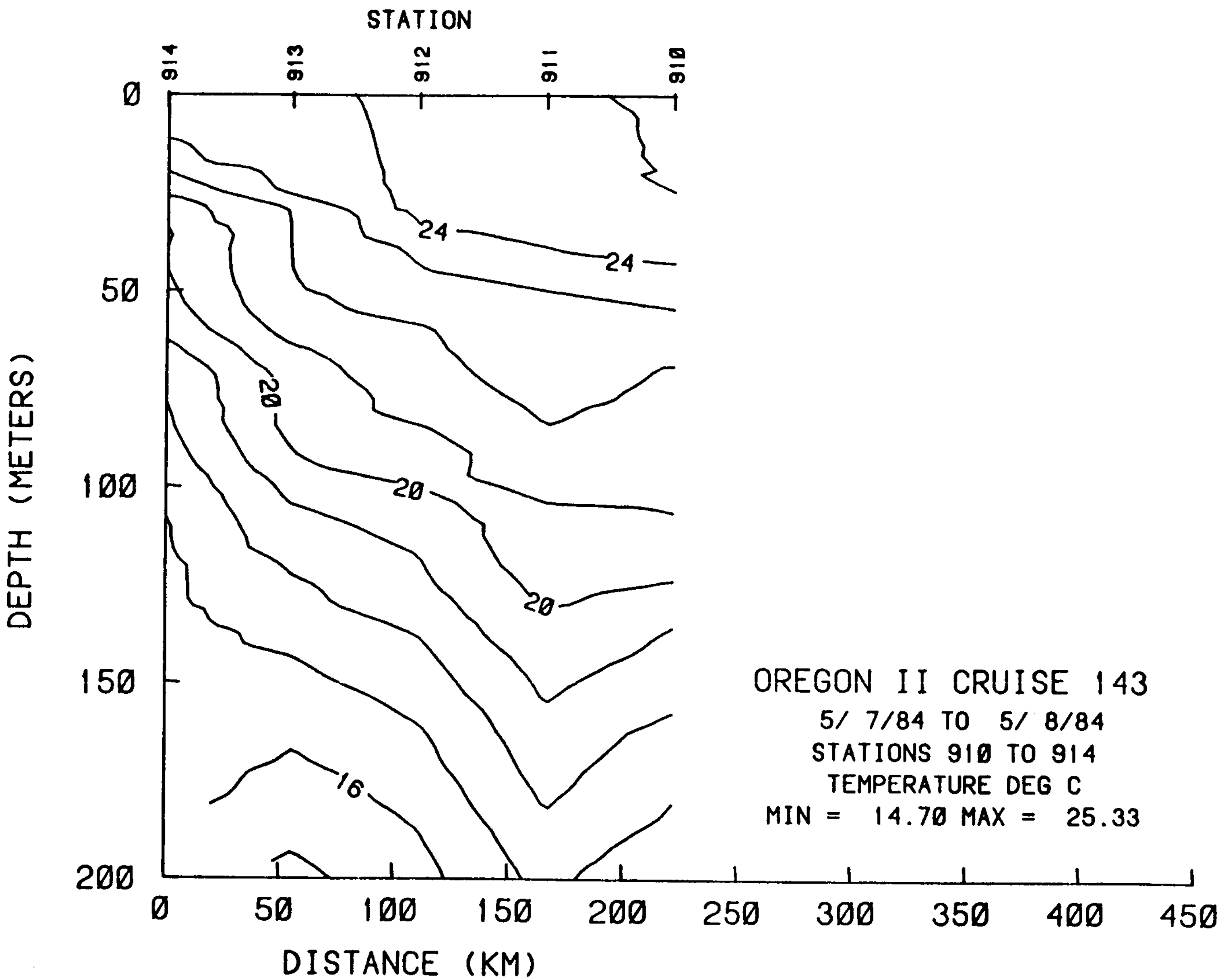


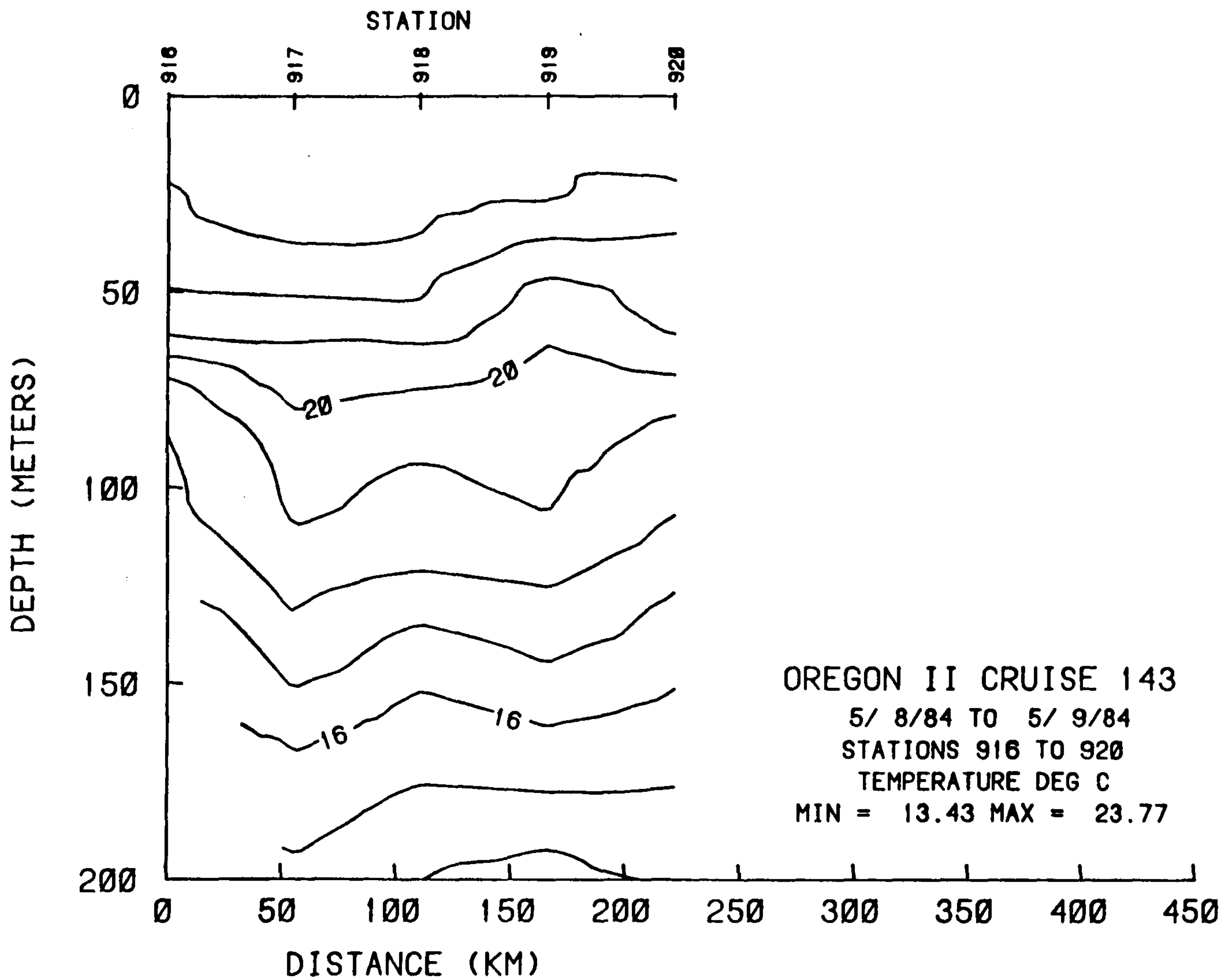
OREGON II CRUISE 143
4/22/84 TO 4/24/84
STATIONS 857 TO 863
TEMPERATURE DEG C
MIN = 11.19 MAX = 26.39

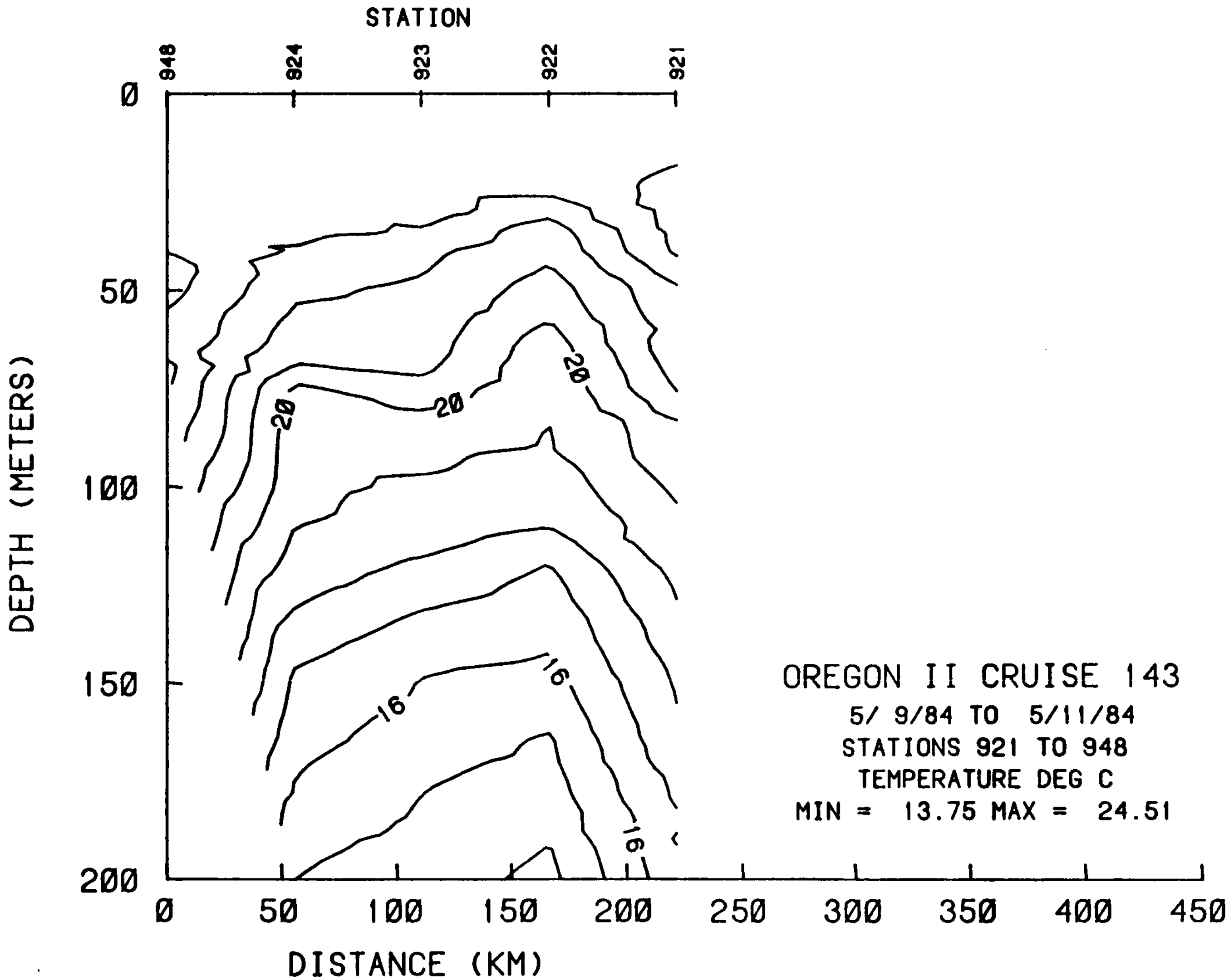

STATION
850
851
852
853
854
855
24
24
20
20
20
16
16
16
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0
50
100
150
200
250
300
350
400
450
OREGON II CRUISE 143
4/21/84 TO 4/22/84
STATIONS 850 TO 855
TEMPERATURE DEG C
MIN = 13.26 MAX = 25.96

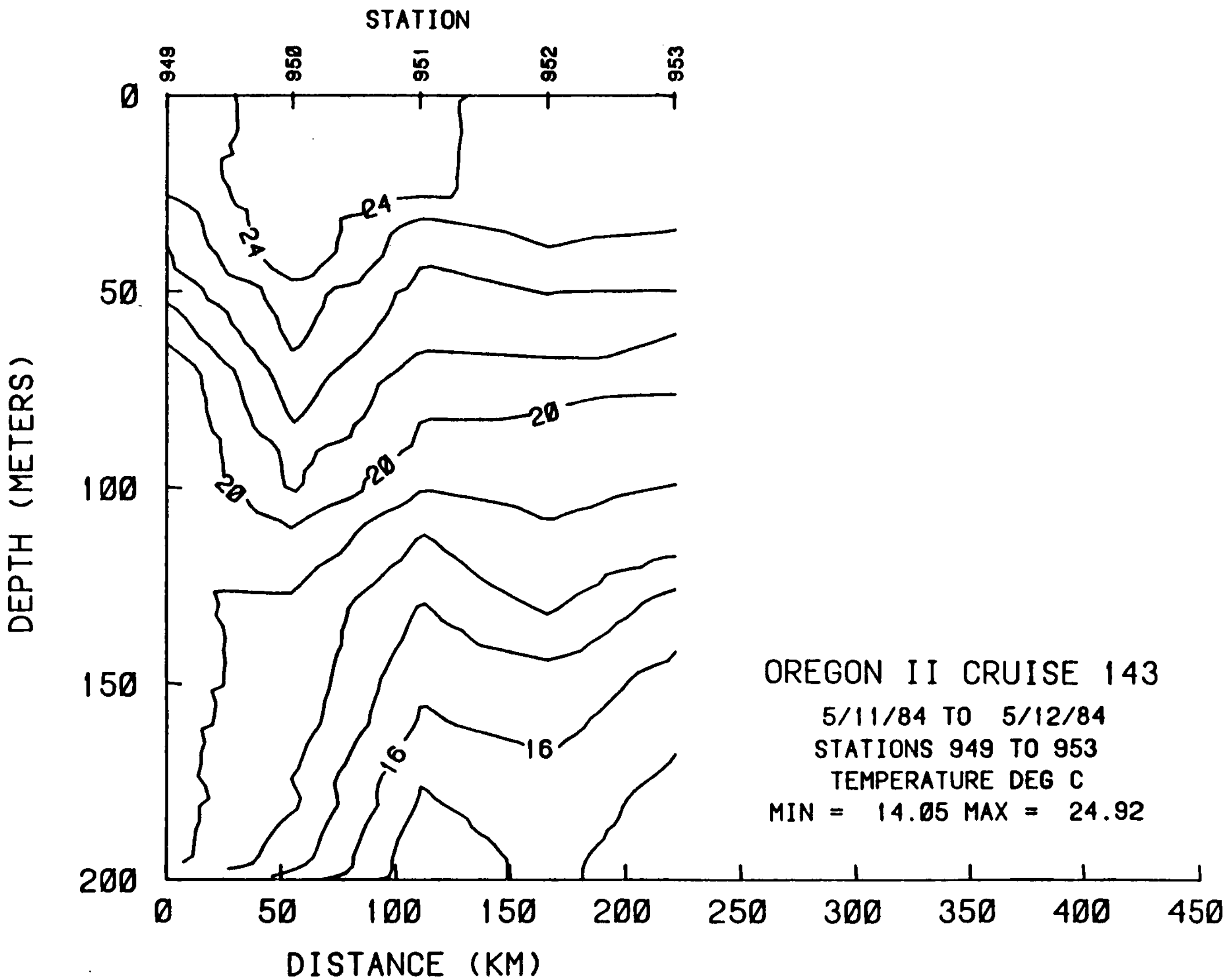

STATION
902
901
900
899
898
24
24
20
20
20
16
16
DEPTH (METERS)
0
50
100
150
200
0
50
100
150
200
250
300
350
400
450
DISTANCE (KM)
OREGON II CRUISE 143
4/ 5/84 TO 5/ 5/84
STATIONS 898 TO 902
TEMPERATURE DEG C
MIN = 14.36 MAX = 25.13

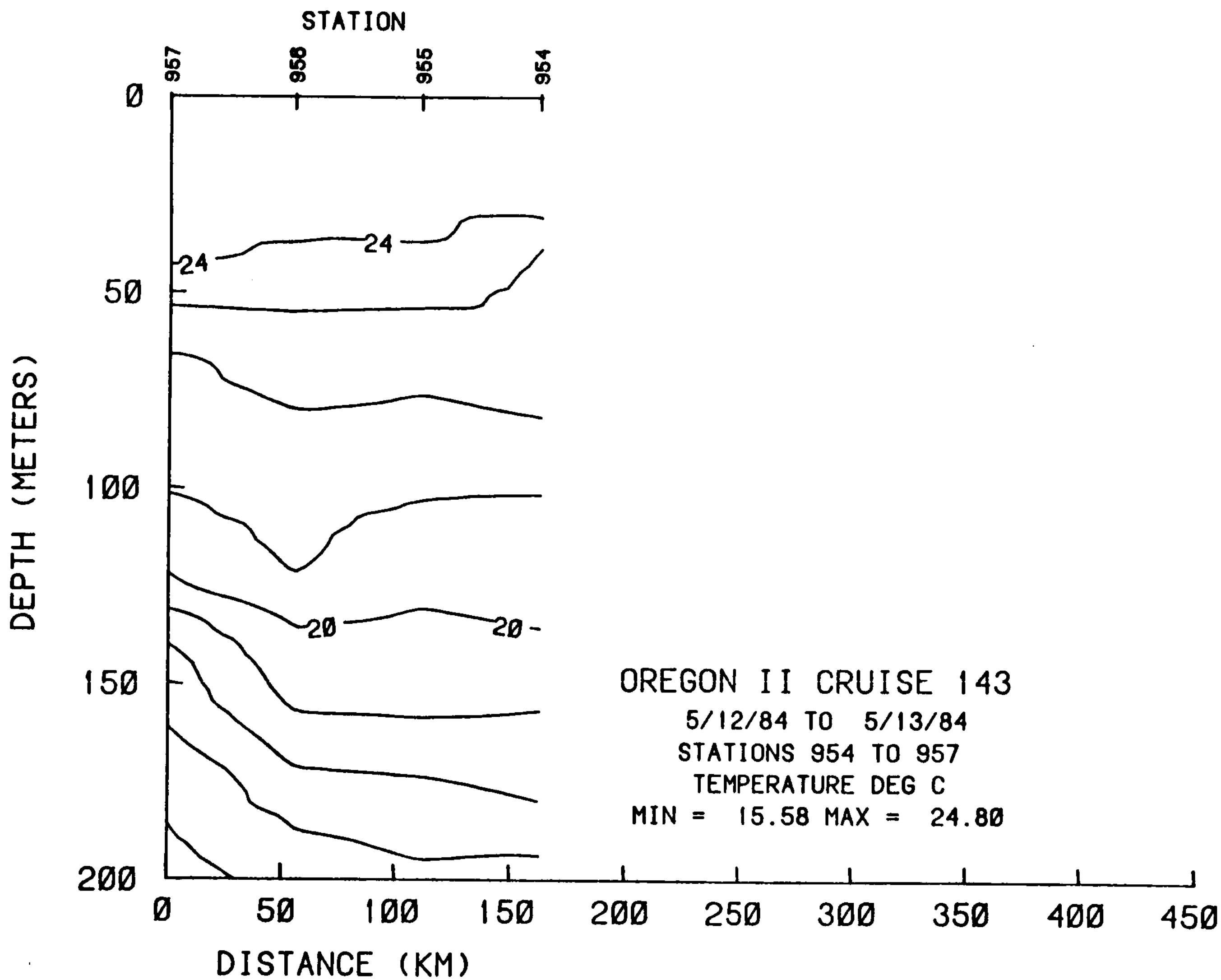

STATION
904
905
906
907
908
24
20
16
DEPTH (METERS)
DISTANCE (KM)
OREGON II CRUISE 143
5/ 6/84 TO 5/ 7/84
STATIONS 904 TO 908
TEMPERATURE DEG C
MIN = 15.37 MAX = 24.34

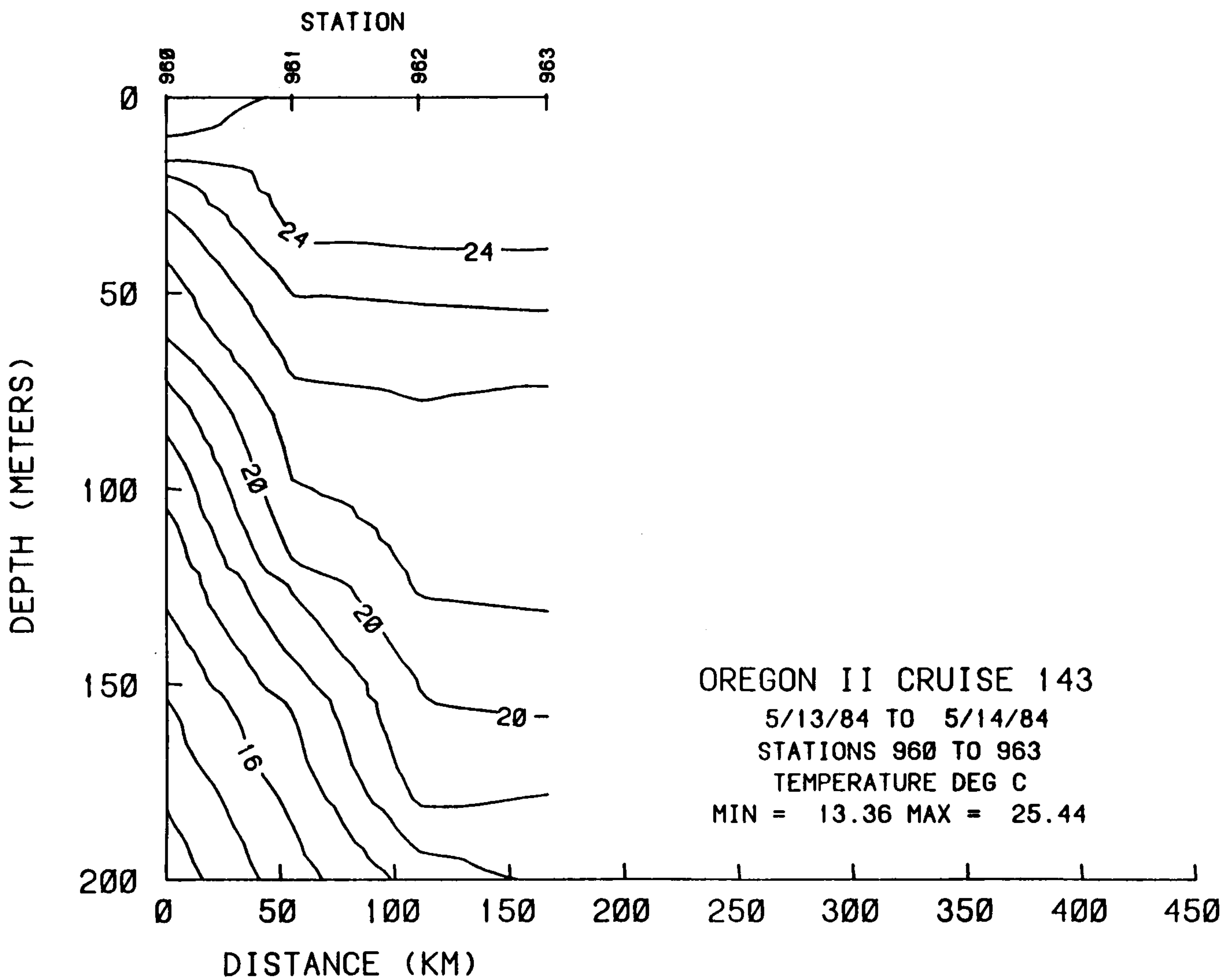

STATION
914
913
912
911
910
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0
50
100
150
200
250
300
350
400
450
24
24
20
20
20
16
OREGON II CRUISE 143
5/ 7/84 TO 5/ 8/84
STATIONS 910 TO 914
TEMPERATURE DEG C
MIN = 14.70 MAX = 25.33

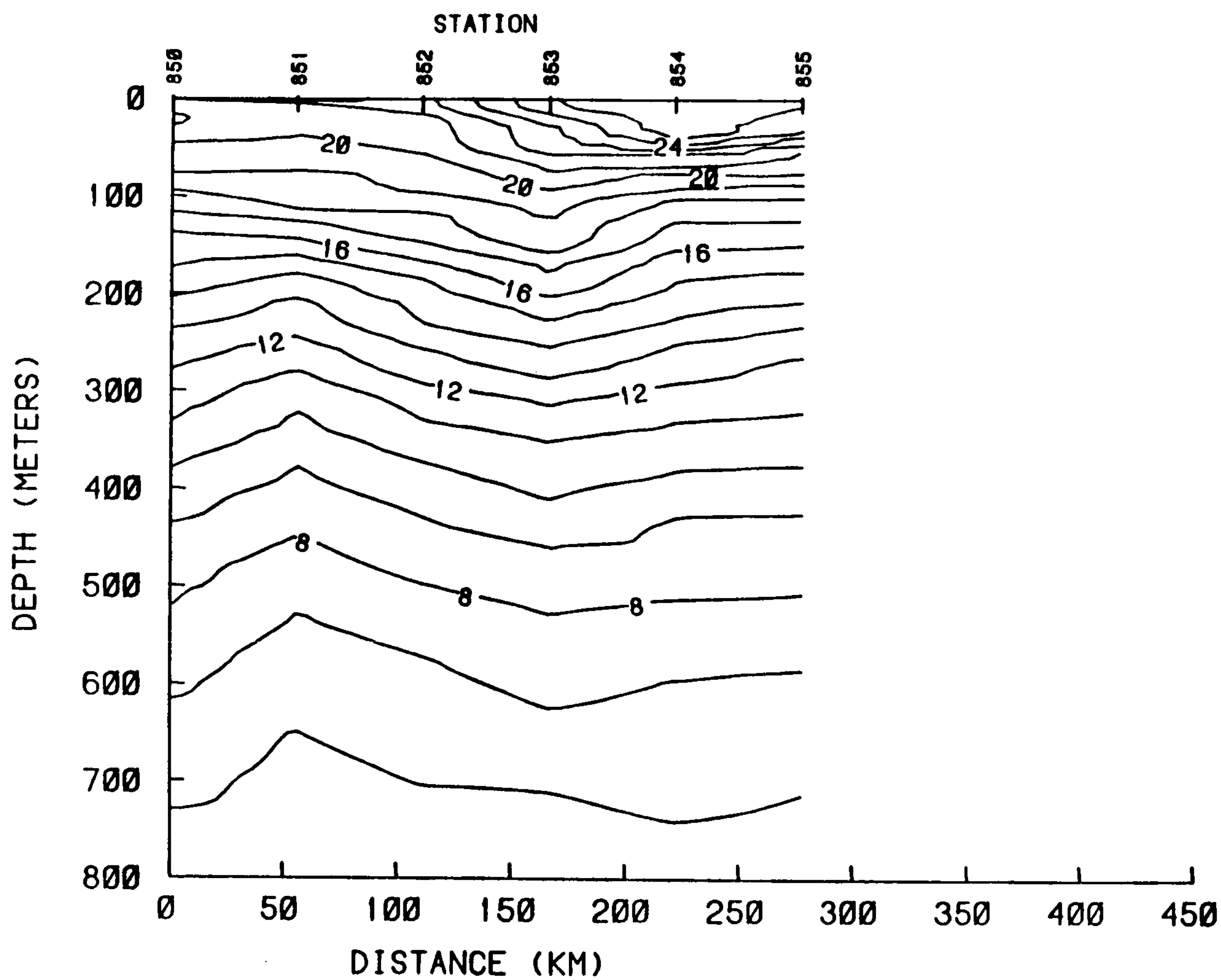

STATION
916
917
918
919
920
0
50
100
150
200
DEPTH (METERS)
20
20
16
16
OREGON II CRUISE 143
5/ 8/84 TO 5/ 9/84
STATIONS 916 TO 920
TEMPERATURE DEG C
MIN = 13.43 MAX = 23.77
0
50
100
150
200
250
300
350
400
450
DISTANCE (KM)


STATION
948
924
923
922
921
DEPTH (METERS)
0
50
100
150
200
20
20
20
16
16
16
0
50
100
150
200
250
300
350
400
450
DISTANCE (KM)
OREGON II CRUISE 143
5/ 9/84 TO 5/11/84
STATIONS 921 TO 948
TEMPERATURE DEG C
MIN = 13.75 MAX = 24.51

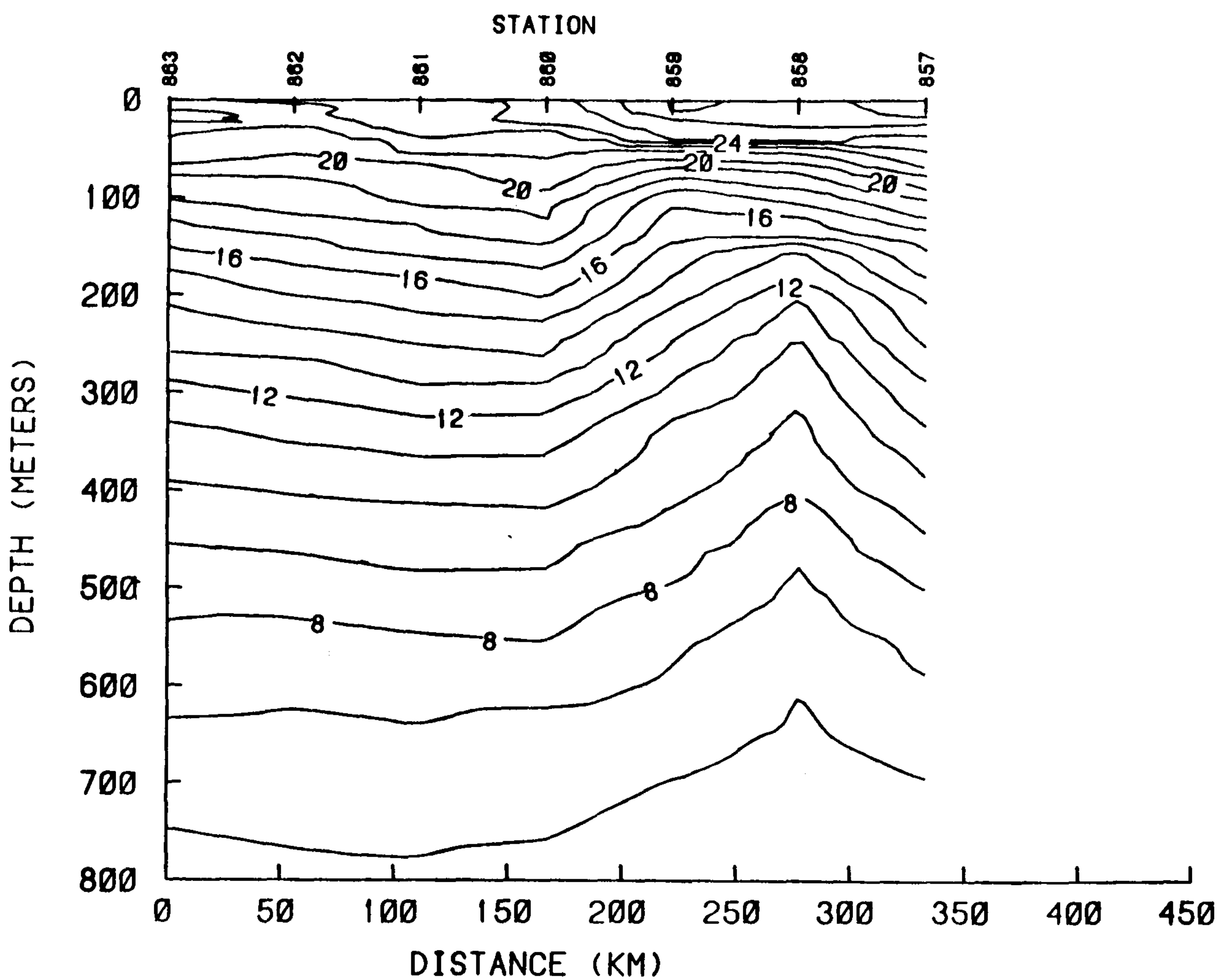

STATION
949
950
951
952
953
DEPTH (METERS)
0
50
100
150
200
24
24
20
20
20
16
16
0
50
100
150
200
250
300
350
400
450
DISTANCE (KM)
OREGON II CRUISE 143
5/11/84 TO 5/12/84
STATIONS 949 TO 953
TEMPERATURE DEG C
MIN = 14.05 MAX = 24.92


STATION
957
958
955
954
24
24
20
20
0
50
100
150
200
DEPTH (METERS)
0
50
100
150
200
250
300
350
400
450
DISTANCE (KM)
OREGON II CRUISE 143
5/12/84 TO 5/13/84
STATIONS 954 TO 957
TEMPERATURE DEG C
MIN = 15.58 MAX = 24.80

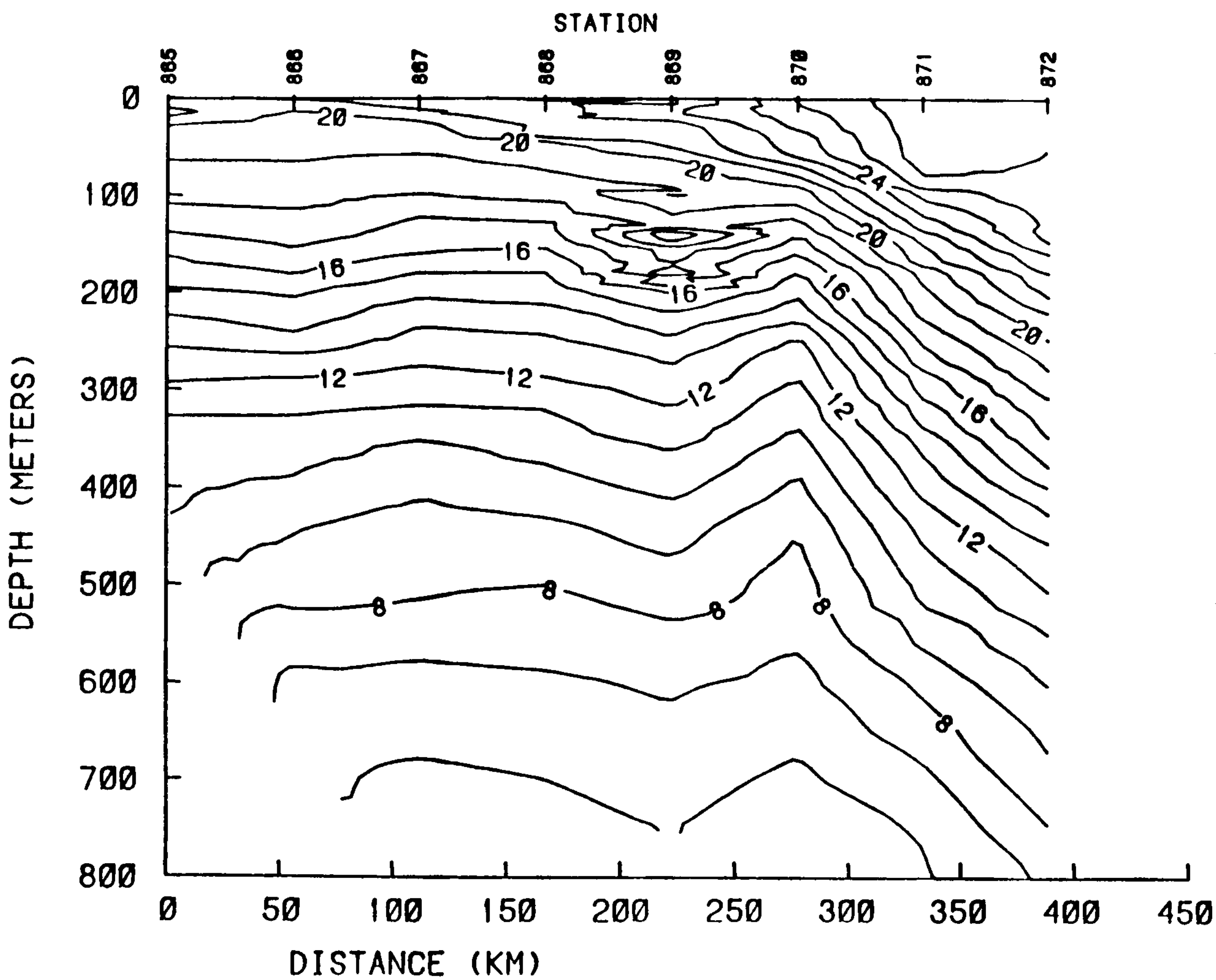

STATION
960
961
962
963
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0
50
100
150
200
250
300
350
400
450
24
24
20
20
20
16
OREGON II CRUISE 143
5/13/84 TO 5/14/84
STATIONS 960 TO 963
TEMPERATURE DEG C
MIN = 13.36 MAX = 25.44



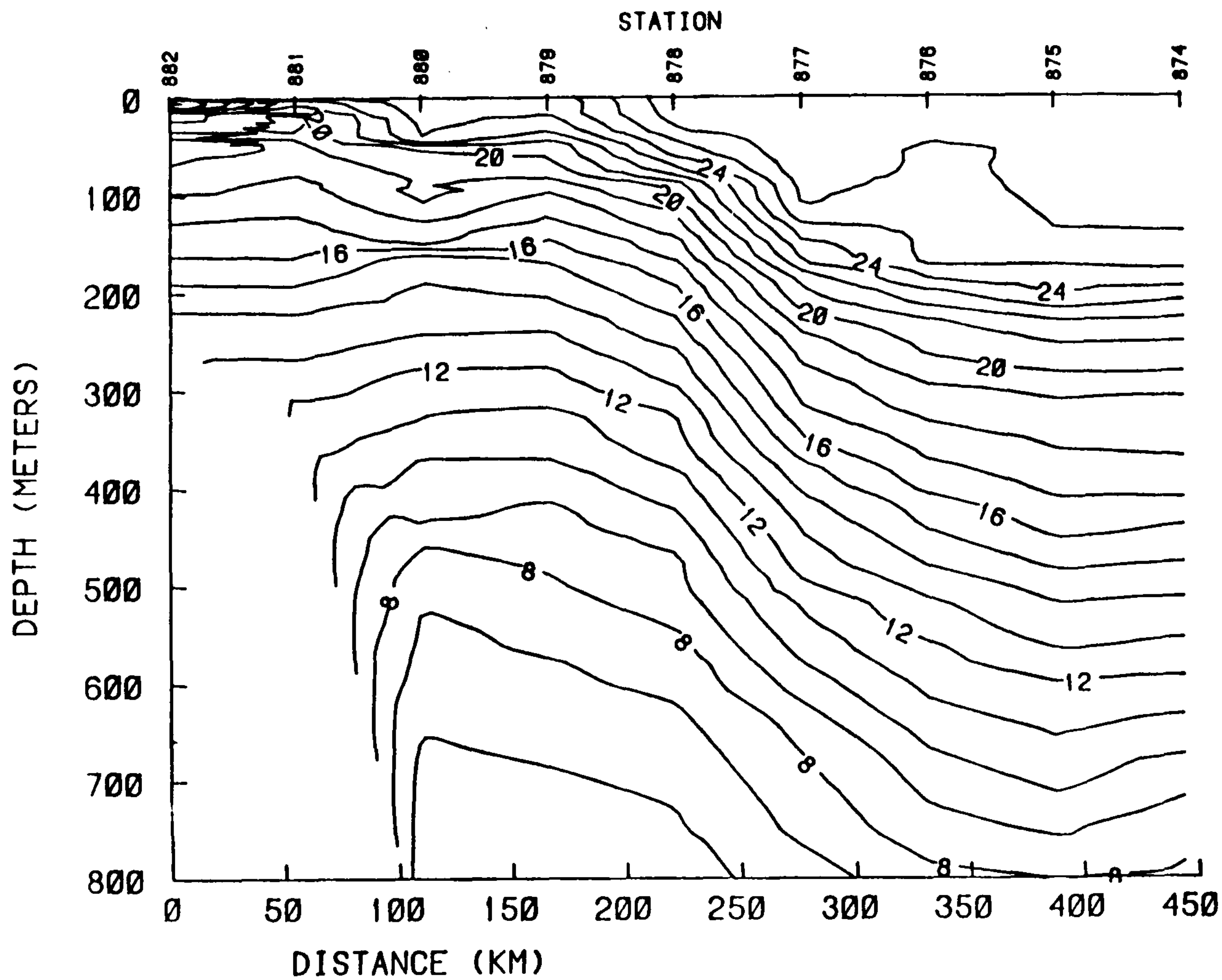
OREGON II CRUISE 143
4/21/84 TO 4/22/84
STATIONS 850 TO 855
TEMPERATURE DEG C
MIN = 5.02 MAX = 25.96



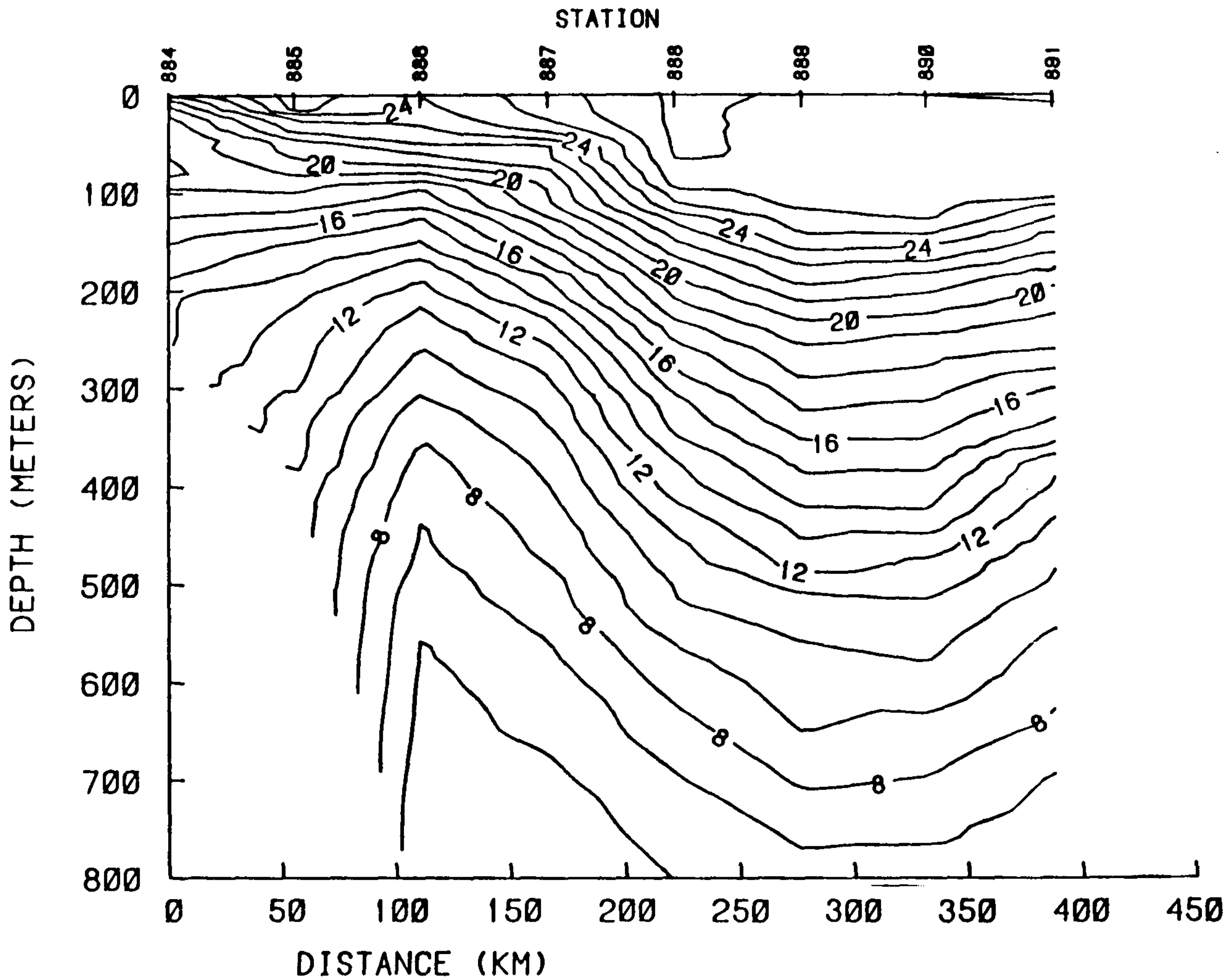
OREGON II CRUISE 143
4/22/84 TO 4/24/84
STATIONS 857 TO 863
TEMPERATURE DEG C
MIN = 4.93 MAX = 26.39



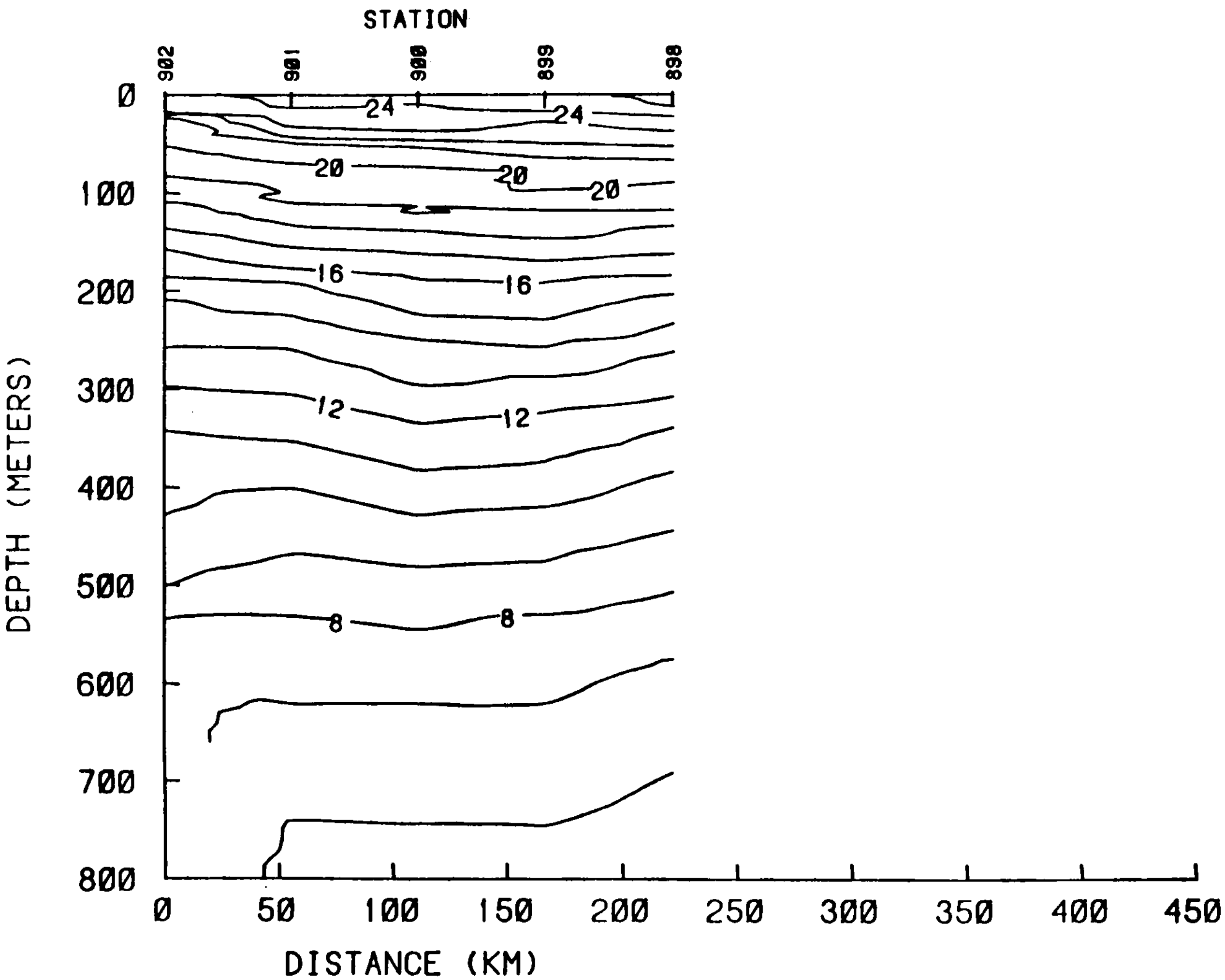
OREGON II CRUISE 143
4/24/84 TO 4/26/84
STATIONS 865 TO 872
TEMPERATURE DEG C
MIN = 5.09 MAX = 26.67



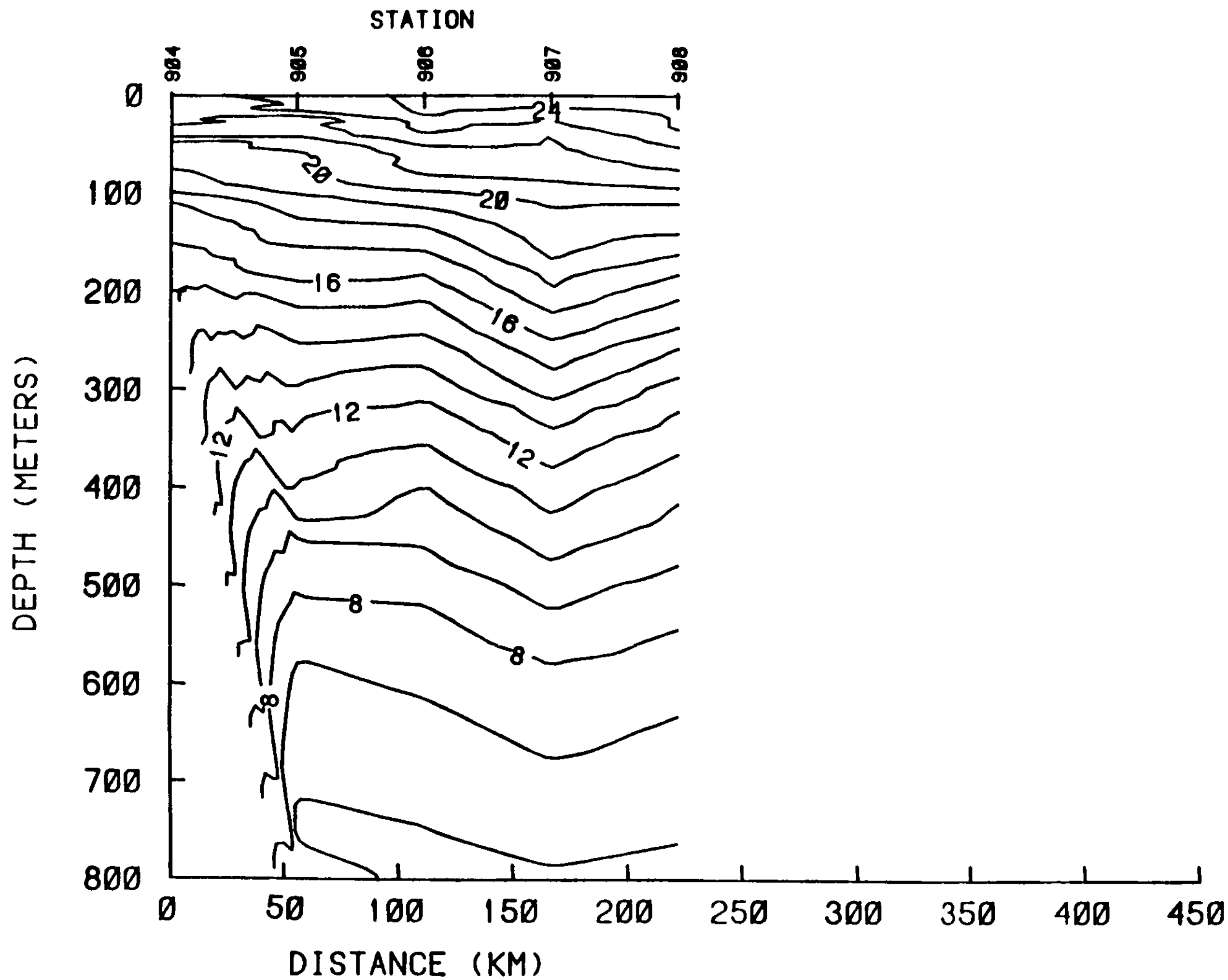
OREGON II CRUISE 143
4/26/84 TO 4/28/84
STATIONS 874 TO 882
TEMPERATURE DEG C
MIN = 4.93 MAX = 27.02



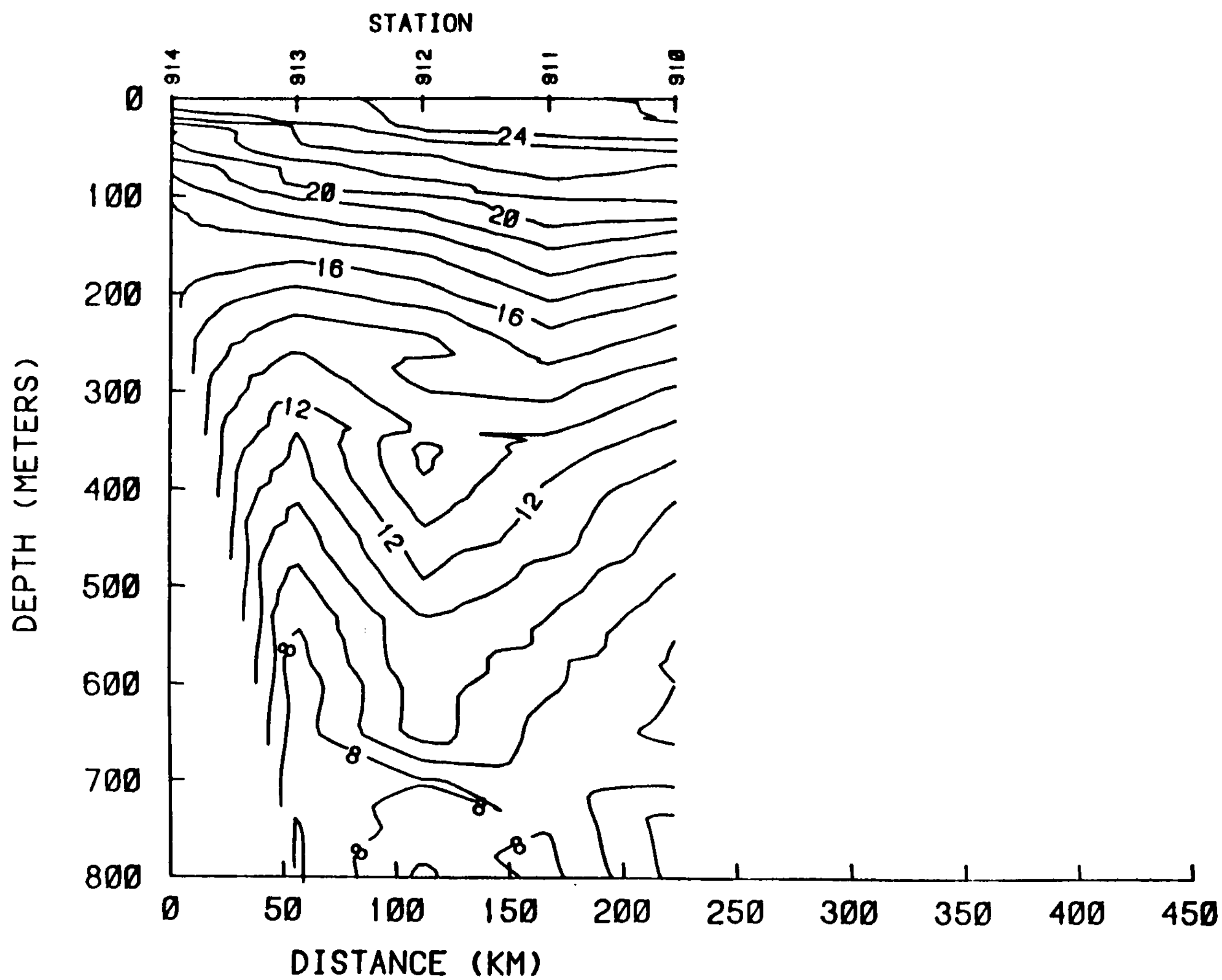
OREGON II CRUISE 143
4/28/84 TO 4/29/84
STATIONS 884 TO 891
TEMPERATURE DEG C
MIN = 5.05 MAX = 27.21



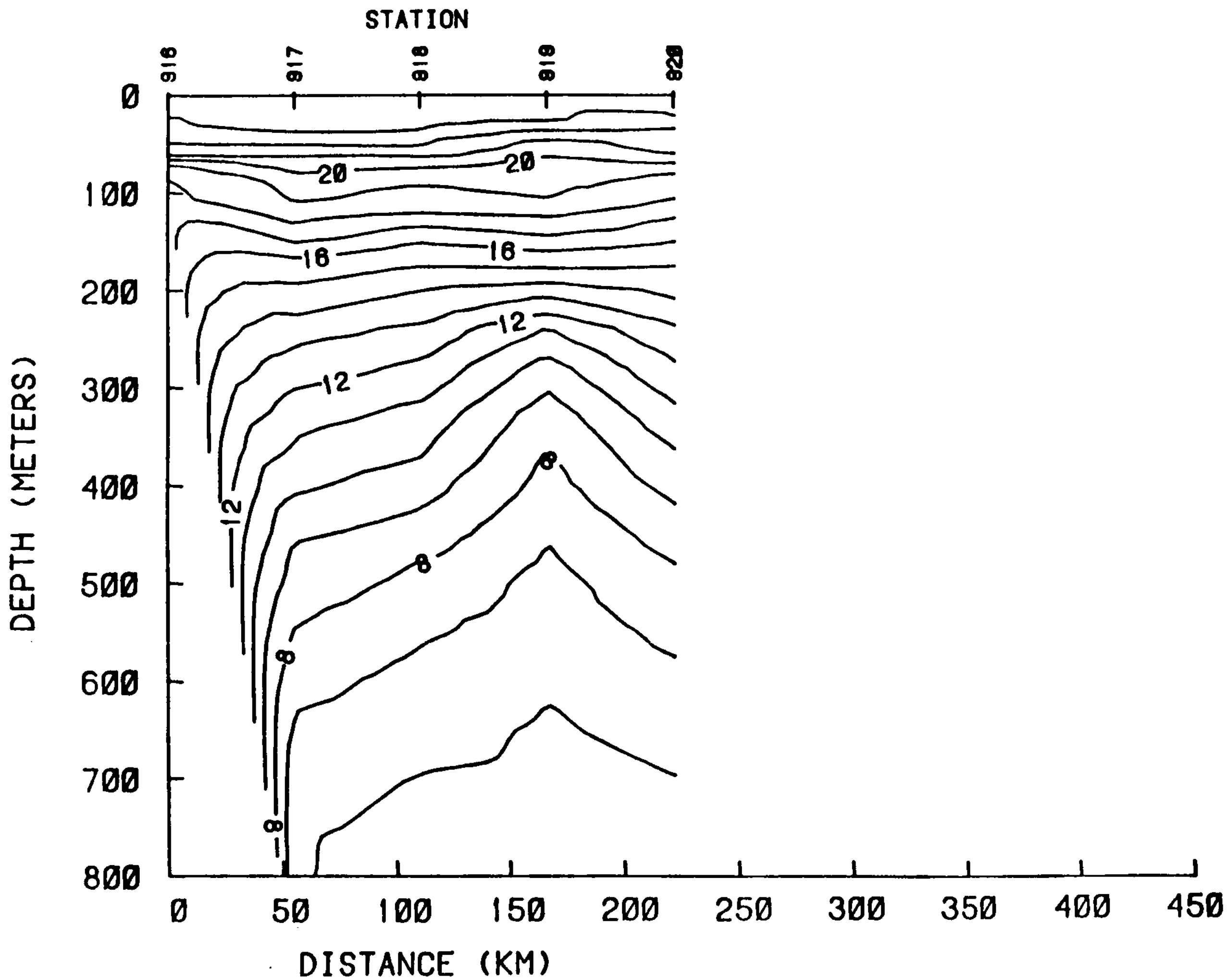
OREGON II CRUISE 143
4/ 5/84 TO 5/ 5/84
STATIONS 898 TO 902
TEMPERATURE DEG C
MIN = 5.19 MAX = 25.13



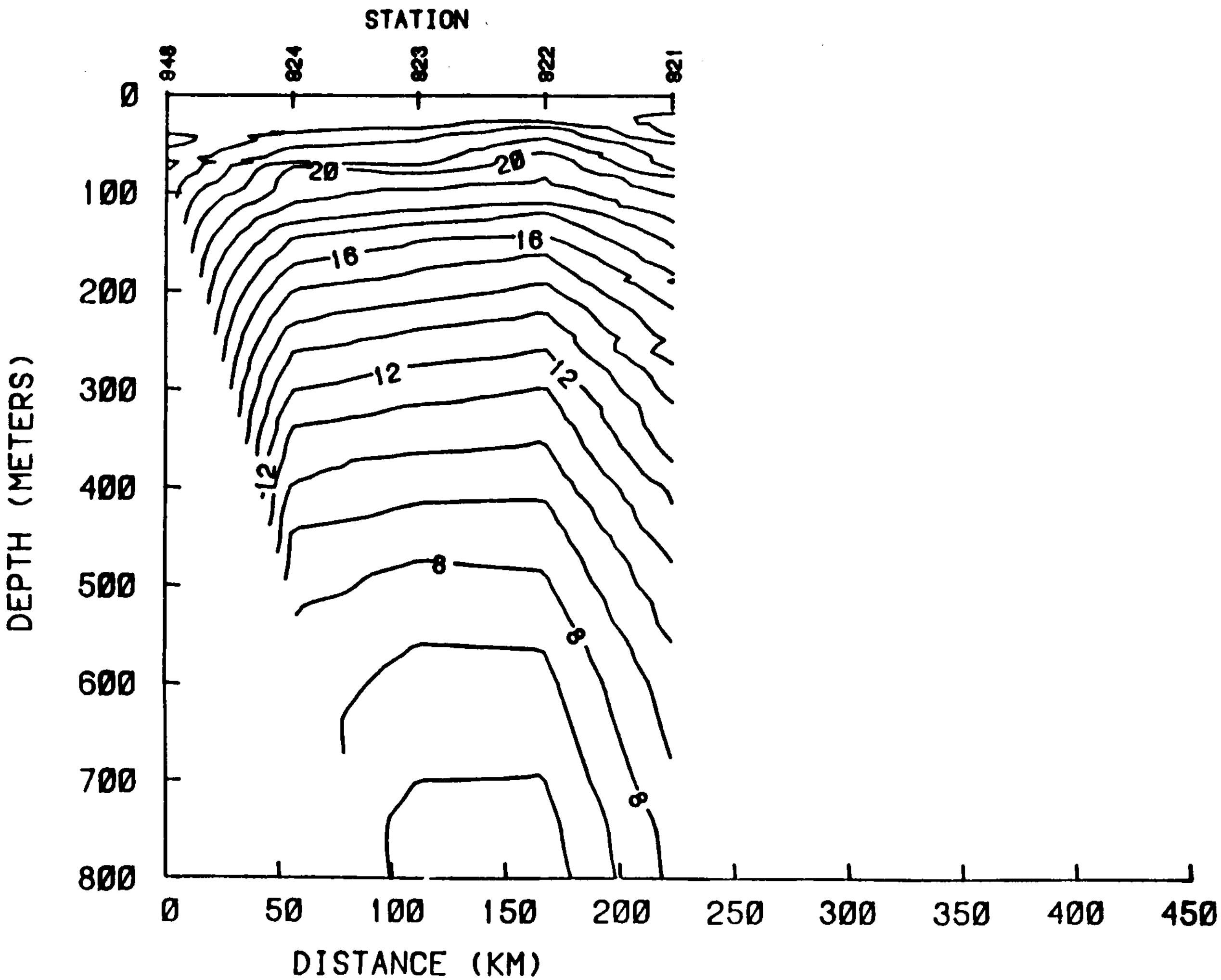
OREGON II CRUISE 143
5/ 6/84 TO 5/ 7/84
STATIONS 904 TO 908
TEMPERATURE DEG C
MIN = 5.18 MAX = 24.34



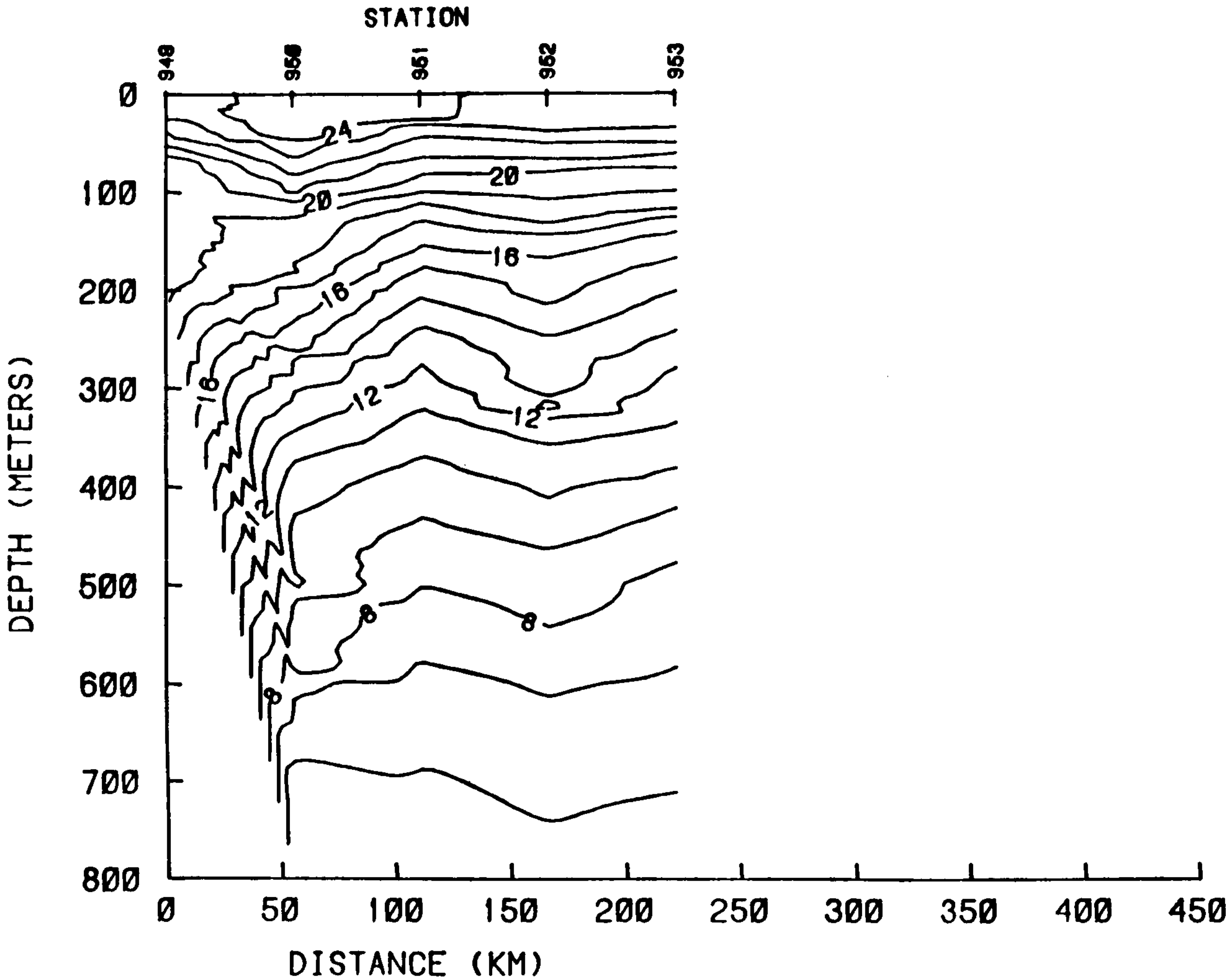
OREGON II CRUISE 143
5/ 7/84 TO 5/ 8/84
STATIONS 910 TO 914
TEMPERATURE DEG C
MIN = 6.86 MAX = 25.33



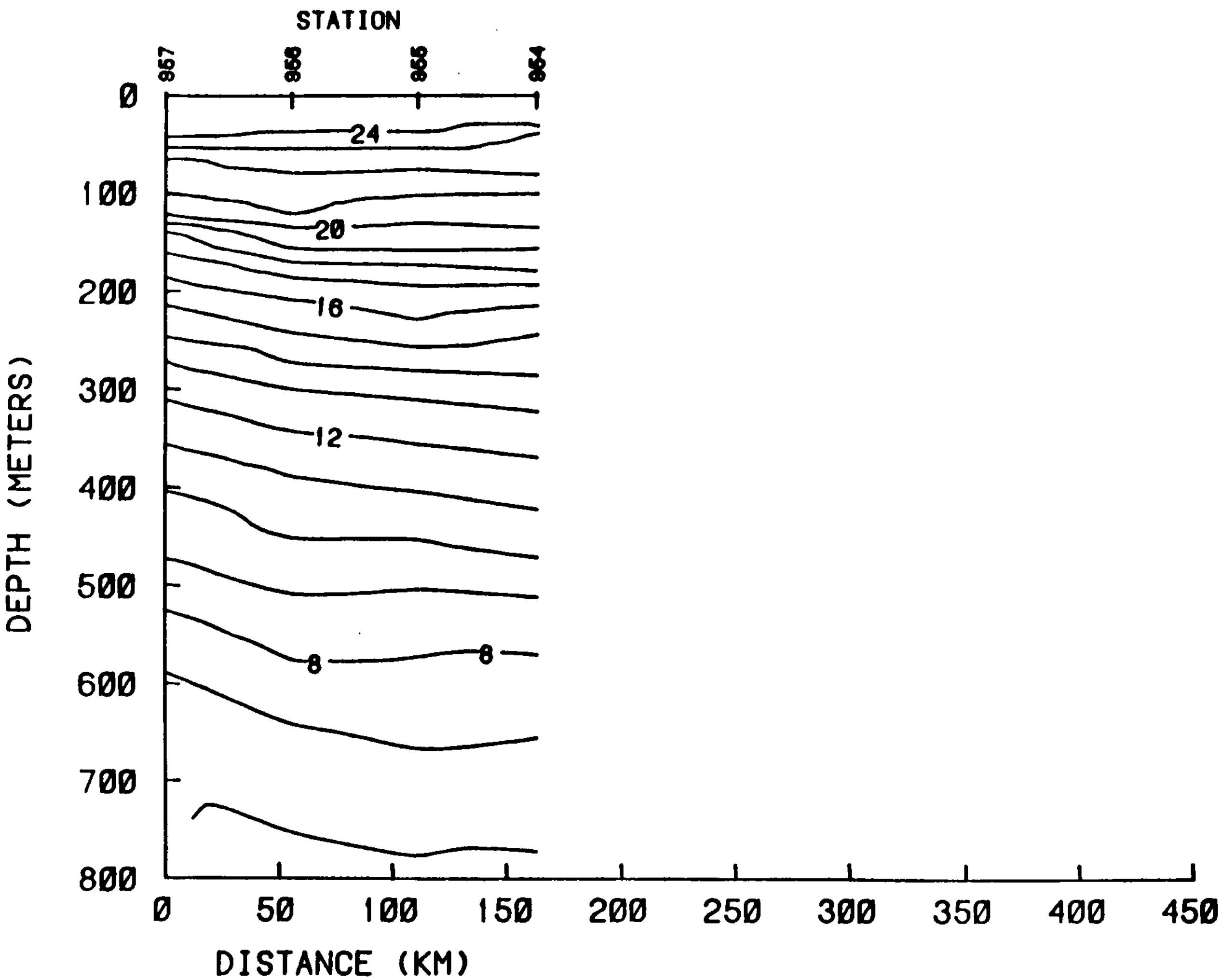
OREGON II CRUISE 143
5/ 8/84 TO 5/ 9/84
STATIONS 916 TO 920
TEMPERATURE DEG C
MIN = 5.09 MAX = 23.77



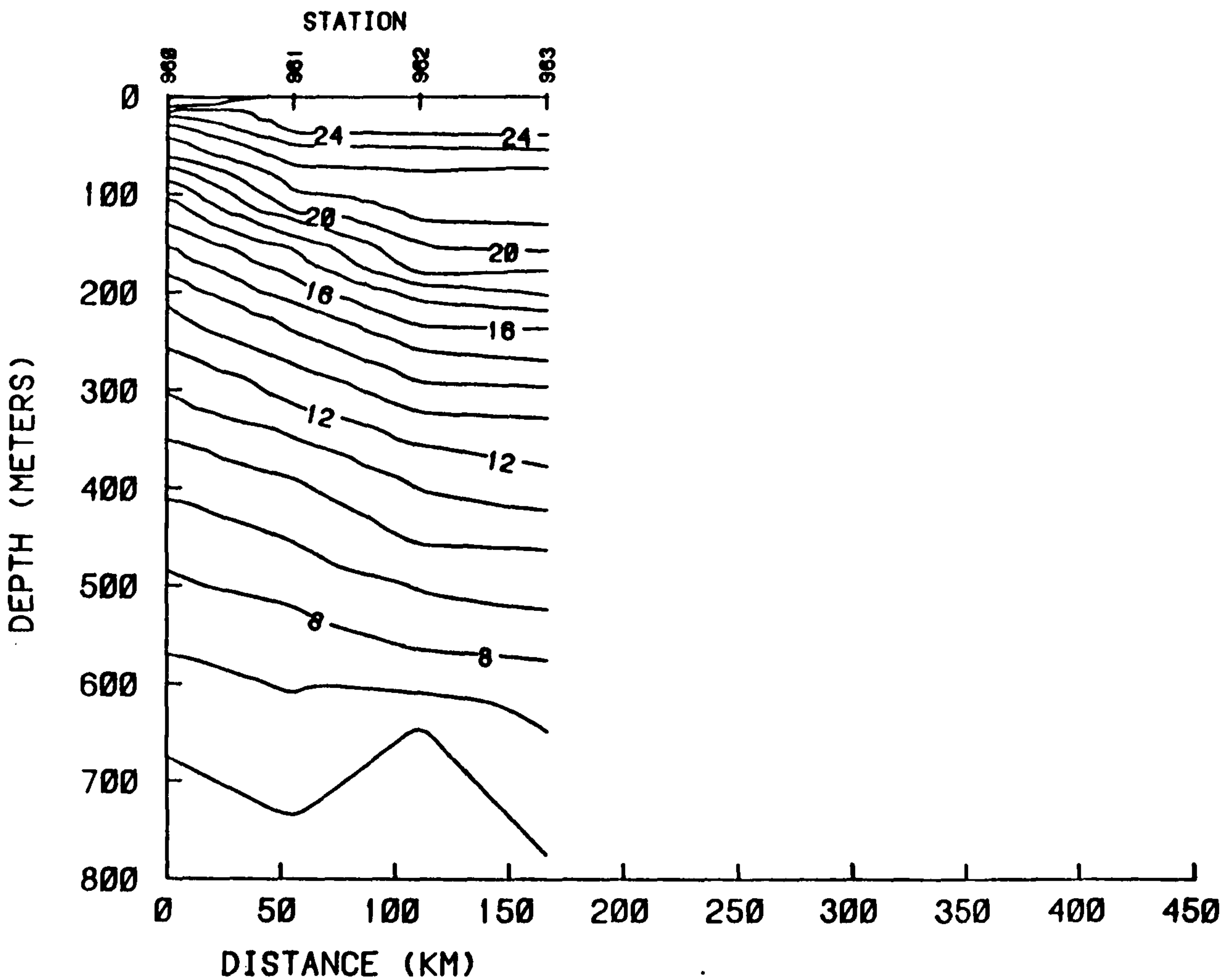
OREGON II CRUISE 143
5/ 9/84 TO 5/11/84
STATIONS 921 TO 948
TEMPERATURE DEG C
MIN = 5.25 MAX = 24.51



OREGON II CRUISE 143
5/11/84 TO 5/12/84
STATIONS 949 TO 953
TEMPERATURE DEG C
MIN = 5.15 MAX = 24.92

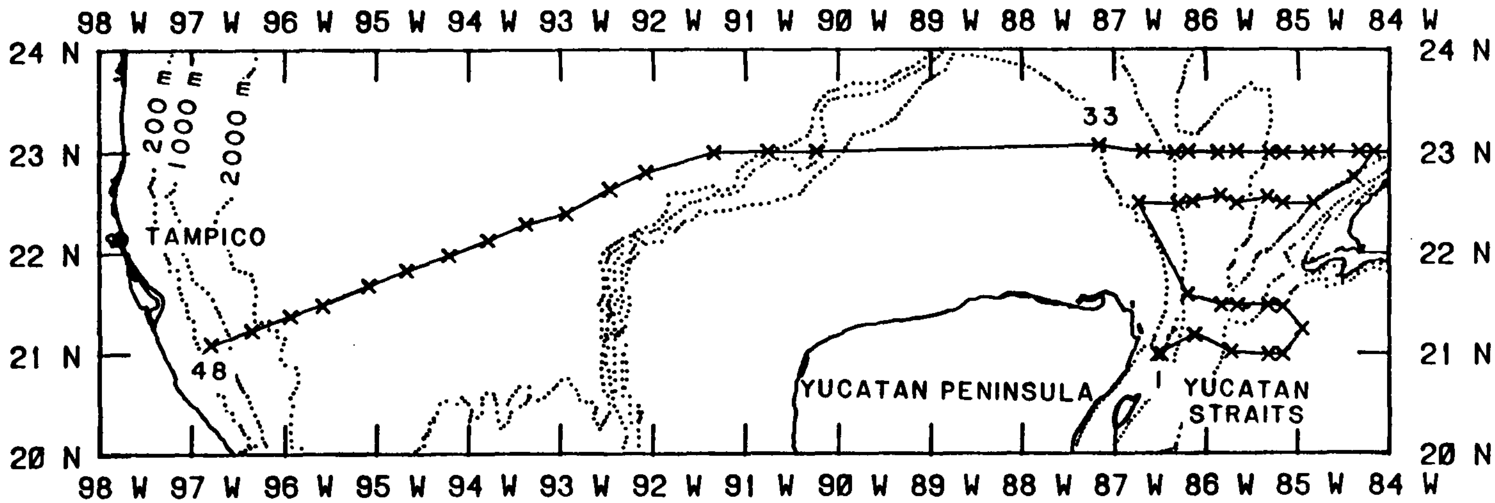


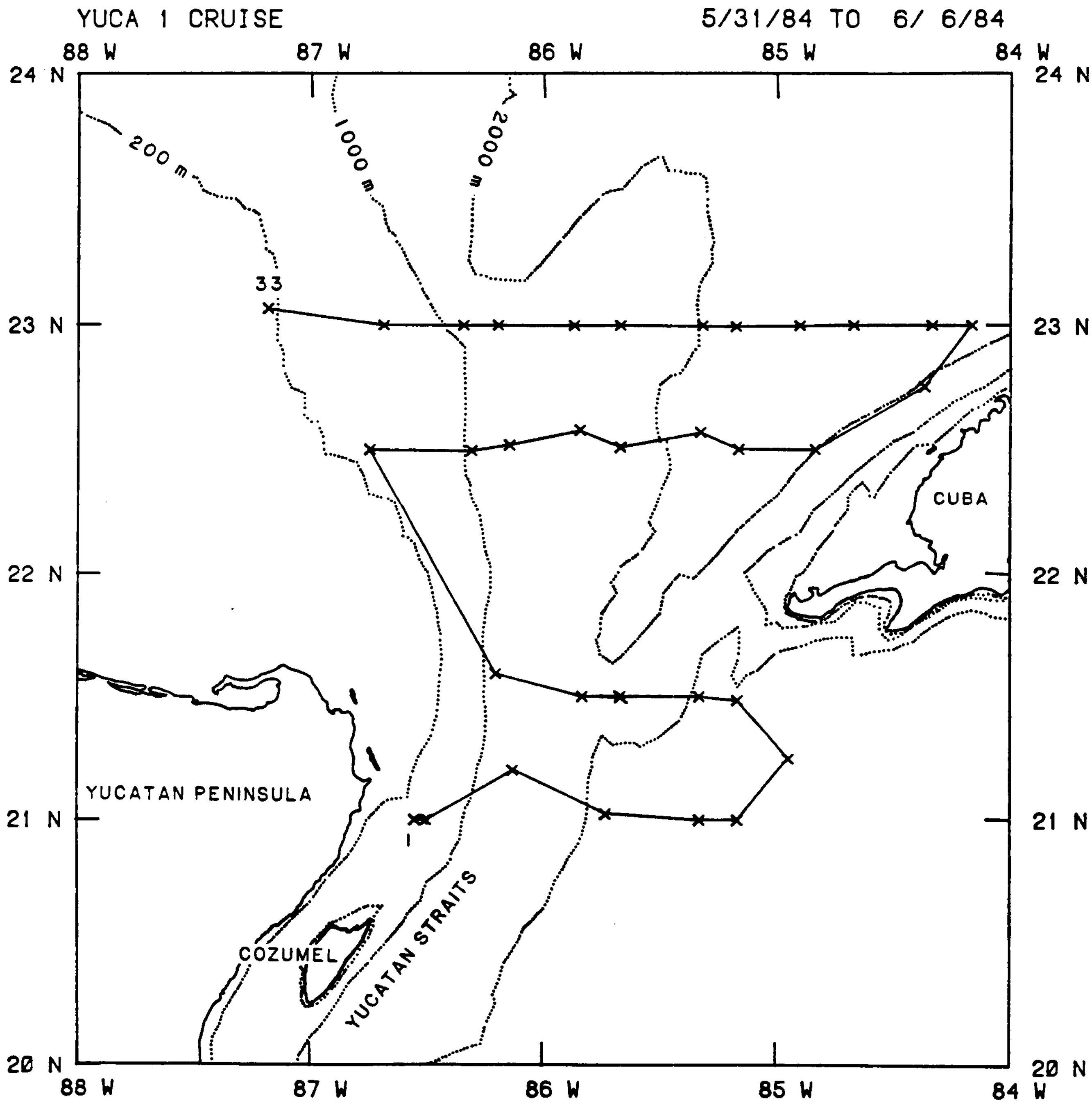
OREGON II CRUISE 143
5/12/84 TO 5/13/84
STATIONS 954 TO 957
TEMPERATURE DEG C
MIN = 5.37 MAX = 24.80

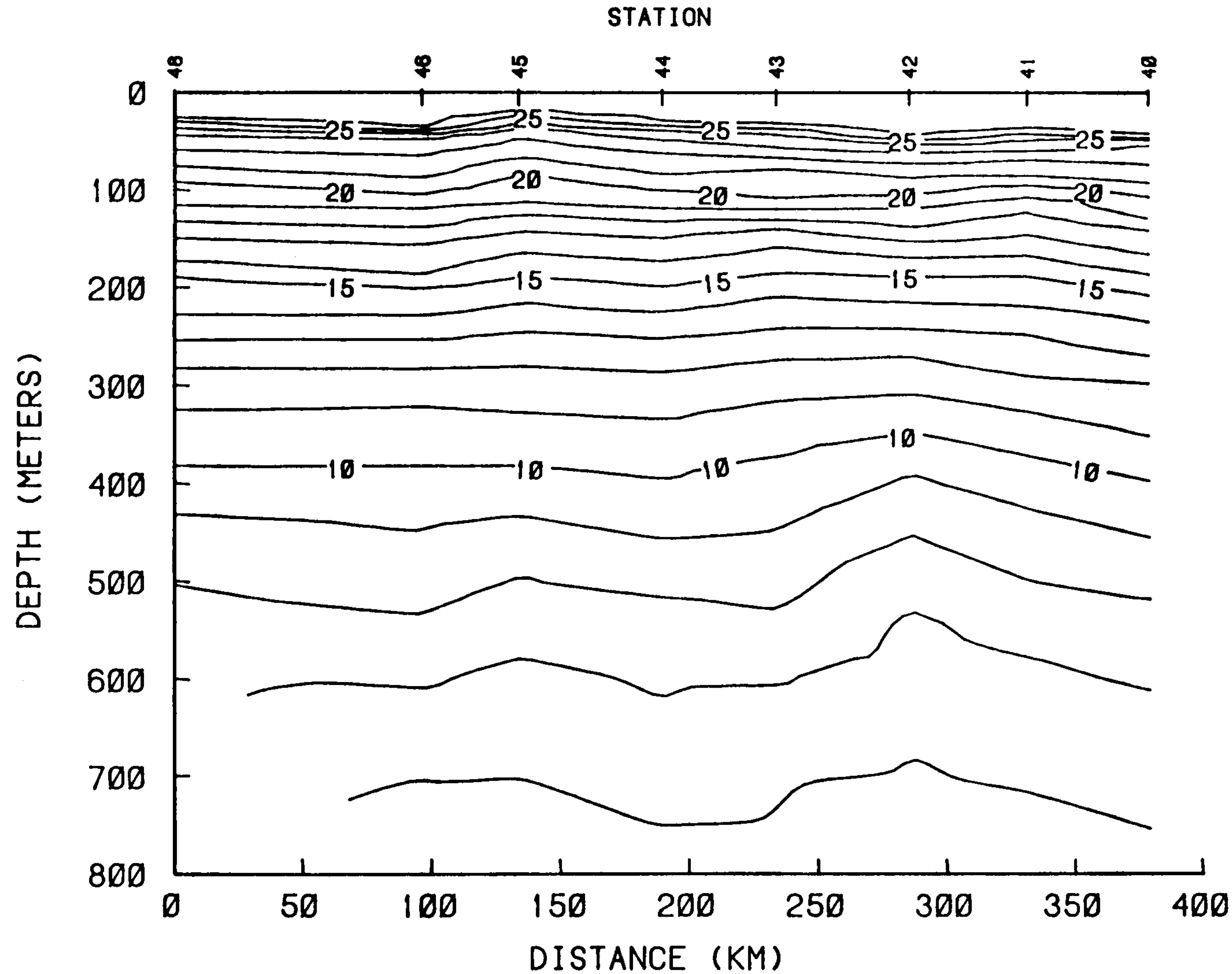


OREGON II CRUISE 143
5/13/84 TO 5/14/84
STATIONS 960 TO 963
TEMPERATURE DEG C
MIN = 5.39 MAX = 25.44

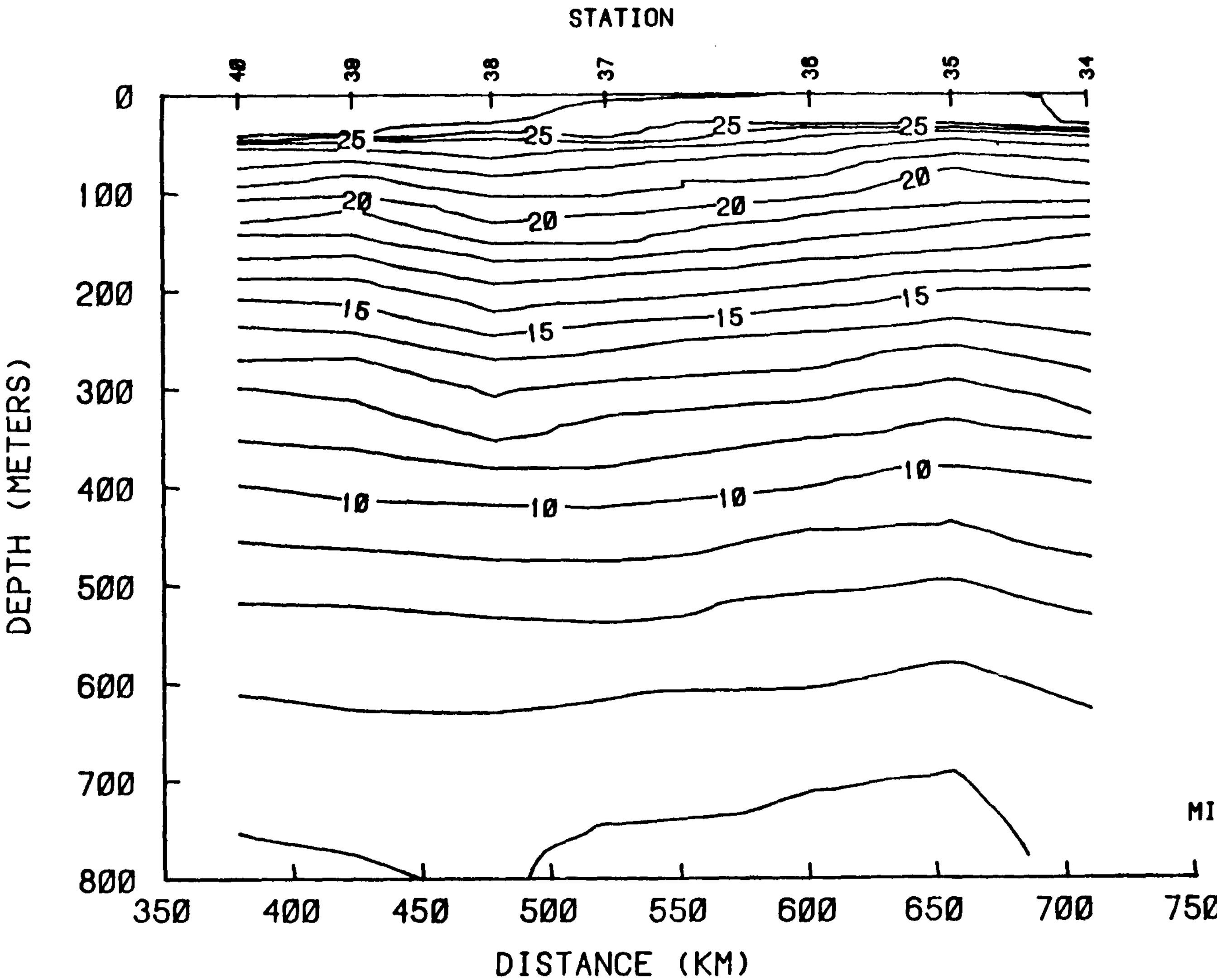
YUCA I CRUISE 5/31/84 TO 6/ 6/84



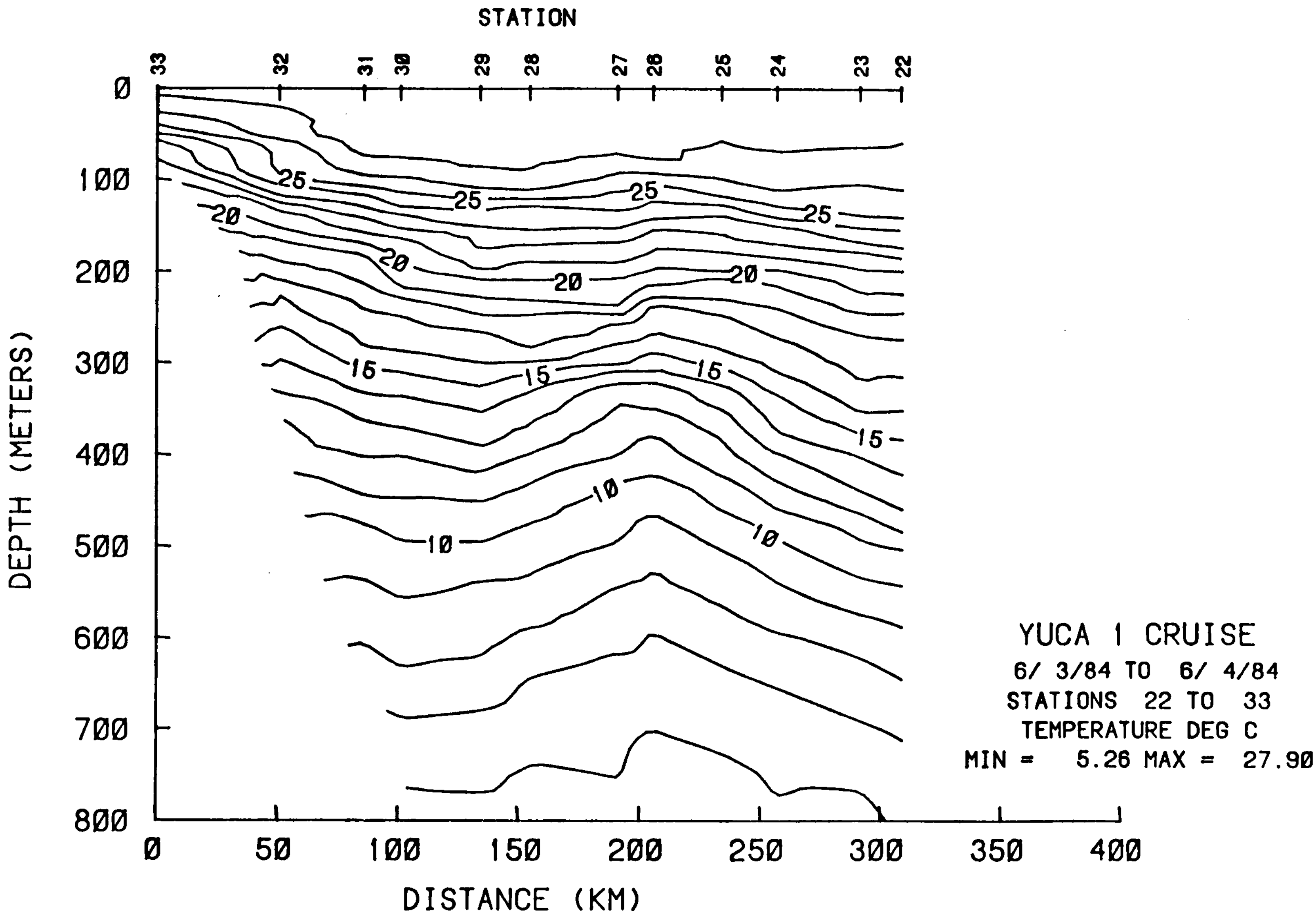

YUCA 1 CRUISE
5/31/84 TO 6/ 6/84
88 W
87 W
86 W
85 W
84 W
24 N
23 N
22 N
21 N
20 N
200 m
1000 m
2000 m
33
1
CUBA
YUCATAN PENINSULA
COZUMEL
YUCATAN STRAITS

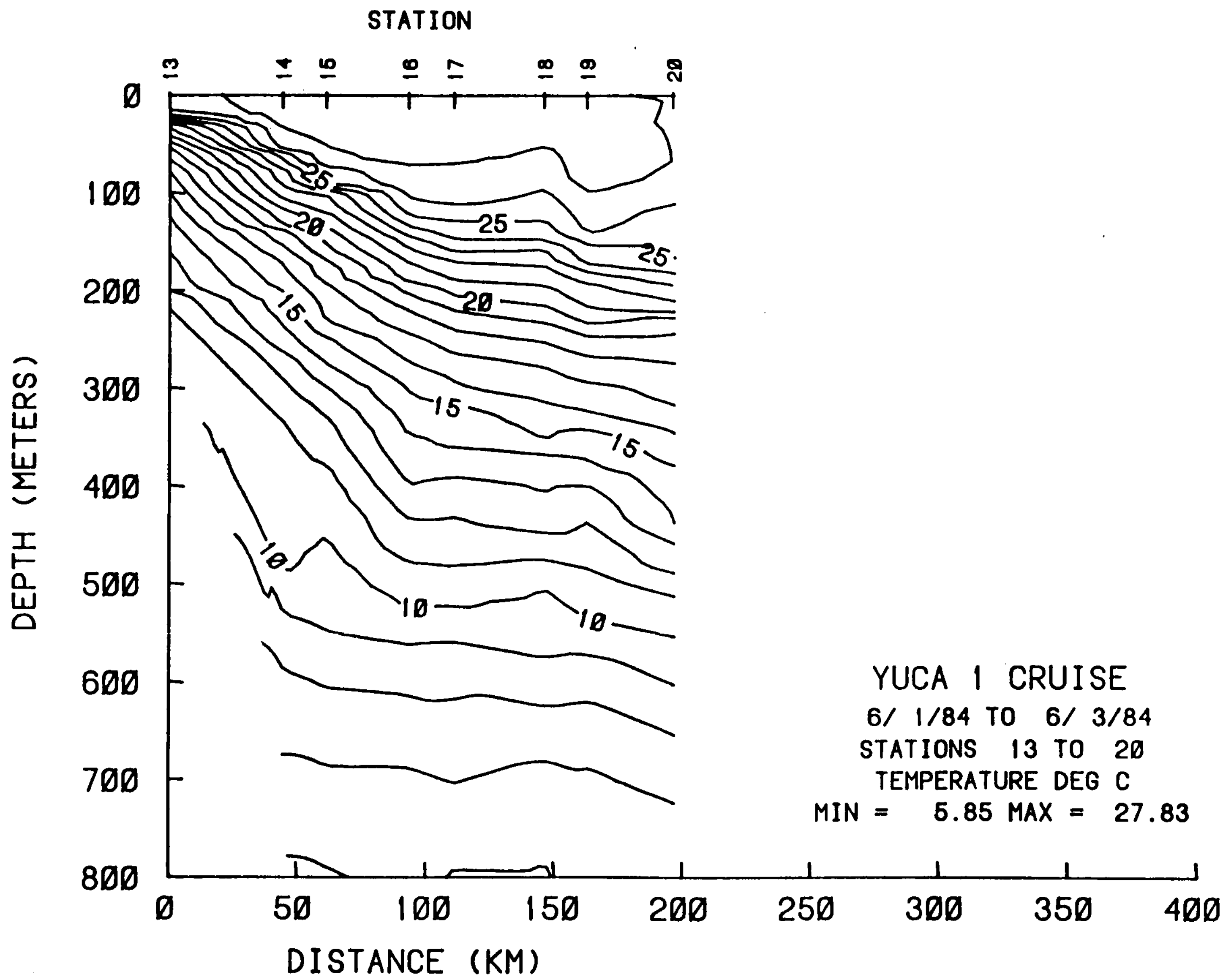


YUCA 1 CRUISE
6/ 6/84 TO 6/ 6/84
STATIONS 40 TO 48
TEMPERATURE DEG C
MIN = 5.28 MAX = 27.05

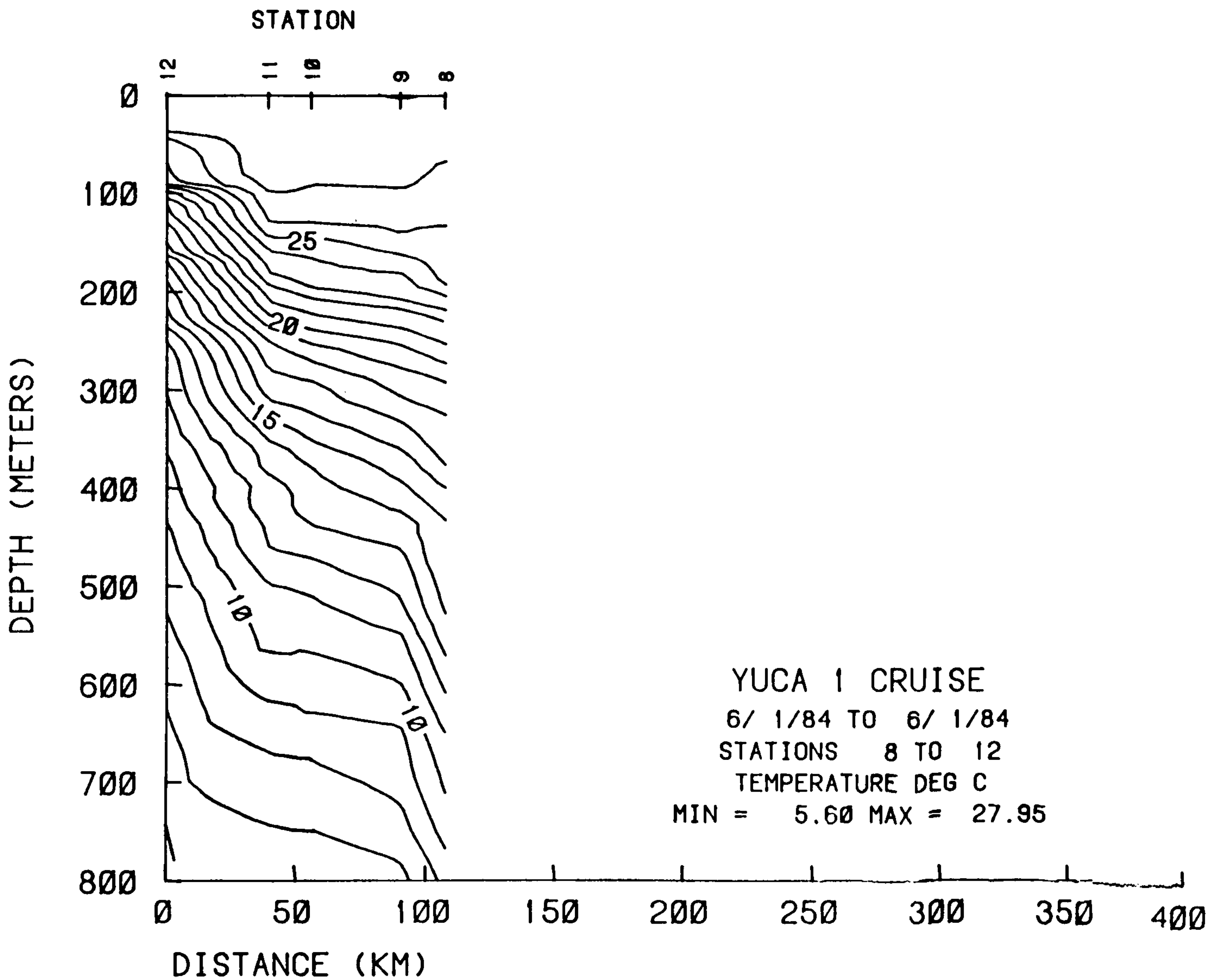


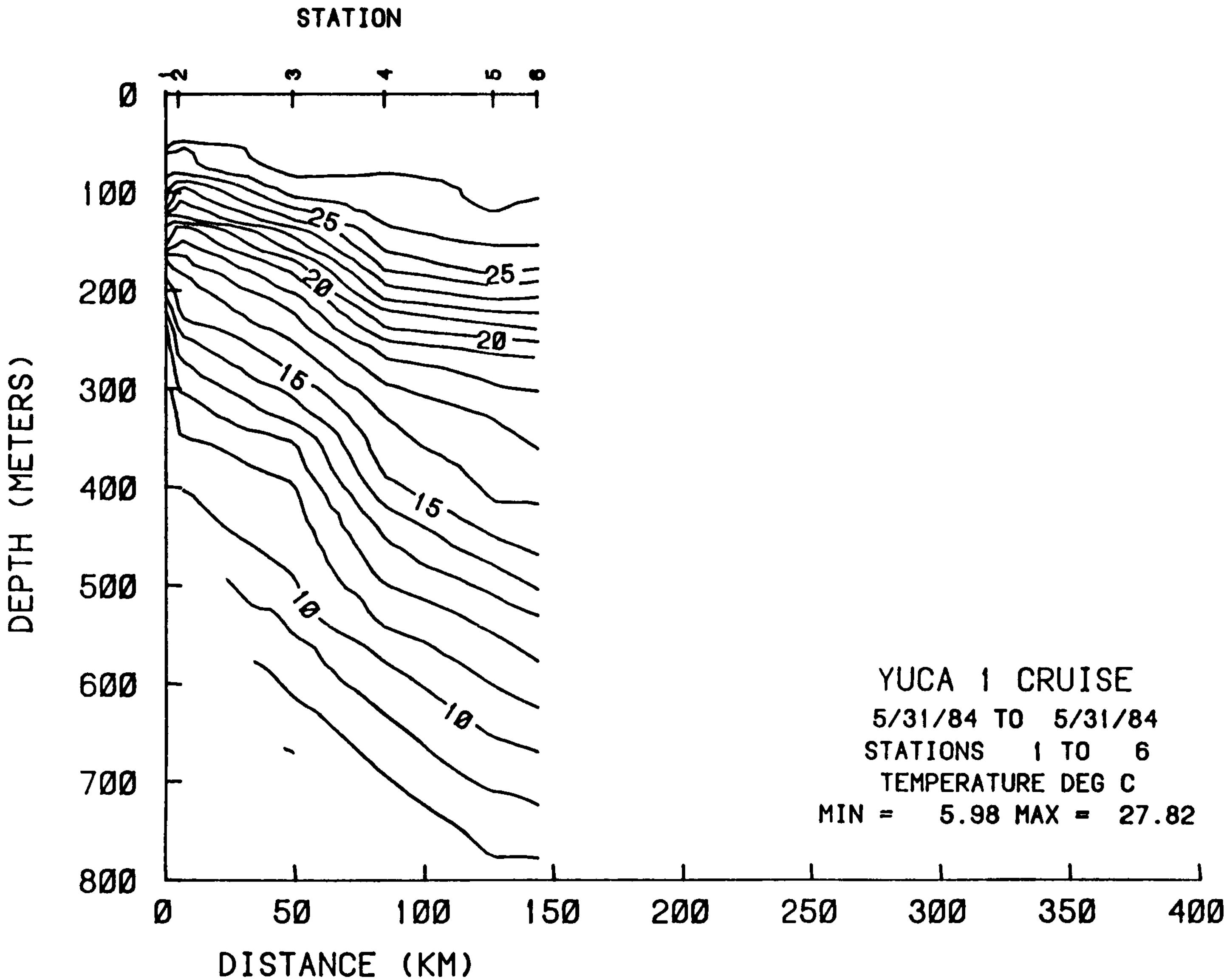
YUCA 1 CRUISE
6/ 5/84 TO 6/ 6/84
STATIONS 34 TO 40
TEMPERATURE DEG C
MIN = 5.56 MAX = 26.95

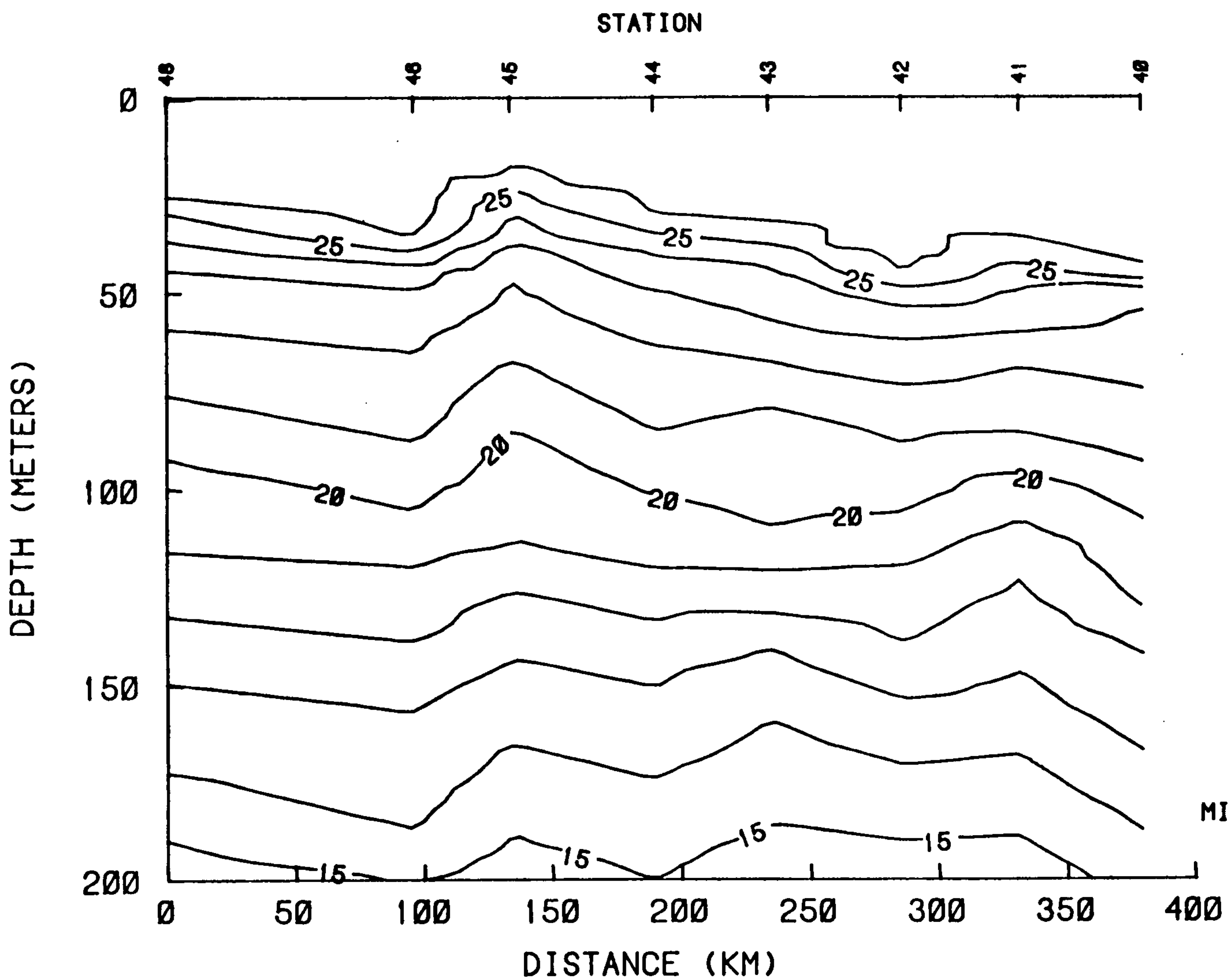

STATION
33
32
31
30
29
28
27
26
25
24
23
22
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0
50
100
150
200
250
300
350
400
25
20
15
10
YUCA 1 CRUISE
6/ 3/84 TO 6/ 4/84
STATIONS 22 TO 33
TEMPERATURE DEG C
MIN = 5.26 MAX = 27.90



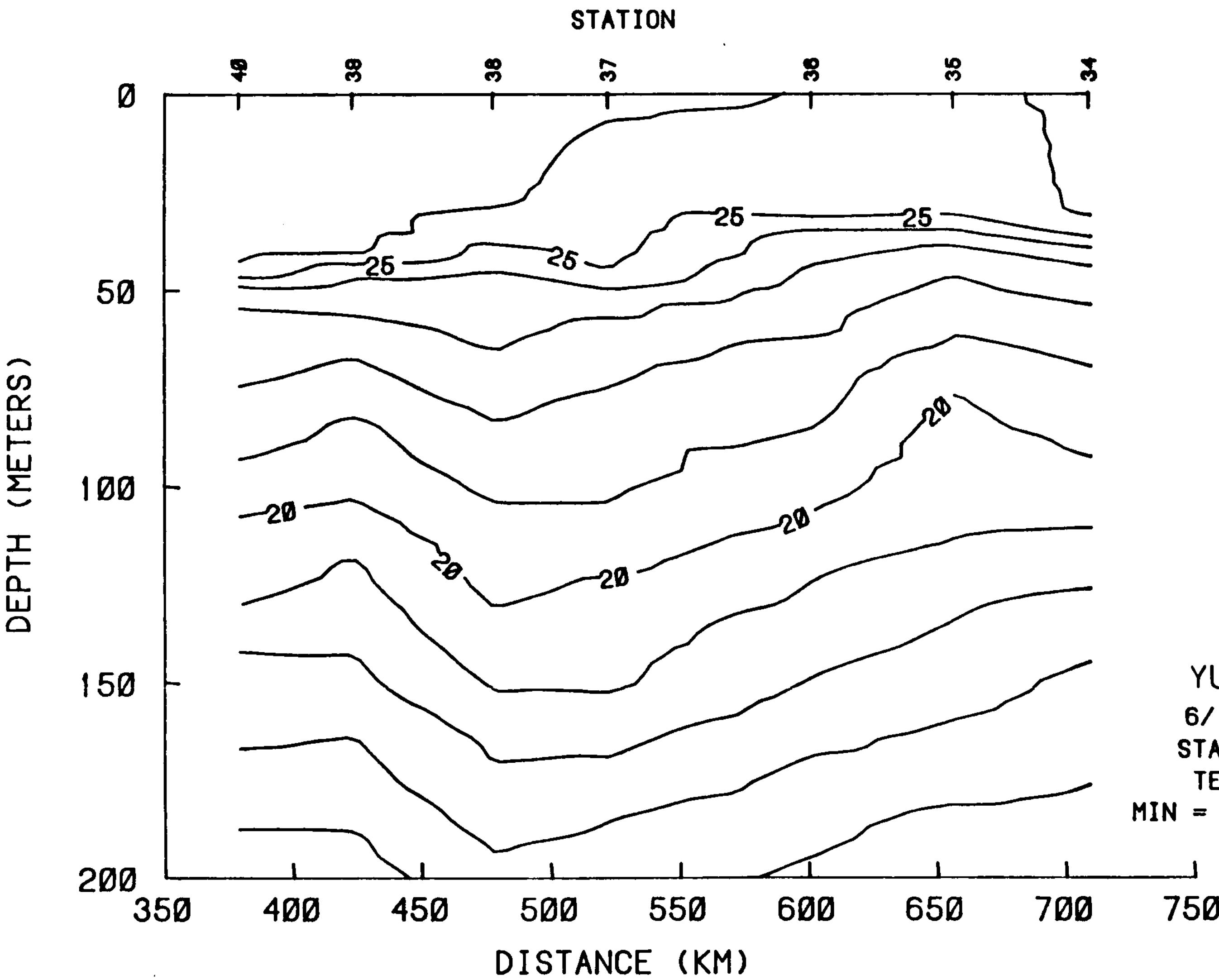
STATION
13
14
15
16
17
18
19
20
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0
50
100
150
200
250
300
350
400
25
20
15
10
YUCA 1 CRUISE
6/ 1/84 TO 6/ 3/84
STATIONS 13 TO 20
TEMPERATURE DEG C
MIN = 5.85 MAX = 27.83


STATION
12
11
10
9
8
0
100
200
300
400
500
600
700
800
DEPTH (METERS)
25
20
15
10
10
0
50
100
150
200
250
300
350
400
DISTANCE (KM)
YUCA 1 CRUISE
6/ 1/84 TO 6/ 1/84
STATIONS 8 TO 12
TEMPERATURE DEG C
MIN = 5.60 MAX = 27.95

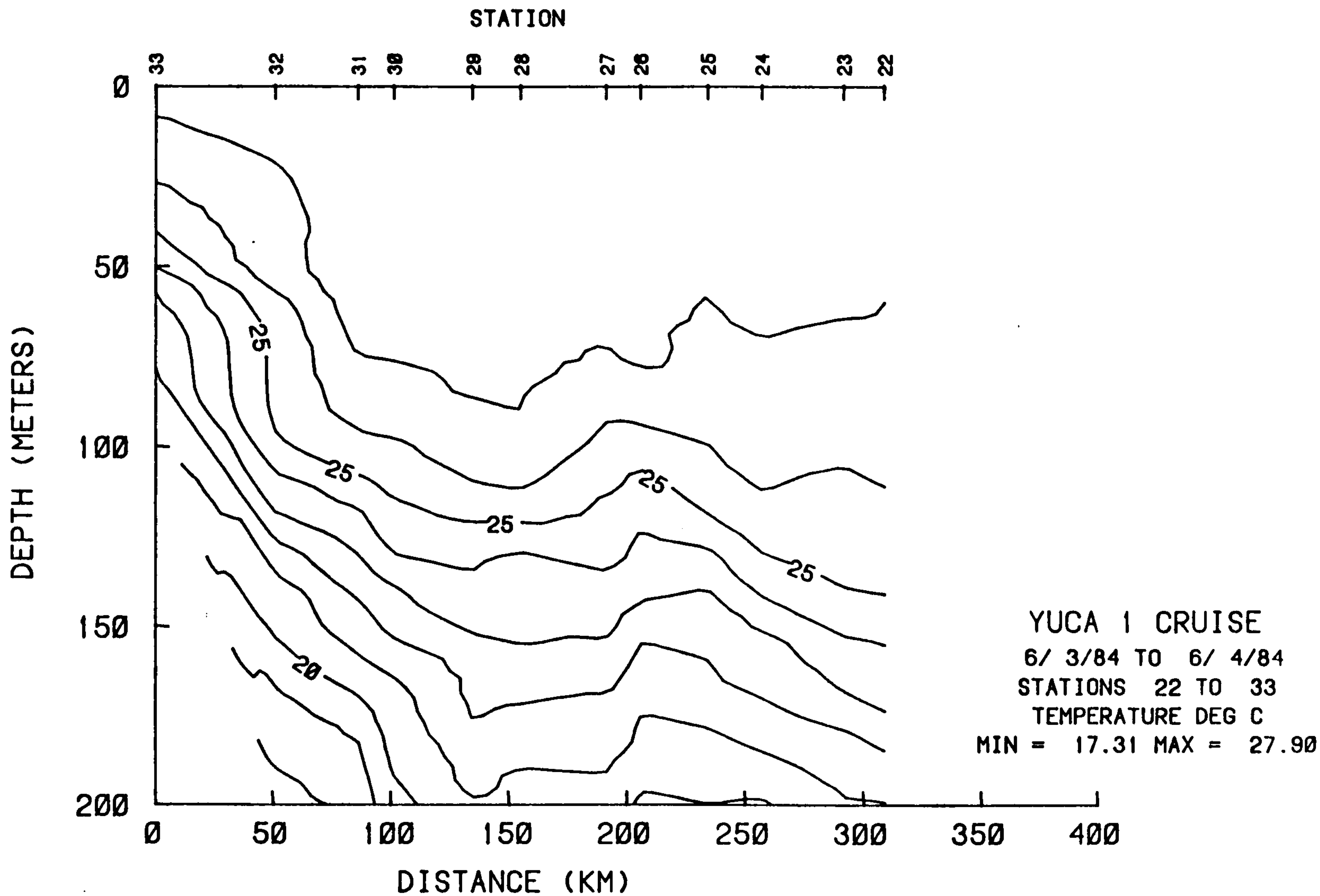

STATION
1
2
3
4
5
6
DEPTH (METERS)
Ø
100
200
300
400
500
600
700
800
25
25
20
20
15
15
10
10
YUCA 1 CRUISE
5/31/84 TO 5/31/84
STATIONS 1 TO 6
TEMPERATURE DEG C
MIN = 5.98 MAX = 27.82
Ø
50
100
150
200
250
300
350
400
DISTANCE (KM)

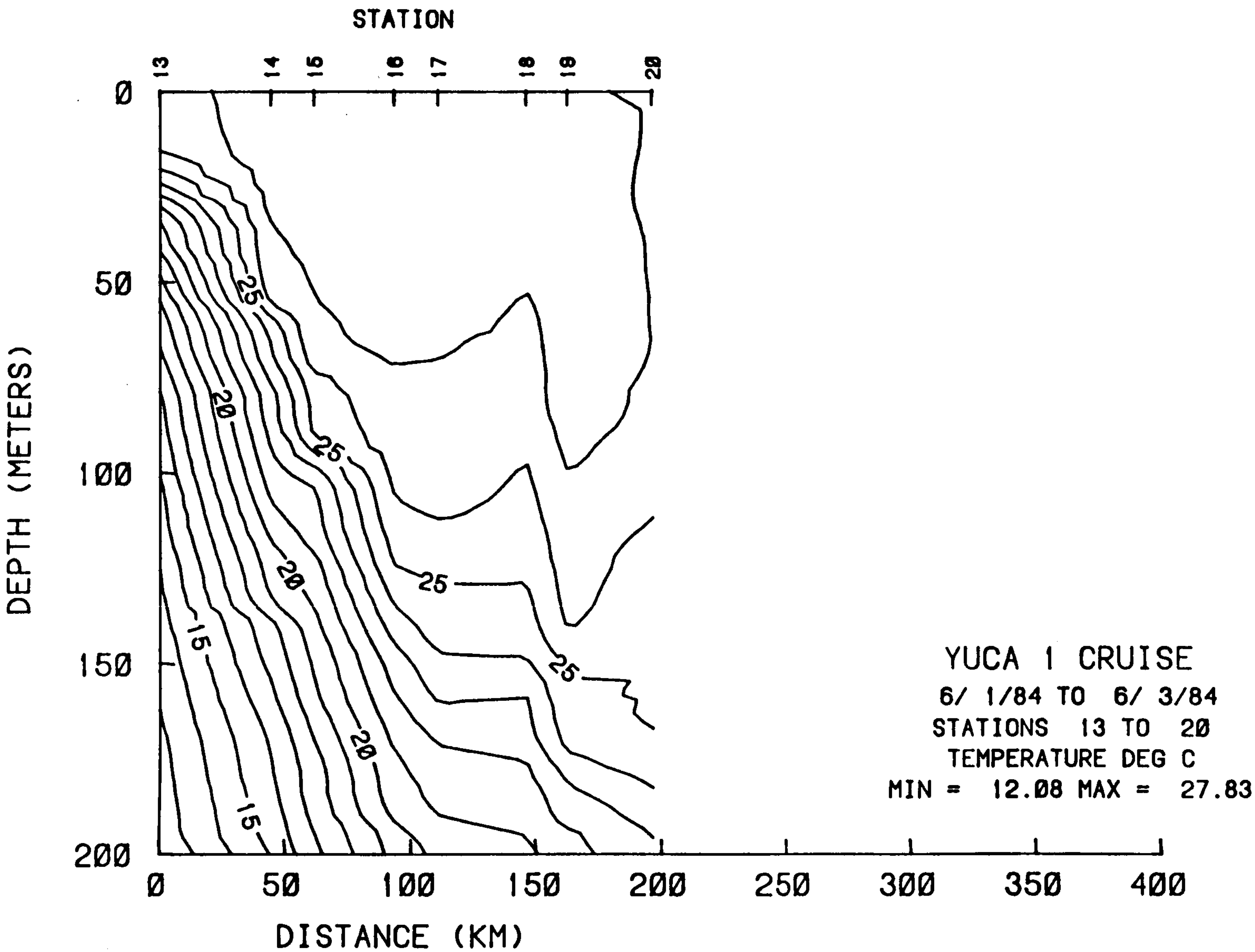


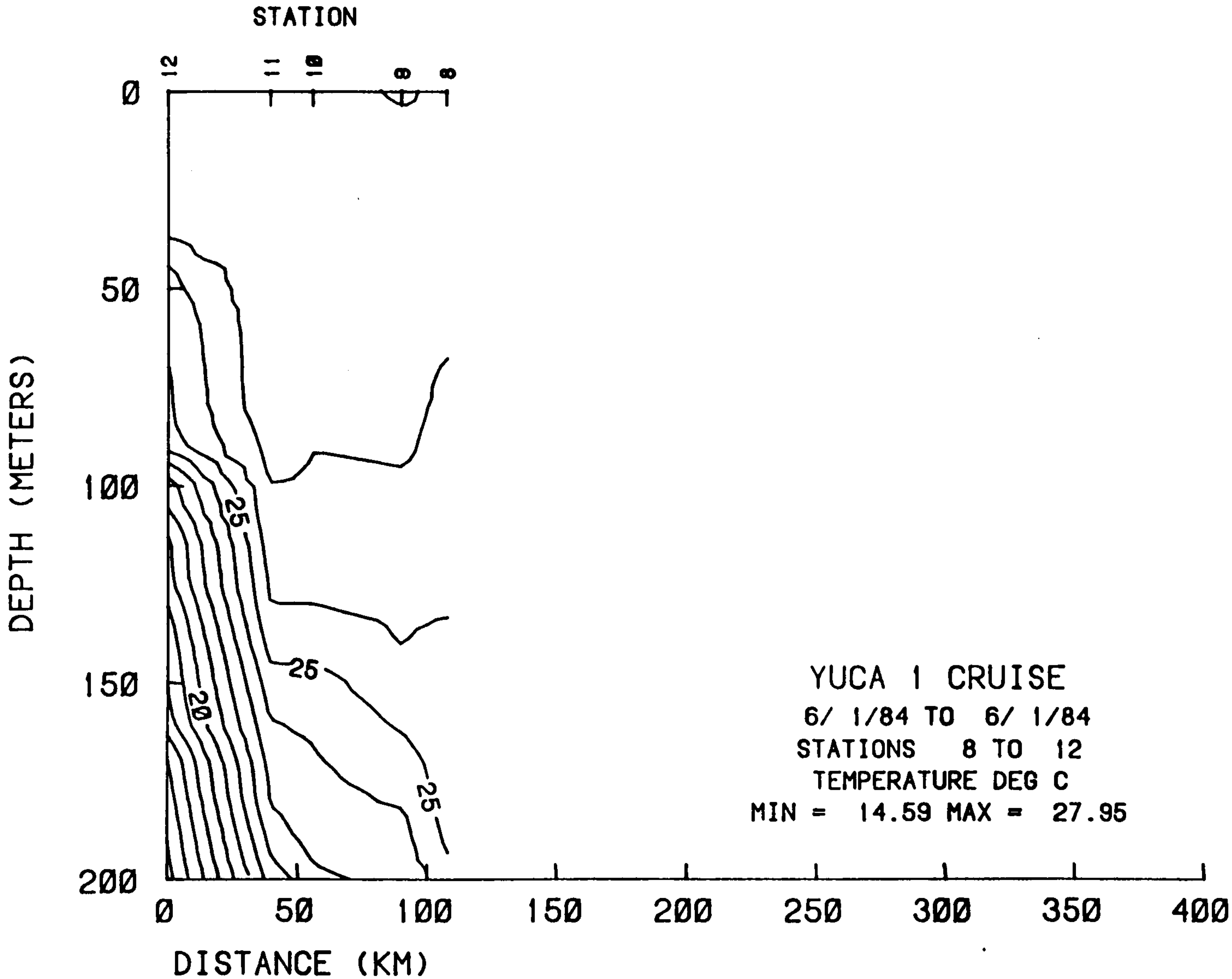
YUCA 1 CRUISE
6/ 6/84 TO 6/ 6/84
STATIONS 40 TO 48
TEMPERATURE DEG C
MIN = 14.44 MAX = 27.05

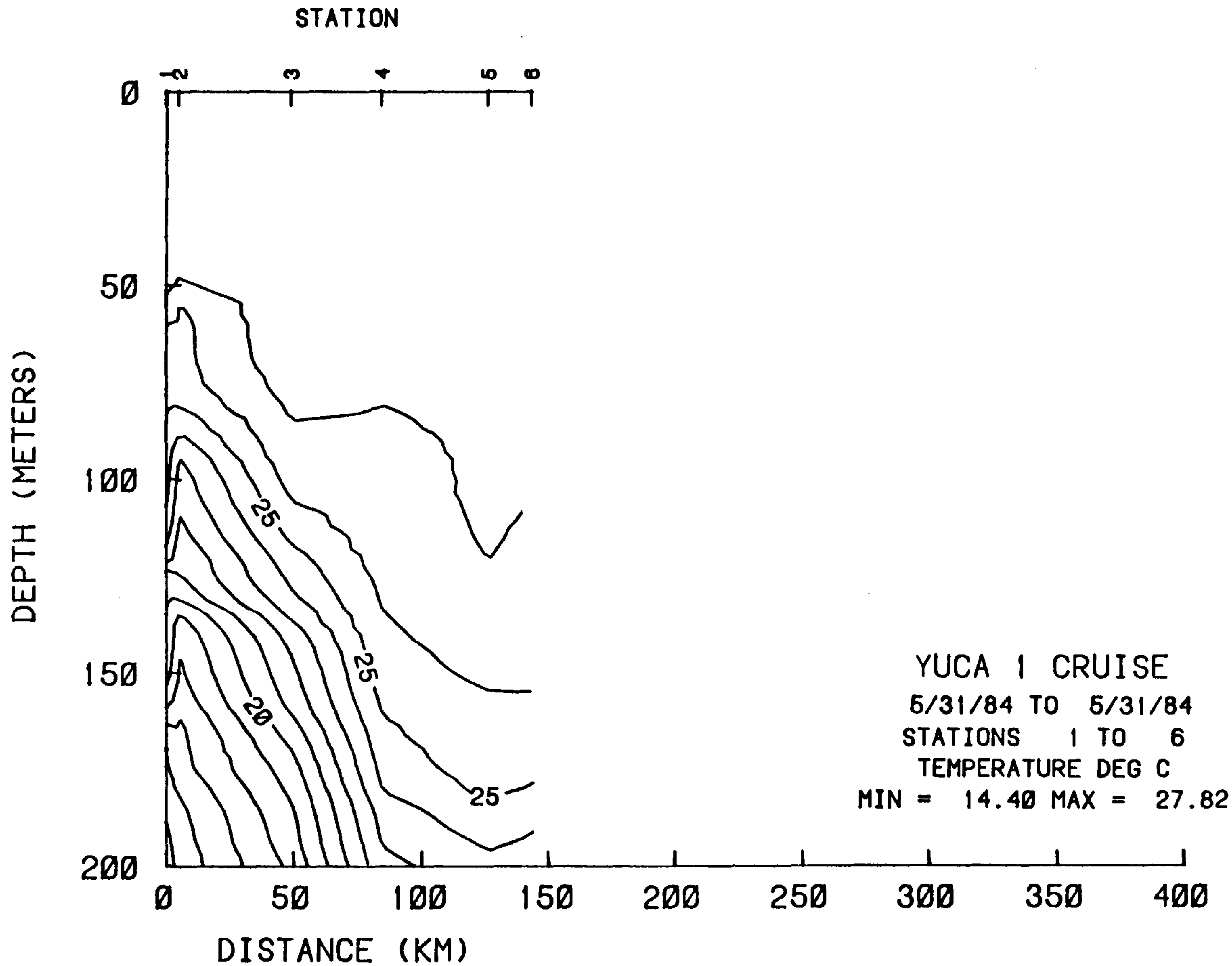


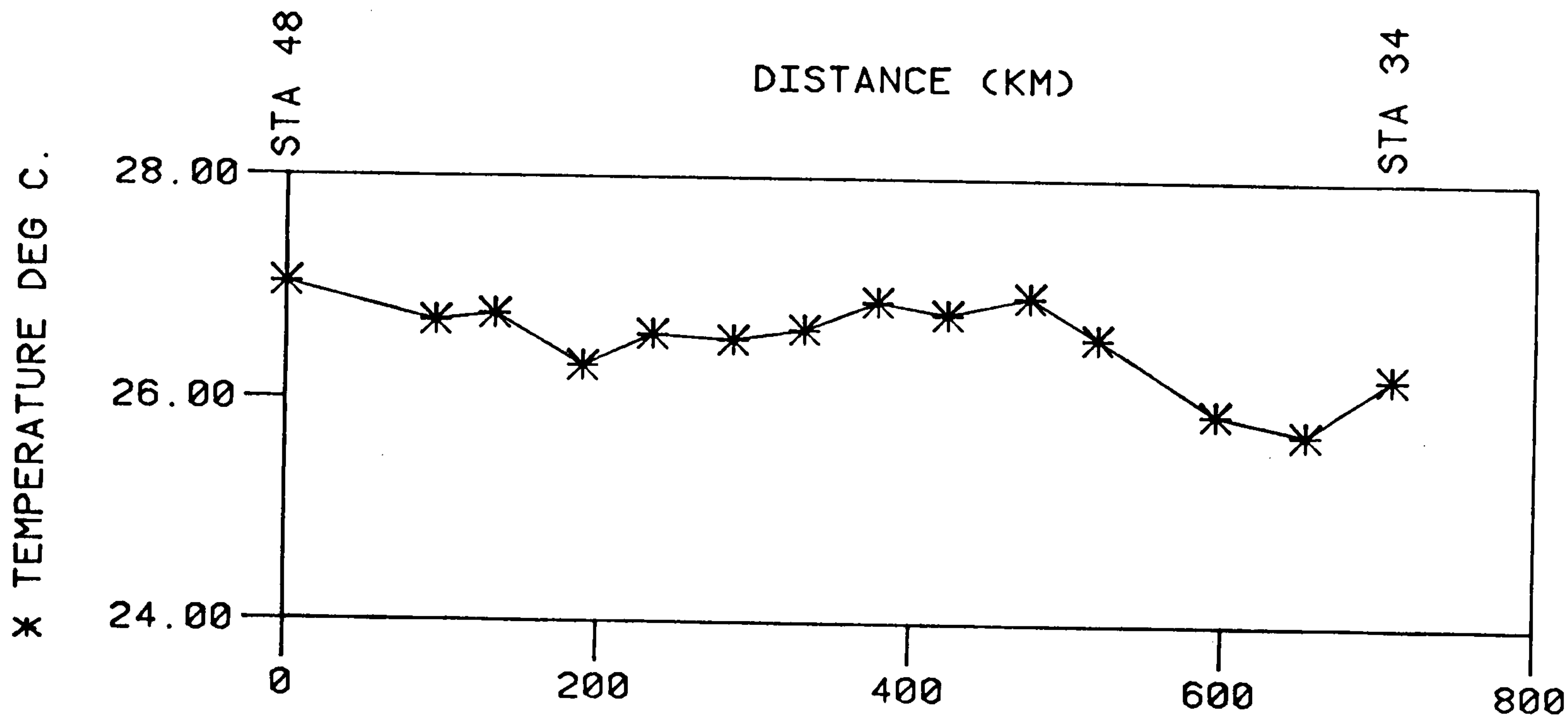
YUCA 1 CRUISE
6/ 5/84 TO 6/ 6/84
STATIONS 34 TO 4Ø
TEMPERATURE DEG C
MIN = 15.ØØ MAX = 26.95


STATION
33
32
31
30
29
28
27
26
25
24
23
22
DEPTH (METERS)
0
50
100
150
200
25
20
DISTANCE (KM)
0
50
100
150
200
250
300
350
400
YUCA 1 CRUISE
6/ 3/84 TO 6/ 4/84
STATIONS 22 TO 33
TEMPERATURE DEG C
MIN = 17.31 MAX = 27.90

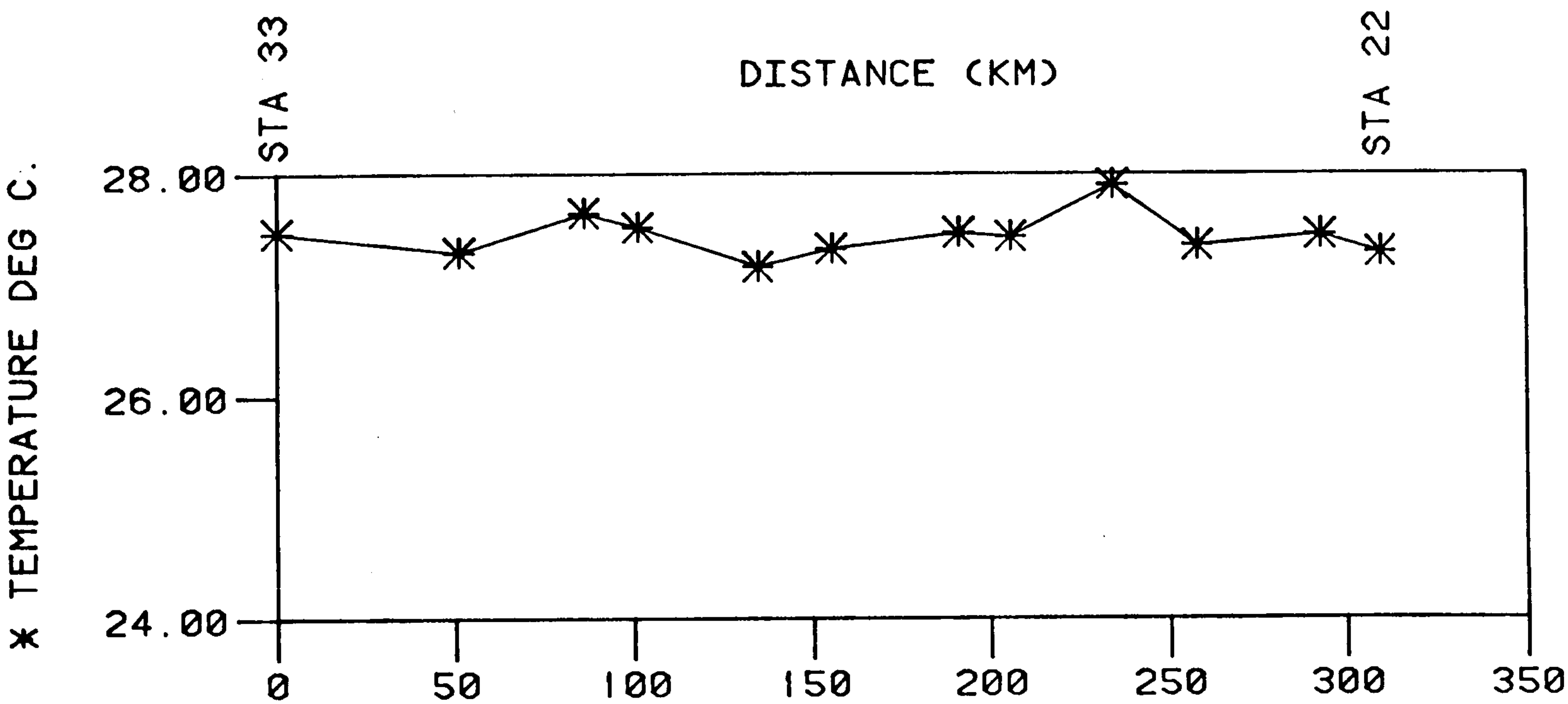

STATION
13
14
15
16
17
18
19
20
0
50
100
150
200
DEPTH (METERS)
25
25
25
25
20
20
20
15
15
0
50
100
150
200
250
300
350
400
DISTANCE (KM)
YUCA 1 CRUISE
6/ 1/84 TO 6/ 3/84
STATIONS 13 TO 20
TEMPERATURE DEG C
MIN = 12.08 MAX = 27.83


STATION
12
11
10
8
8
DEPTH (METERS)
0
50
100
150
200
25
25
20
25
0
50
100
150
200
250
300
350
400
DISTANCE (KM)
YUCA 1 CRUISE
6/ 1/84 TO 6/ 1/84
STATIONS 8 TO 12
TEMPERATURE DEG C
MIN = 14.59 MAX = 27.95

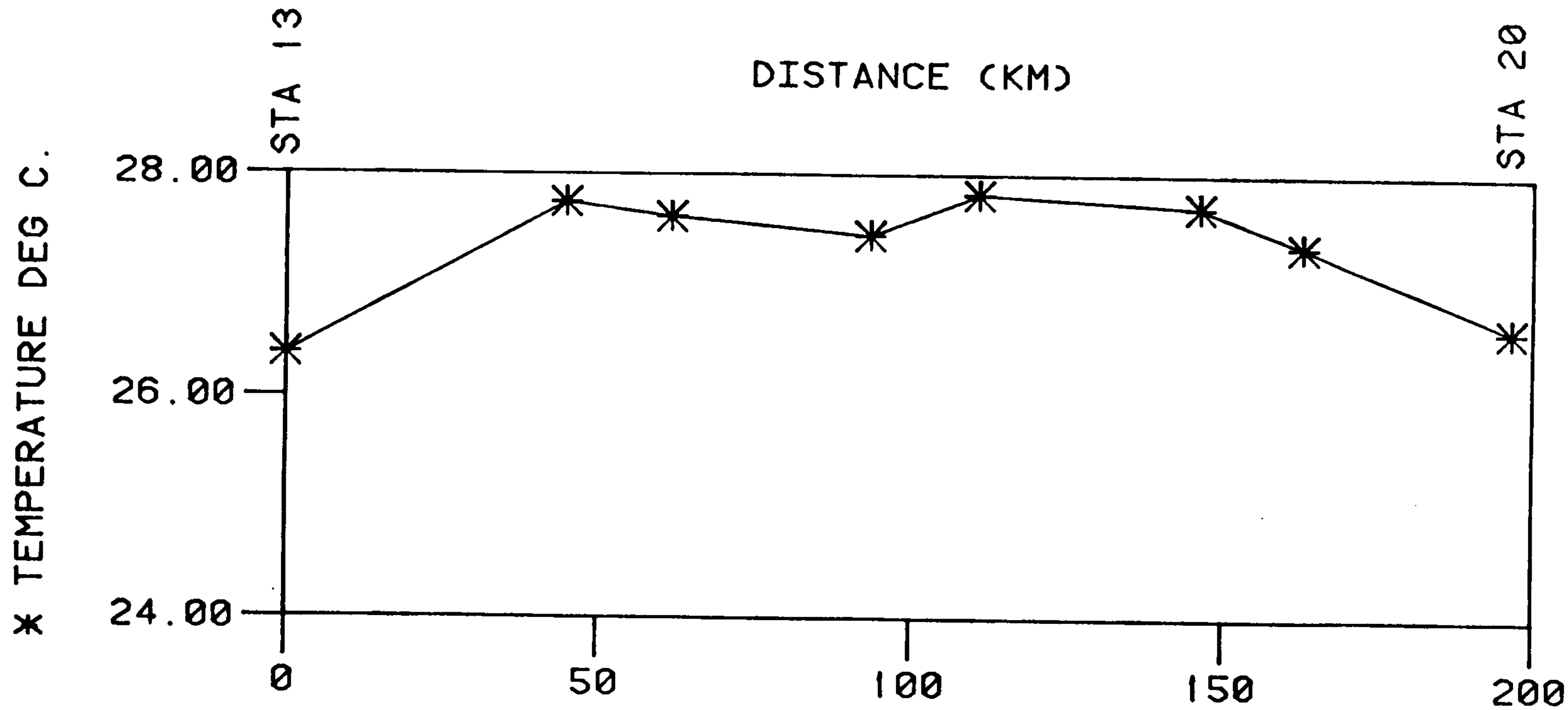

STATION
1
2
3
4
5
6
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0
50
100
150
200
250
300
350
400
25
25
20
25
YUCA 1 CRUISE
5/31/84 TO 5/31/84
STATIONS 1 TO 6
TEMPERATURE DEG C
MIN = 14.40 MAX = 27.82



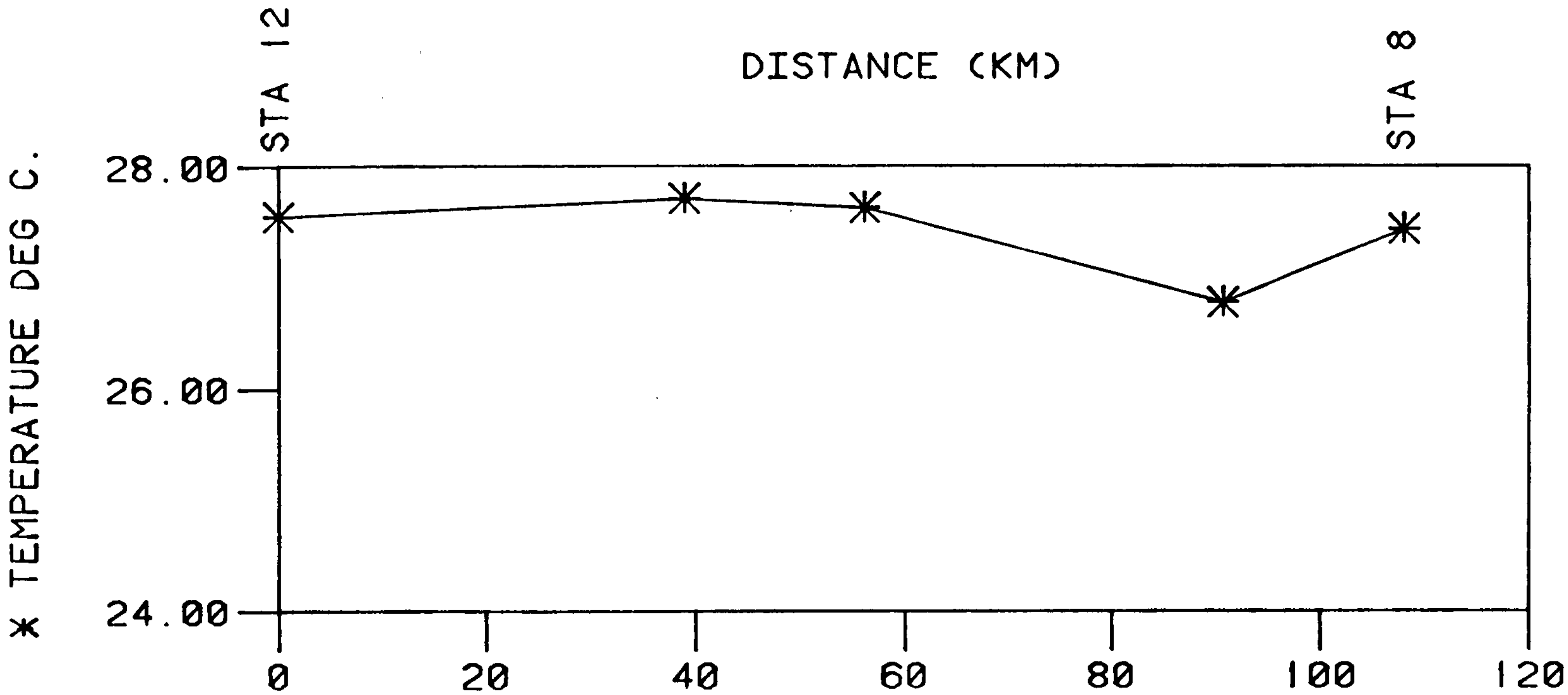
PARAMETERS AT SURFACE YUCA I CRUISE



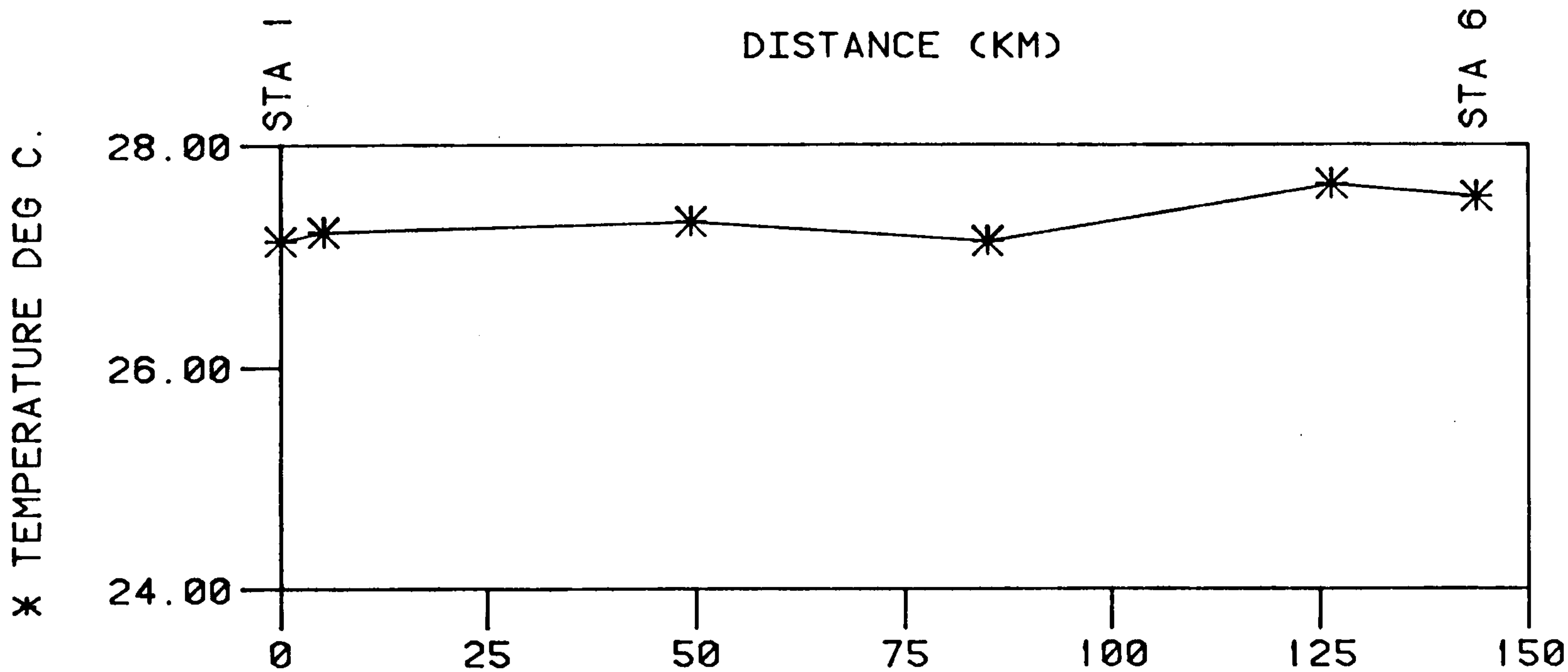
PARAMETERS AT SURFACE YUCA I CRUISE



PARAMETERS AT SURFACE YUCA I CRUISE



PARAMETERS AT SURFACE YUCA I CRUISE



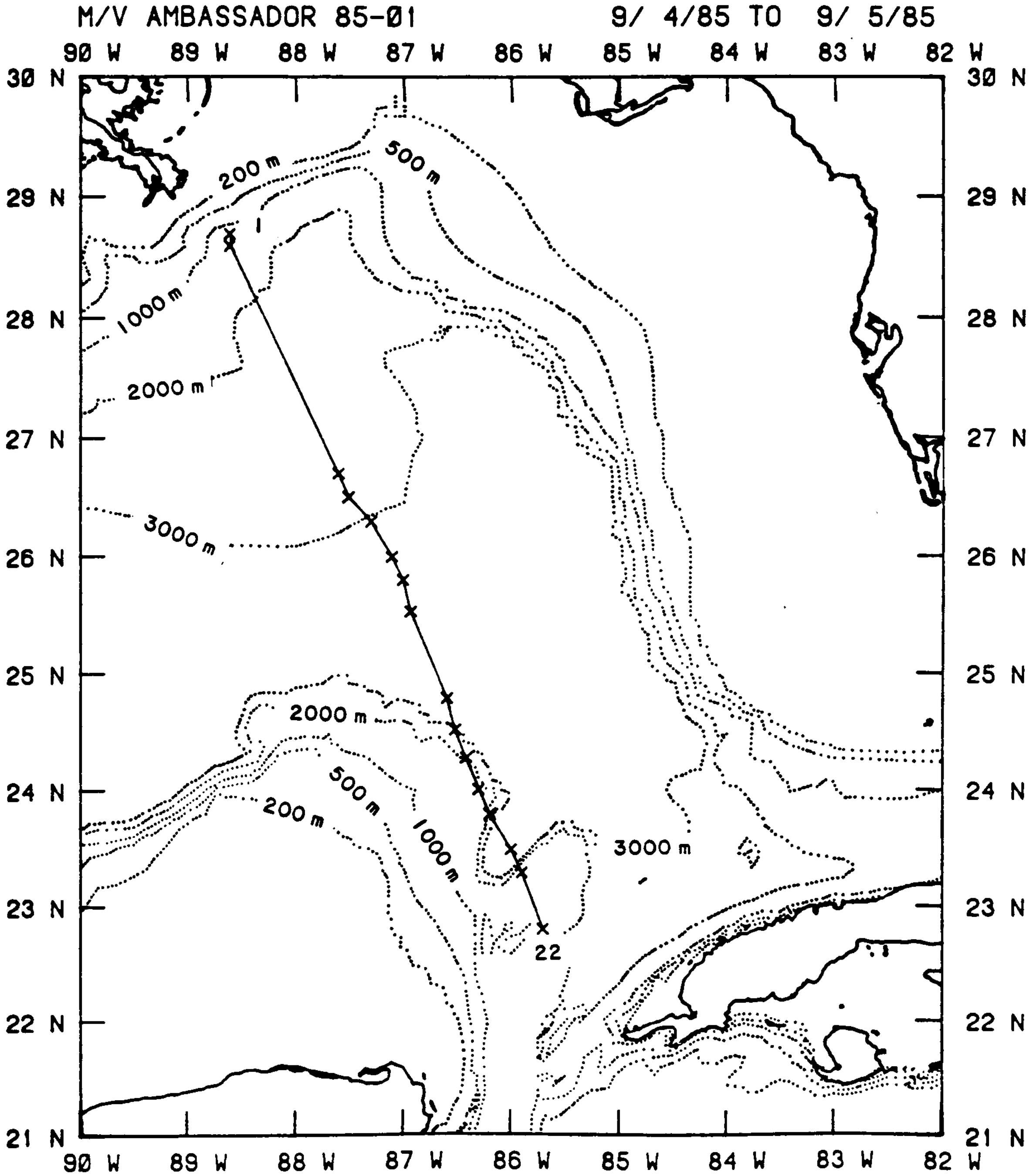
PARAMETERS AT SURFACE YUCA I CRUISE

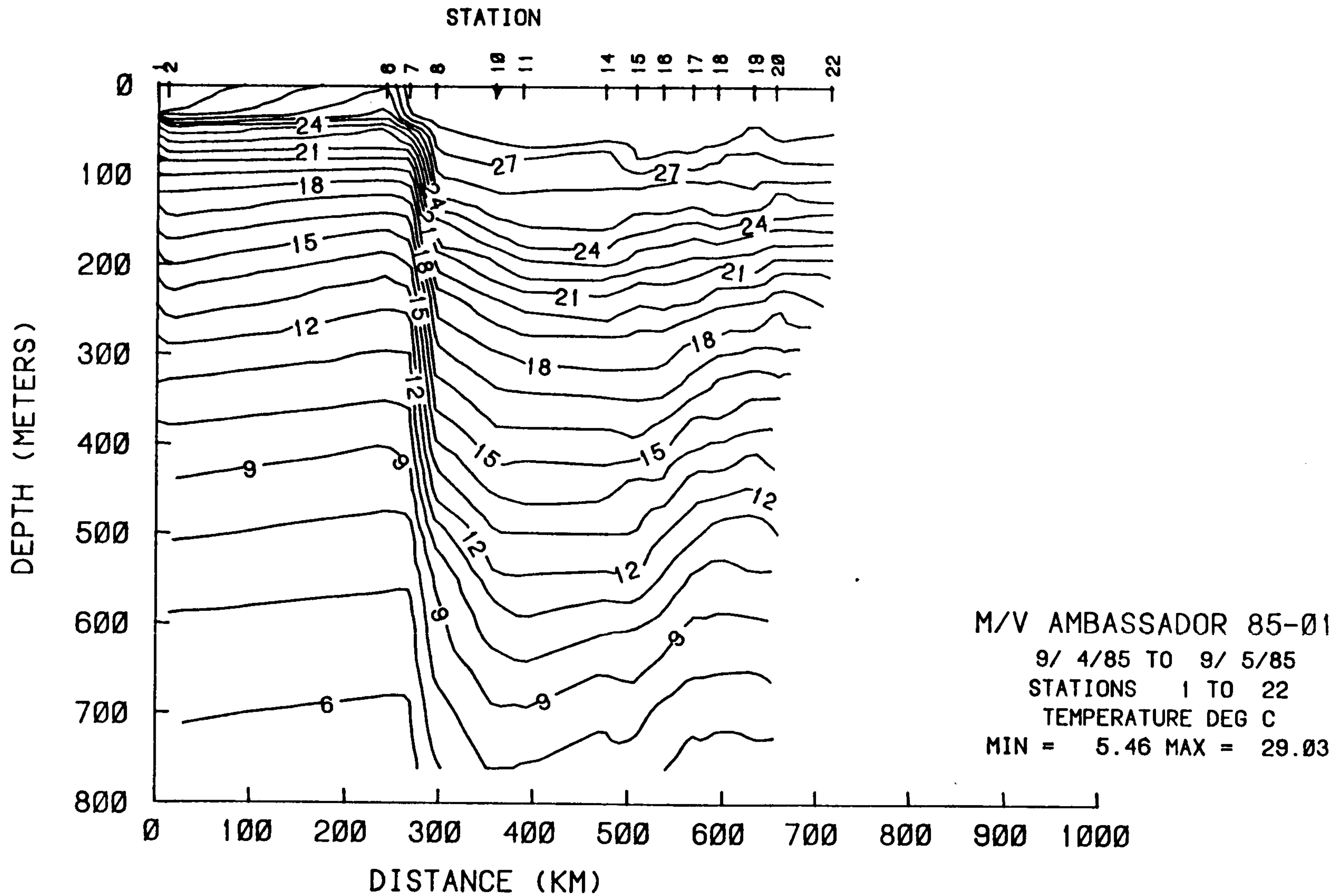
1985 SOOP DATA BY VESSEL

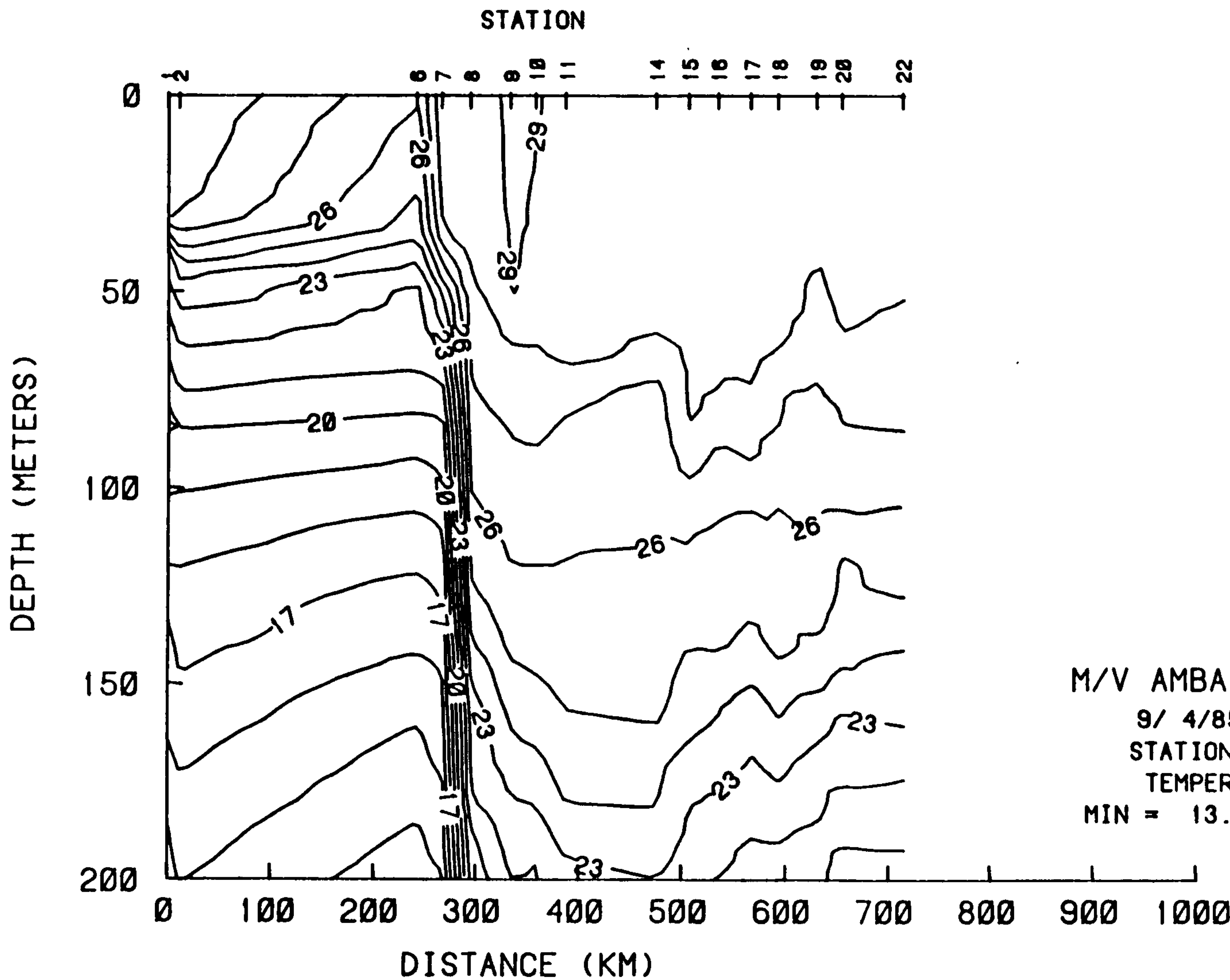
ID	Cruise	Dates
AM85-01	Ambassador Cruise 85-01	85-09-04 to 85-09-05
AM85-02	Ambassador Cruise 85-02	85-09-13 to 85-09-14
AM85-04	Ambassador Cruise 85-04	85-09-24 to 85-09-25
AM85-05	Ambassador Cruise 85-05	85-10-13 to 85-10-14
SH85-01	Stena Hispania Cruise 85-01	85-05-17 to 85-05-18
SH85-02	Stena Hispania Cruise 85-02	85-05-27 to 85-05-28
SH85-03	Stena Hispania Cruise 85-03	85-05-30 to 85-05-31
SH85-04	Stena Hispania Cruise 85-04	85-06-10 to 85-06-14
SH85-05	Stena Hispania Cruise 85-05	85-06-26 to 85-06-28
SH85-06	Stena Hispania Cruise 85-06	85-06-29 to 85-07-13
SH85-07	Stena Hispania Cruise 85-07	85-07-16 to 85-07-17
SH85-08	Stena Hispania Cruise 85-08	85-07-31 to 85-08-18
QU85-01	E.M. Queeny Cruise 85-01	85-01-18 to 85-01-19
QU85-04	E.M. Queeny Cruise 85-04	85-04-18 to 85-04-19
QU85-05	E.M. Queeny Cruise 85-05	85-05-07 to 85-05-08
QU85-06	E.M. Queeny Cruise 85-06	85-05-26 to 85-05-27
QU85-07	E.M. Queeny Cruise 85-07	85-06-07 to 85-06-08
QU85-08	E.M. Queeny Cruise 85-08	85-06-13 to 85-06-14
QU85-09	E.M. Queeny Cruise 85-09	85-07-01 to 85-07-02
QU85-10	E.M. Queeny Cruise 85-10	85-07-31 to 85-08-01
AL85-01	B/O Altair Cruise 85-01	85-06-11 to 85-06-15
NC85-01	M/V Nat Co 6 Cruise 85-01	85-07-16 to 85-07-19
N185-01	Nestor I Cruise 85-01	85-01-11 to 85-01-12
N185-02	Nestor I Cruise 85-02	85-01-25 to 85-01-25
N185-03	Nestor I Cruise 85-03	85-02-05 to 85-02-06
N185-04	Nestor I Cruise 85-04	85-02-21 to 85-02-22
N185-05	Nestor I Cruise 85-05	85-03-09 to 85-03-09
N185-06	Nestor I Cruise 85-06	85-03-12 to 85-03-26
N185-07	Nestor I Cruise 85-07	85-04-10 to 85-04-11
N185-08	Nestor I Cruise 85-08	85-04-14 to 85-04-26
N185-09	Nestor I Cruise 85-09	85-04-28 to 85-04-30
N185-10	Nestor I Cruise 85-10	85-05-10 to 85-05-11

1985 CHRONOLOGICAL SOOP DATA LISTING

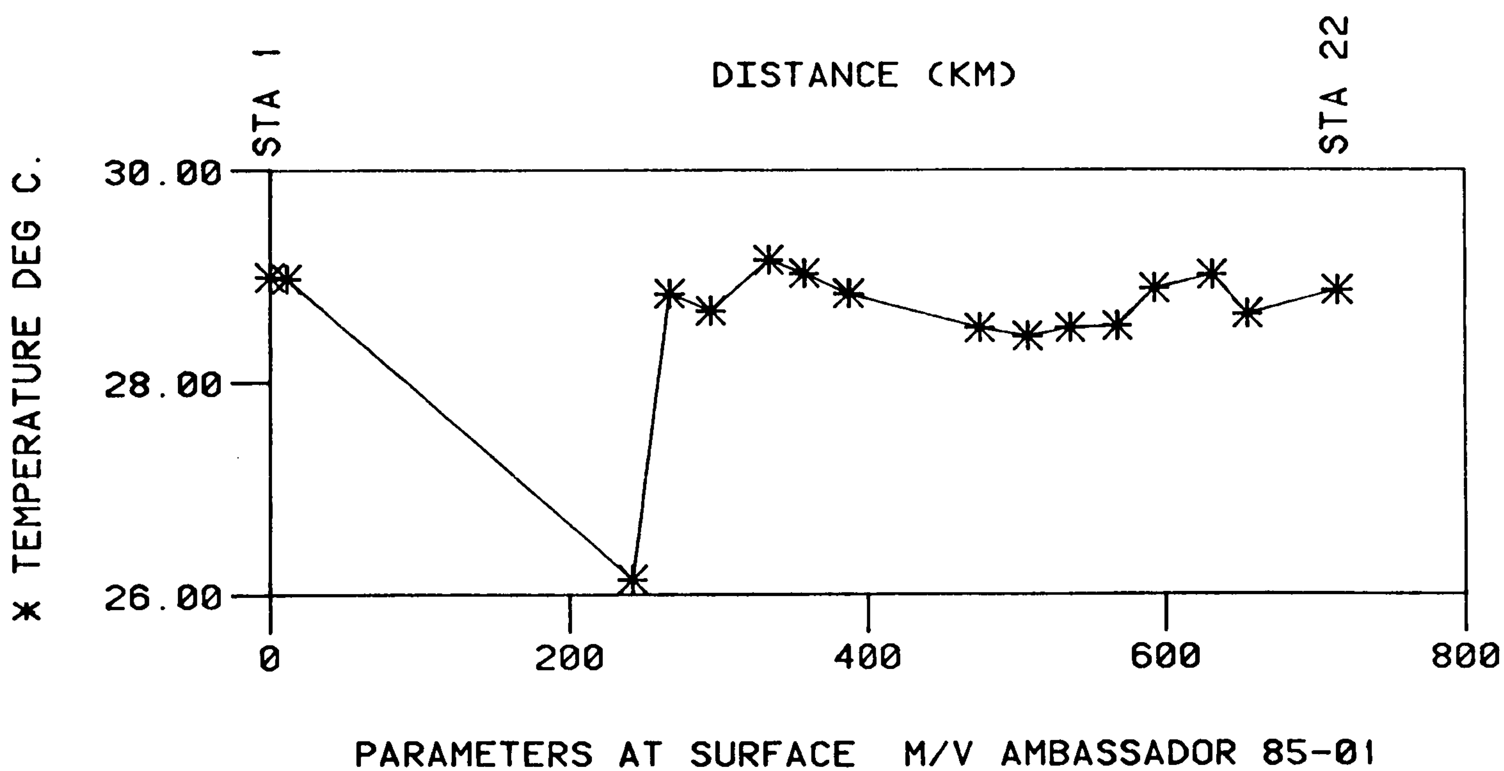
ID	Cruise	Dates
N185-01	Nestor I Cruise 85-01	85-01-11 to 85-01-12
QU85-01	E.M. Queeny Cruise 85-01	85-01-18 to 85-01-19
N185-02	Nestor I Cruise 85-02	85-01-25 to 85-01-25
N185-03	Nestor I Cruise 85-03	85-02-05 to 85-02-06
N185-04	Nestor I Cruise 85-04	85-02-21 to 85-02-22
N185-05	Nestor I Cruise 85-05	85-03-09 to 85-03-09
N185-06	Nestor I Cruise 85-06	85-03-12 to 85-03-26
N185-07	Nestor I Cruise 85-07	85-04-10 to 85-04-11
N185-08	Nestor I Cruise 85-08	85-04-14 to 85-04-26
QU85-04	E.M. Queeny Cruise 85-04	85-04-18 to 85-04-19
N185-09	Nestor I Cruise 85-09	85-04-28 to 85-04-30
QU85-05	E.M. Queeny Cruise 85-05	85-05-07 to 85-05-08
N185-10	Nestor I Cruise 85-10	85-05-10 to 85-05-11
SH85-01	Stena Hispania Cruise 85-01	85-05-17 to 85-05-18
QU85-06	E.M. Queeny Cruise 85-06	85-05-26 to 85-05-27
SH85-02	Stena Hispania Cruise 85-02	85-05-27 to 85-05-28
SH85-03	Stena Hispania Cruise 85-03	85-05-30 to 85-05-31
QU85-07	E.M. Queeny Cruise 85-07	85-06-07 to 85-06-08
SH85-04	Stena Hispania Cruise 85-04	85-06-10 to 85-06-14
AL85-01	B/O Altair Cruise 85-01	85-06-11 to 85-06-15
QU85-08	E.M. Queeny Cruise 85-08	85-06-13 to 85-06-14
SH85-05	Stena Hispania Cruise 85-05	85-06-26 to 85-06-28
SH85-06	Stena Hispania Cruise 85-06	85-06-29 to 85-07-13
QU85-09	E.M. Queeny Cruise 85-09	85-07-01 to 85-07-02
NC85-01	M/V Nat Co 6 Cruise 85-01	85-07-16 to 85-07-19
SH85-07	Stena Hispania Cruise 85-07	85-07-16 to 85-07-17
SH85-08	Stena Hispania Cruise 85-08	85-07-31 to 85-08-18
QU85-10	E.M. Queeny Cruise 85-10	85-07-31 to 85-08-01
AM85-01	Ambassador Cruise 85-01	85-09-04 to 85-09-05
AM85-02	Ambassador Cruise 85-02	85-09-13 to 85-09-14
AM85-04	Ambassador Cruise 85-04	85-09-24 to 85-09-25
AM85-05	Ambassador Cruise 85-05	85-10-13 to 85-10-14

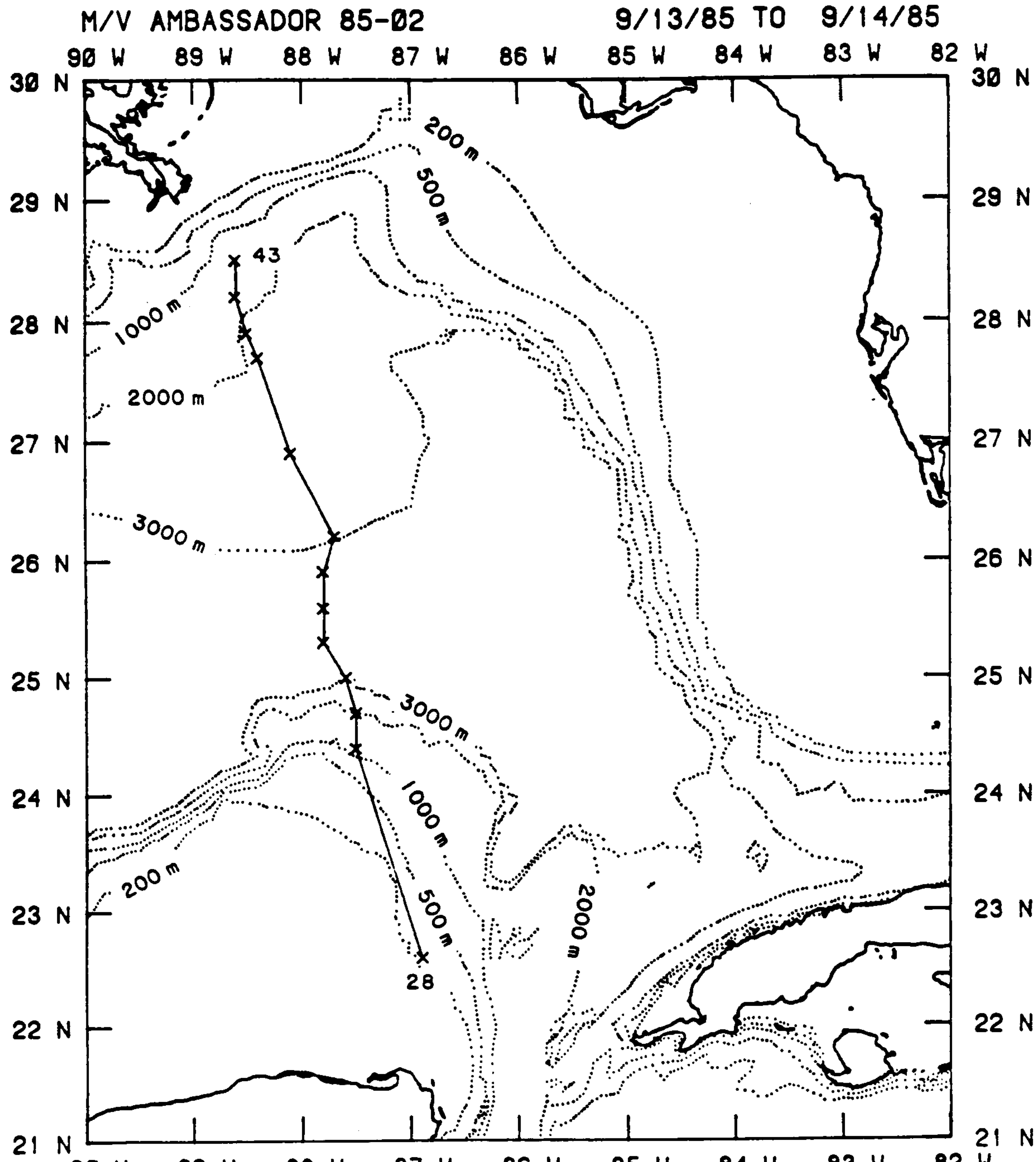

M/V AMBASSADOR 85-Ø1
9/ 4/85 TO 9/ 5/85
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
22


STATION
1 2 6 7 8 10 11 14 15 16 17 18 19 20 22
DEPTH (METERS)
DISTANCE (KM)
0 100 200 300 400 500 600 700 800
0 100 200 300 400 500 600 700 800 900 1000
27 24 21 18 15 12 9 6
M/V AMBASSADOR 85-01
9/ 4/85 TO 9/ 5/85
STATIONS 1 TO 22
TEMPERATURE DEG C
MIN = 5.46 MAX = 29.03

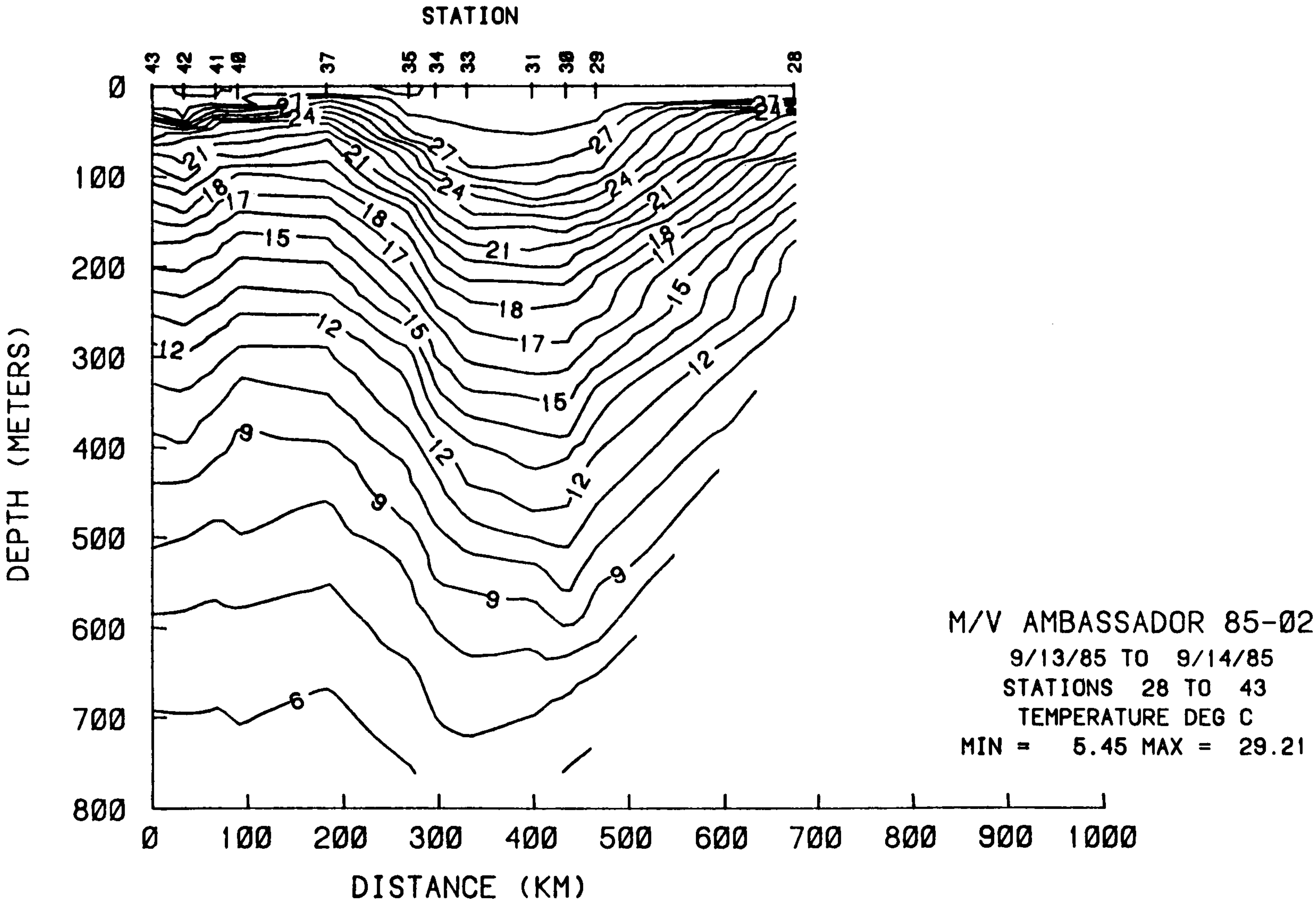


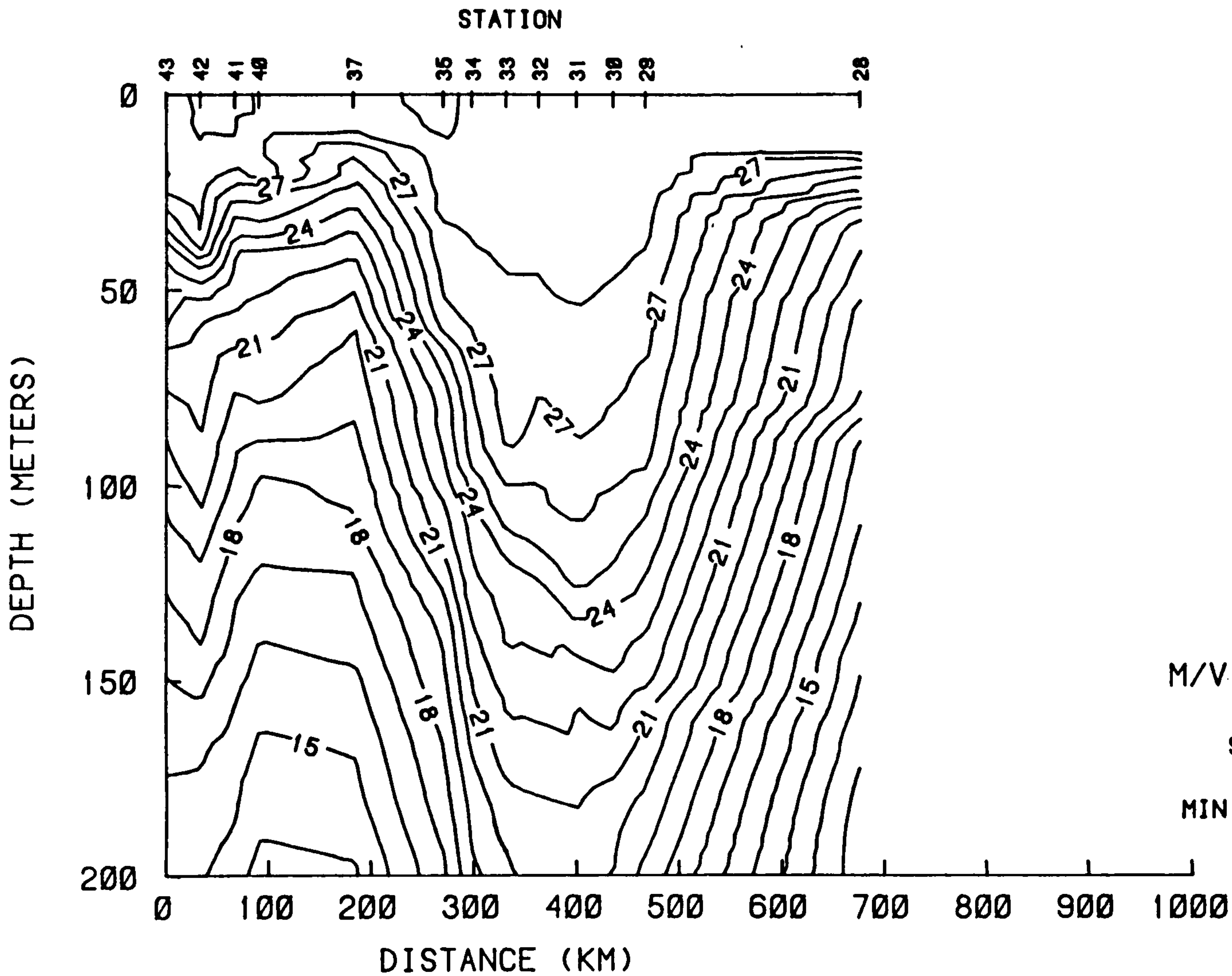
M/V AMBASSADOR 85-01
9/ 4/85 TO 9/ 5/85
STATIONS 1 TO 22
TEMPERATURE DEG C
MIN = 13.42 MAX = 29.15


DISTANCE (KM)
STA 1
STA 22
* TEMPERATURE DEG C.
30.00
28.00
26.00
0
200
400
600
800
PARAMETERS AT SURFACE M/V AMBASSADOR 85-01

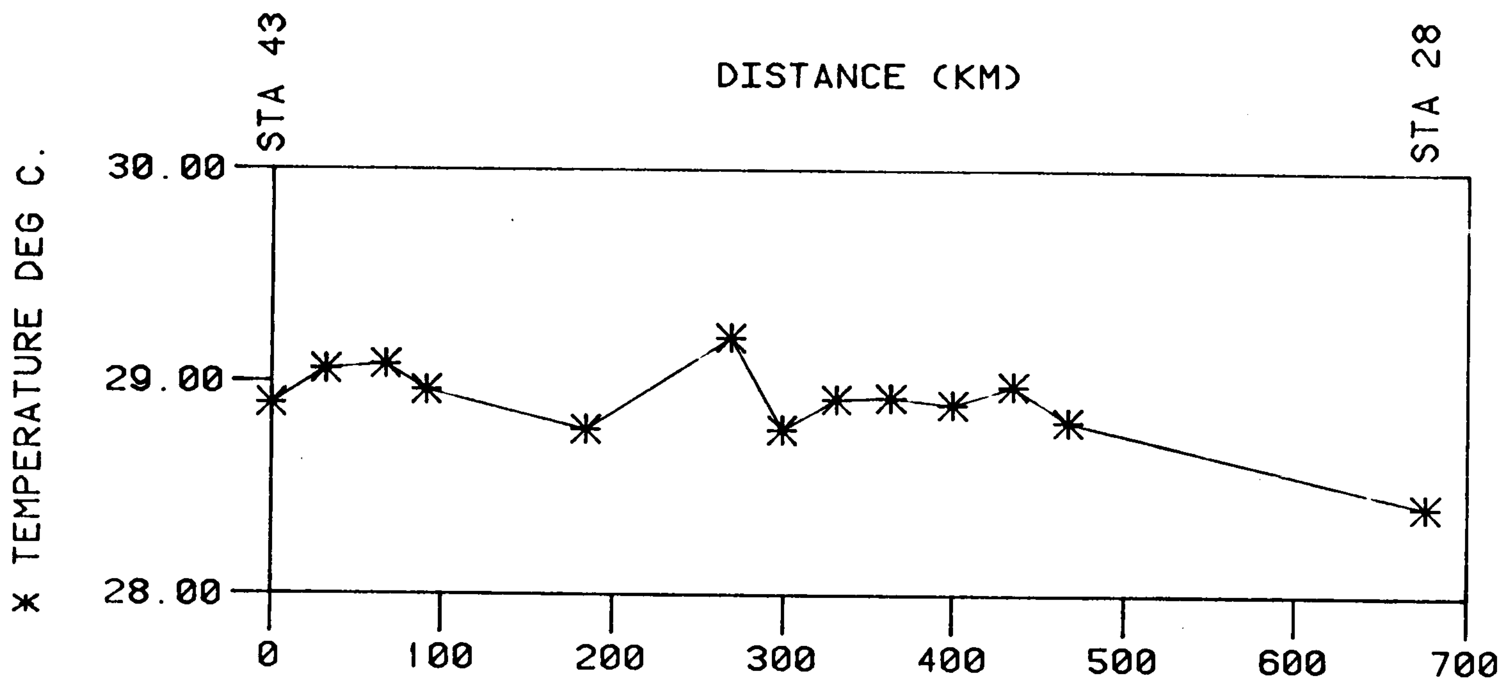


M/V AMBASSADOR 85-02
9/13/85 TO 9/14/85
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
43
28


STATION
43 42 41 40 37 35 34 33 31 30 29 28
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
27
24
21
18
17
15
12
9
6
M/V AMBASSADOR 85-02
9/13/85 TO 9/14/85
STATIONS 28 TO 43
TEMPERATURE DEG C
MIN = 5.45 MAX = 29.21

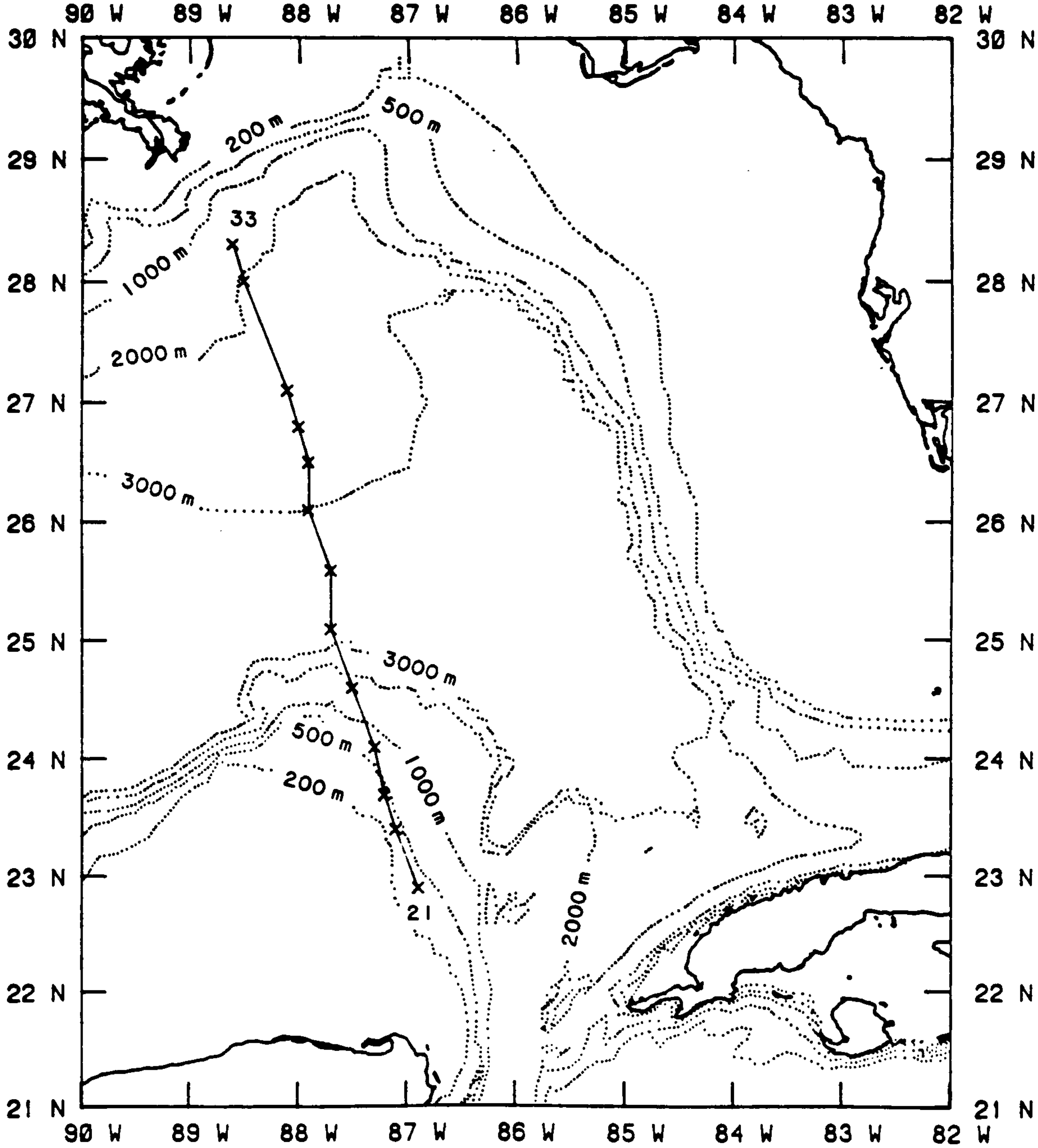


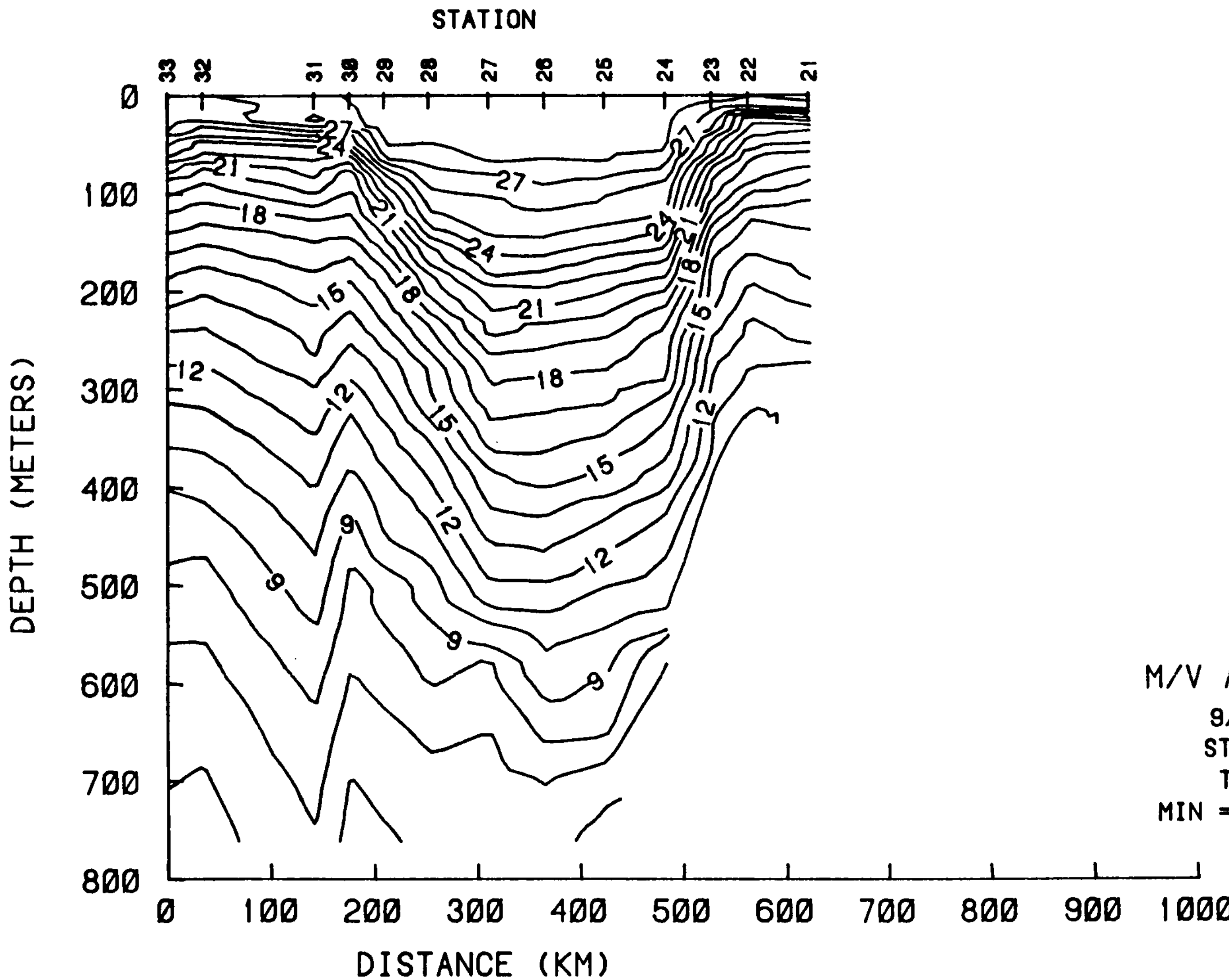
M/V AMBASSADOR 85-02
9/13/85 TO 9/14/85
STATIONS 28 TO 43
TEMPERATURE DEG C
MIN = 11.41 MAX = 29.21



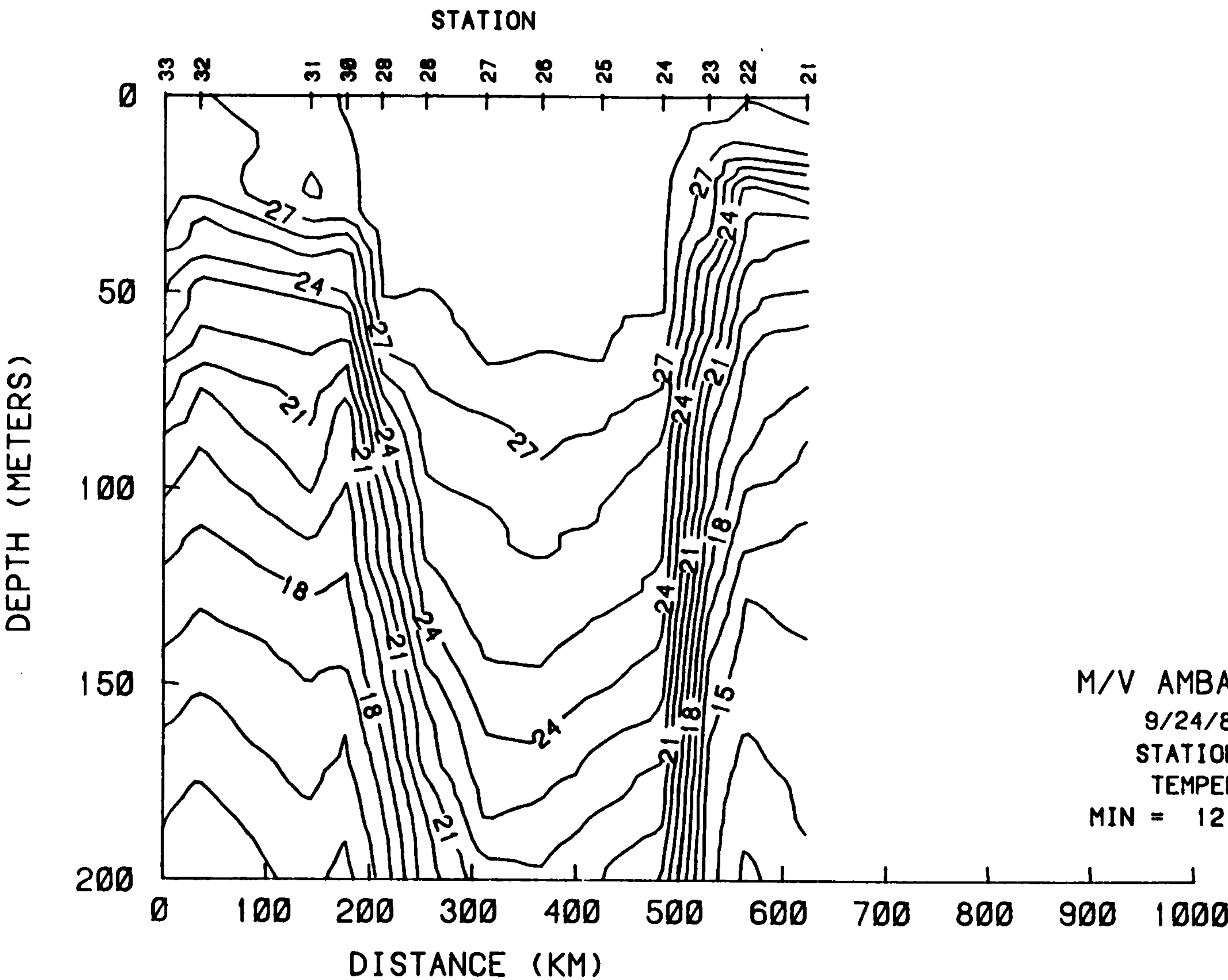
PARAMETERS AT SURFACE M/V AMBASSADOR 85-02

M/V AMBASSADOR 85-Ø4 9/24/85 TO 9/25/85

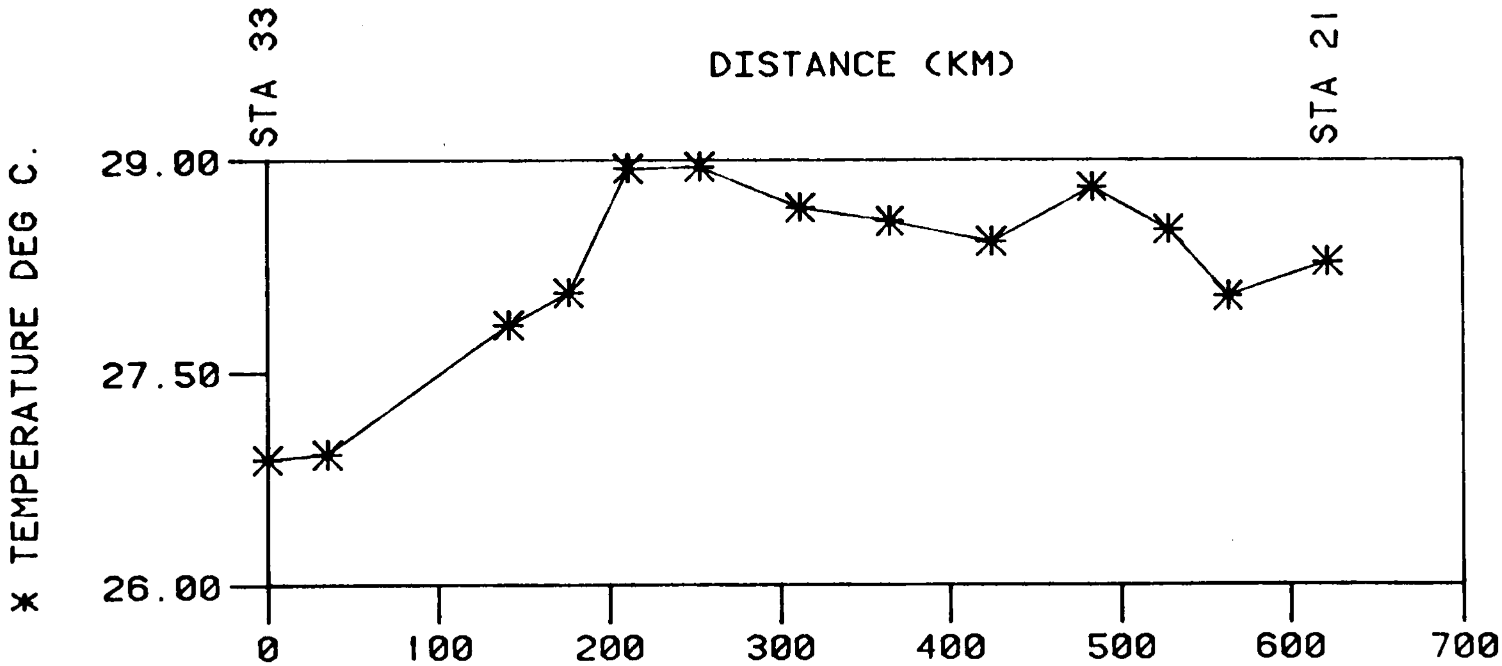




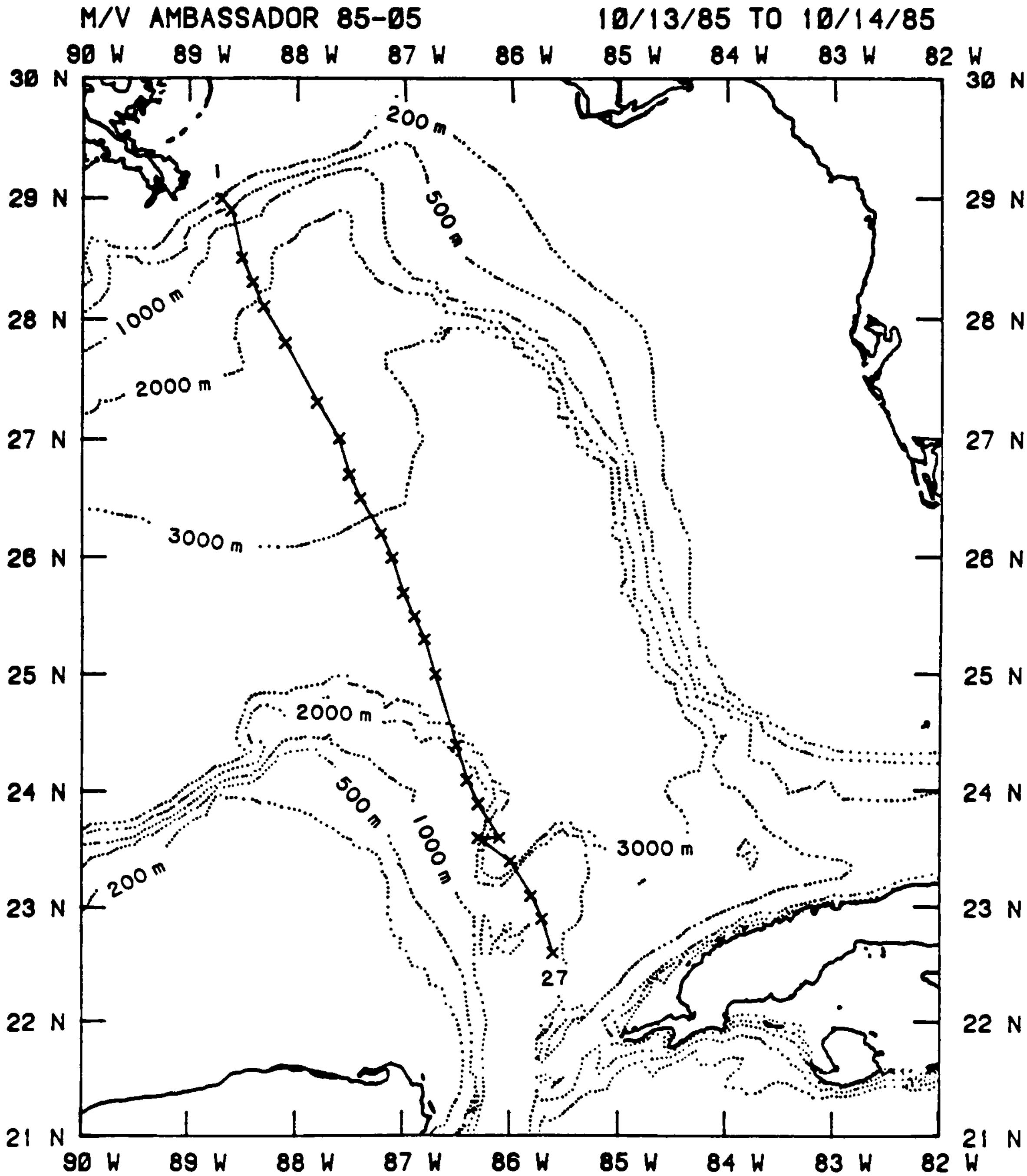
M/V AMBASSADOR 85-04
9/24/85 TO 9/25/85
STATIONS 21 TO 33
TEMPERATURE DEG C
MIN = 5.59 MAX = 28.96



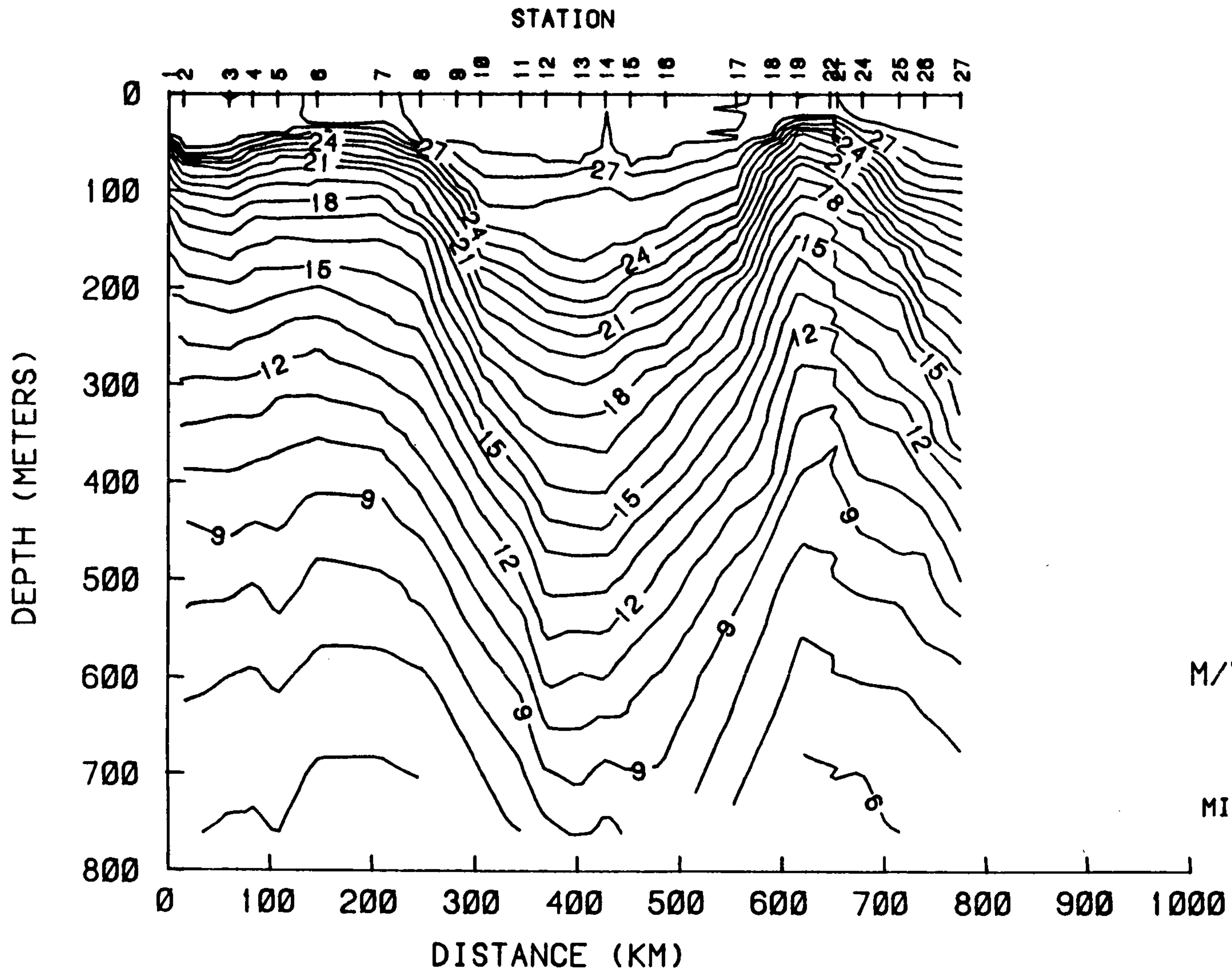
M/V AMBASSADOR 85-04
9/24/85 TO 9/25/85
STATIONS 21 TO 33
TEMPERATURE DEG C
MIN = 12.80 MAX = 28.96



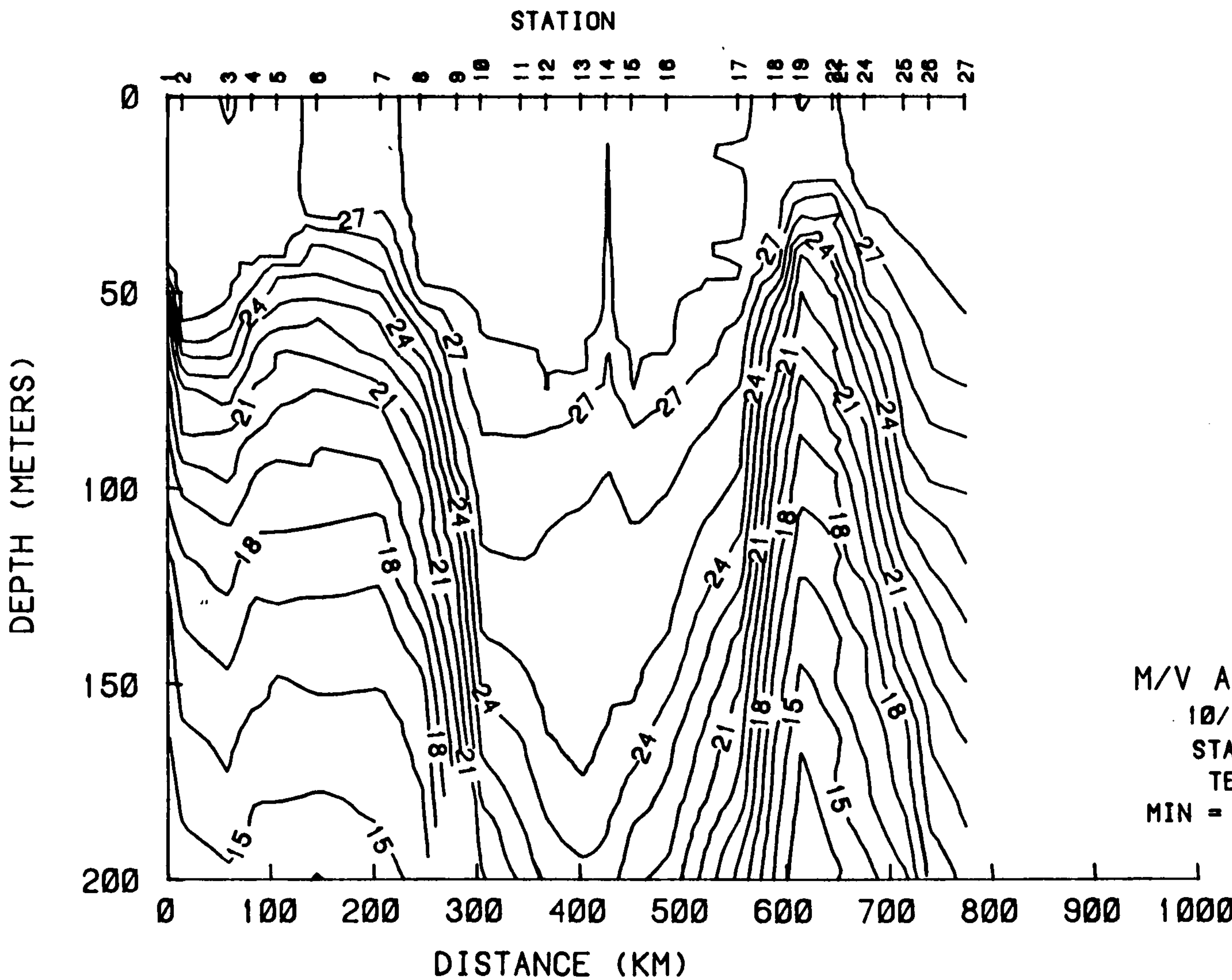
PARAMETERS AT SURFACE M/V AMBASSADOR 85-04



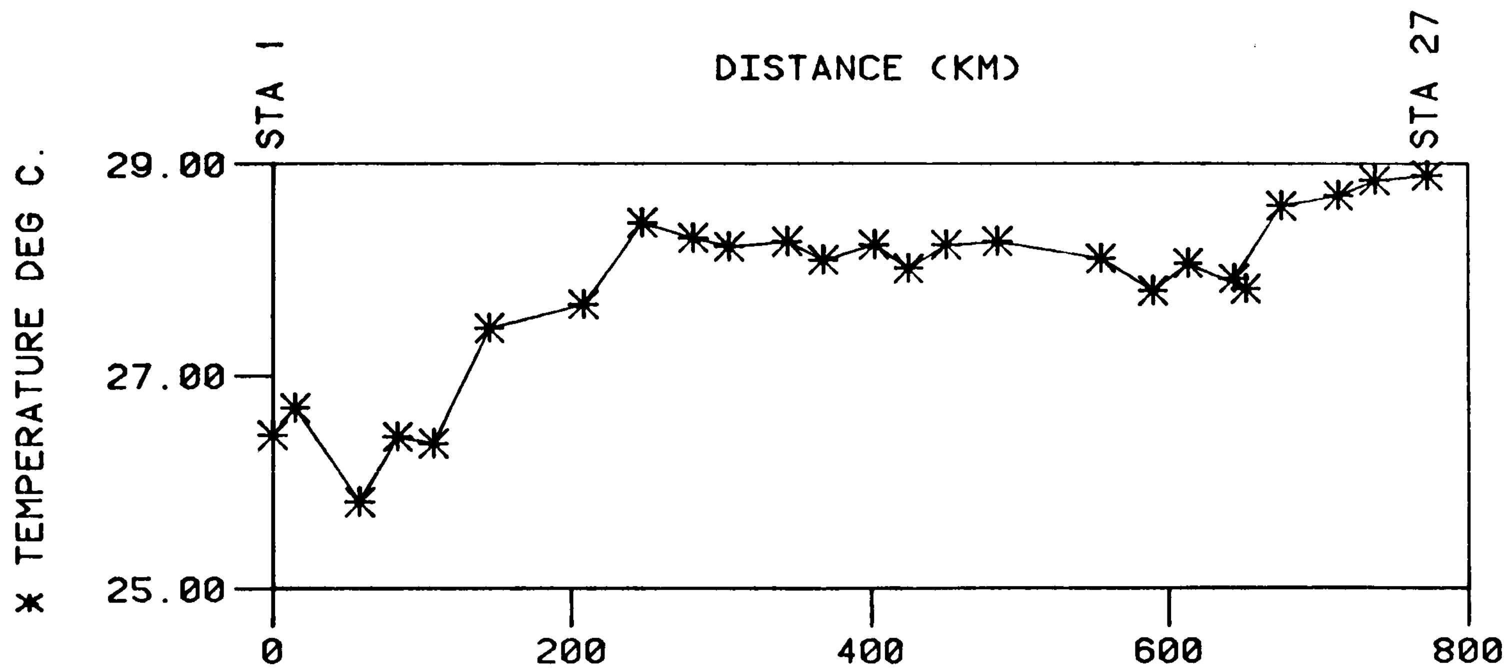
M/V AMBASSADOR 85-Ø5
1Ø/13/85 TO 1Ø/14/85
9Ø W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
3Ø N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
27



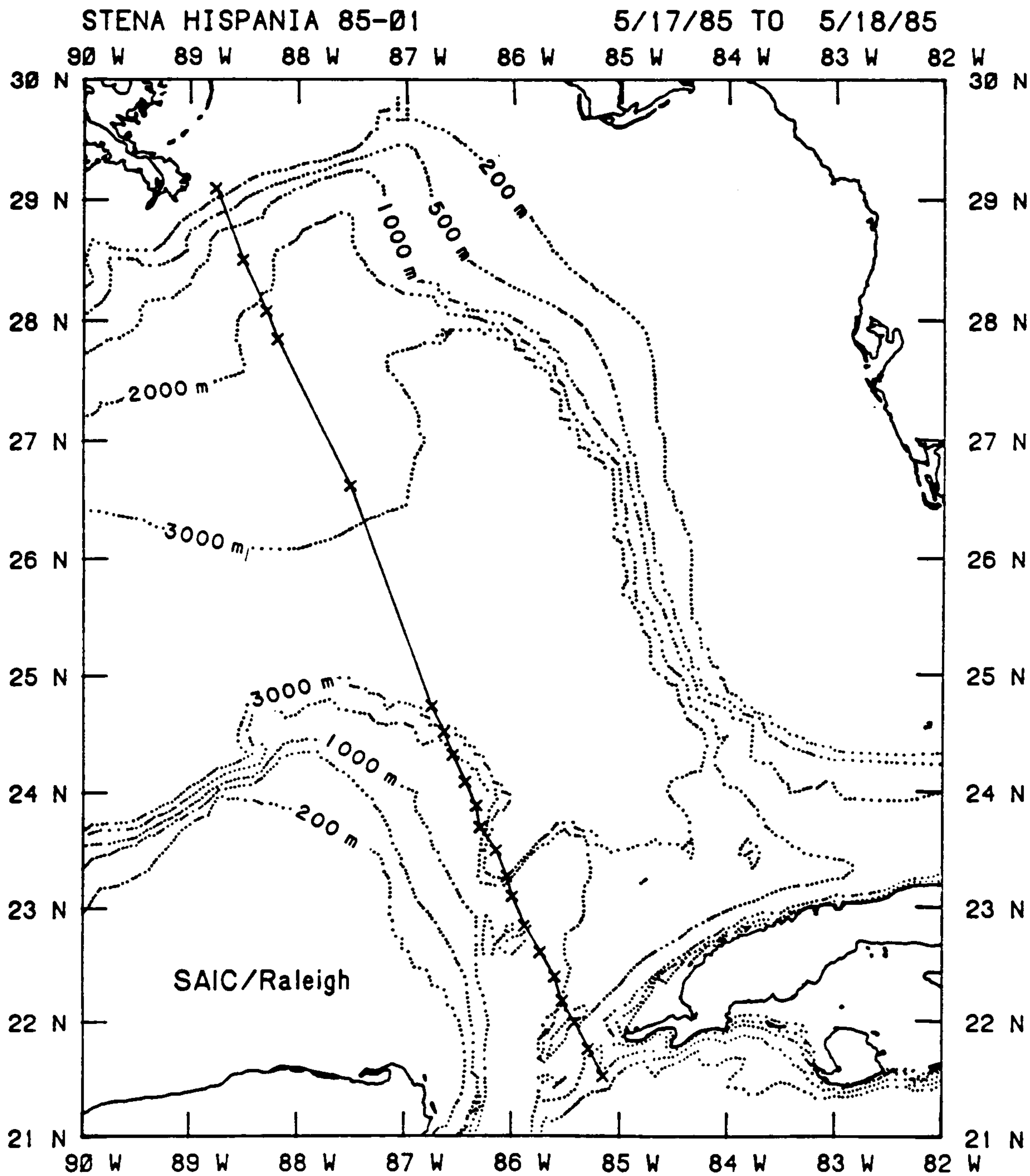
M/V AMBASSADOR 85-05
10/13/85 TO 10/14/85
STATIONS 1 TO 27
TEMPERATURE DEG C
MIN = 5.46 MAX = 28.89

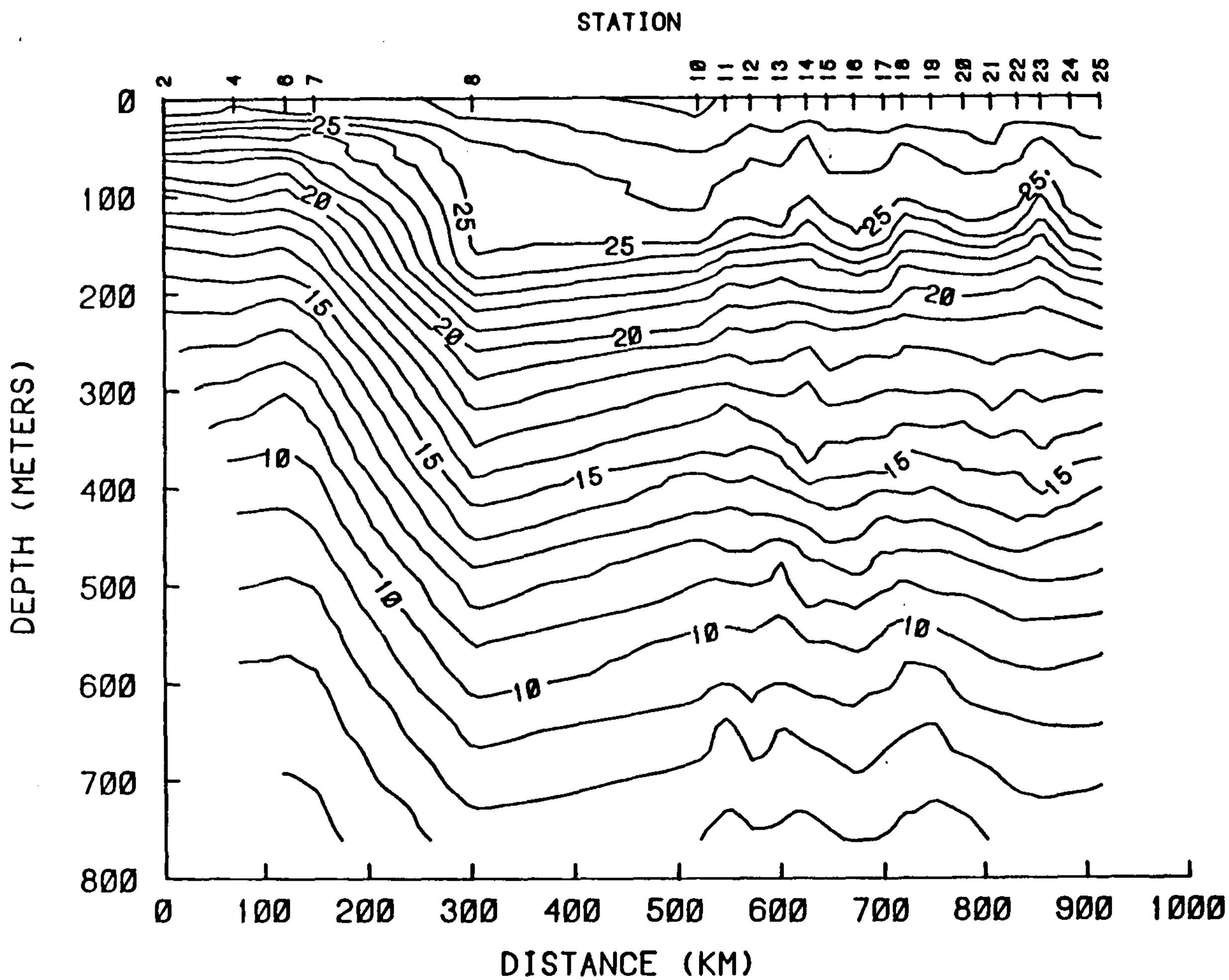


M/V AMBASSADOR 85-05
10/13/85 TO 10/14/85
STATIONS 1 TO 27
TEMPERATURE DEG C
MIN = 13.09 MAX = 28.89

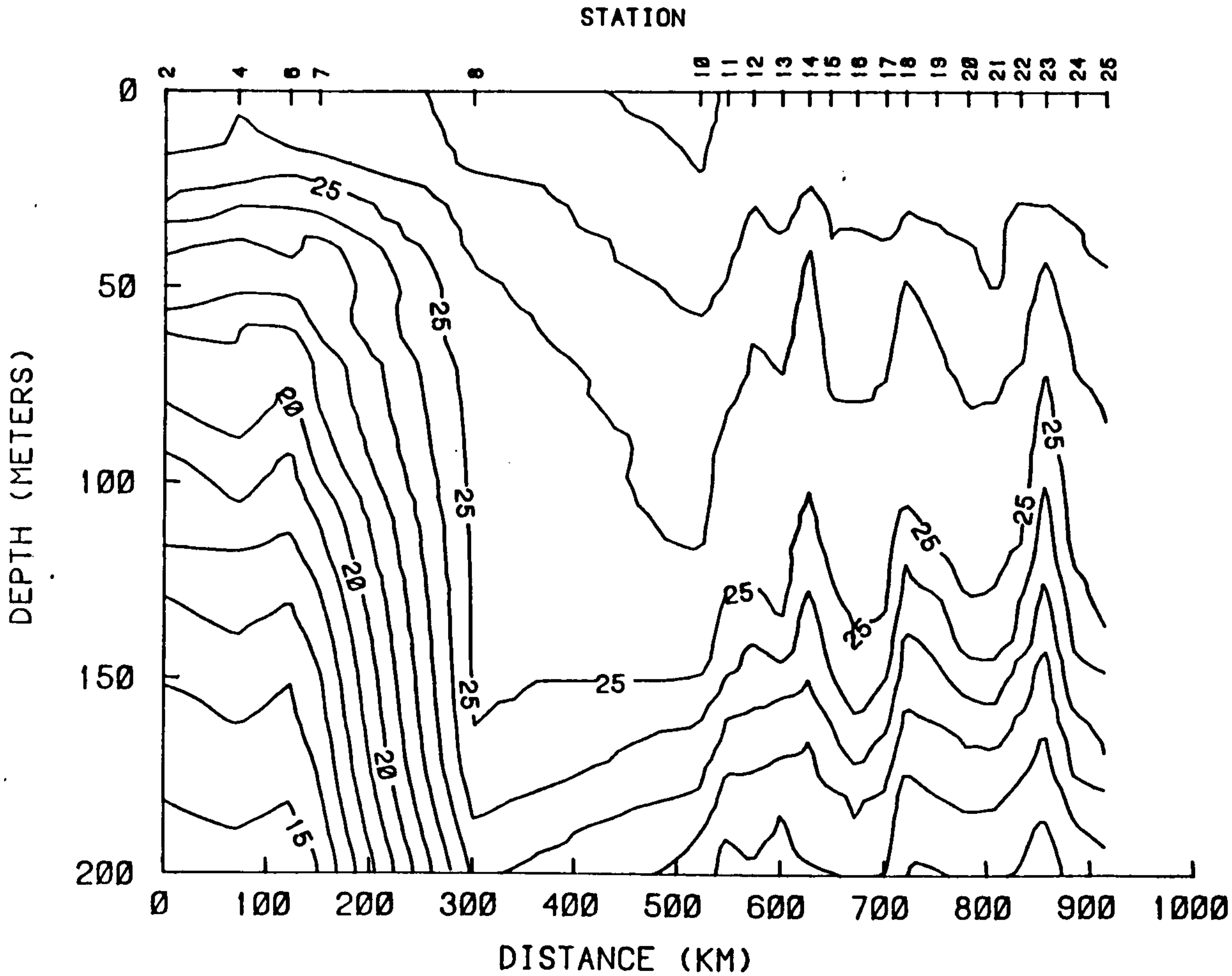


PARAMETERS AT SURFACE M/V AMBASSADOR 85-05

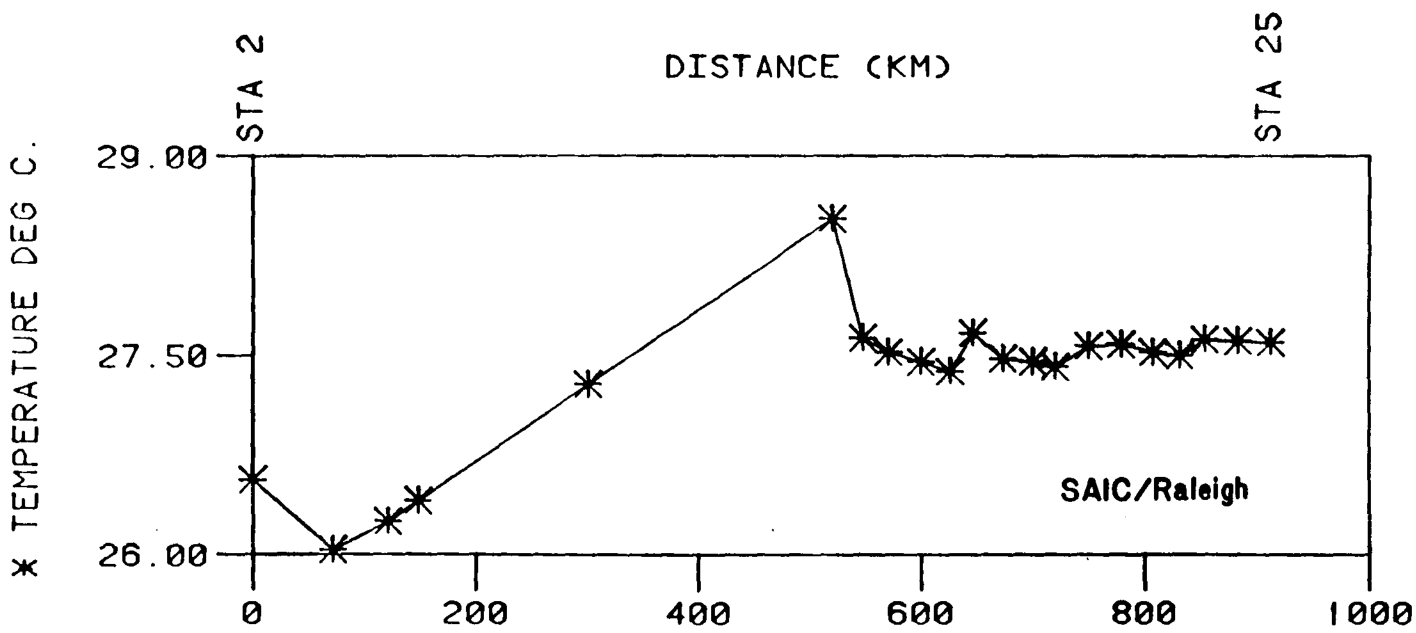

STENA HISPANIA 85-01
5/17/85 TO 5/18/85
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
1000 m
200 m
SAIC/Raleigh



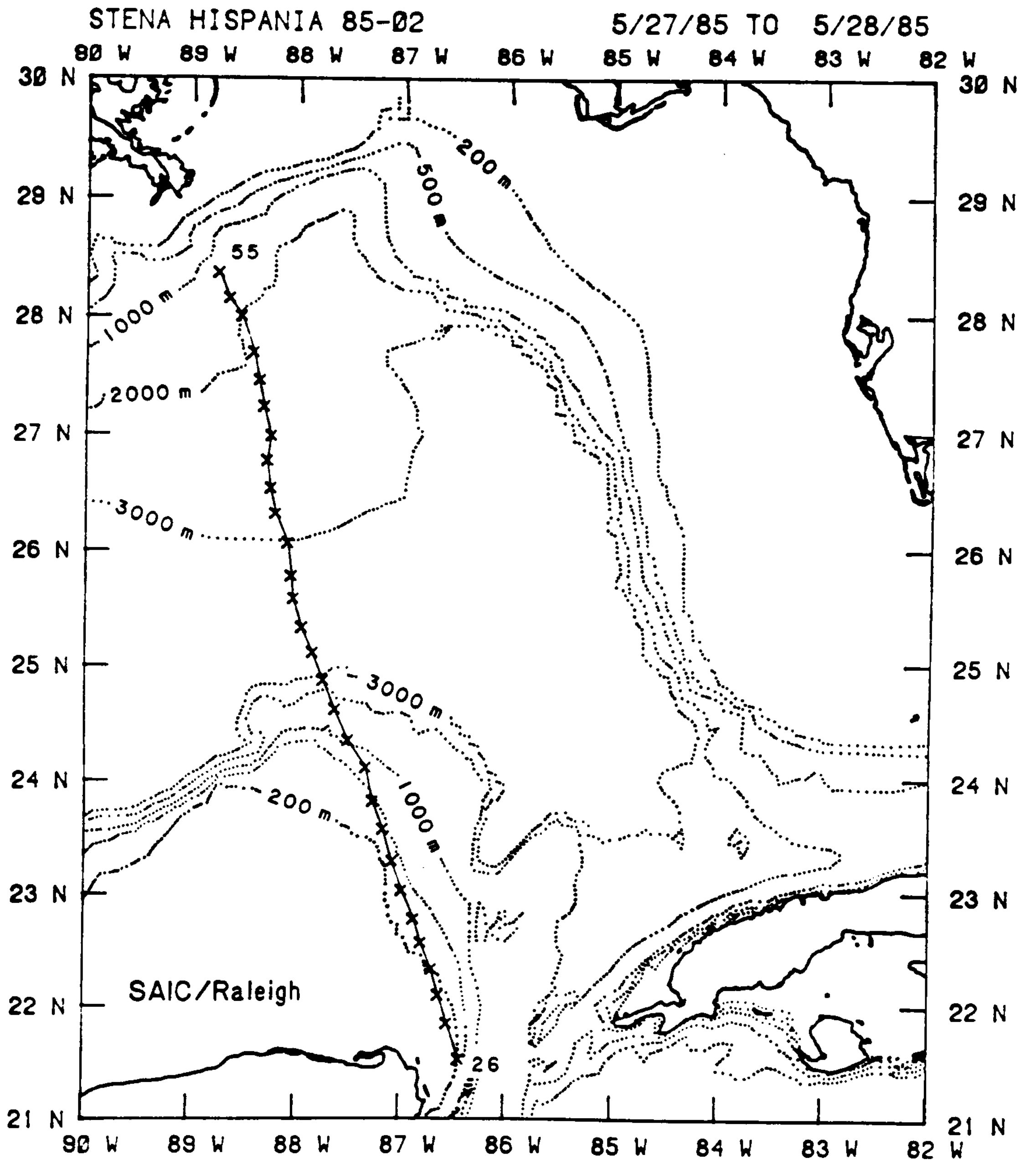
STENA HISPANIA 85-01
5/17/85 TO 5/18/85
STATIONS 2 TO 25
TEMPERATURE DEG C
MIN = 5.62 MAX = 28.54
SAIC/Raleigh



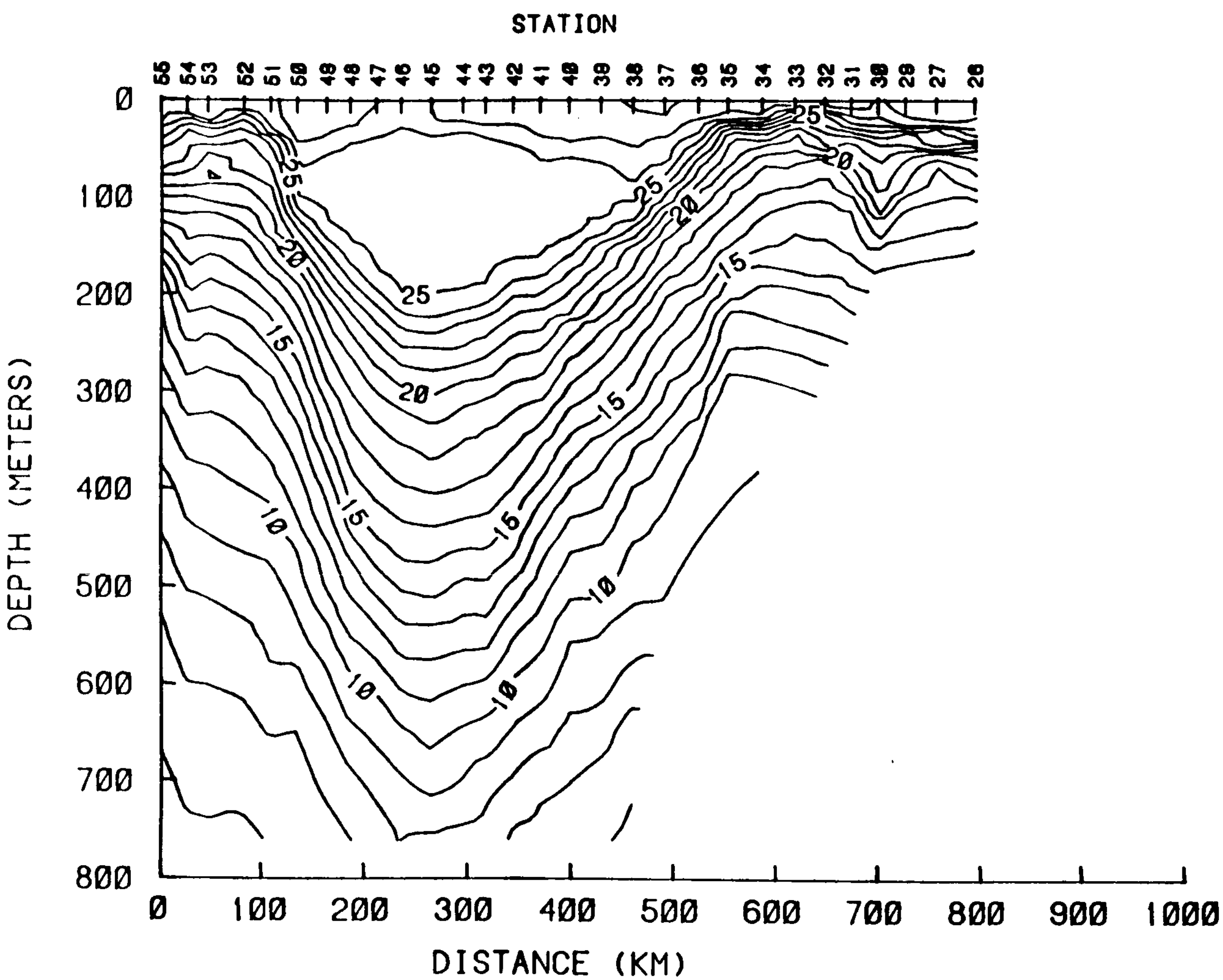
STENA HISPANIA 85-Ø1
5/17/85 TO 5/18/85
STATIONS 2 TO 25
TEMPERATURE DEG C
MIN = 14.22 MAX = 28.54
SAIC/Raleigh



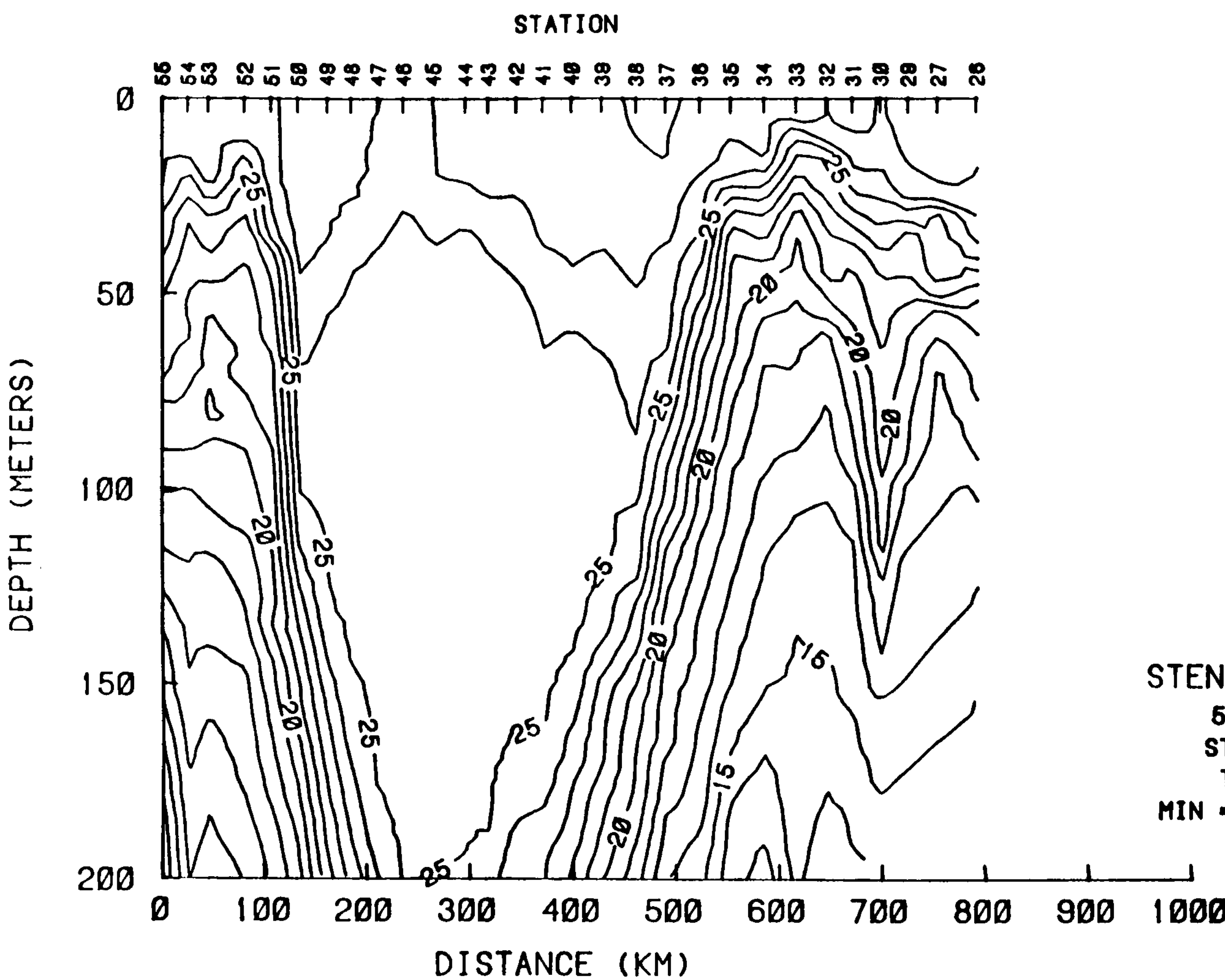
PARAMETERS AT SURFACE STENA HISPANIA 85-01



STENA HISPANIA 85-Ø2
5/27/85 TO 5/28/85
9Ø W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
3Ø N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
1000 m
200 m
55
26
SAIC/Raleigh

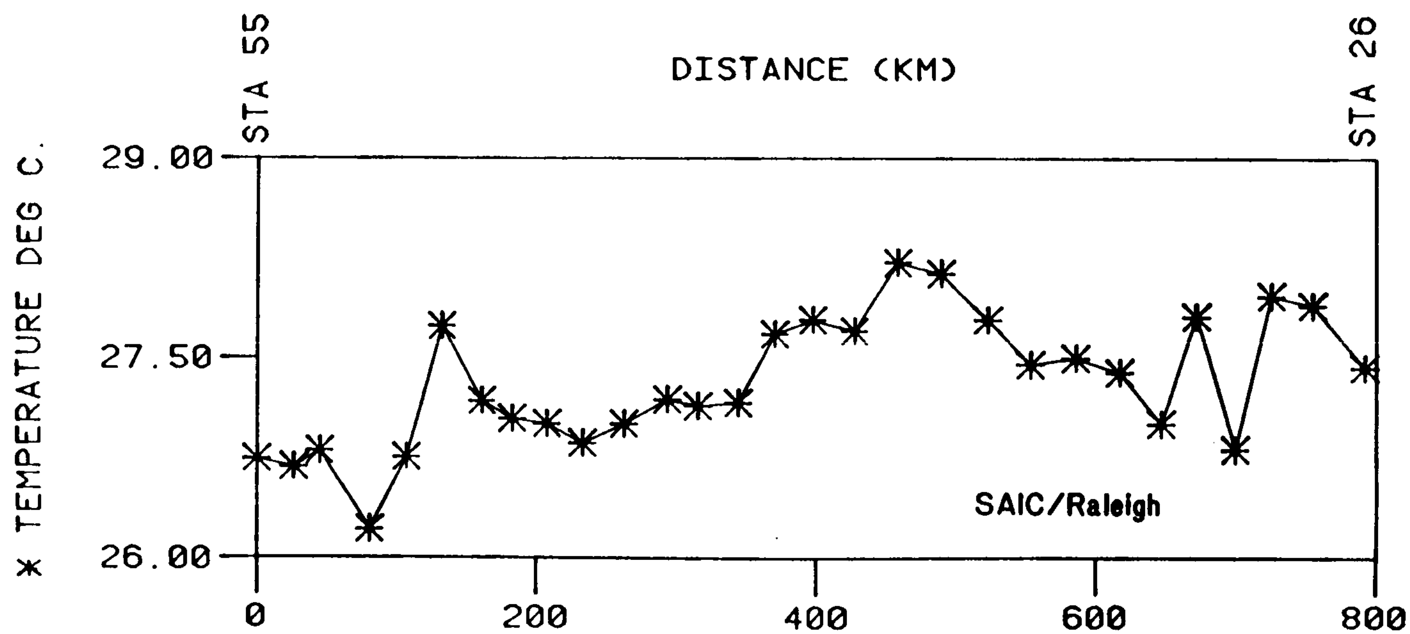


STENA HISPANIA 85-02
5/27/84 TO 5/28/85
STATIONS 26 TO 55
TEMPERATURE DEG C
MIN = 5.59 MAX = 28.22
SAIC/Raleigh

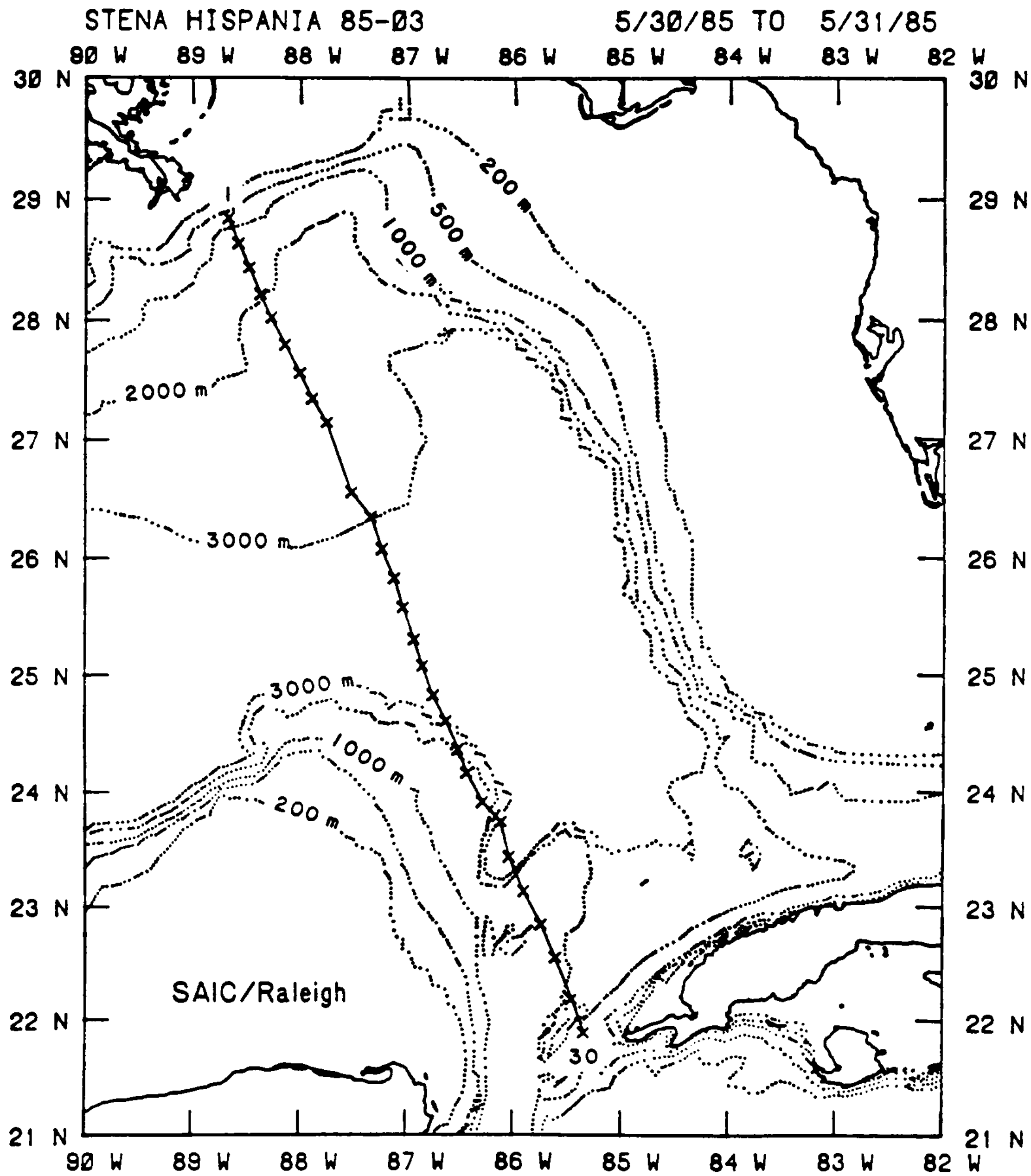


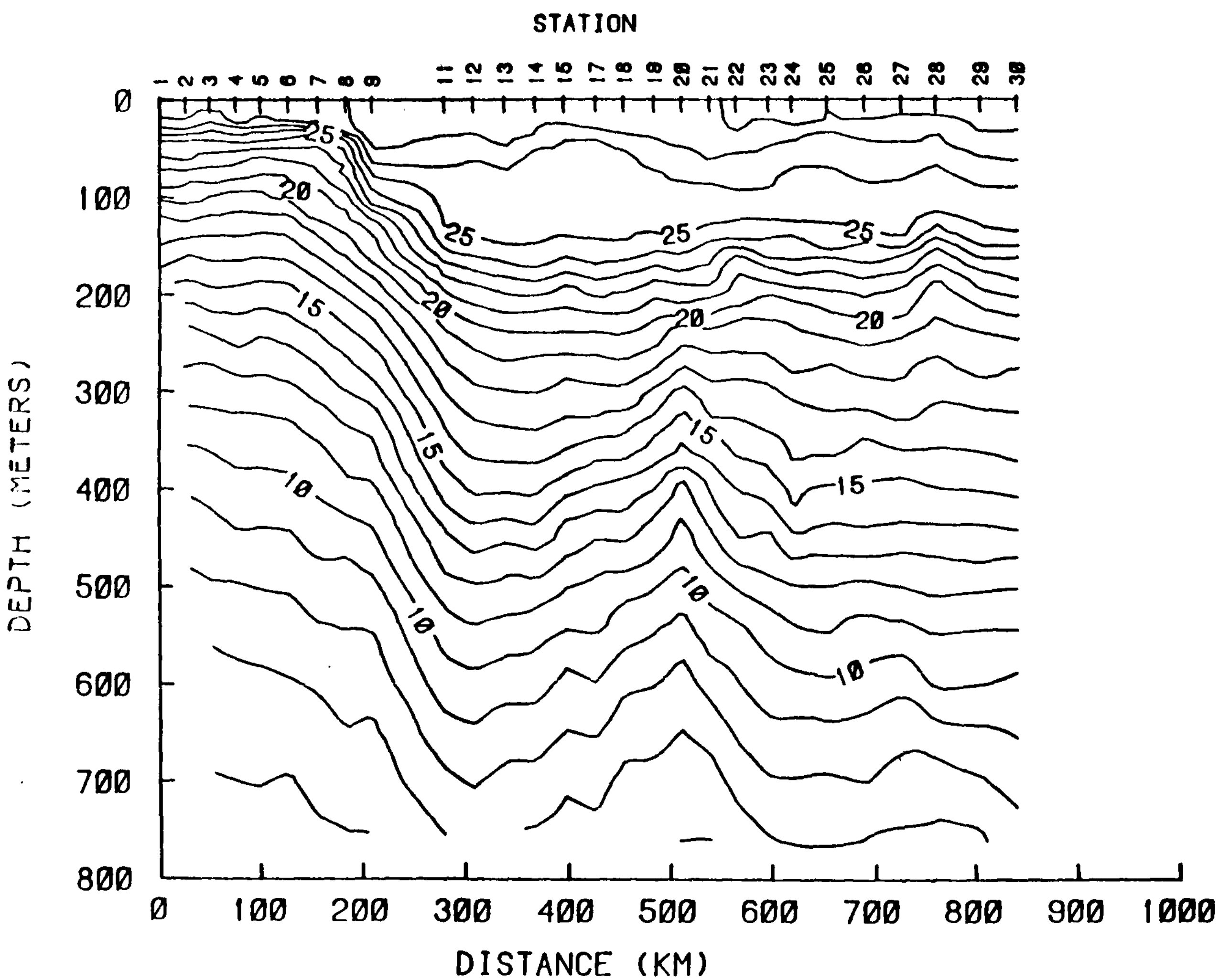
STENA HISPANIA 85-02
5/27/84 TO 5/28/85
STATIONS 26 TO 55
TEMPERATURE DEG C
MIN = 12.25 MAX = 28.22

SAIC/Raleigh

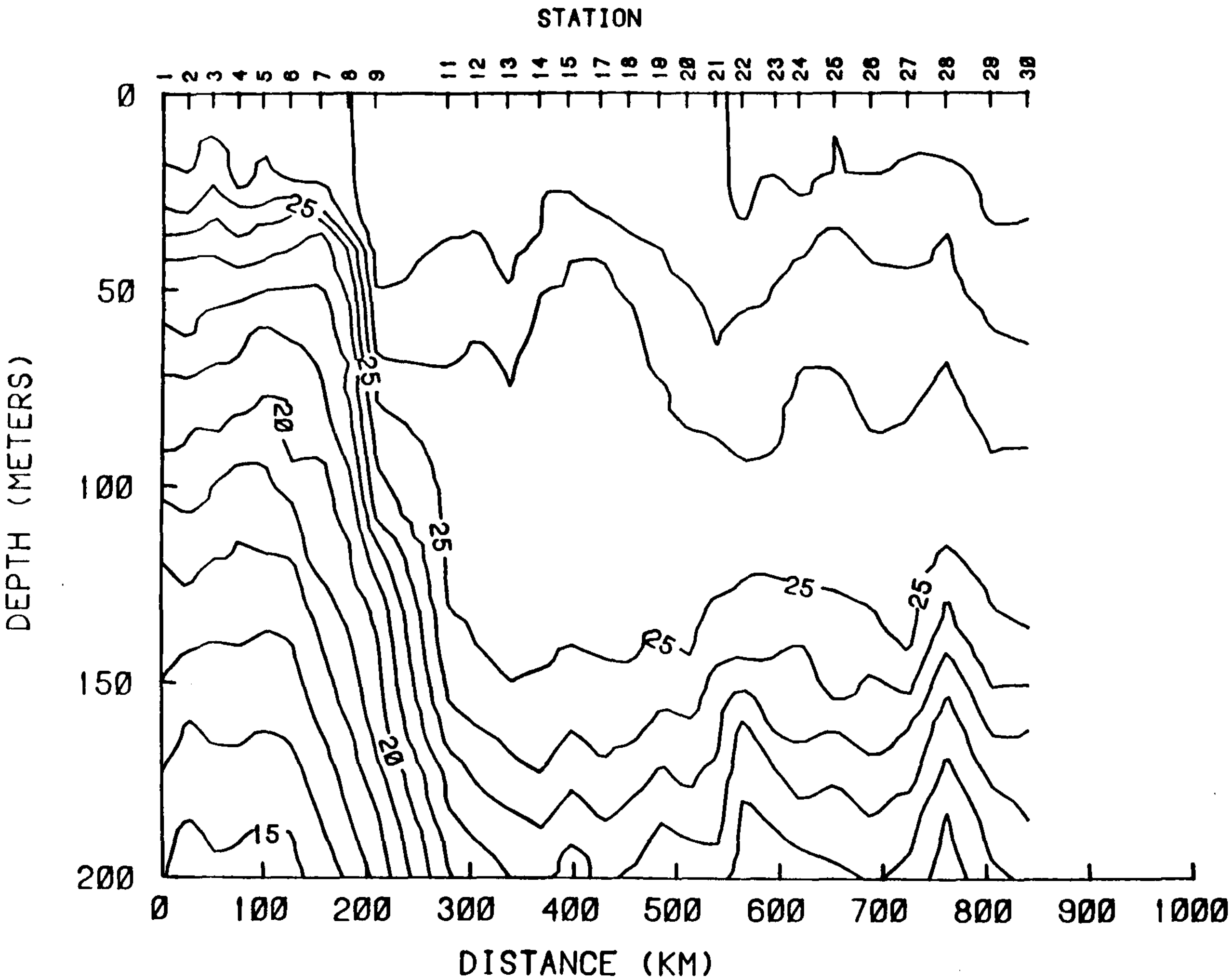


PARAMETERS AT SURFACE STENA HISPANIA 85-02

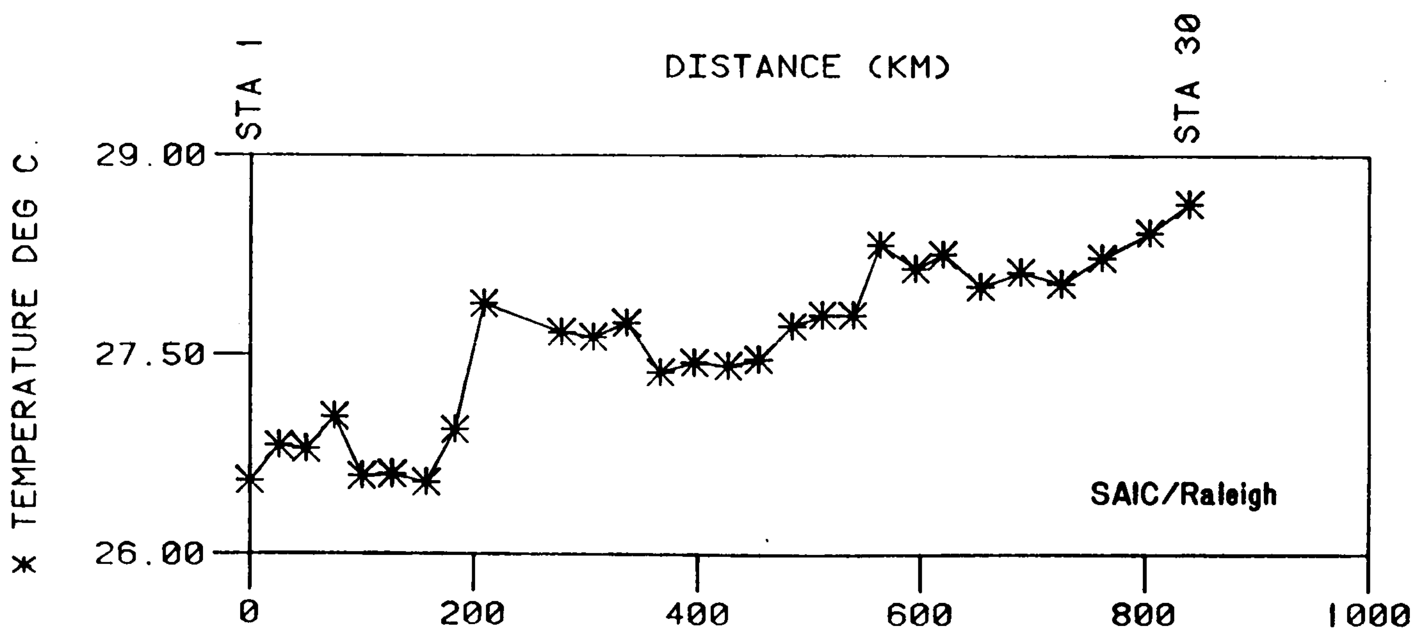

STENA HISPANIA 85-03
5/30/85 TO 5/31/85
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
1000 m
200 m
30
SAIC/Raleigh



STENA HISPANIA 85-03
5/30/85 TO 5/31/85
STATIONS 1 TO 30
TEMPERATURE DEG C
MIN = 5.63 MAX = 28.64
SAIC/Raleigh

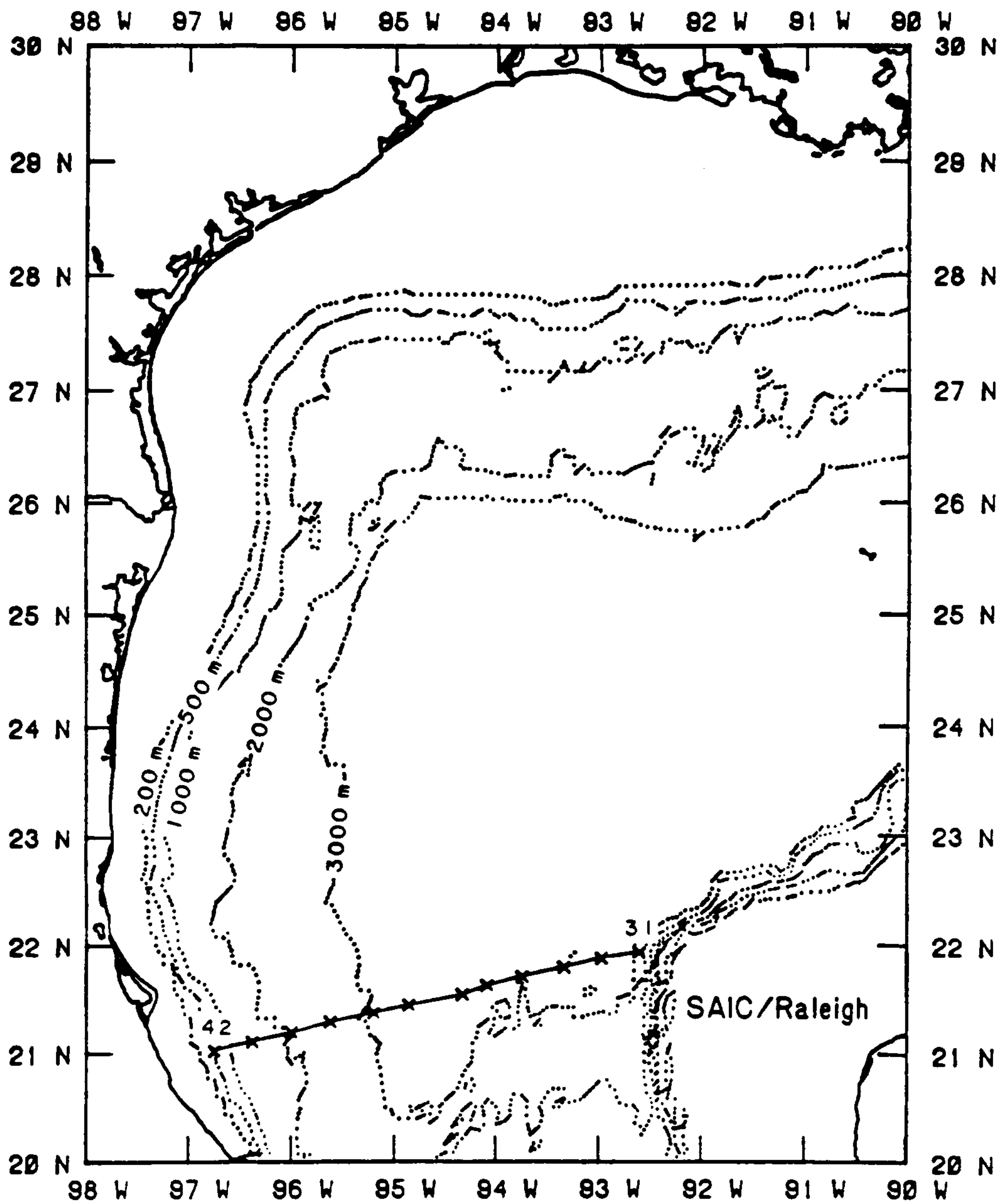


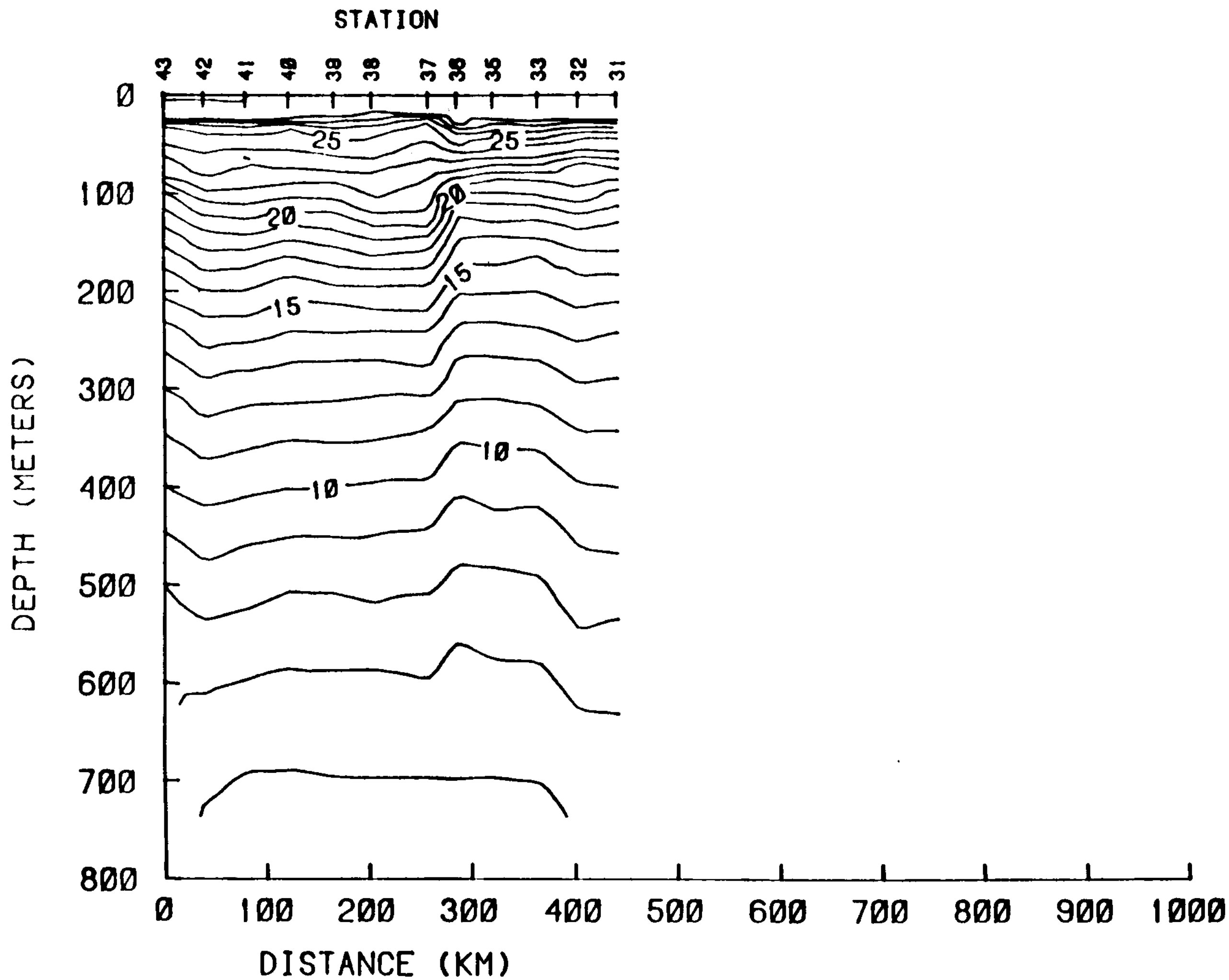
STENA HISPANIA 85-03
5/30/85 TO 5/31/85
STATIONS 1 TO 30
TEMPERATURE DEG C
MIN = 14.27 MAX = 28.64
SAIC/Raleigh



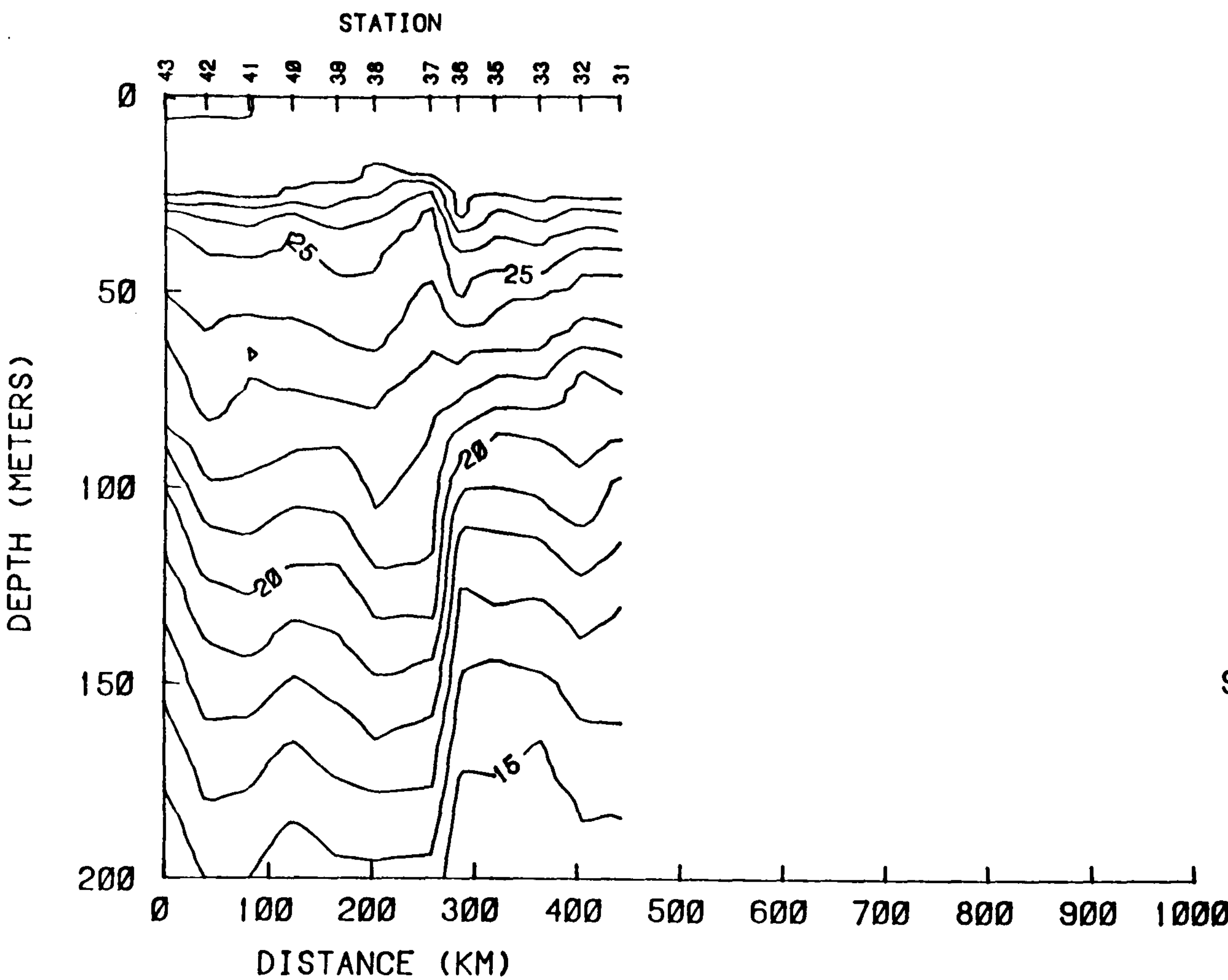
PARAMETERS AT SURFACE STENA HISPANIA 85-03

STENA HISPANIA 85-Ø4 6/1Ø/85 TO 6/14/85

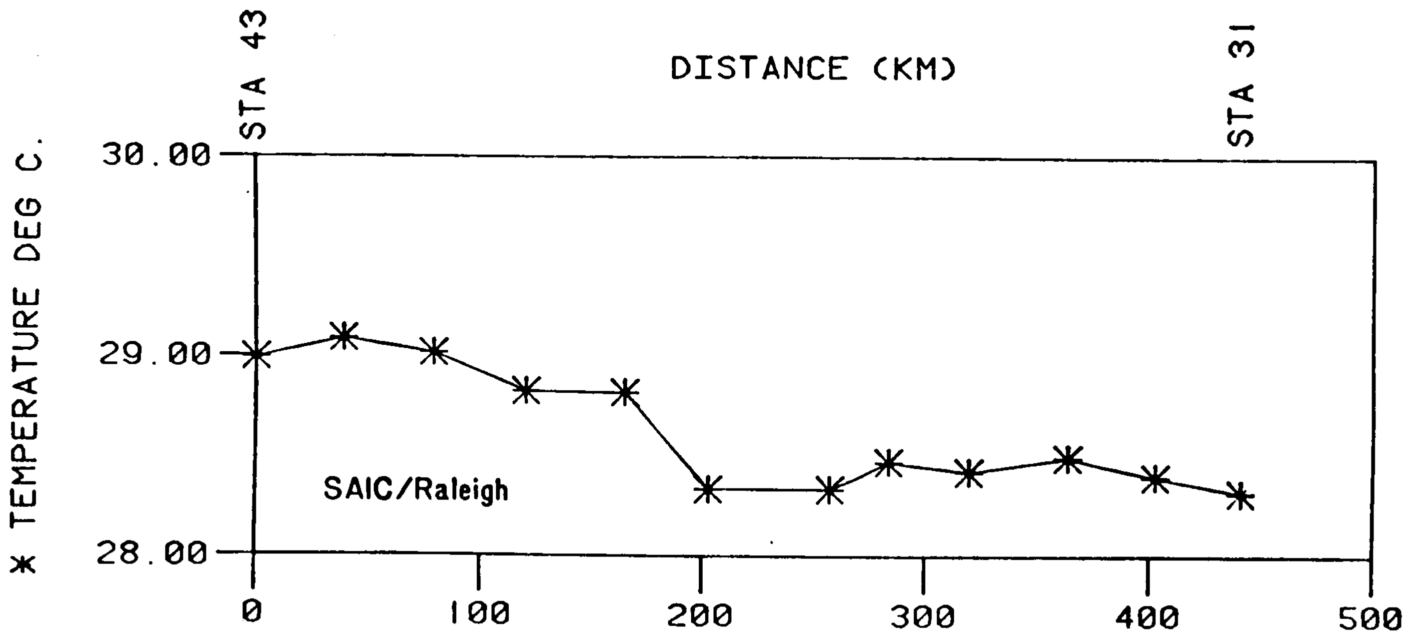




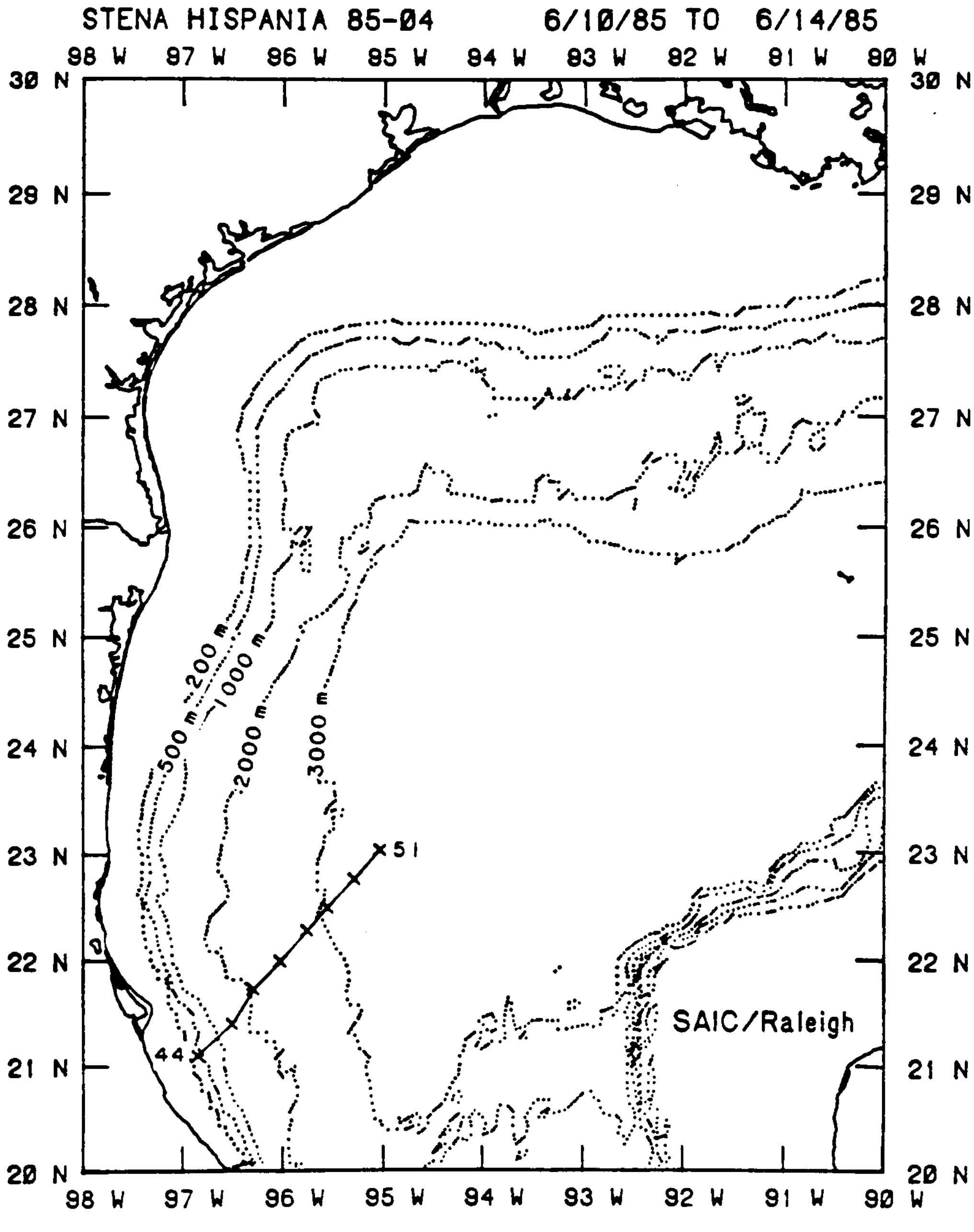
STENA HISPANIA 85-04
6/10/85 TO 6/11/85
STATIONS 31 TO 43
TEMPERATURE DEG C
MIN = 5.55 MAX = 29.09
SAIC/Raleigh

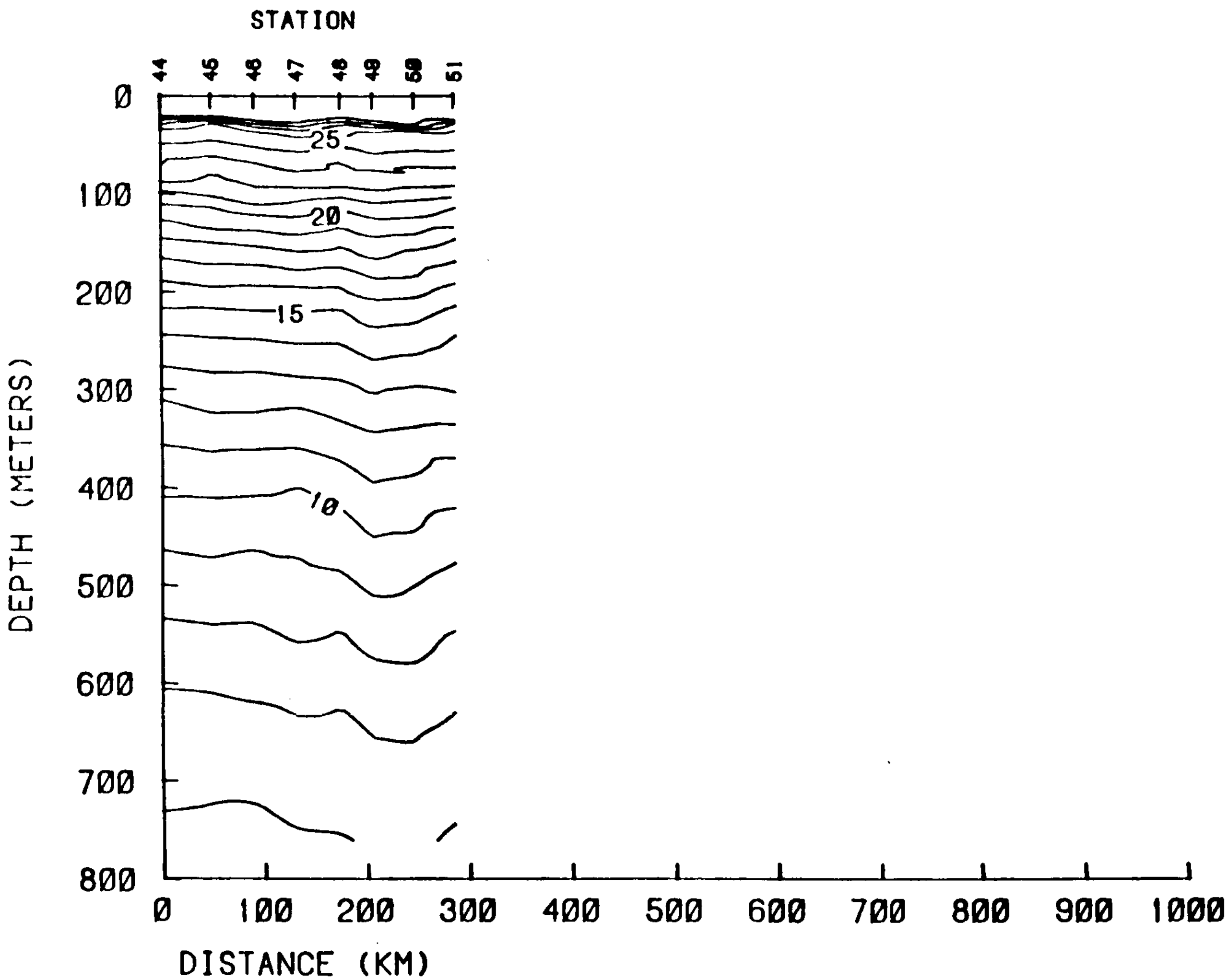


STENA HISPANIA 85-04
6/10/85 TO 6/11/85
STATIONS 31 TO 43
TEMPERATURE DEG C
MIN = 14.02 MAX = 29.09
SAIC/Raleigh

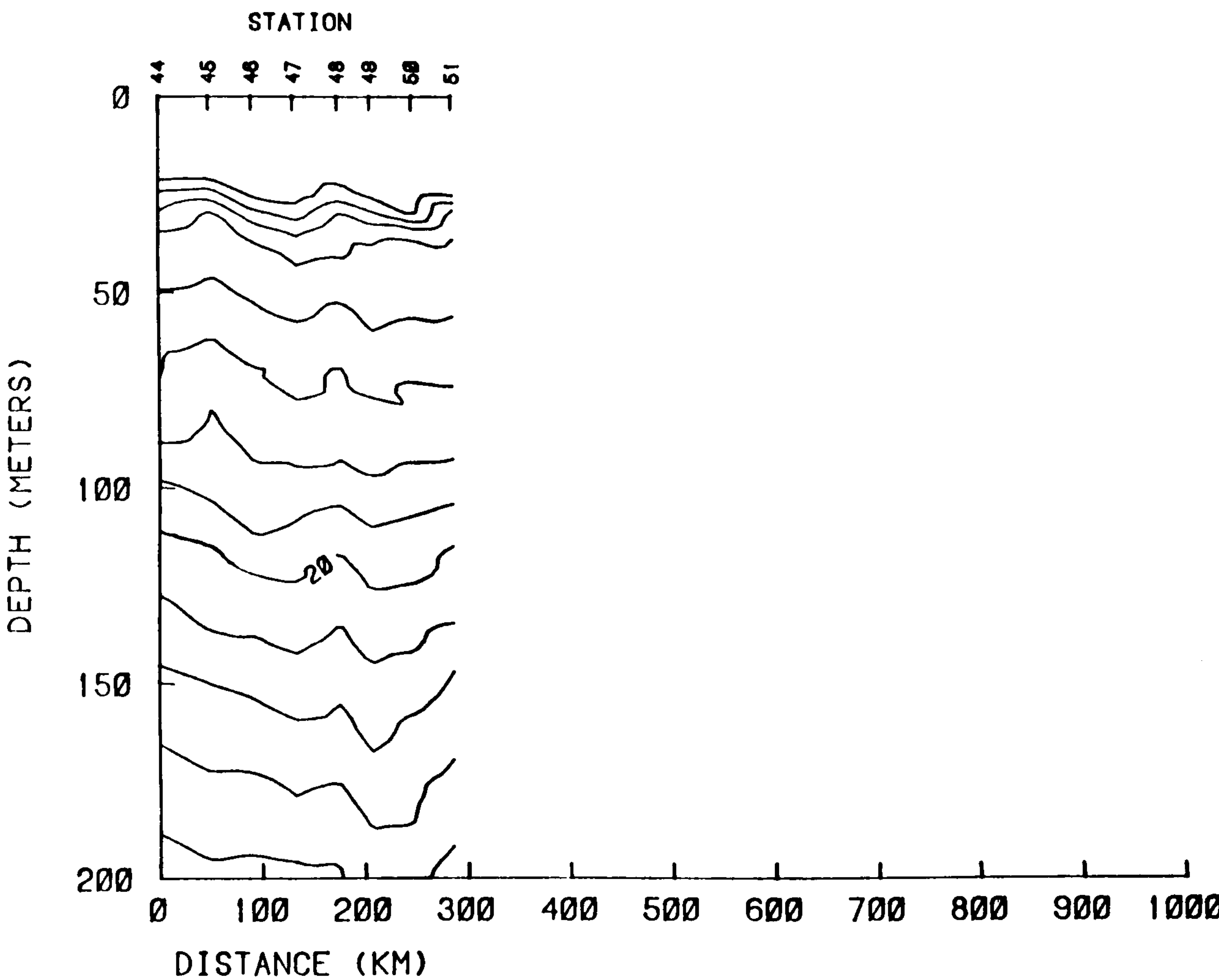


PARAMETERS AT SURFACE : STENA HISPANIA 85-04

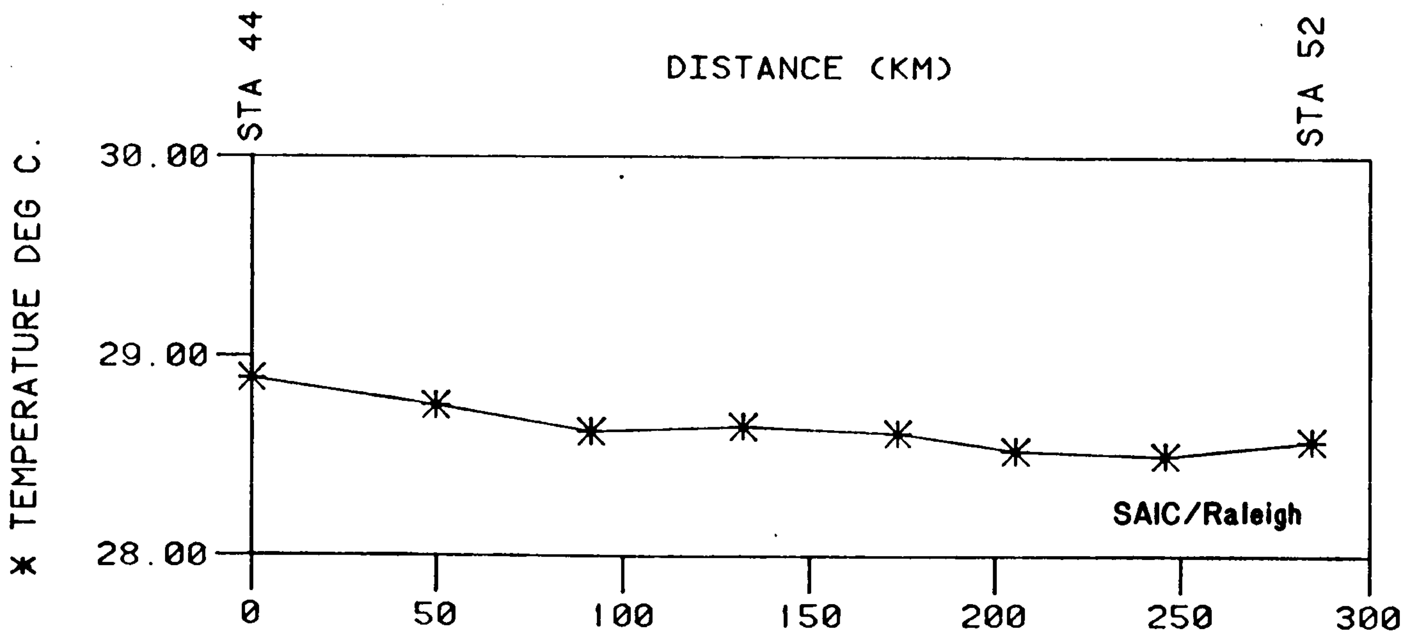

STENA HISPANIA 85-04 6/10/85 TO 6/14/85
98 W
97 W
96 W
95 W
94 W
93 W
92 W
91 W
90 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
20 N
200 m
500 m
1000 m
2000 m
3000 m
51
44
SAIC/Raleigh



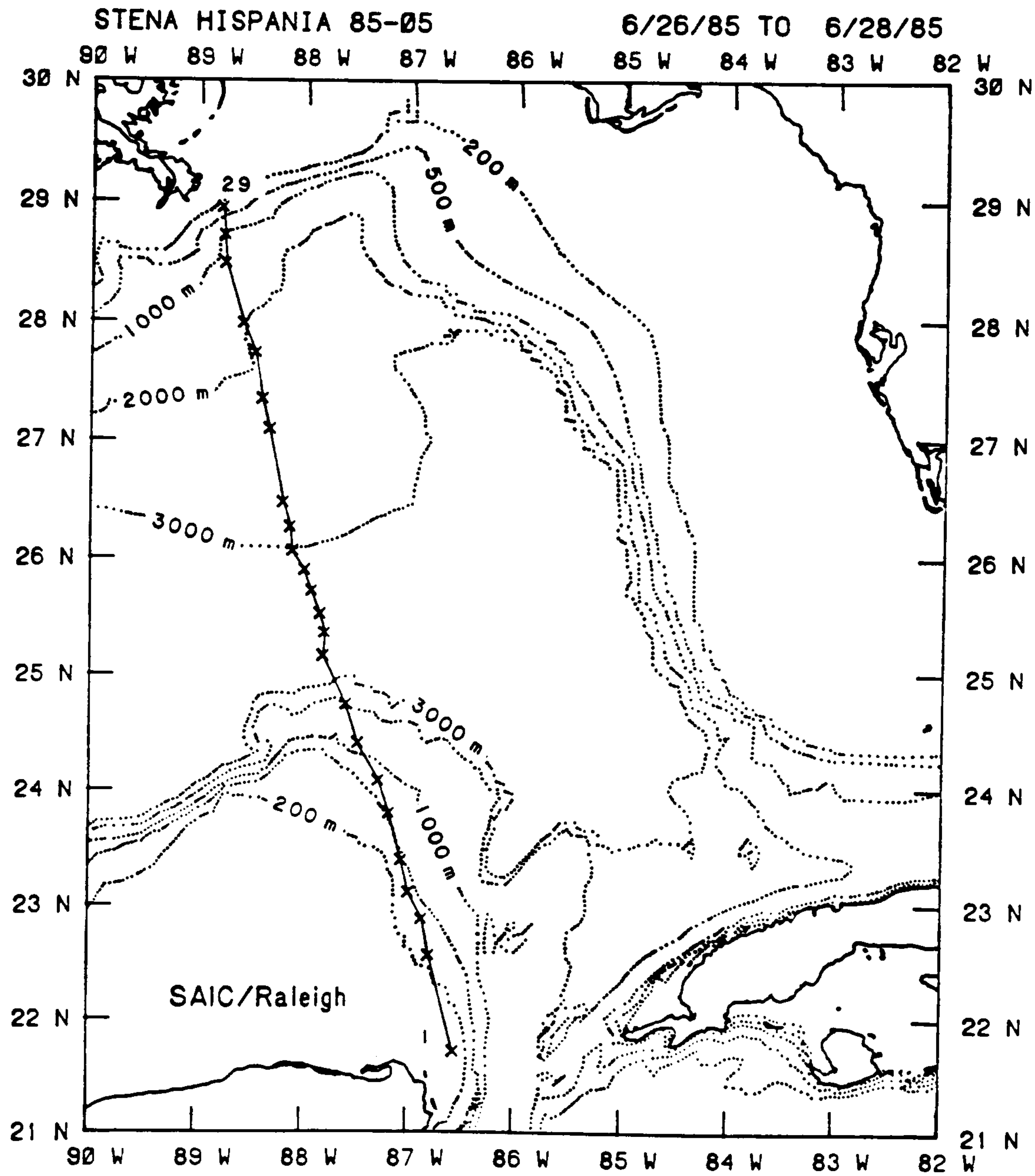
STENA HISPANIA 85-04
6/13/85 TO 6/14/85
STATIONS 44 TO 51
TEMPERATURE DEG C
MIN = 5.72 MAX = 28.90
SAIC/Raleigh

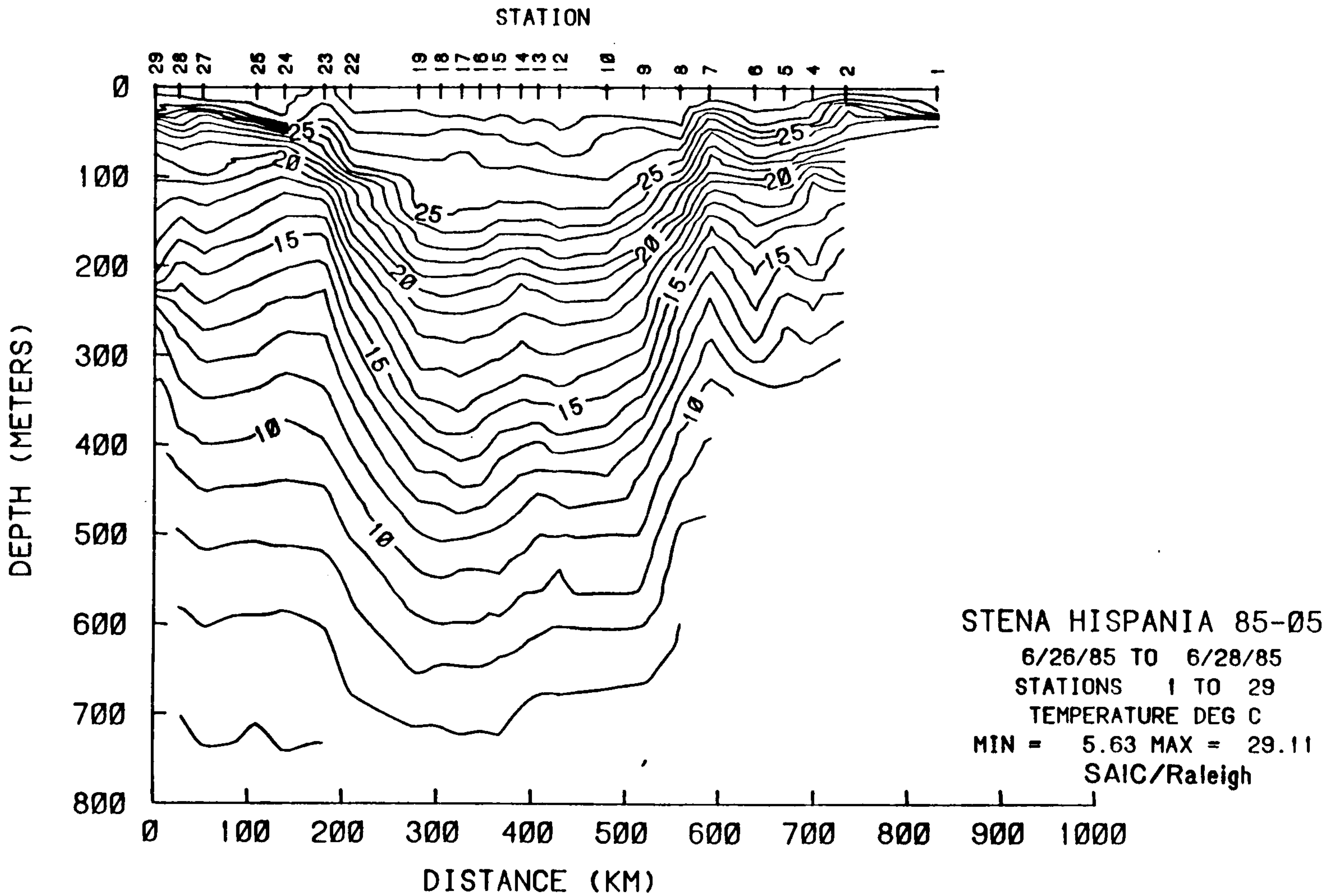


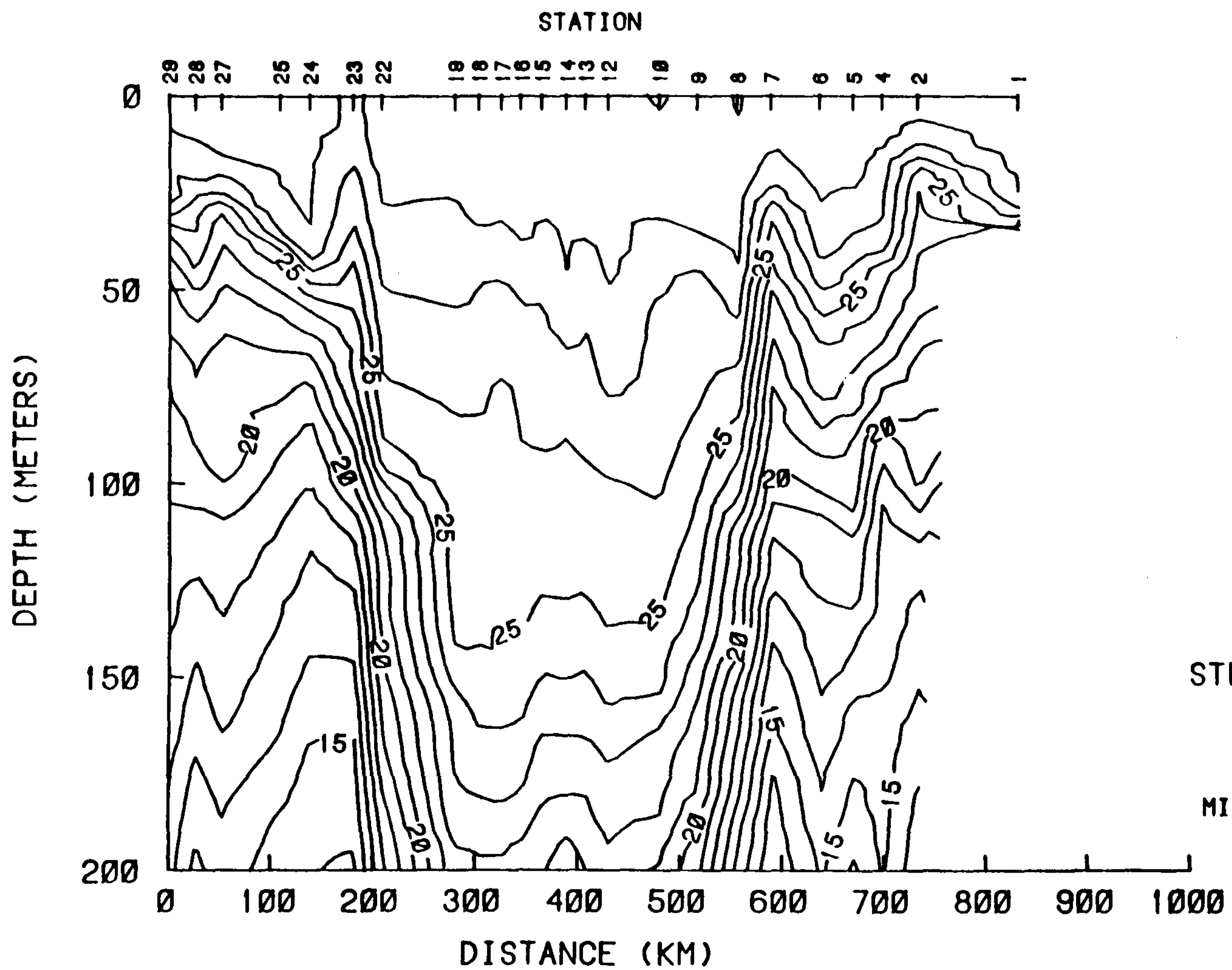
STENA HISPANIA 85-04
6/13/85 TO 6/14/85
STATIONS 44 TO 51
TEMPERATURE DEG C
MIN = 15.56 MAX = 28.90
SAIC/Raleigh



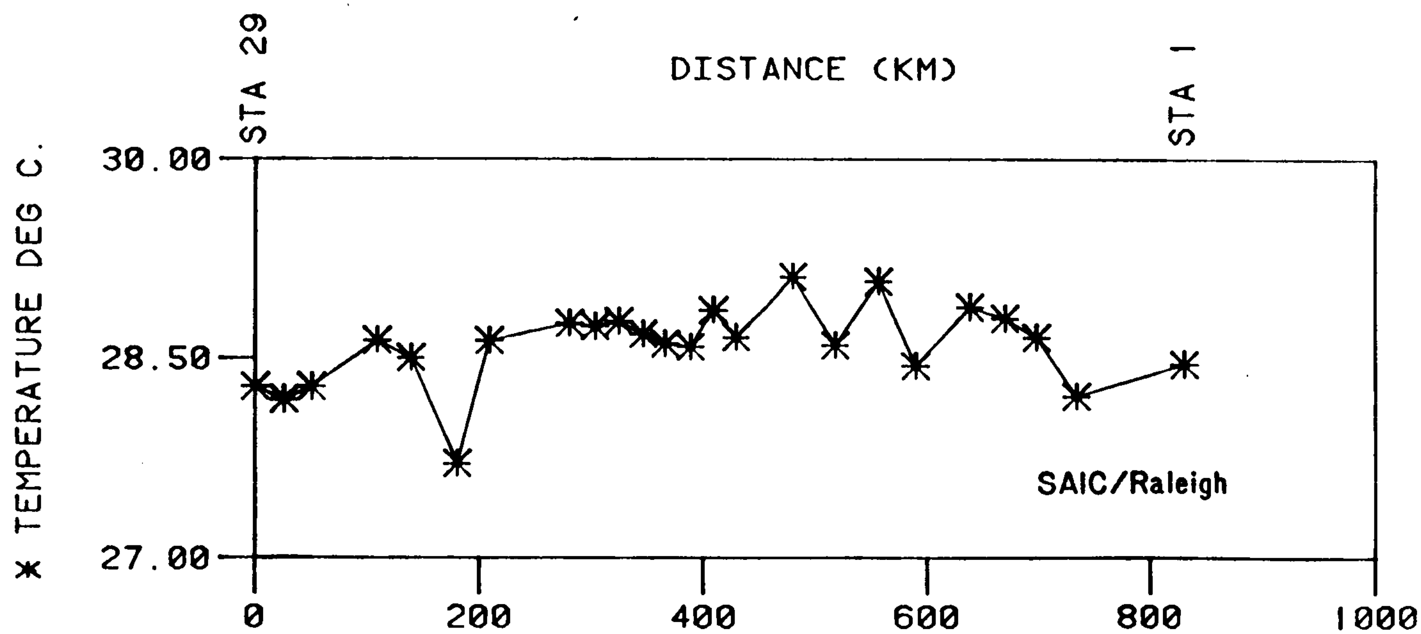
PARAMETERS AT SURFACE STENA HISPANIA 85-04


STENA HISPANIA 85-Ø5
6/26/85 TO 6/28/85
SAIC/Raleigh
200 m
500 m
1000 m
2000 m
3000 m
29
1
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W

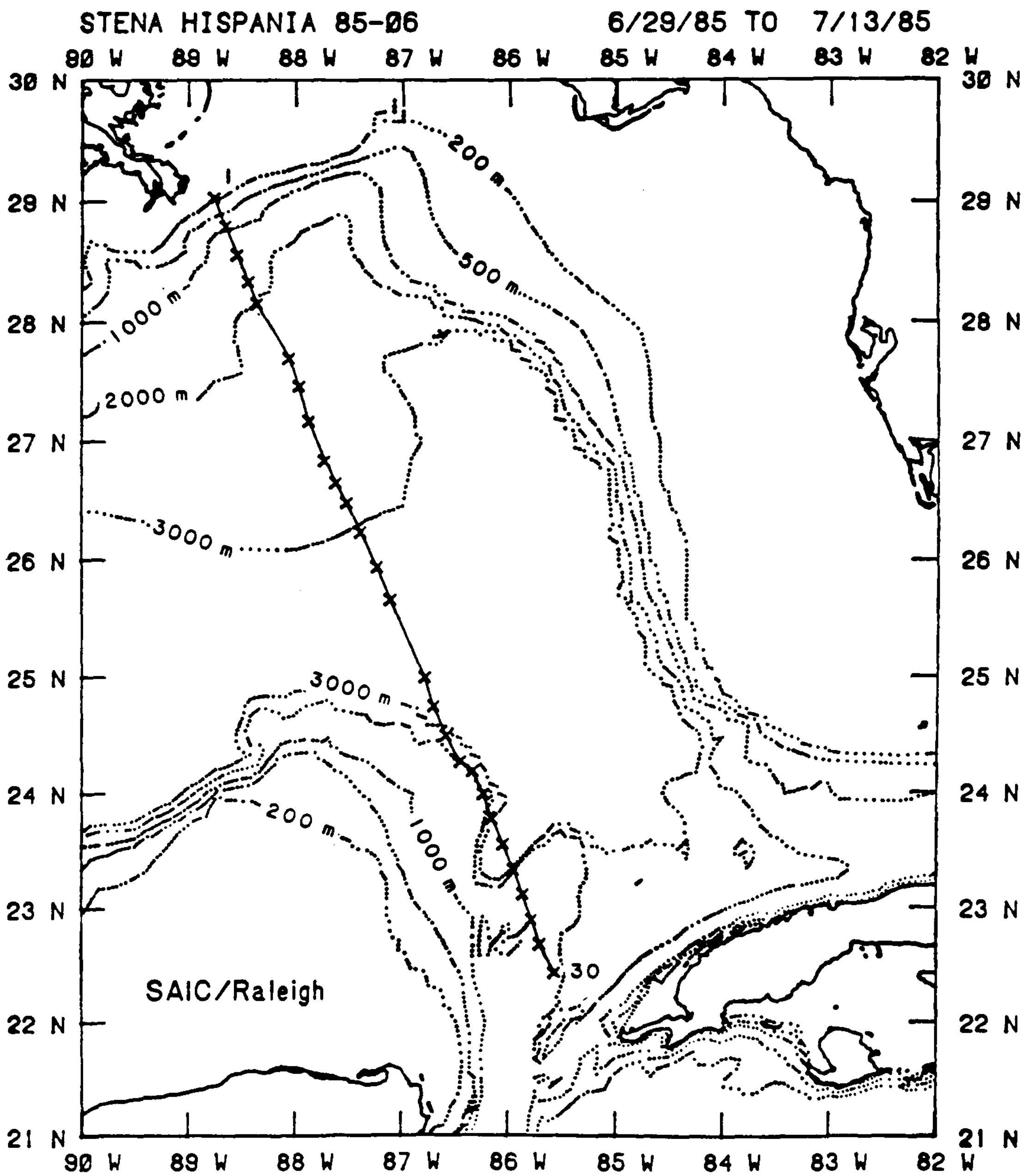

STATION
29 28 27 26 24 23 22 19 18 17 16 15 14 13 12 10 9 8 7 6 5 4 2 1
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
10
STENA HISPANIA 85-05
6/26/85 TO 6/28/85
STATIONS 1 TO 29
TEMPERATURE DEG C
MIN = 5.63 MAX = 29.11
SAIC/Raleigh

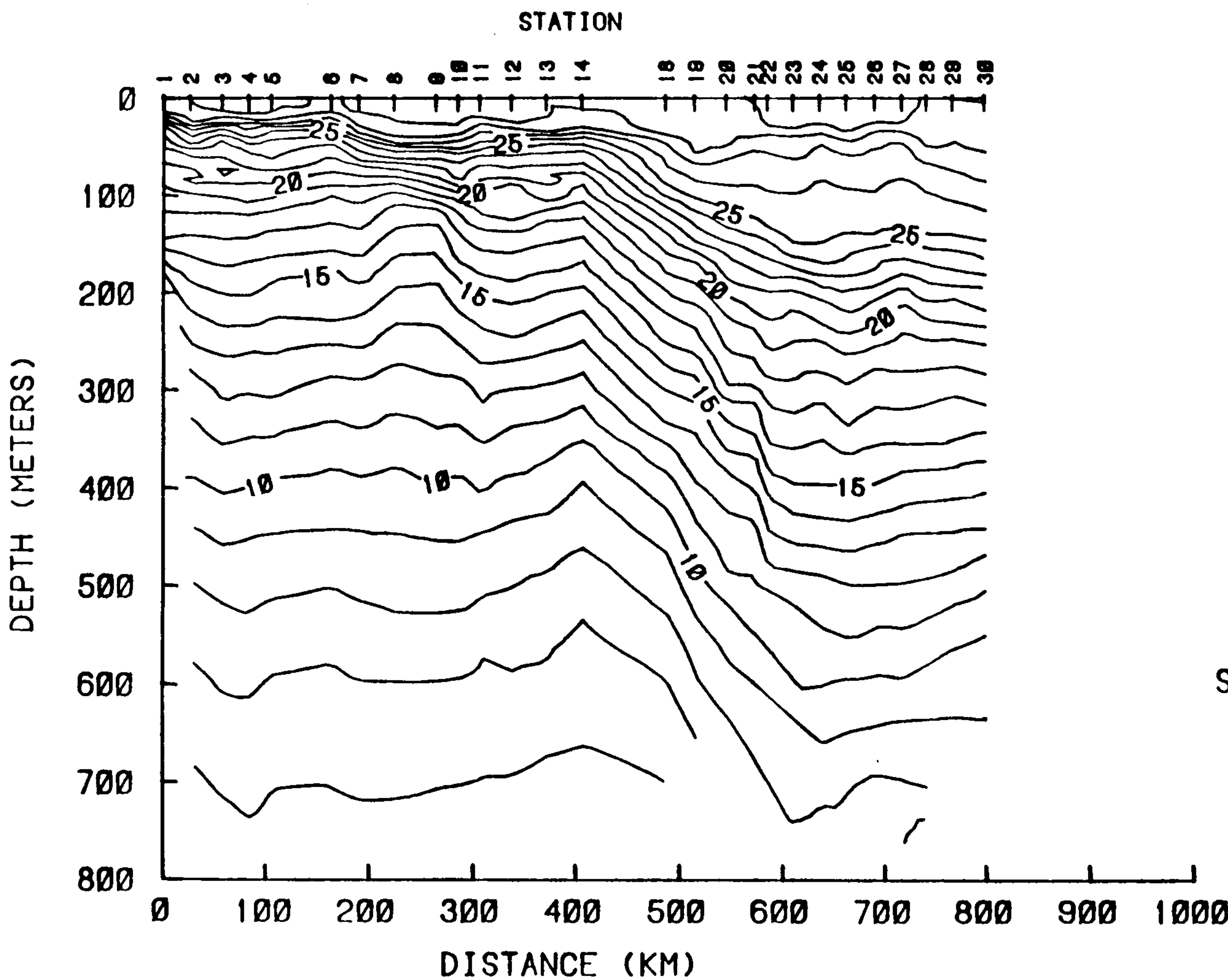


STENA HISPANIA 85-05
6/26/85 TO 6/28/85
STATIONS 1 TO 29
TEMPERATURE DEG C
MIN = 13.13 MAX = 29.11
SAIC/Raleigh

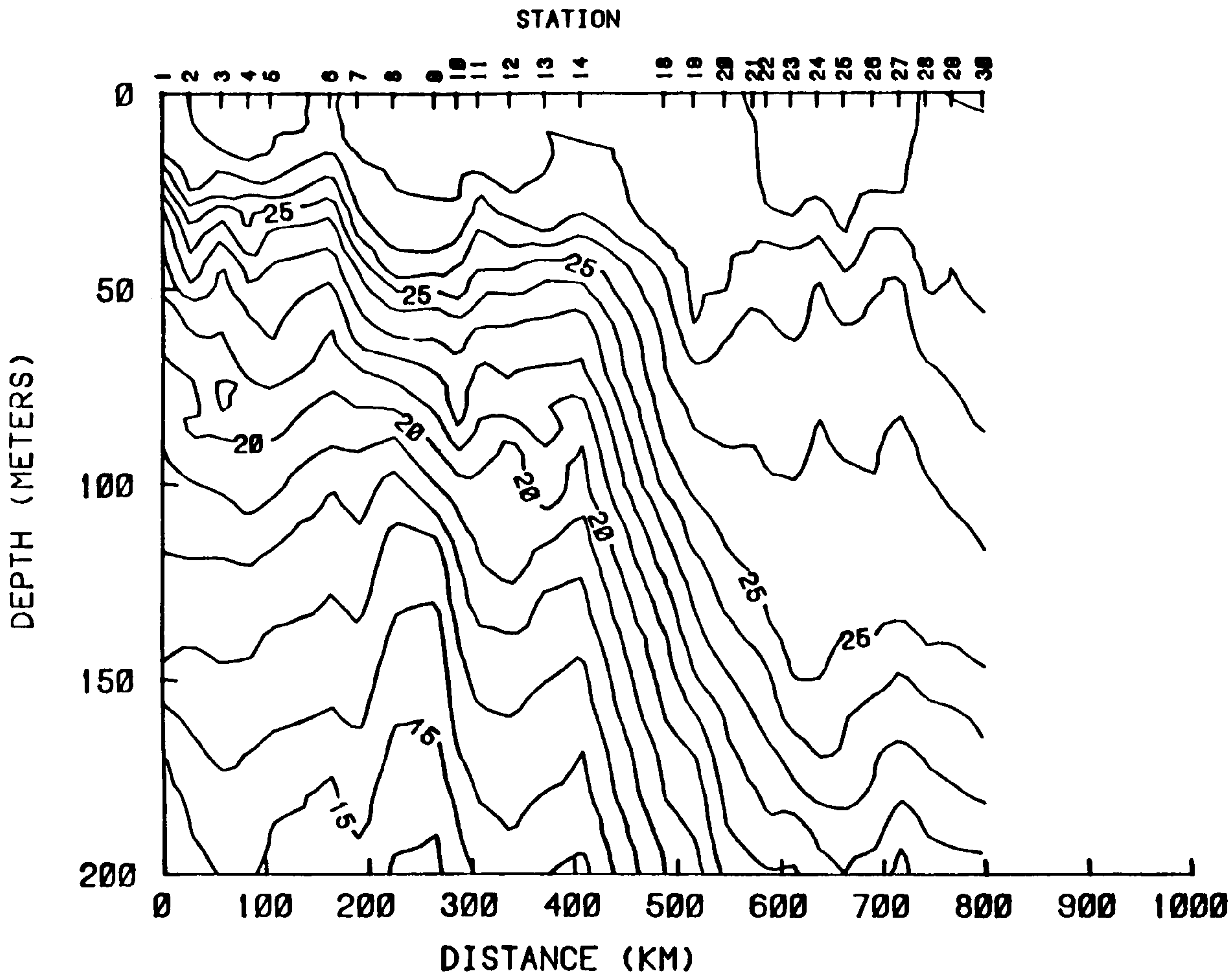


PARAMETERS AT SURFACE STENA HISPANIA 85-05

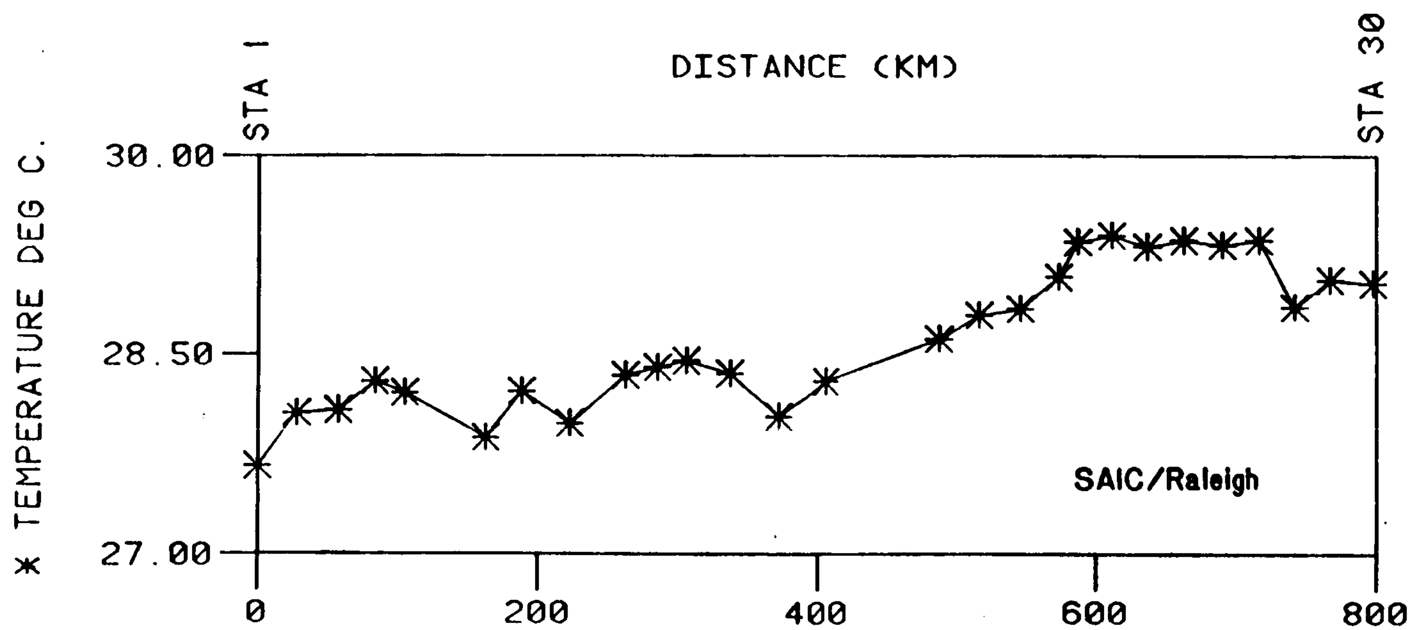

STENA HISPANIA 85-06
6/29/85 TO 7/13/85
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
200 m
1000 m
1
30
SAIC/Raleigh



STENA HISPANIA 85-06
6/29/85 TO 6/30/85
STATIONS 1 TO 30
TEMPERATURE DEG C
MIN = 5.40 MAX = 29.42
SAIC/Raleigh

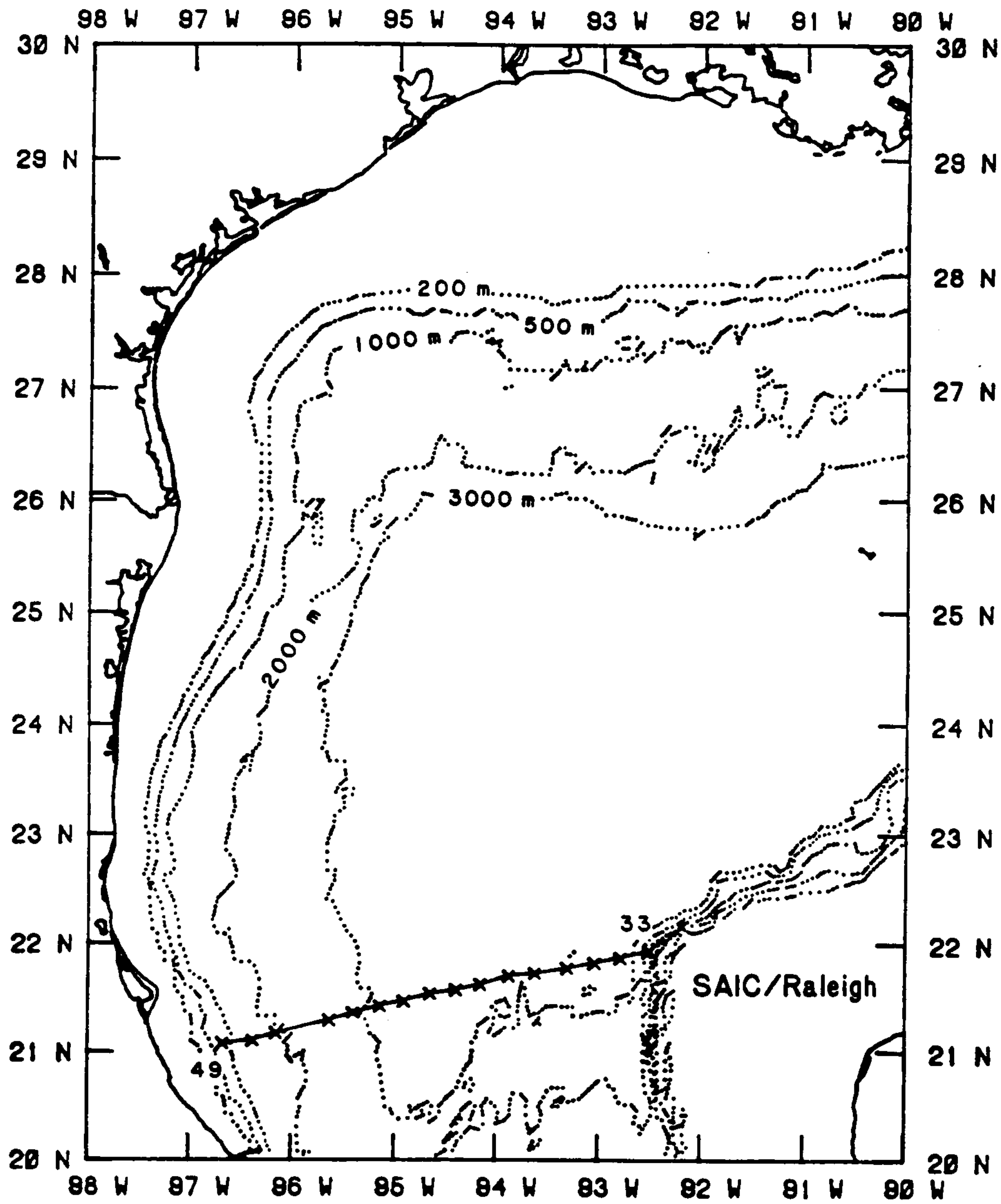


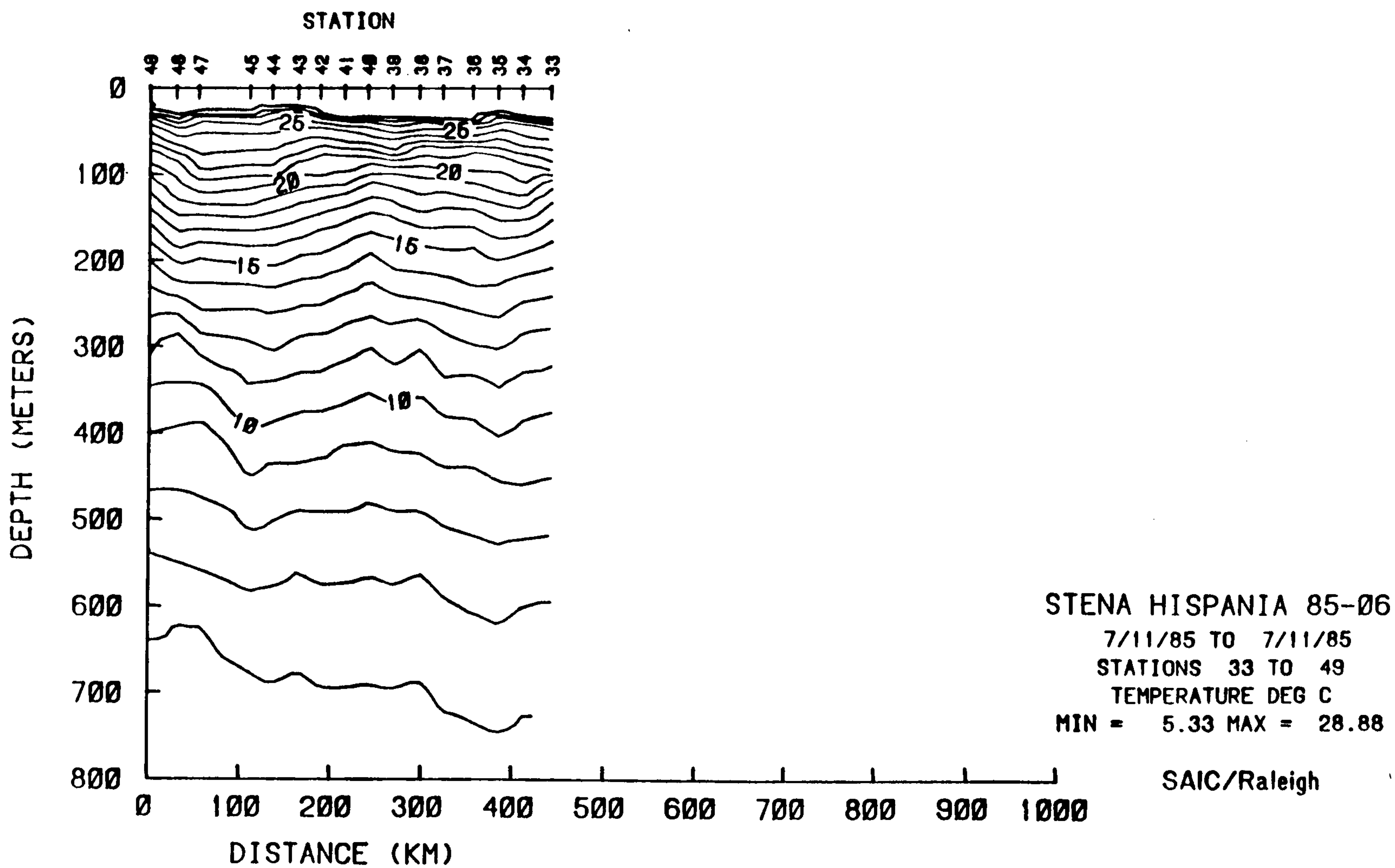
STENA HISPANIA 85-06
6/28/85 TO 6/30/85
STATIONS 1 TO 30
TEMPERATURE DEG C
MIN = 13.81 MAX = 29.42
SAIC/Raleigh

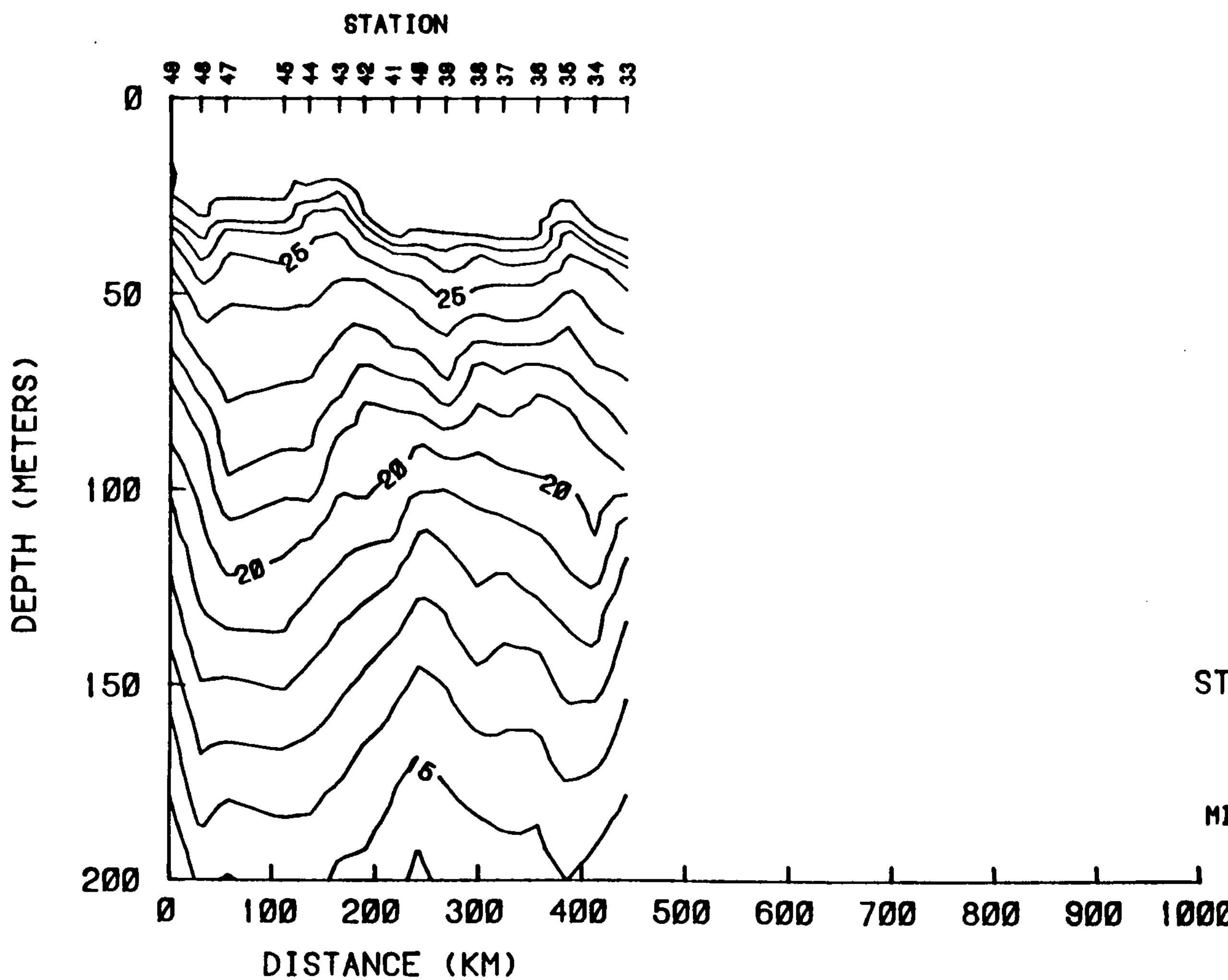


PARAMETERS AT SURFACE STENA HISPANIA 85-06

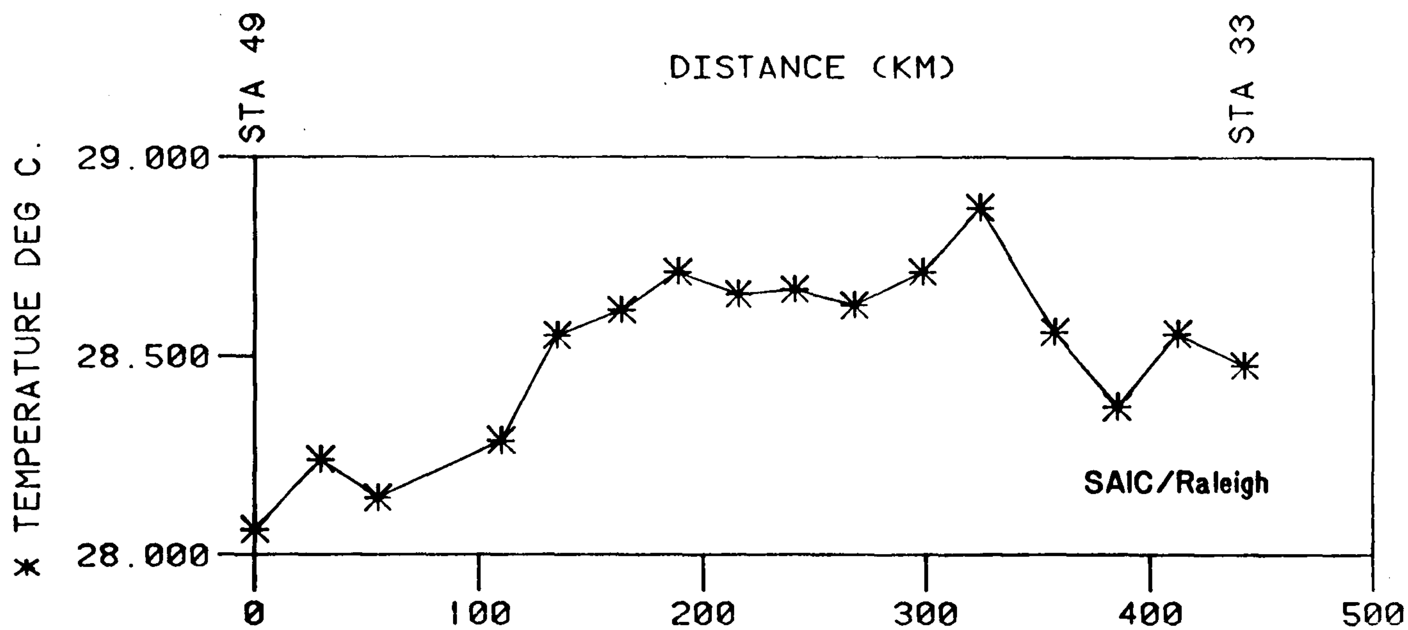
STENA HISPANIA 85-06 6/29/85 TO 7/13/85



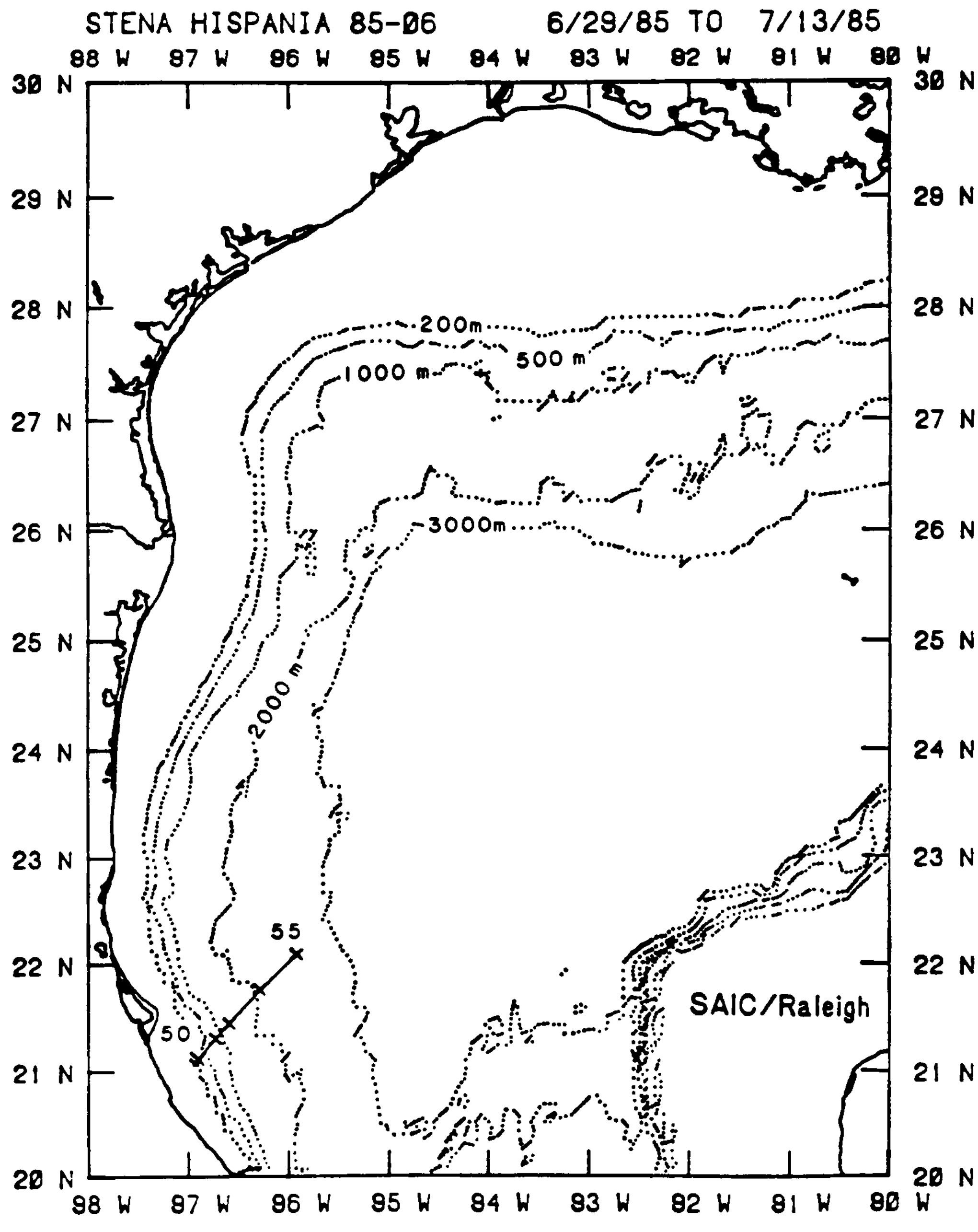

STATION
49 48 47 45 44 43 42 41 40 39 38 37 36 35 34 33
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
25
20
15
10
0
100
200
300
400
500
600
700
800
900
1000
DISTANCE (KM)
STENA HISPANIA 85-06
7/11/85 TO 7/11/85
STATIONS 33 TO 49
TEMPERATURE DEG C
MIN = 5.33 MAX = 28.88
SAIC/Raleigh

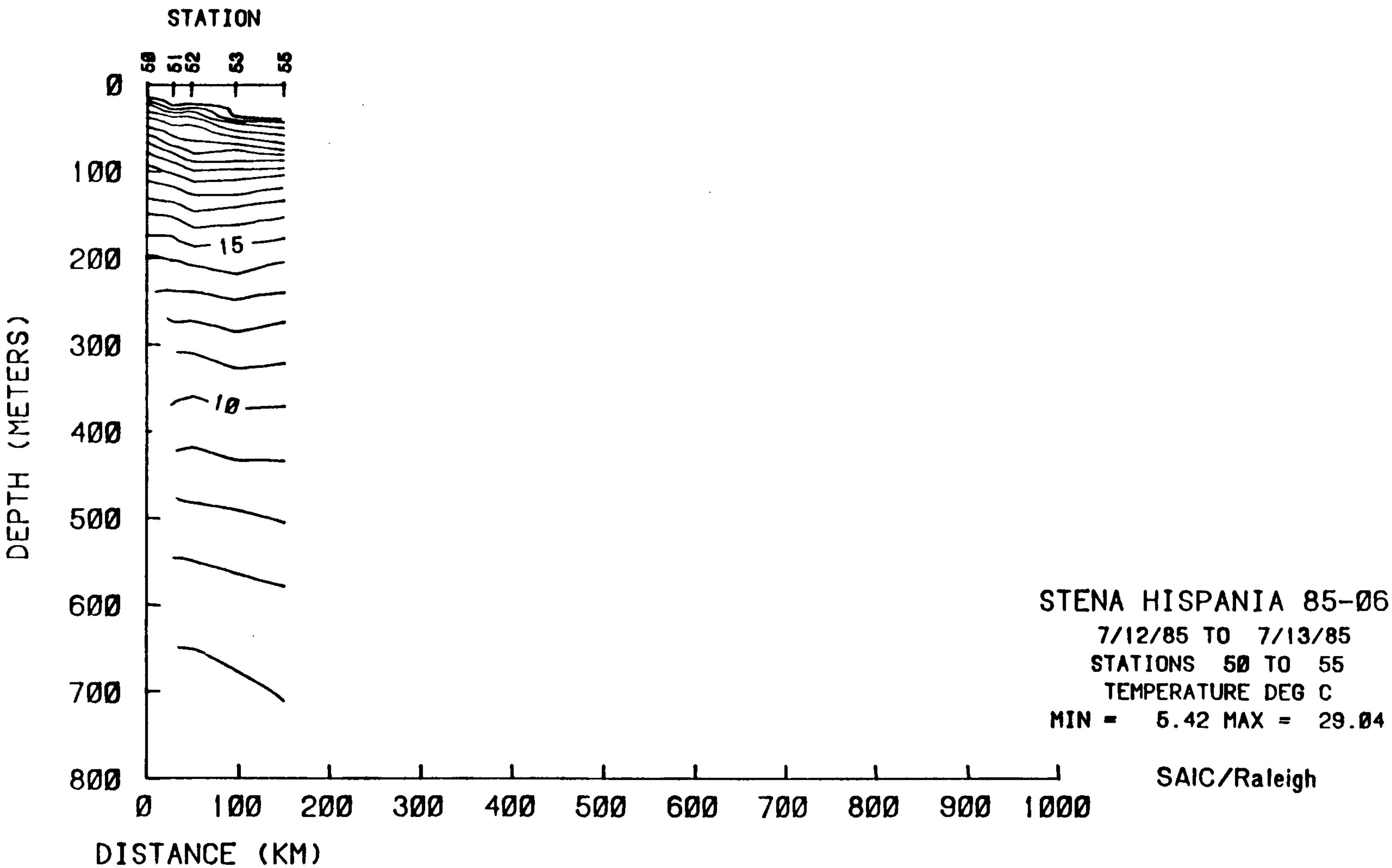


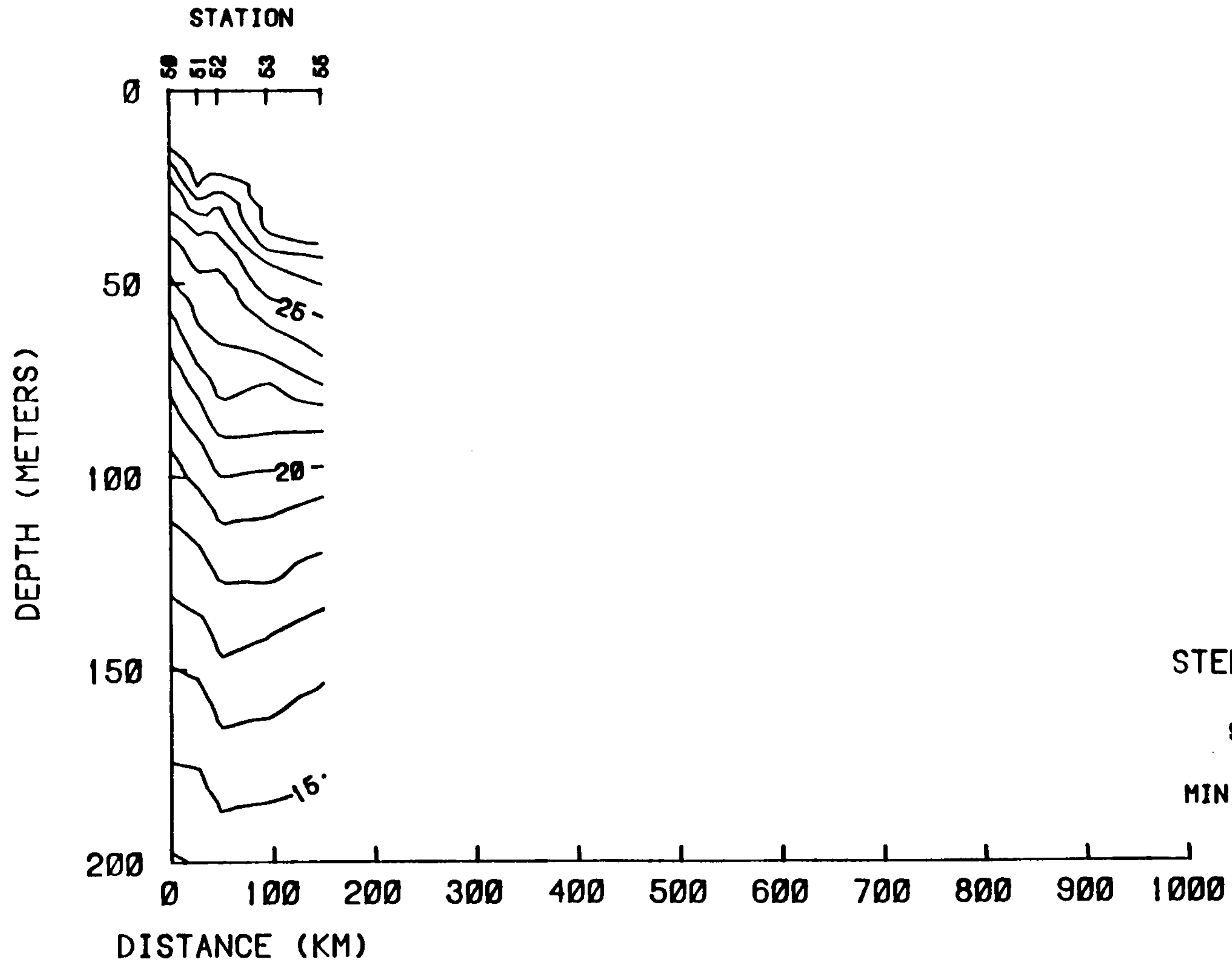
STENA HISPANIA 85-06
7/11/85 TO 7/11/85
STATIONS 33 TO 49
TEMPERATURE DEG C
MIN = 13.78 MAX = 28.88
SAIC/Raleigh



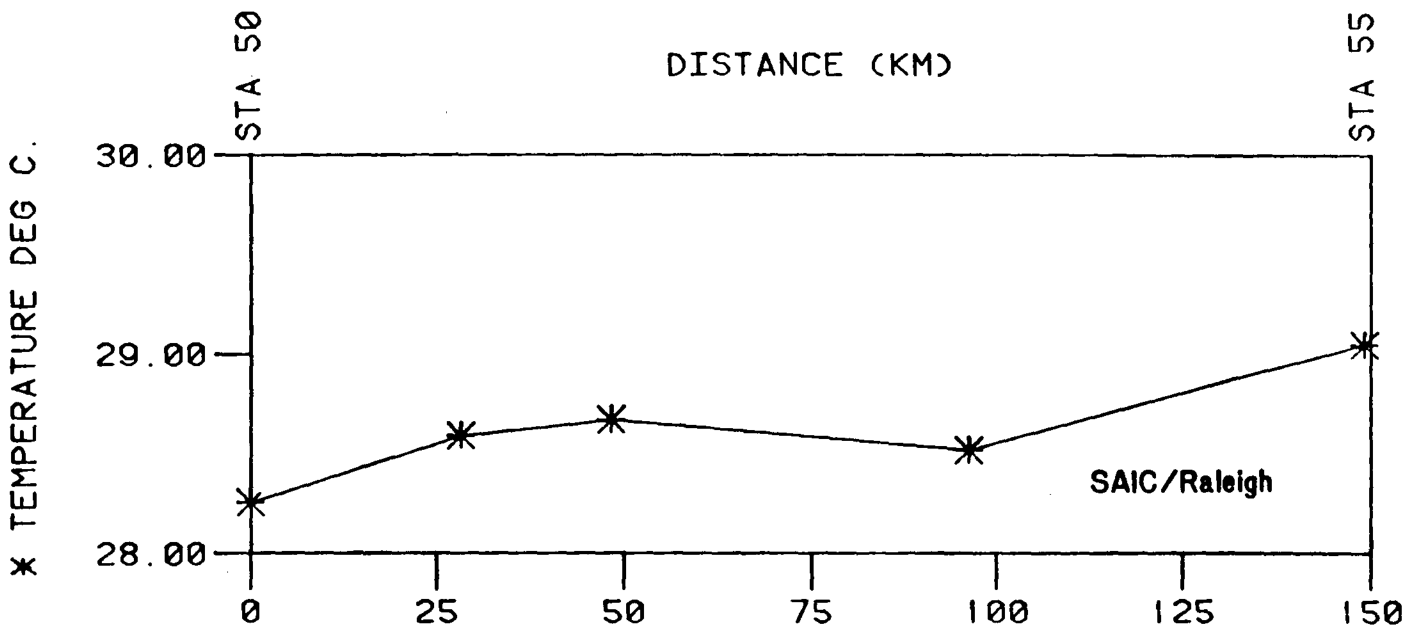
PARAMETERS AT SURFACE STENA HISPANIA 85-06


STENA HISPANIA 85-06 6/29/85 TO 7/13/85
98 W
97 W
96 W
95 W
94 W
93 W
92 W
91 W
90 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
20 N
200m
500 m
1000 m
3000m
2000 m
55
50
SAIC/Raleigh


STATION
50
51
52
53
55
15
10
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0
100
200
300
400
500
600
700
800
900
1000
STENA HISPANIA 85-06
7/12/85 TO 7/13/85
STATIONS 50 TO 55
TEMPERATURE DEG C
MIN = 5.42 MAX = 29.04
SAIC/Raleigh

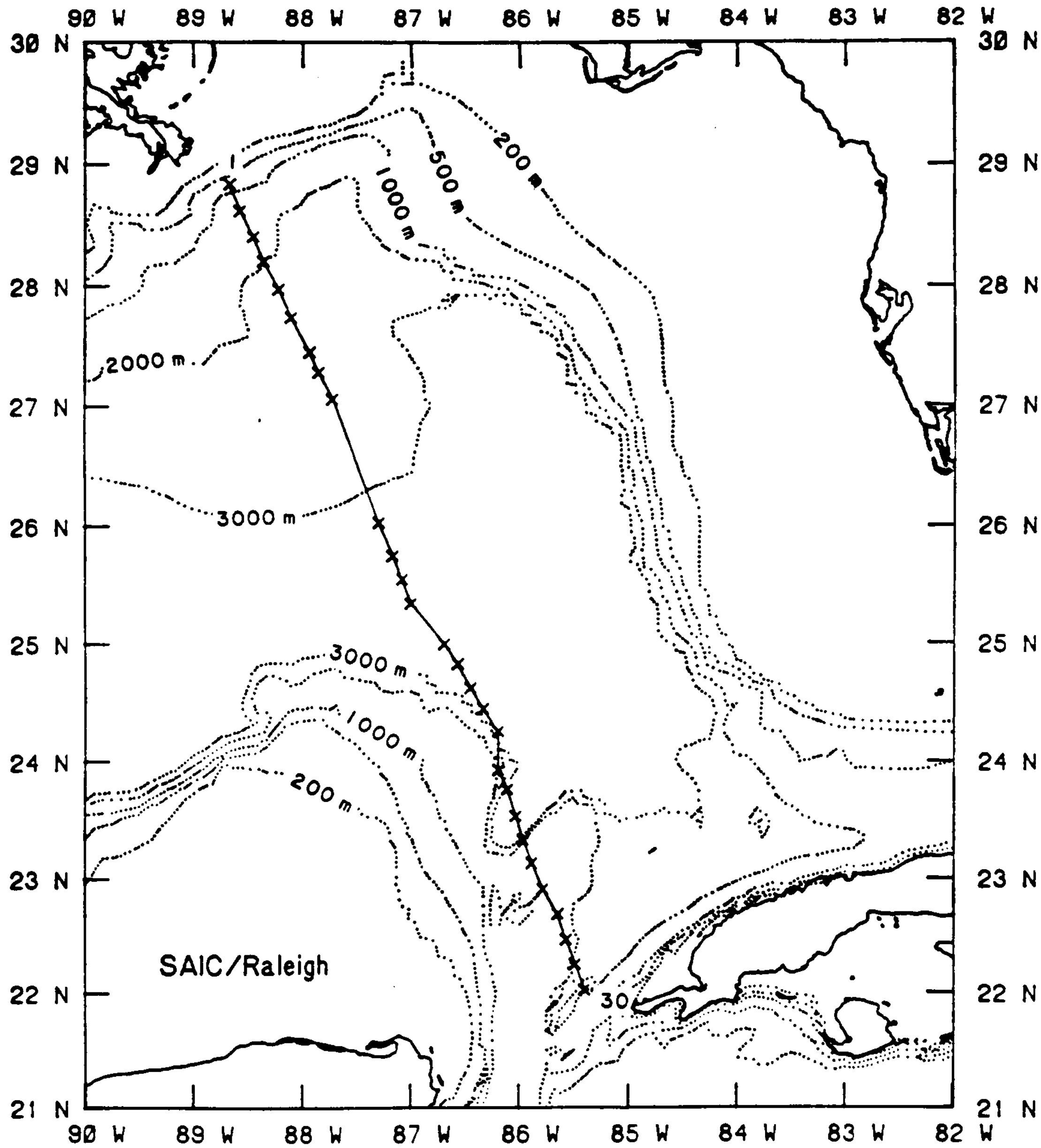


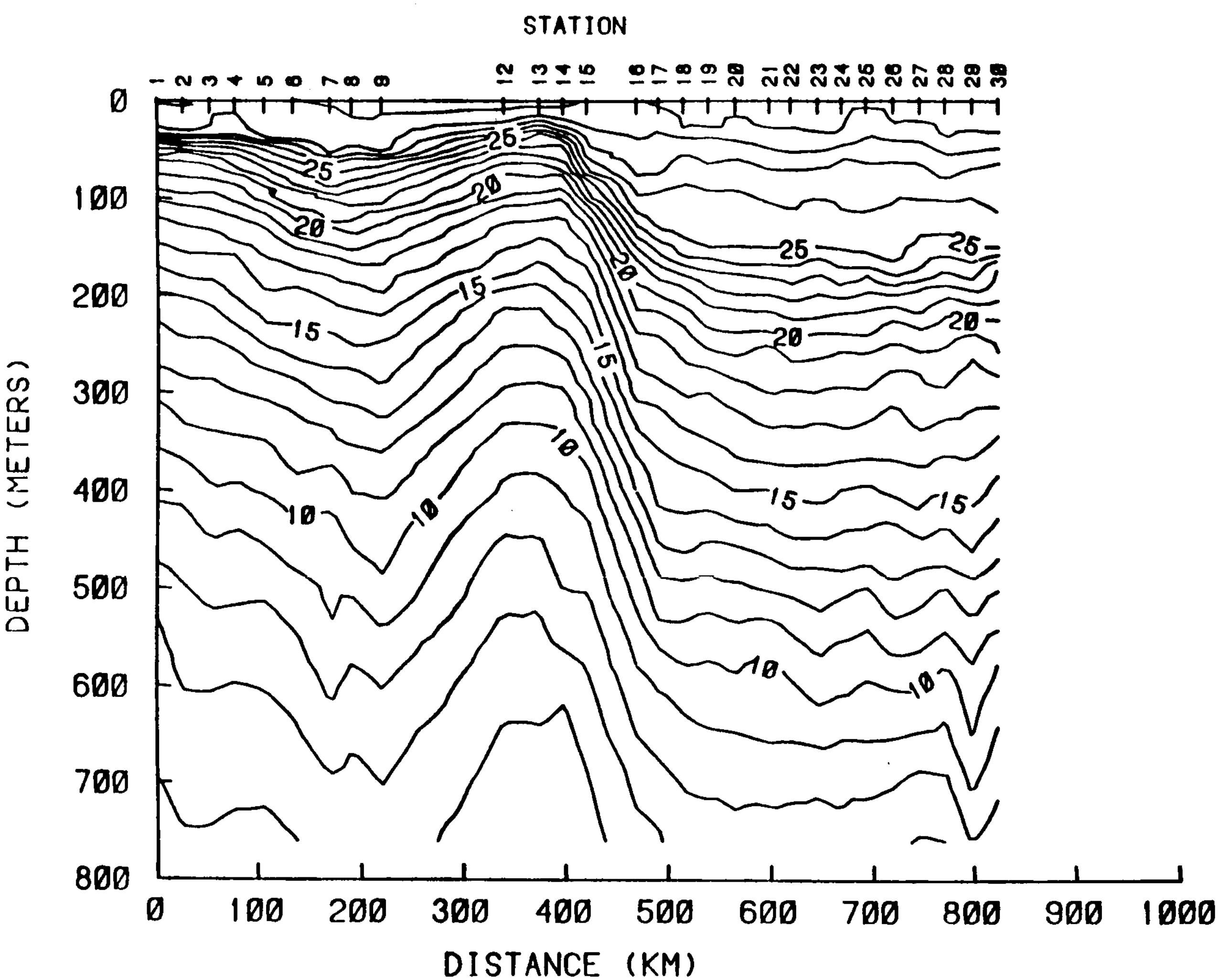
STENA HISPANIA 85-06
7/12/85 TO 7/13/85
STATIONS 50 TO 55
TEMPERATURE DEG C
MIN = 13.90 MAX = 29.04
SAIC/Raleigh



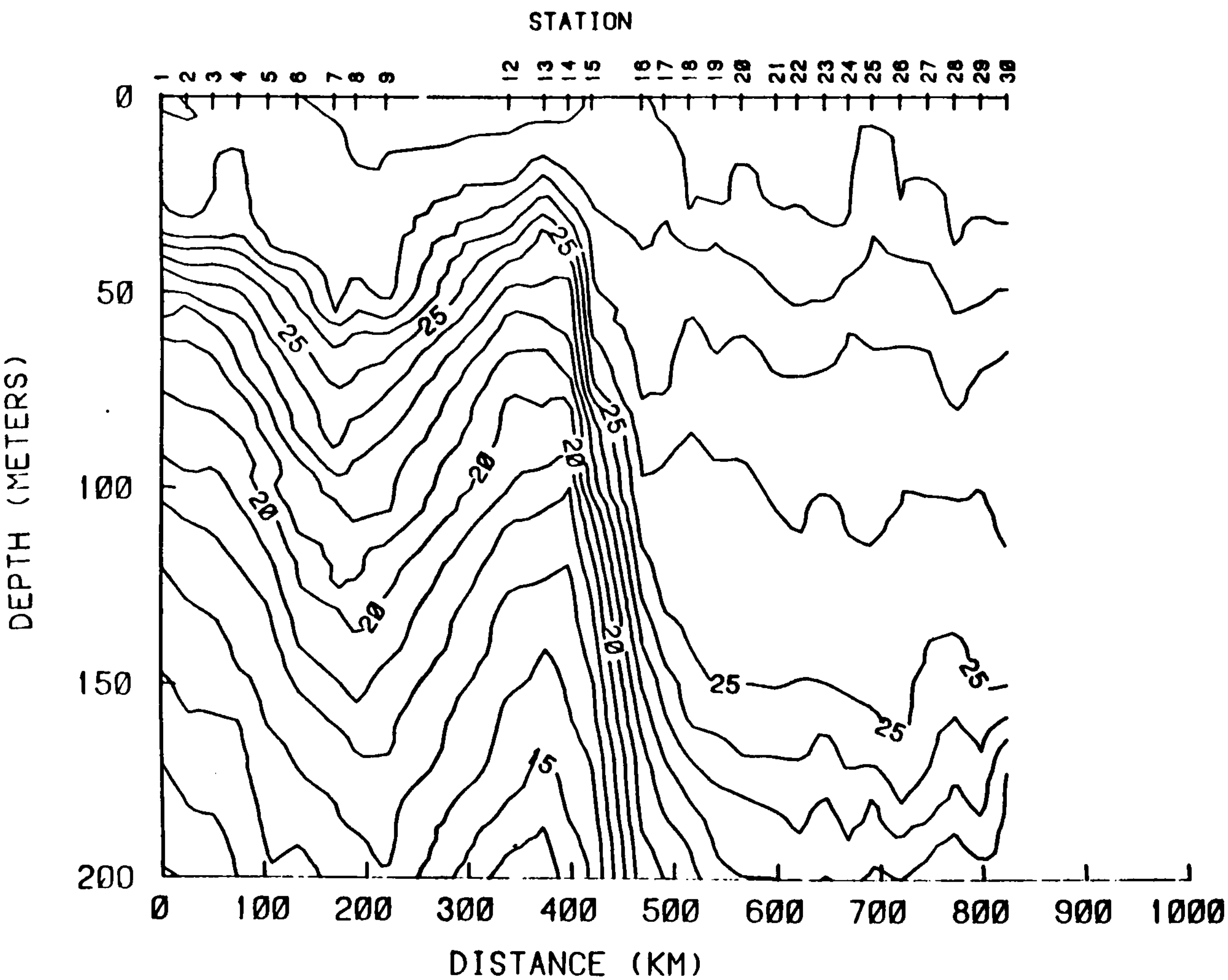
PARAMETERS AT SURFACE STENA HISPANIA 85-06

STENA HISPANIA 85-Ø7 7/16/85 TO 7/17/85

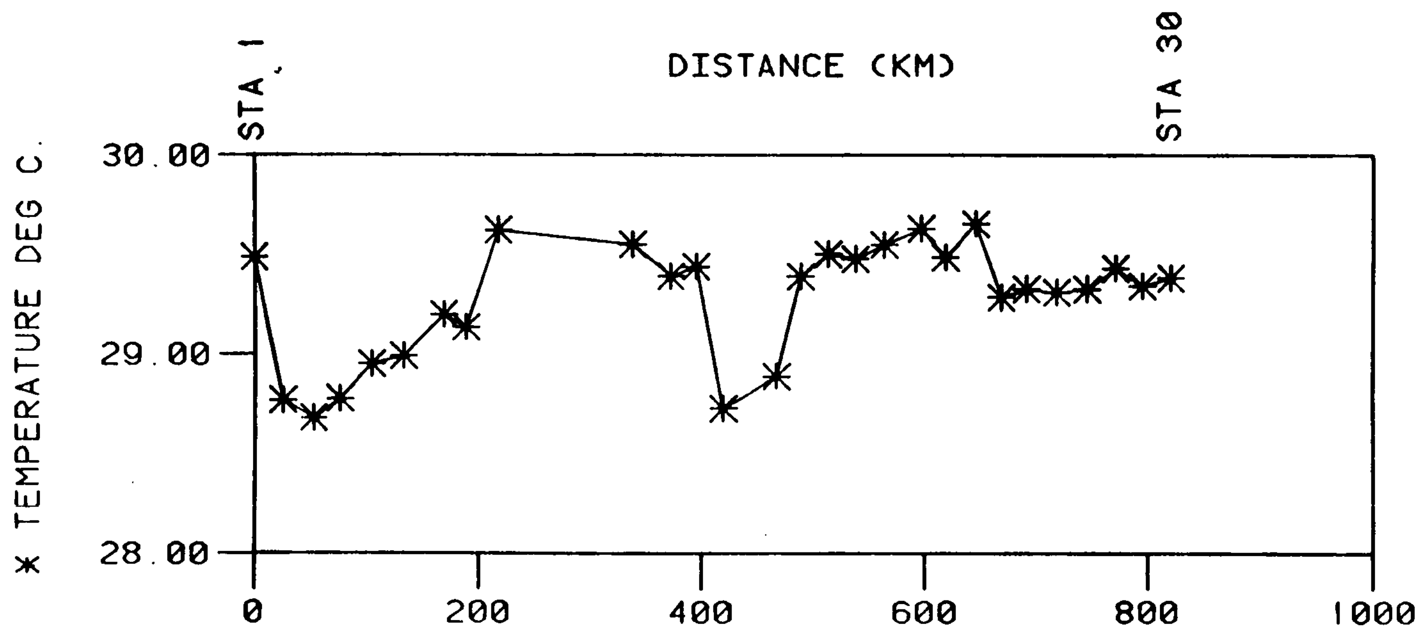




STENA HISPANIA 85-07
7/16/85 TO 7/17/85
STATIONS 1 TO 30
TEMPERATURE DEG C
MIN = 5.23 MAX = 29.66

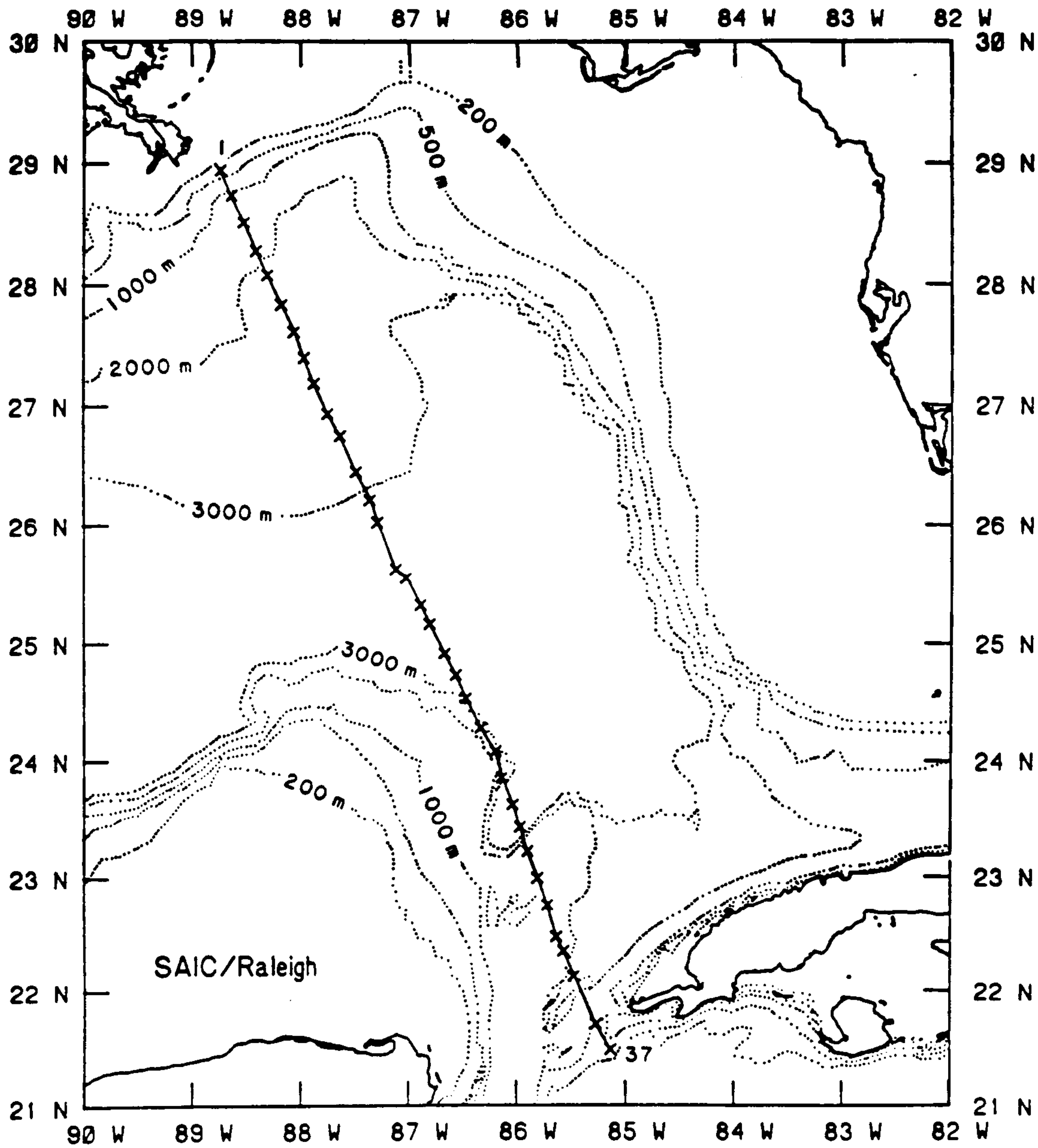


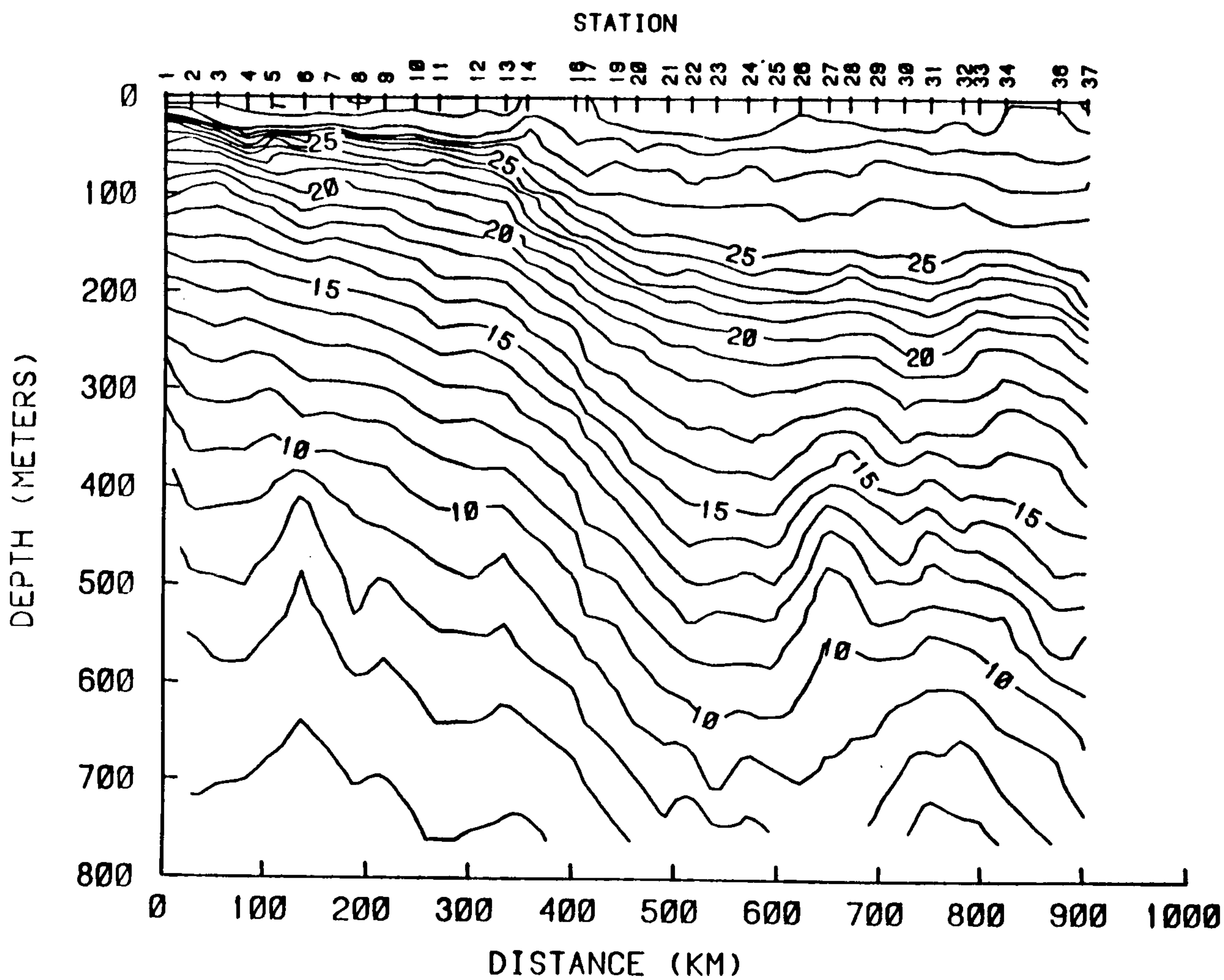
STENA HISPANIA 85-07
7/16/85 TO 7/17/85
STATIONS 1 TO 30
TEMPERATURE DEG C
MIN = 13.47 MAX = 29.66



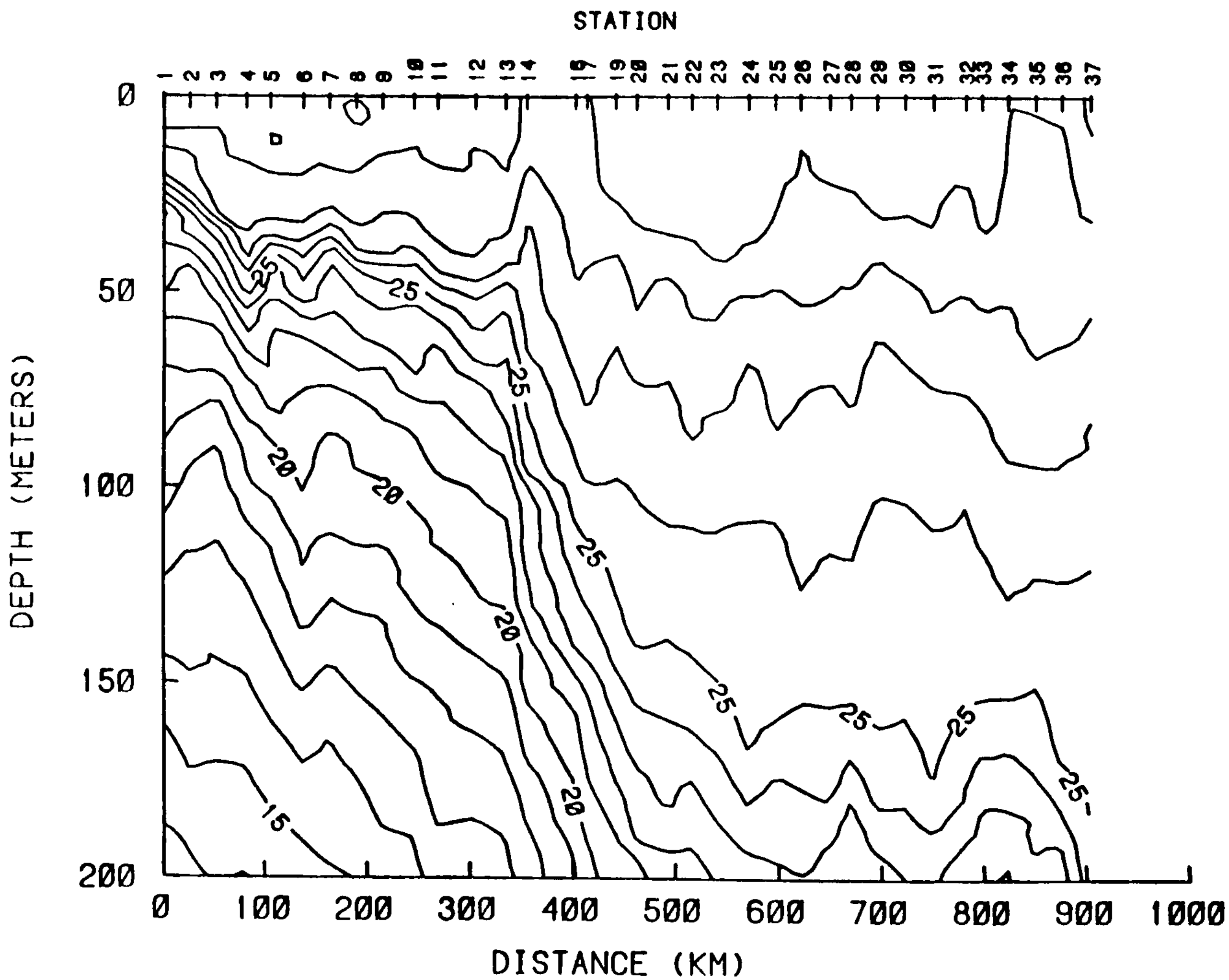
PARAMETERS AT SURFACE STENA HISPANIA 85-07

STENA HISPANIA 85-Ø8 7/31/85 TO 8/18/85

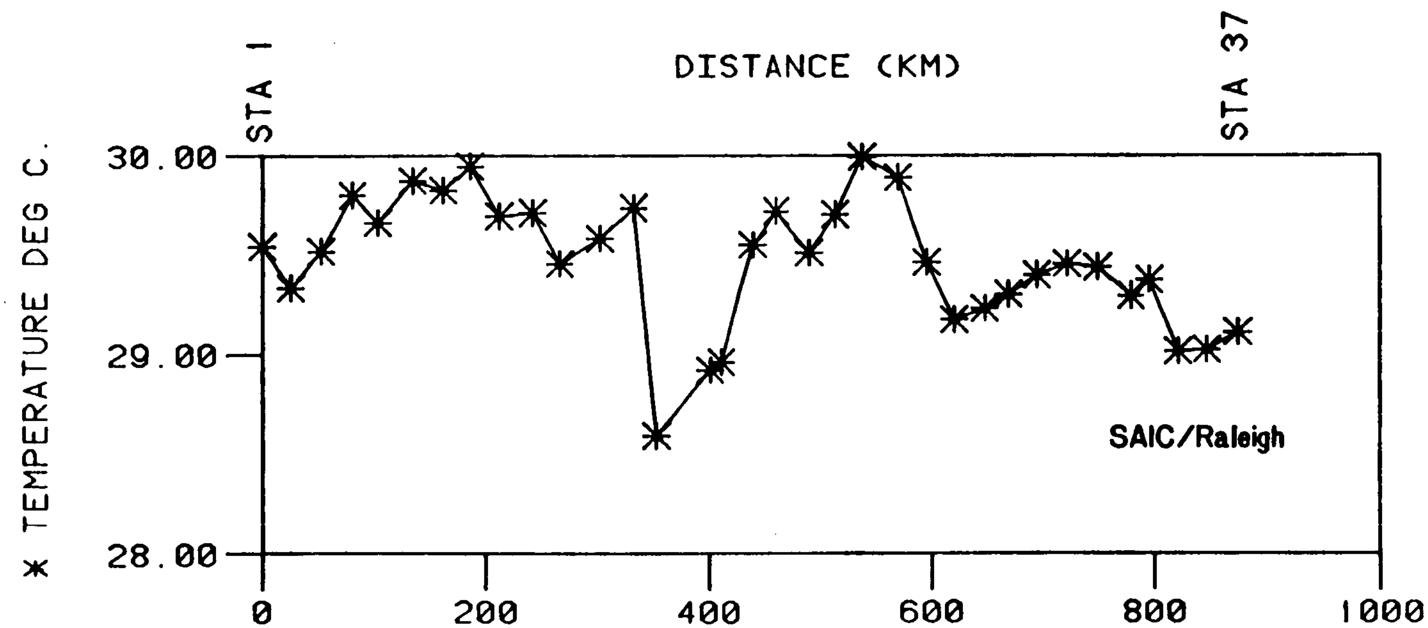




STENA HISPANIA 85-08
7/31/31 TO 8/ 1/85
STATIONS 1 TO 37
TEMPERATURE DEG C
MIN = 5.39 MAX = 30.39
SAIC/Raleigh

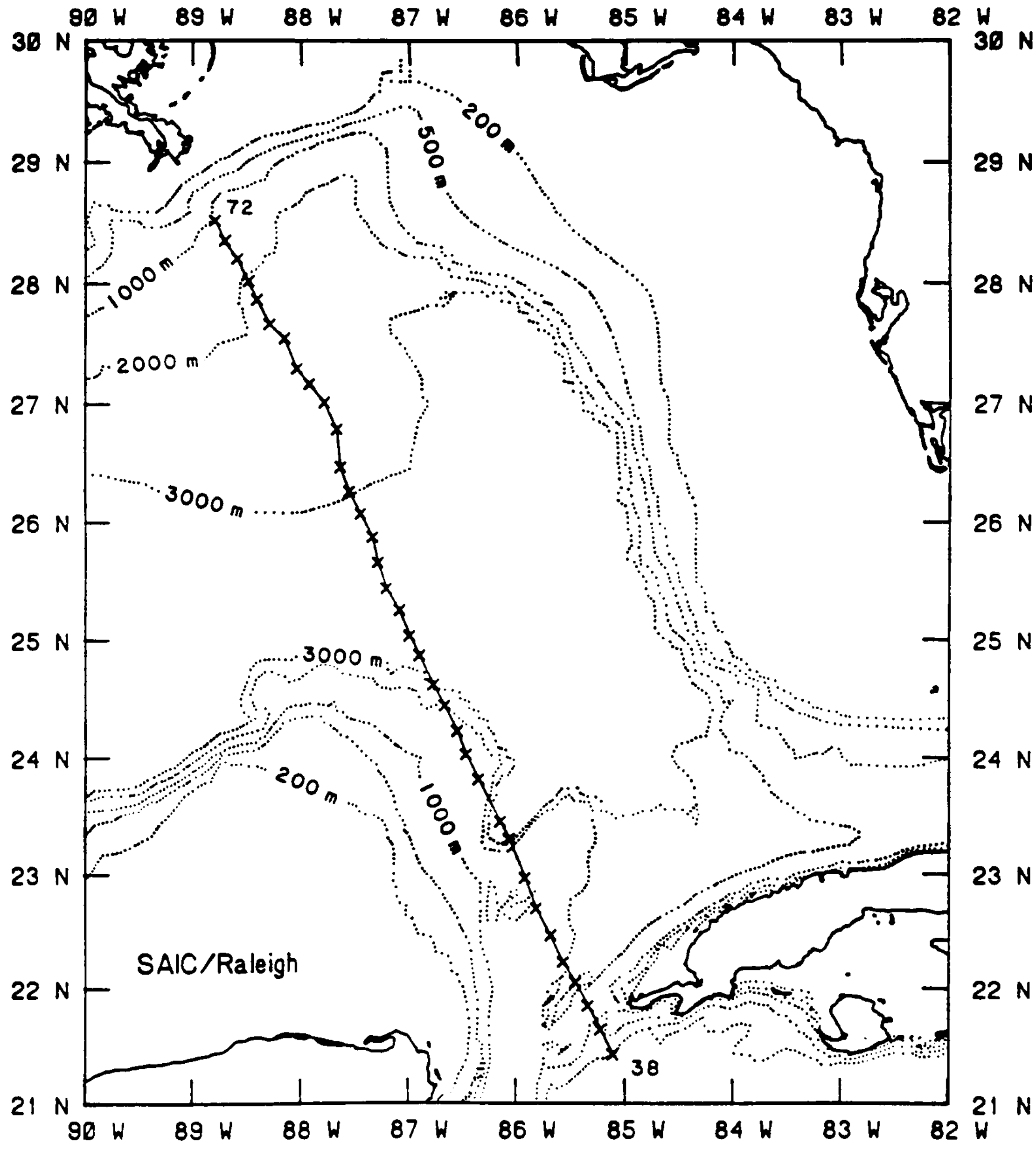


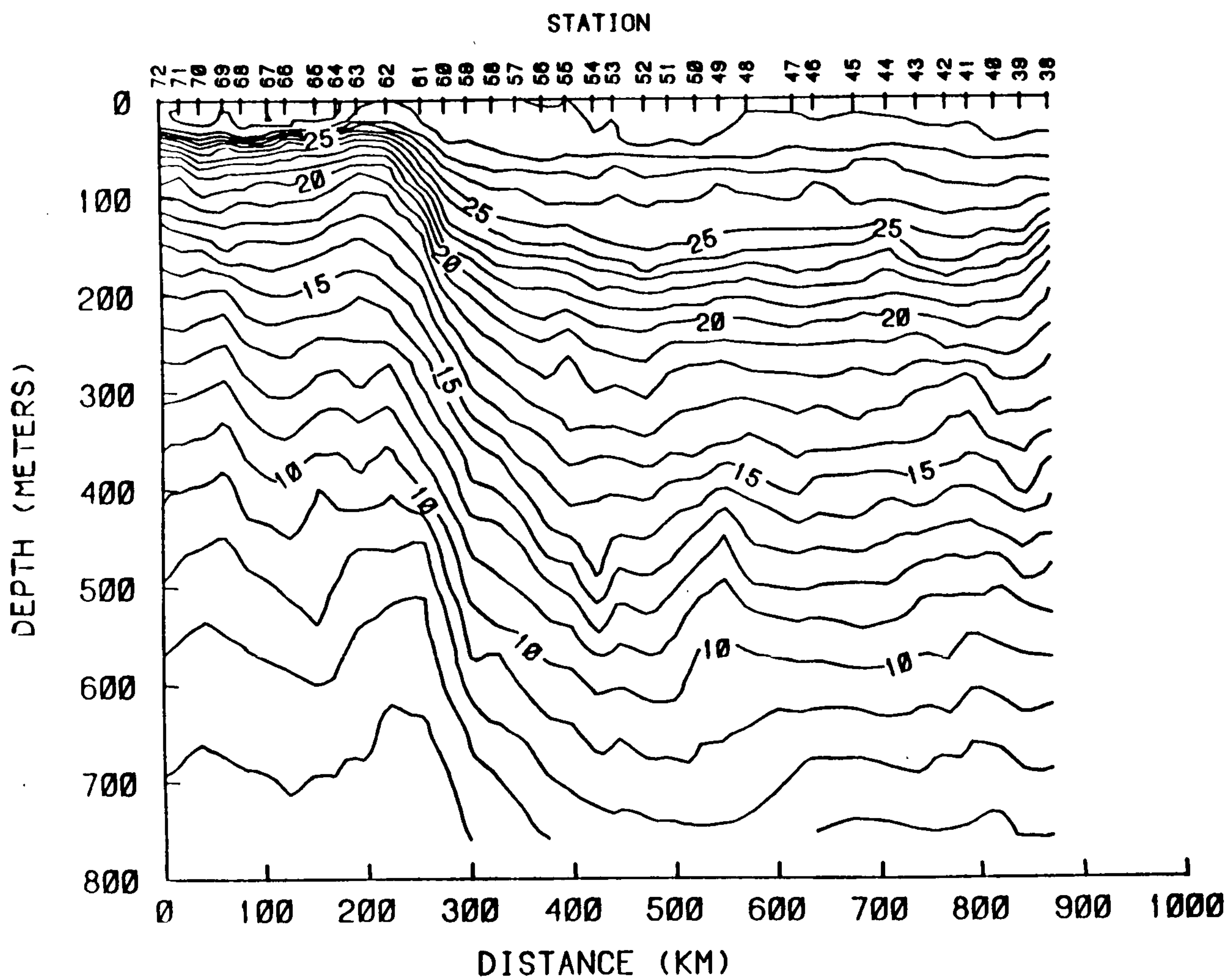
STENA HISPANIA 85-Ø8
7/31/31 TO 8/ 1/85
STATIONS 1 TO 37
TEMPERATURE DEG C
MIN = 13.46 MAX = 3Ø.39
SAIC/Raleigh



PARAMETERS AT SURFACE STENA HISPANIA 85-08

STENA HISPANIA 85-Ø8 7/31/85 TO 8/18/85





STENA HISPANIA 85-08

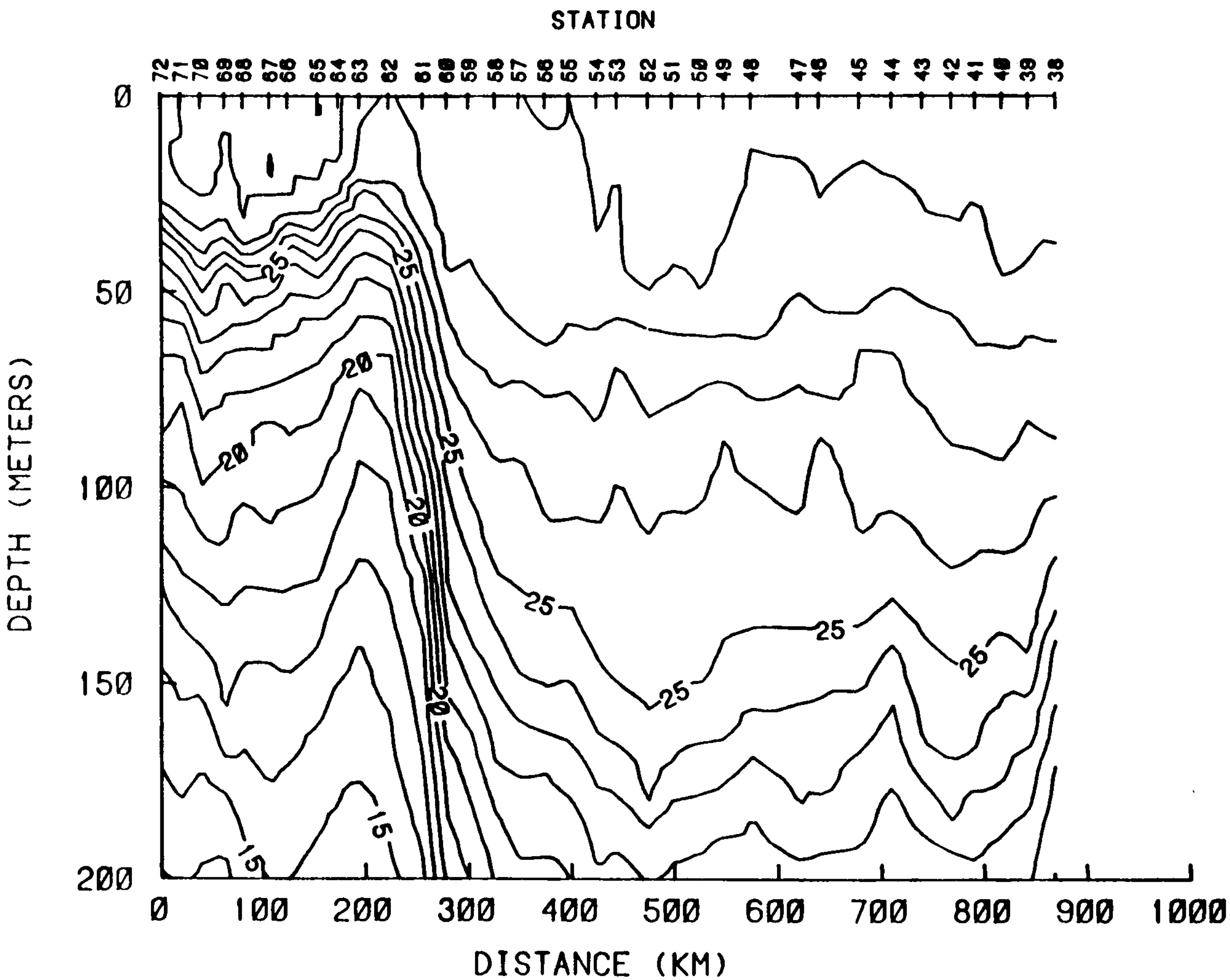
8/16/85 TO 8/18/85

STATIONS 38 TO 72

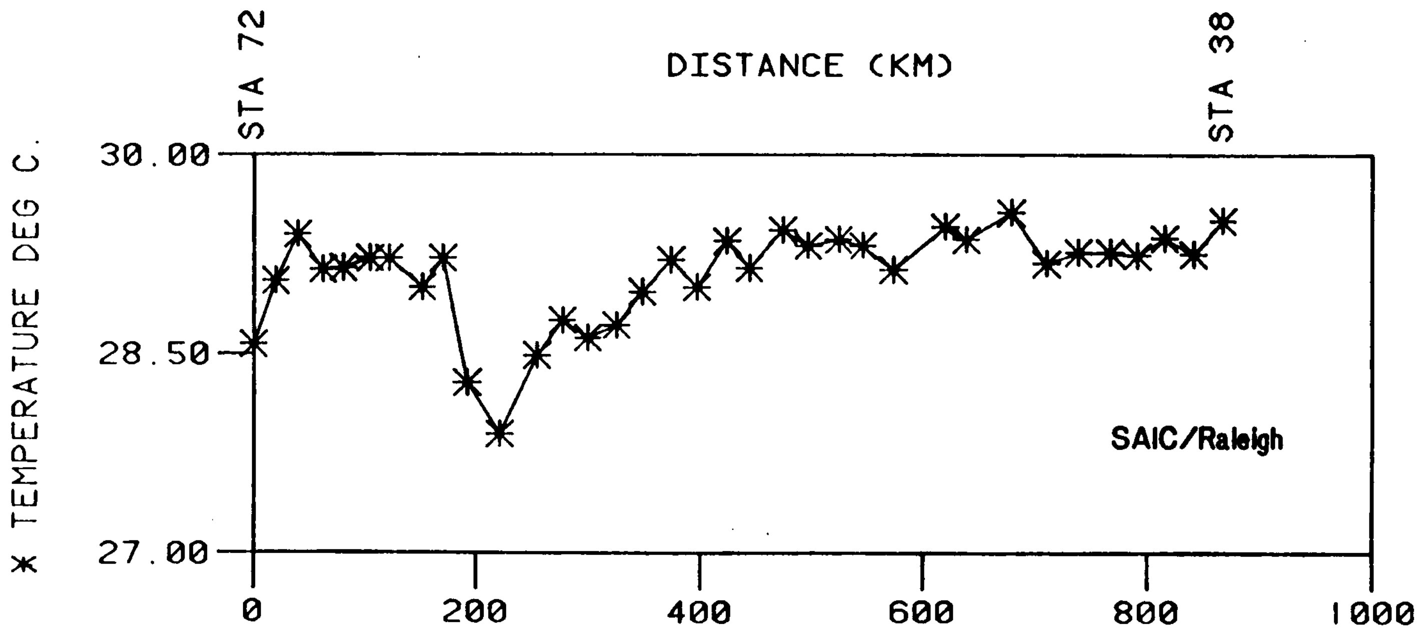
TEMPERATURE DEG C

MIN = 13.74 MAX = 29.57

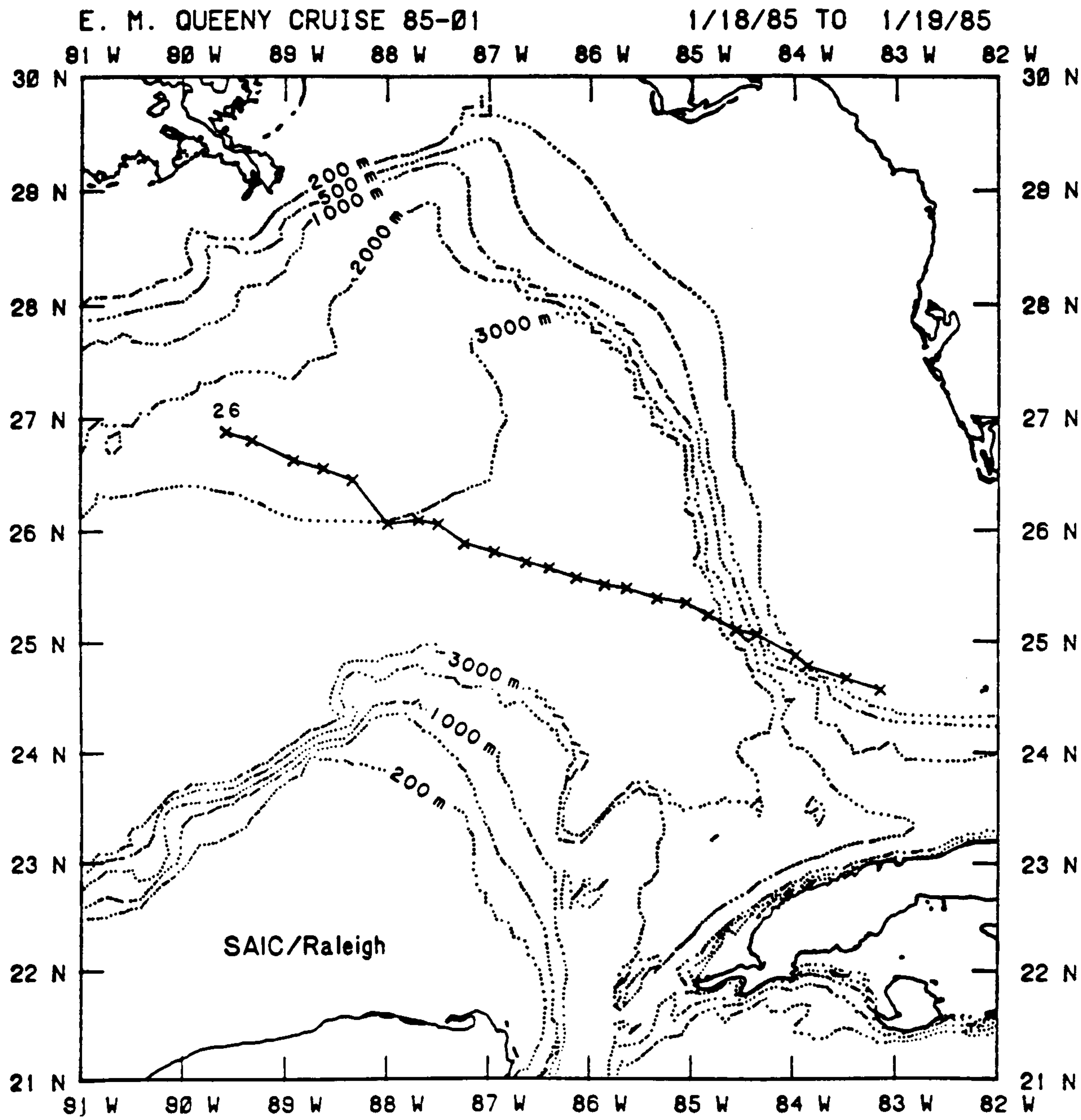
SAIC/Raleigh

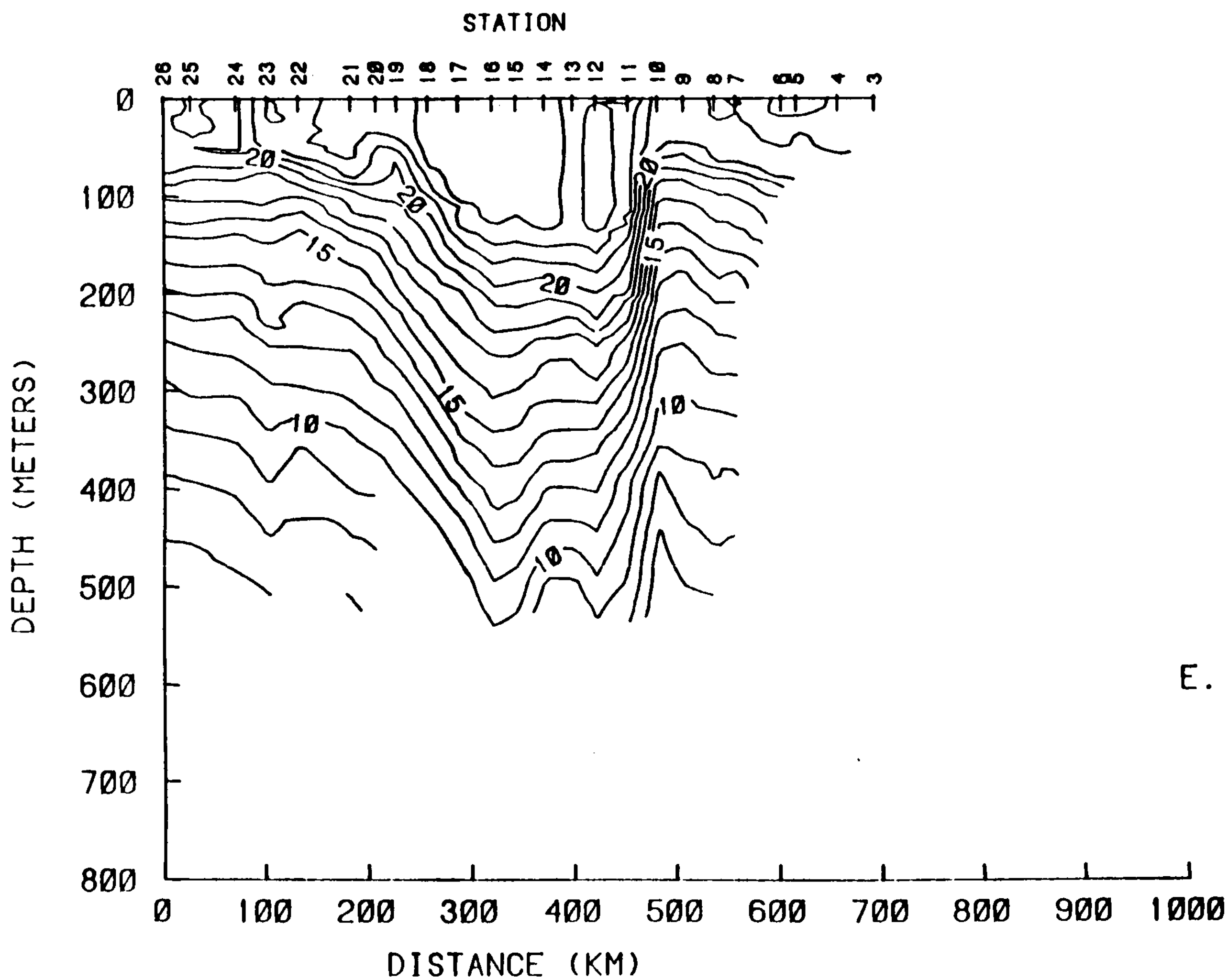


STENA HISPANIA 85-08
8/16/85 TO 8/18/85
STATIONS 38 TO 72
TEMPERATURE DEG C
MIN = 13.74 MAX = 29.57
SAIC/Raleigh

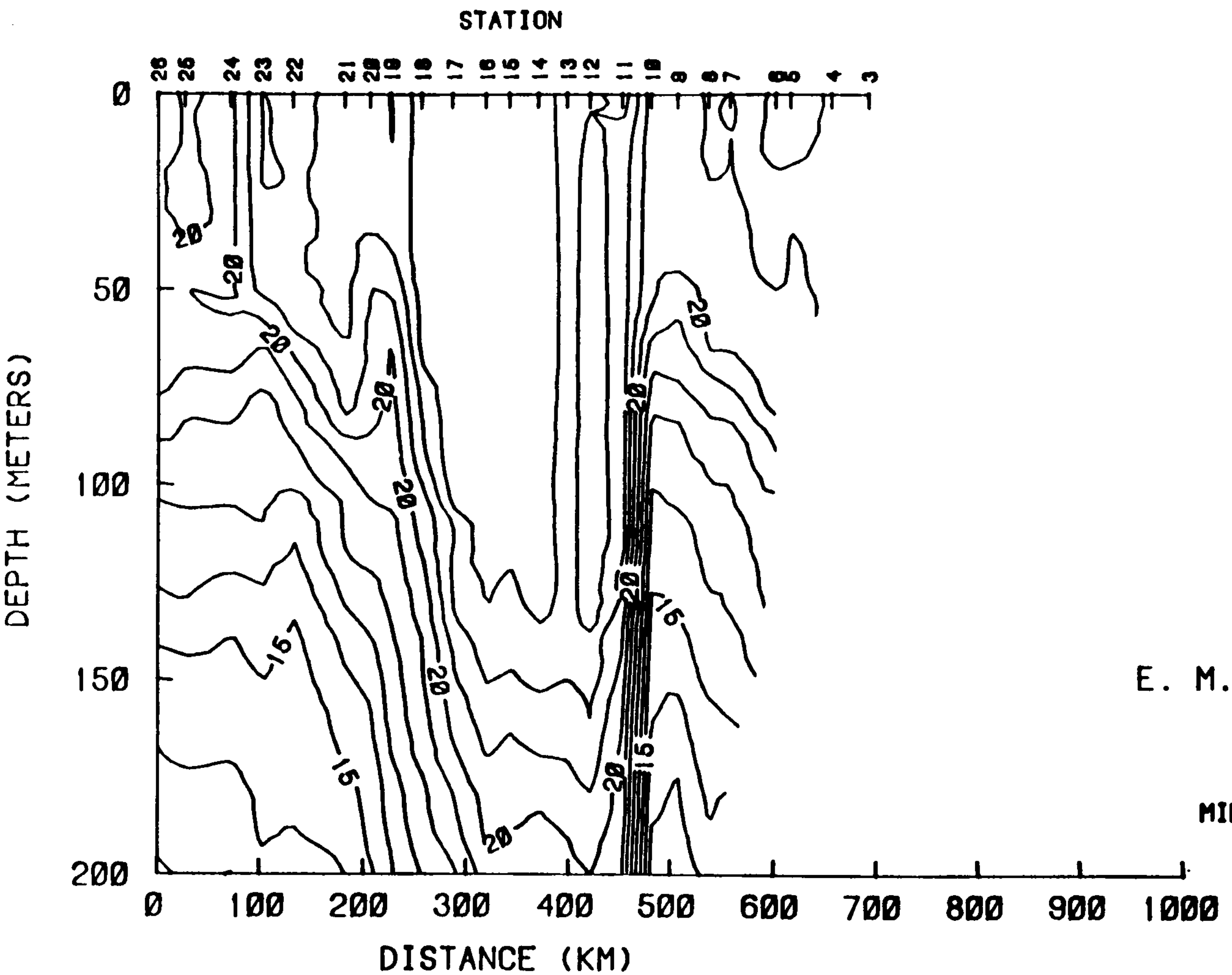


PARAMETERS AT SURFACE STENA HISPANIA 85-08

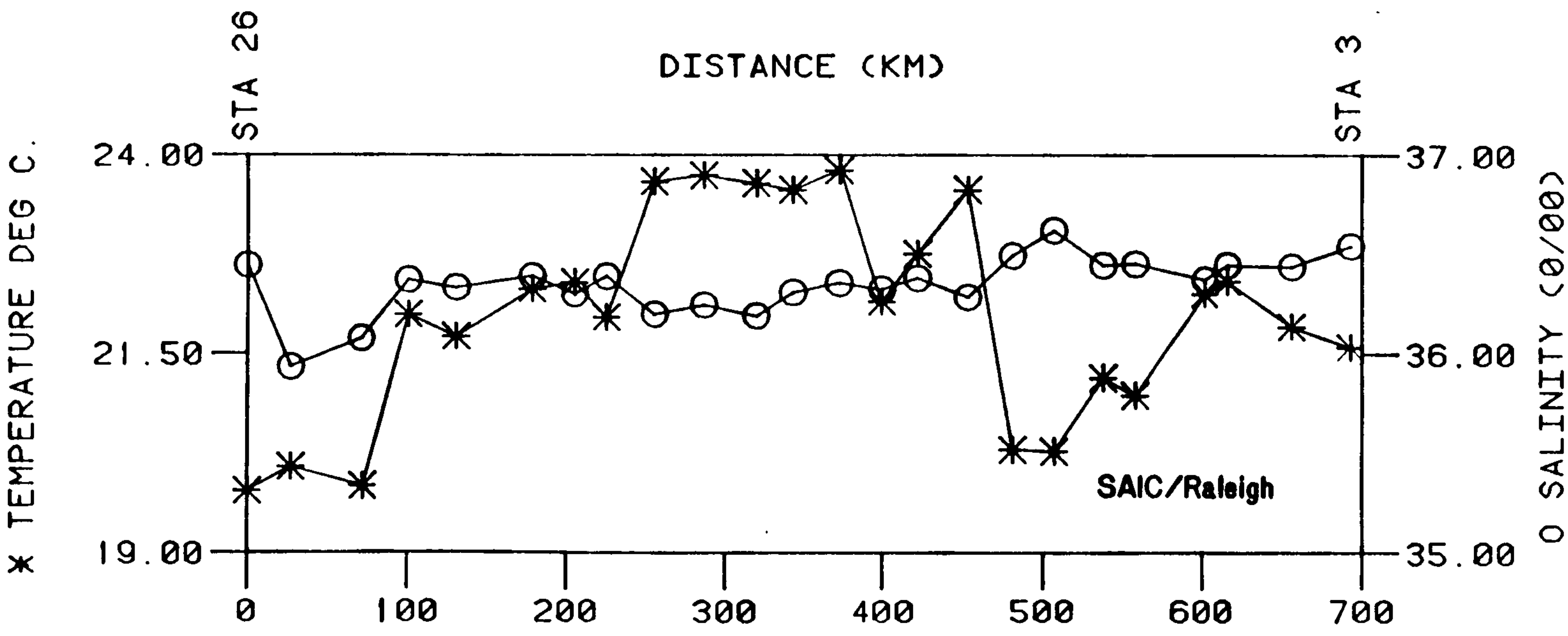

E. M. QUEENY CRUISE 85-01
1/18/85 TO 1/19/85
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
26
SAIC/Raleigh



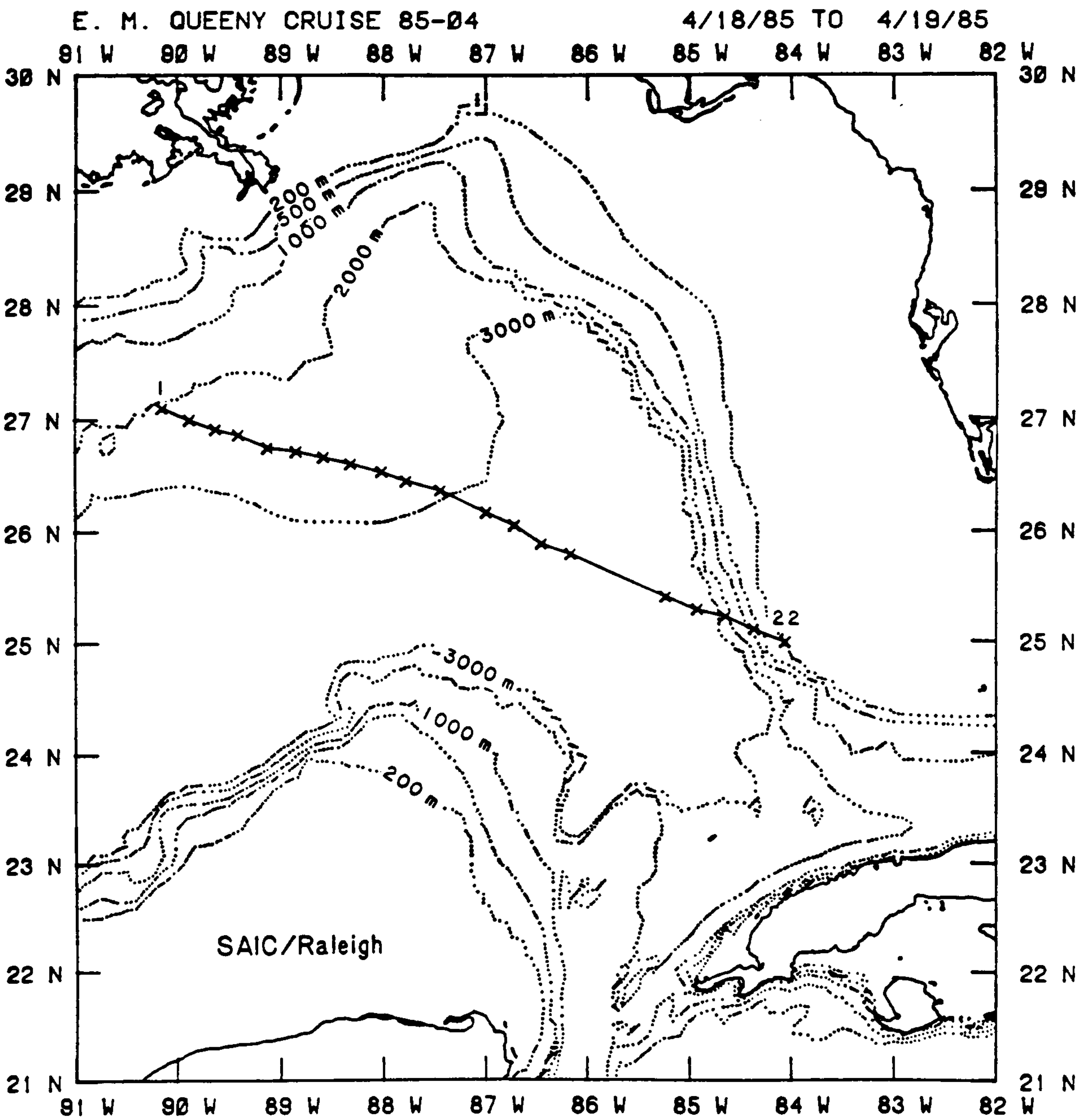
E. M. QUEENY CRUISE 85-01
1/18/85 TO 1/19/85
STATIONS 3 TO 26
TEMPERATURE DEG C
MIN = 6.18 MAX = 23.99
SAIC/Raleigh

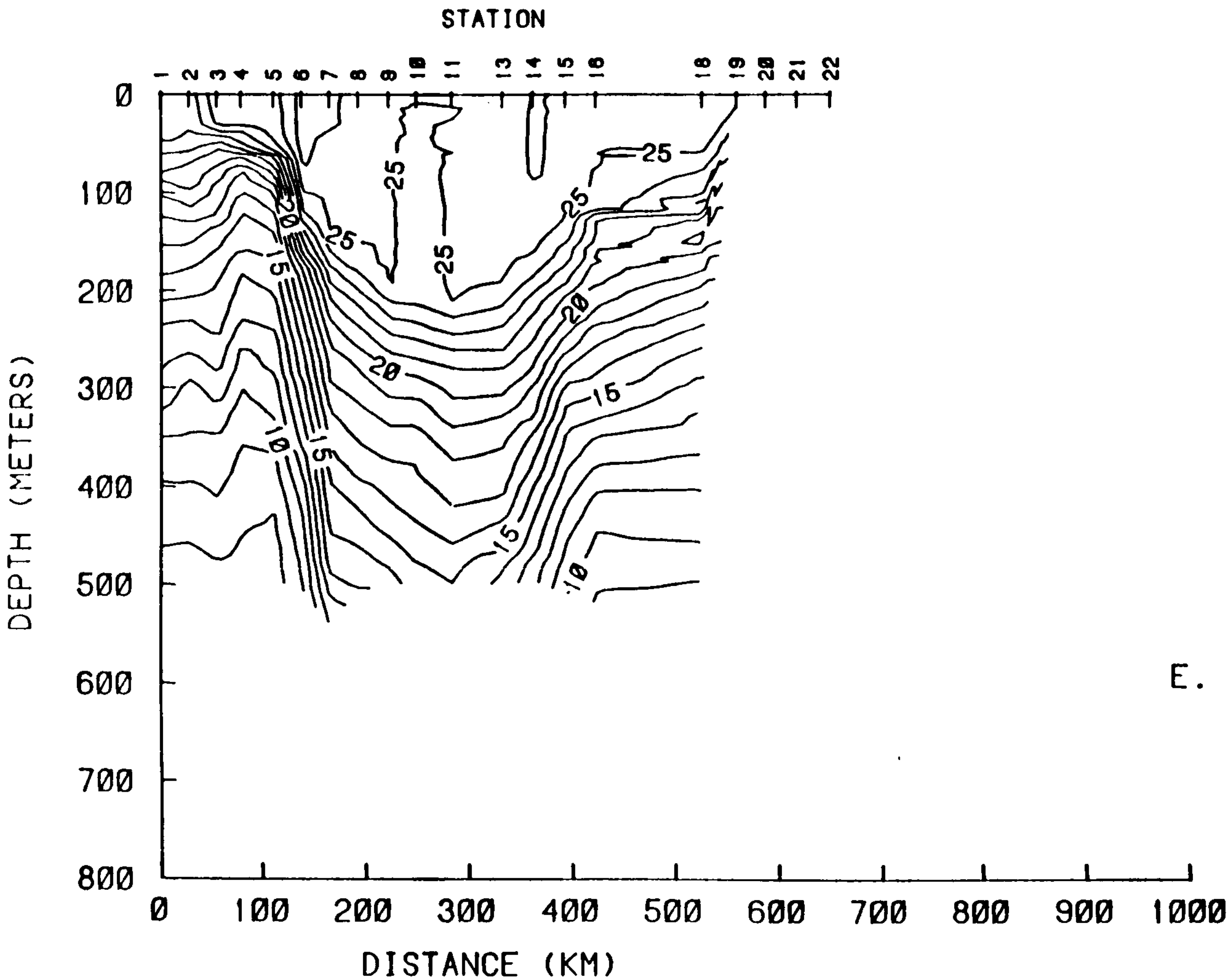


E. M. QUEENY CRUISE 85-01
1/18/85 TO 1/19/85
STATIONS 3 TO 26
TEMPERATURE DEG C
MIN = 12.20 MAX = 23.98
SAIC/Raleigh



PARAMETERS AT SURFACE E. M. QUEENY CRUISE 85-01


E. M. QUEENY CRUISE 85-Ø4
4/18/85 TO 4/19/85
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
22
3000 m
1000 m
200 m
SAIC/Raleigh



E. M. QUEENY CRUISE 85-04

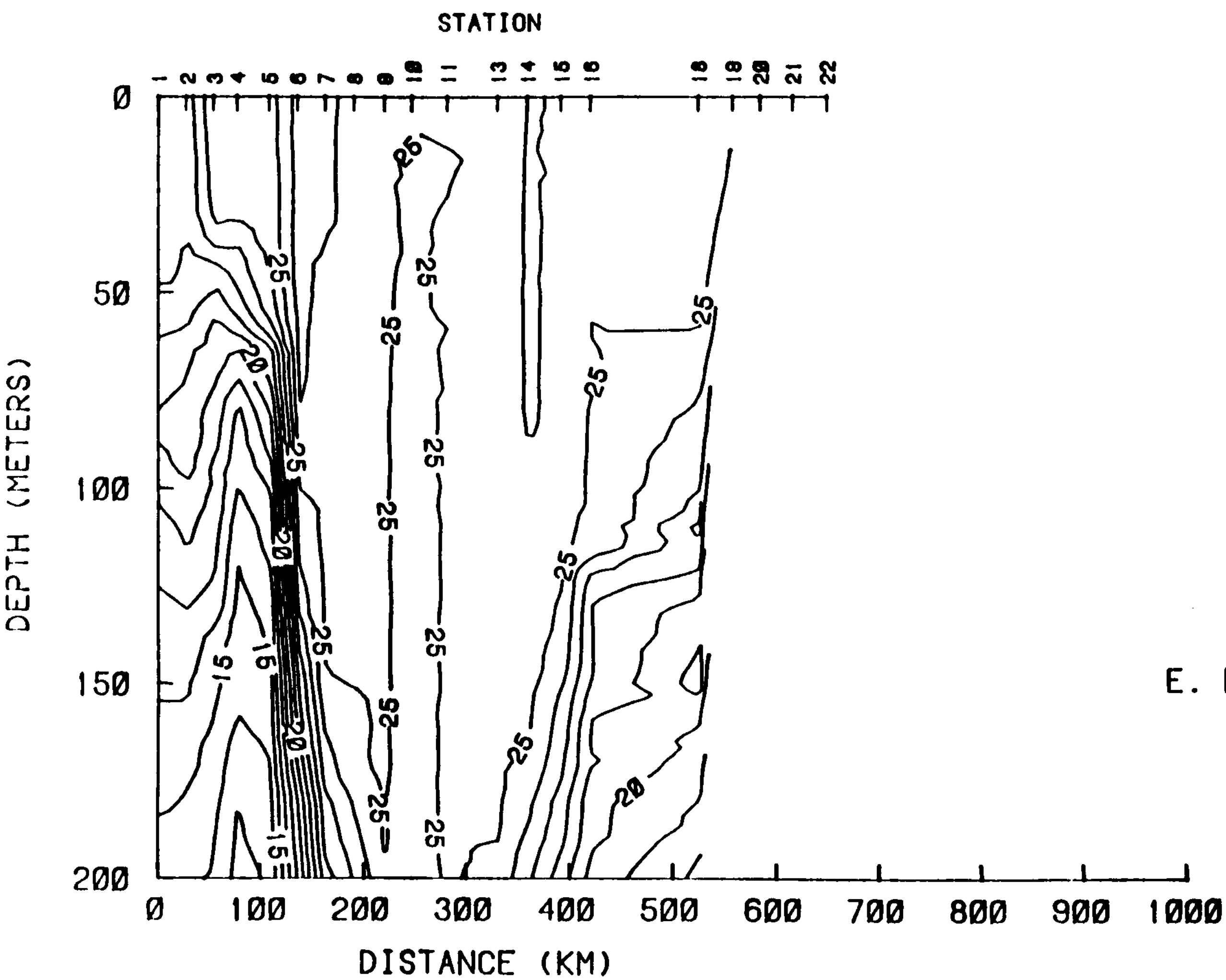
4/18/85 TO 4/19/85

STATIONS 1 TO 22

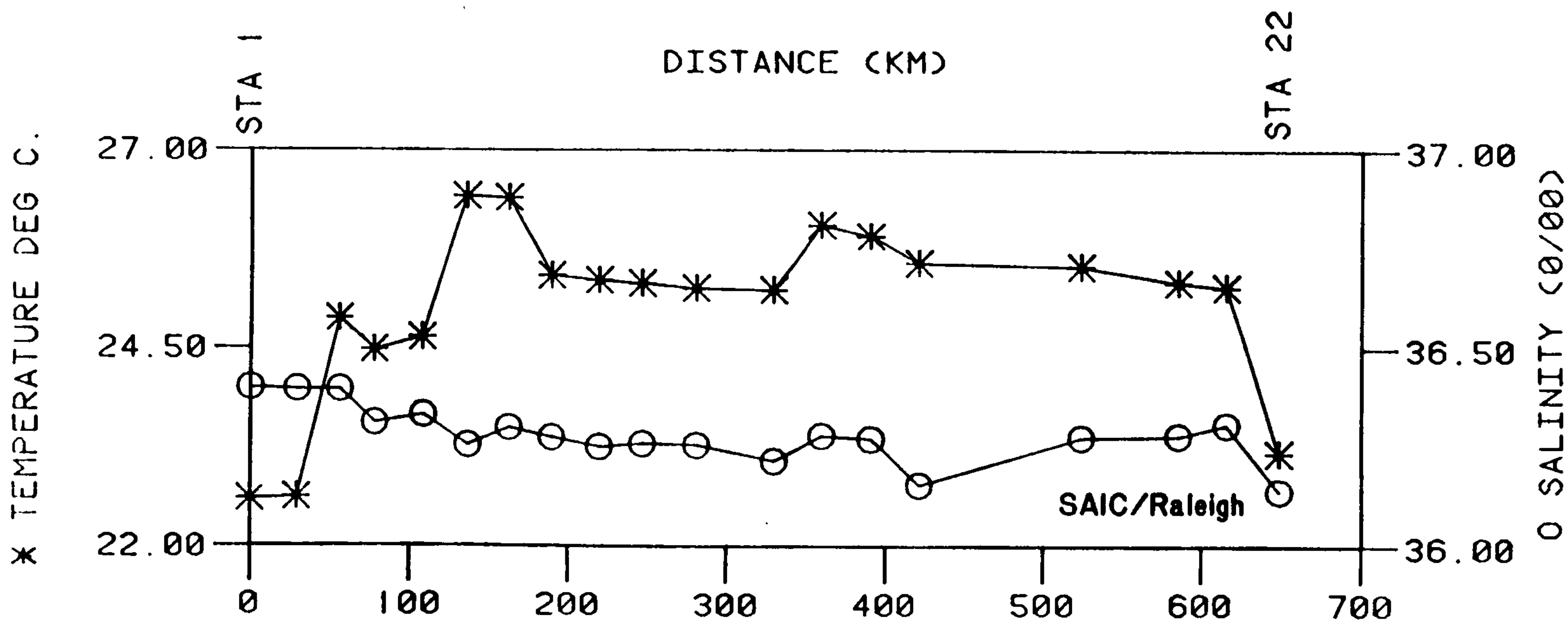
TEMPERATURE DEG C

MIN = 7.17 MAX = 26.54

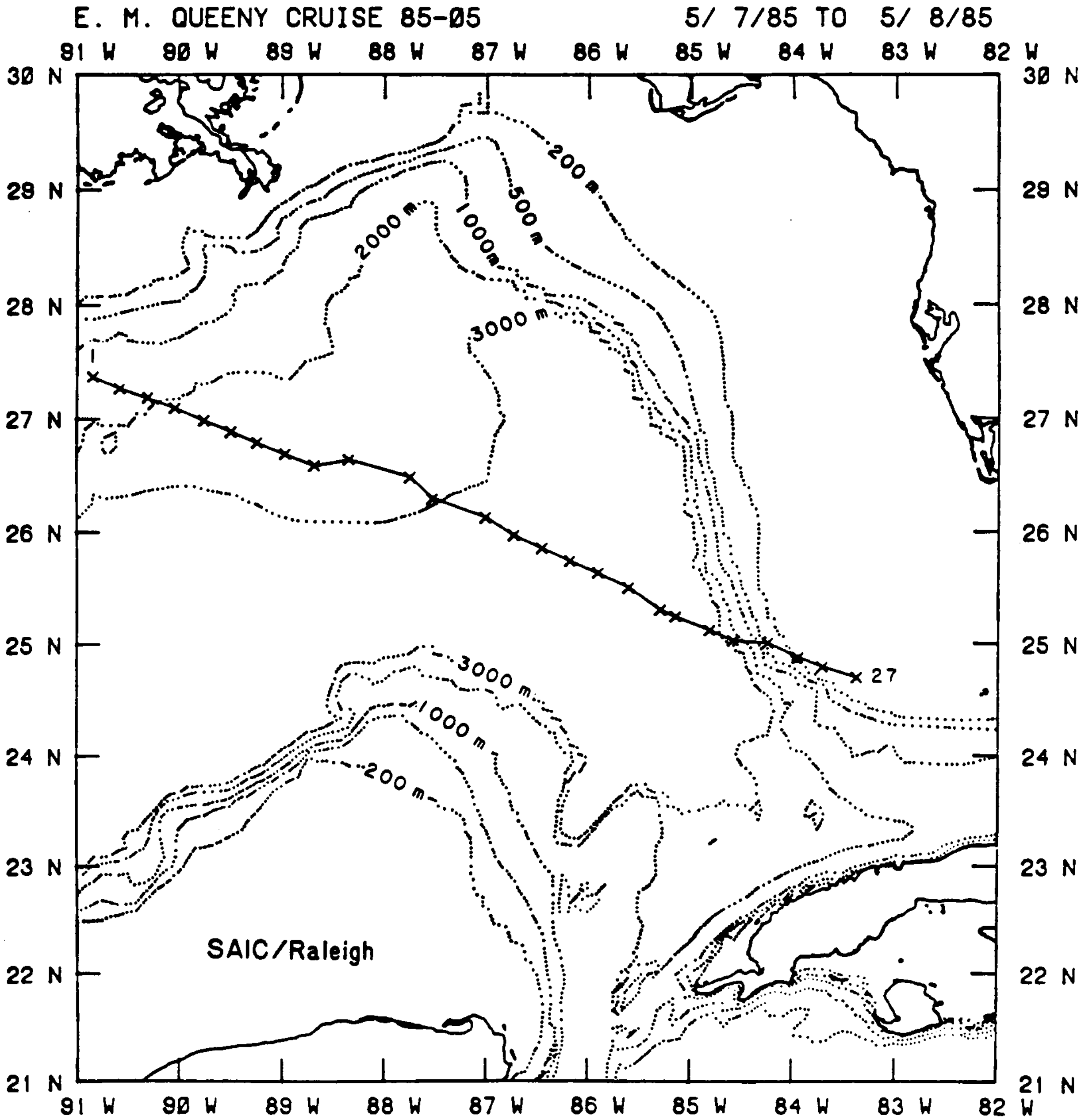
SAIC/Raleigh

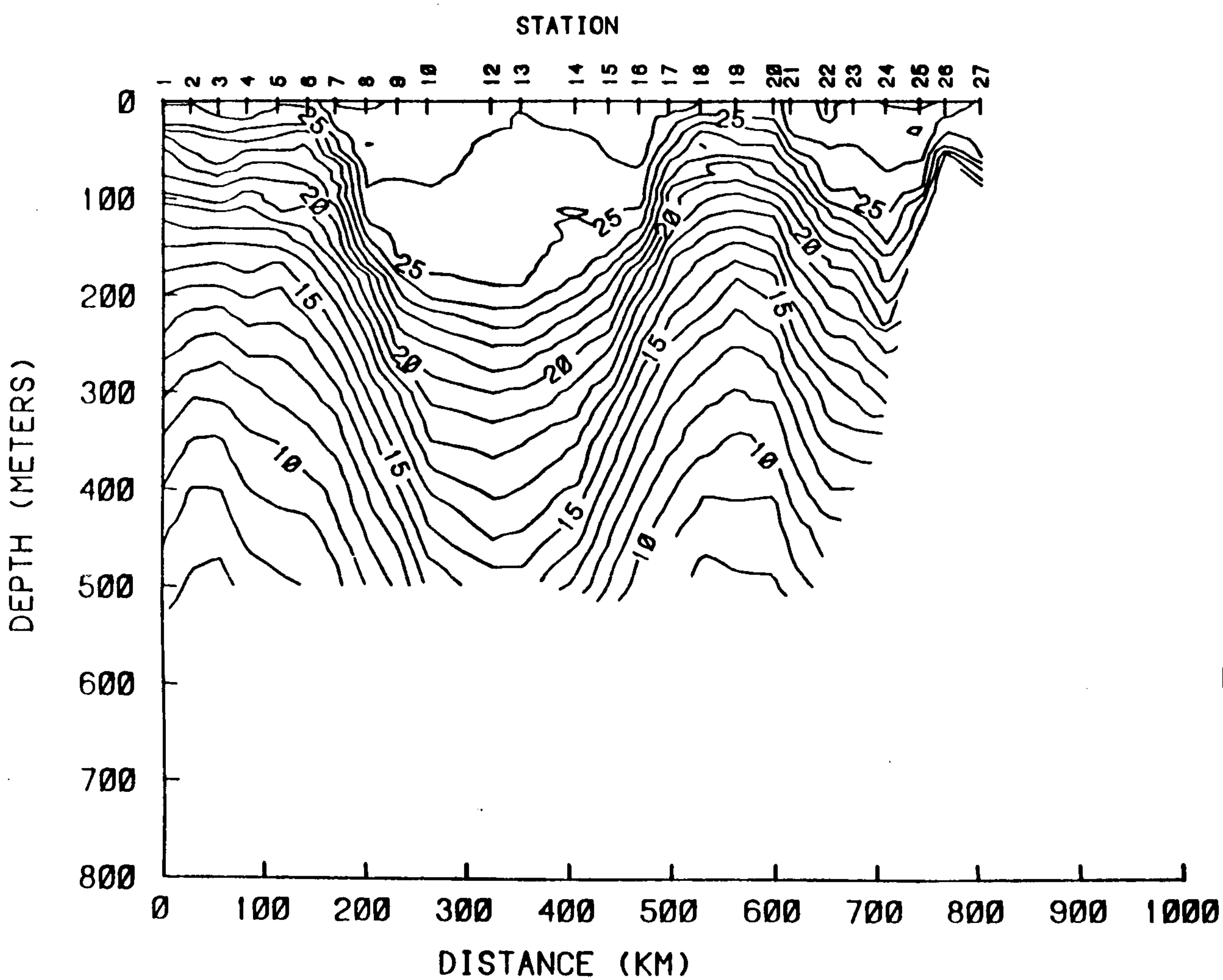


E. M. QUEENY CRUISE 85-04
4/18/85 TO 4/19/85
STATIONS 1 TO 22
TEMPERATURE DEG C
MIN = 12.68 MAX = 26.54
SAIC/Raleigh



PARAMETERS AT SURFACE E. M. QUEENY CRUISE 85-04


E. M. QUEENY CRUISE 85-05
5/ 7/85 TO 5/ 8/85
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
1000 m
200 m
27
SAIC/Raleigh



E. M. QUEENY CRUISE 85-05

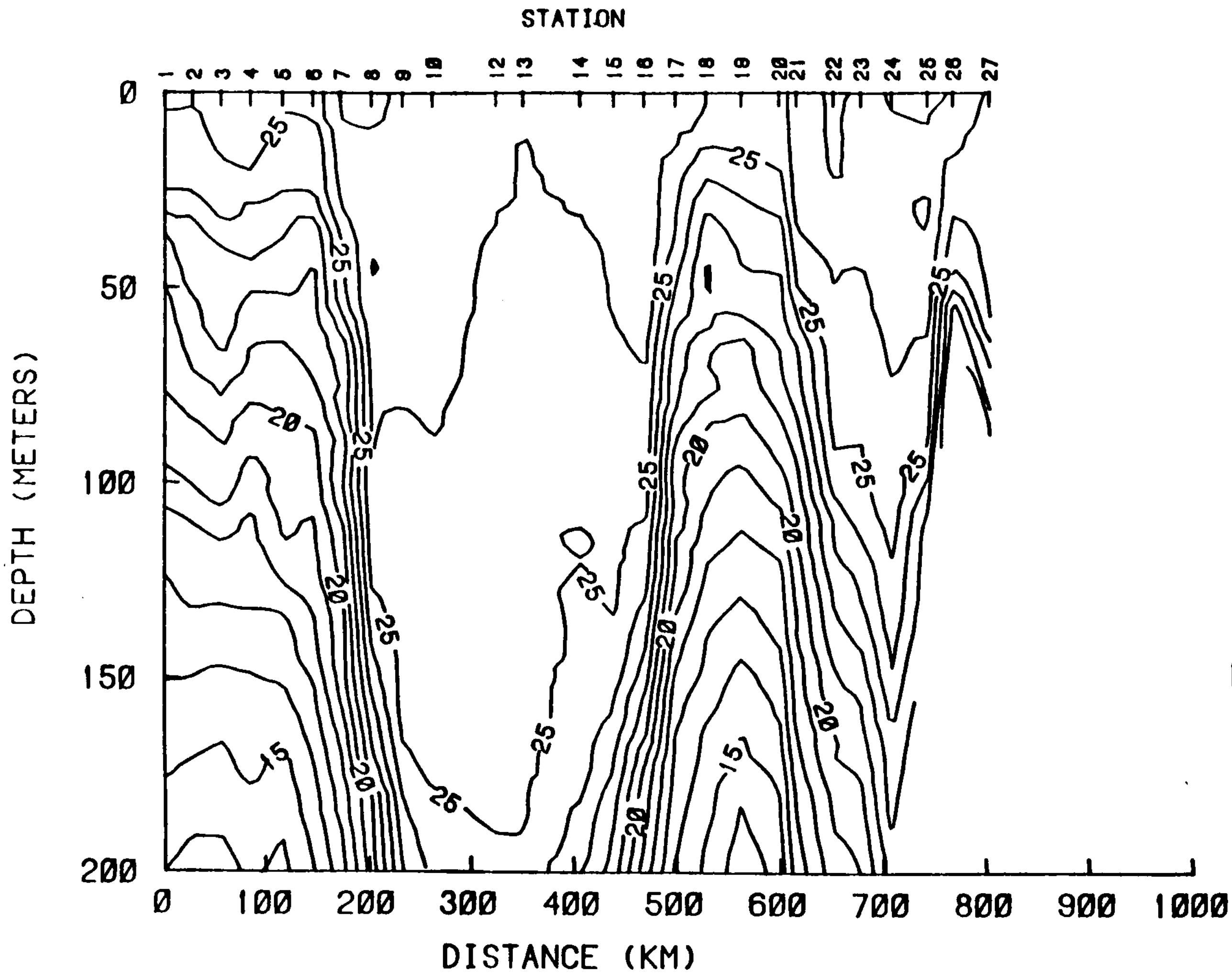
5/ 7/85 TO 5/ 8/85

STATIONS 1 TO 27

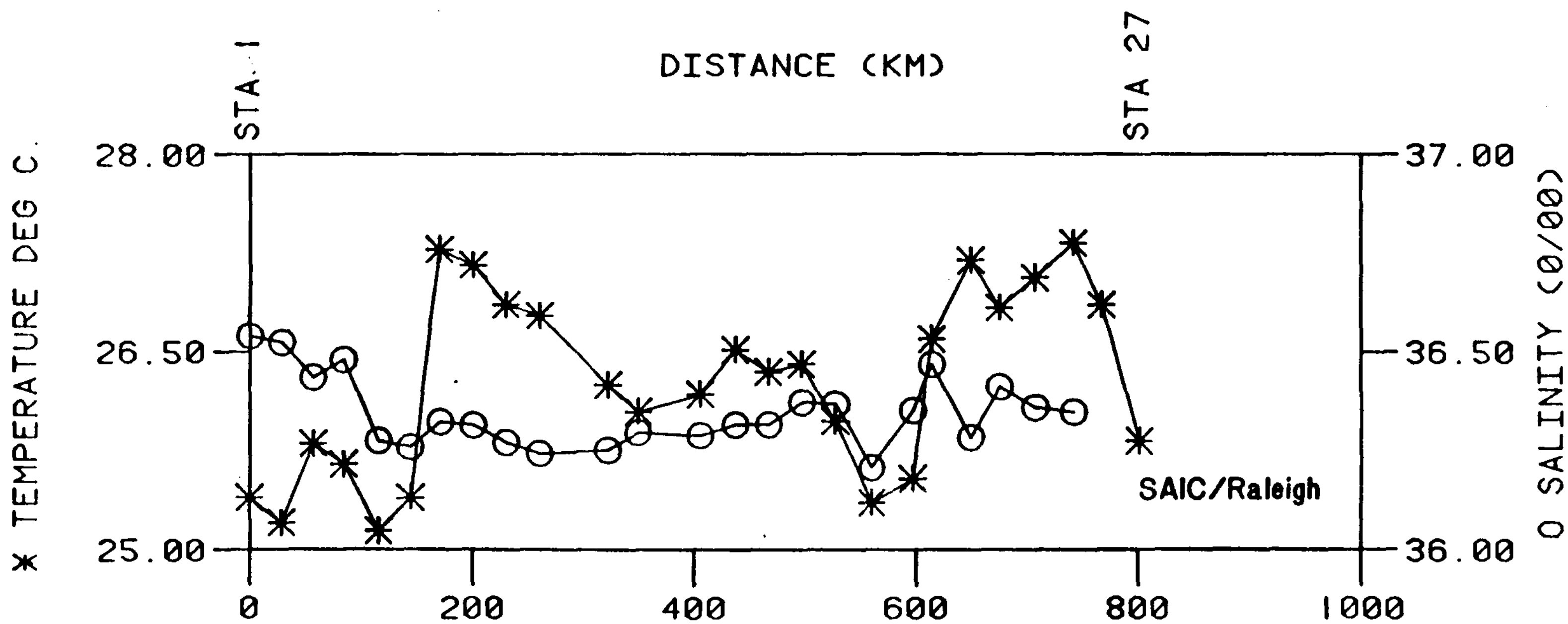
TEMPERATURE DEG C

MIN = 6.52 MAX = 27.33

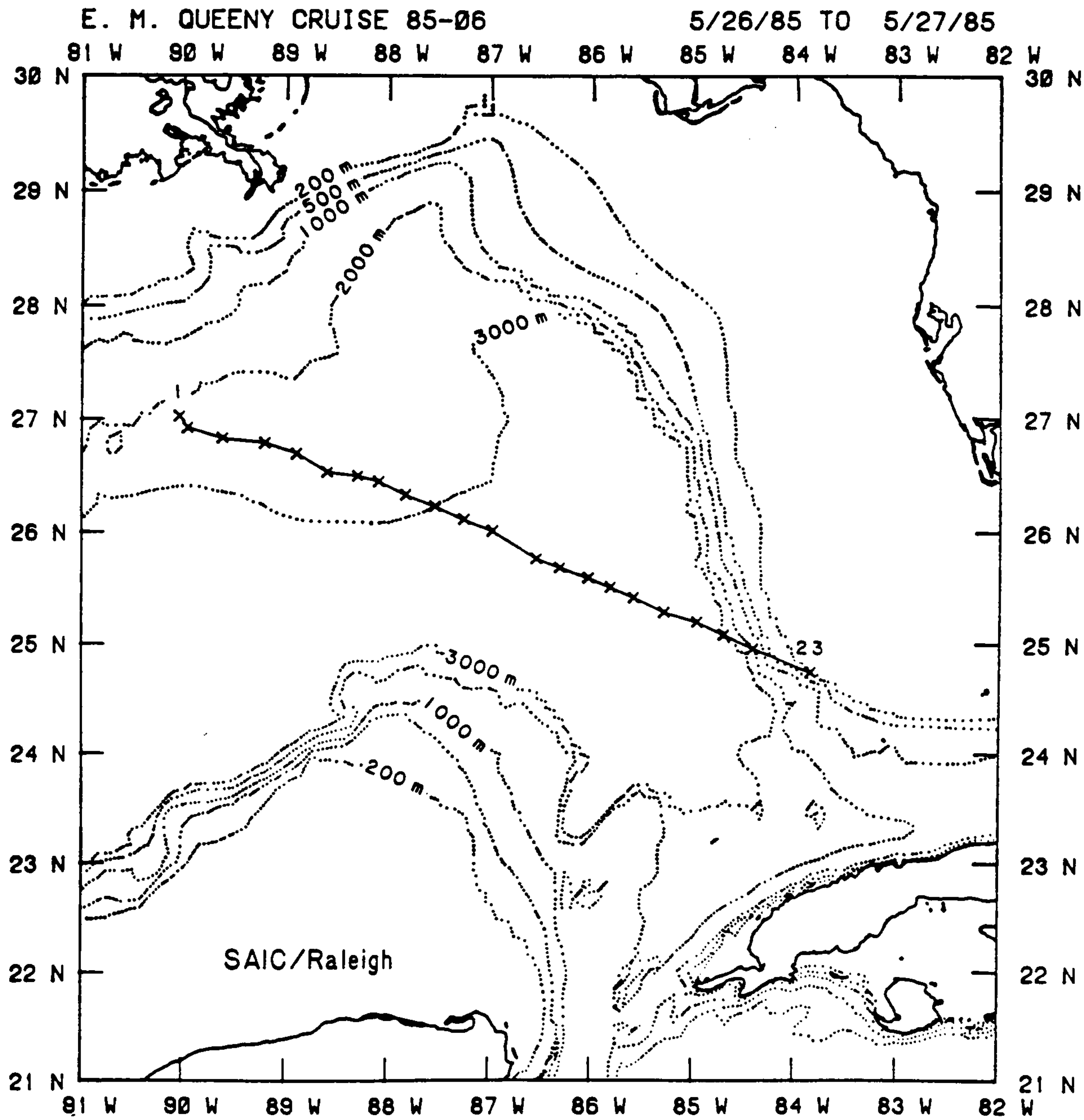
SAIC/Raleigh



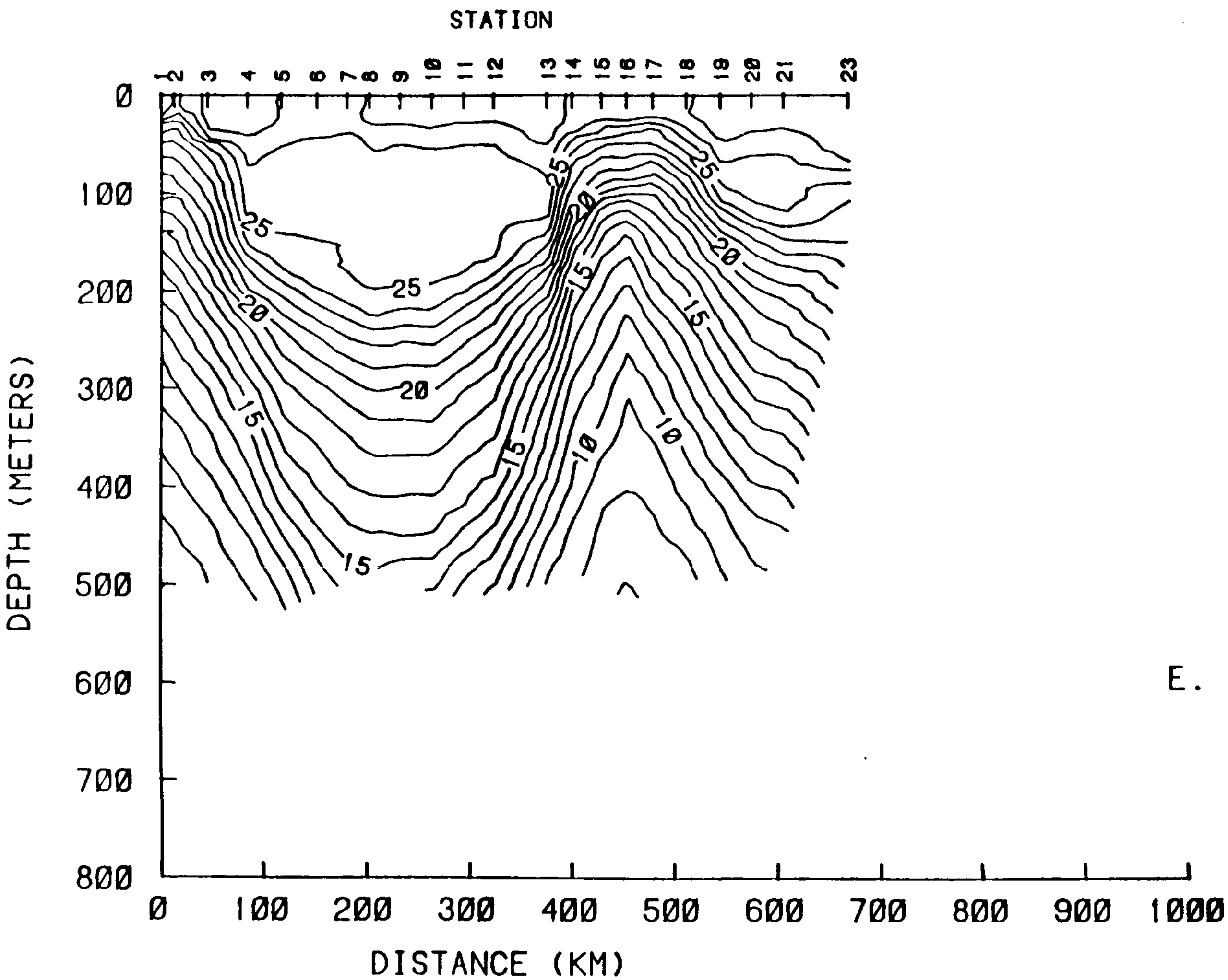
E. M. QUEENY CRUISE 85-05
5/ 7/85 TO 5/ 8/85
STATIONS 1 TO 27
TEMPERATURE DEG C
MIN = 13.43 MAX = 27.33
SAIC/Raleigh



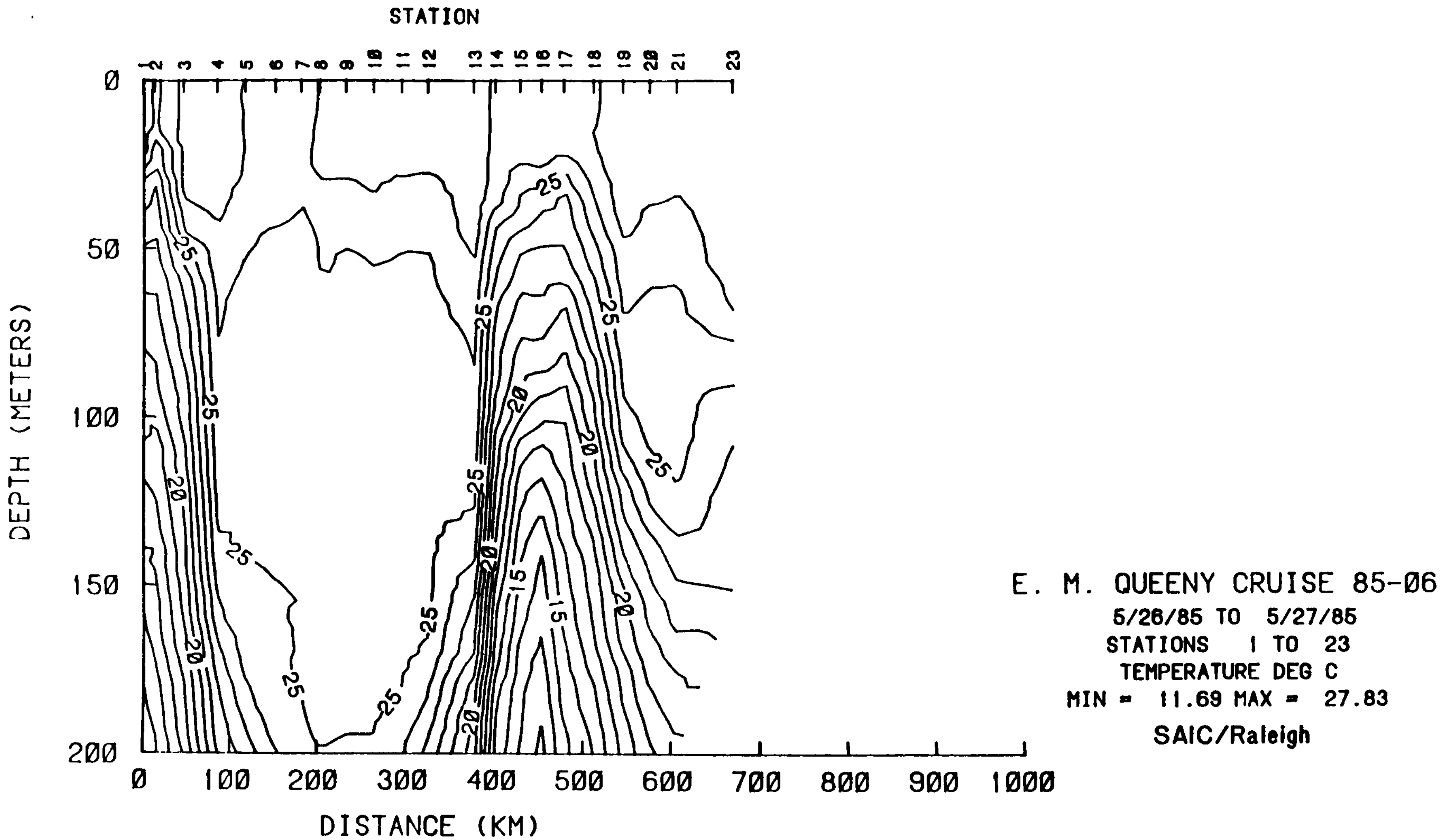
PARAMETERS AT SURFACE E. M. QUEENY CRUISE 85-05

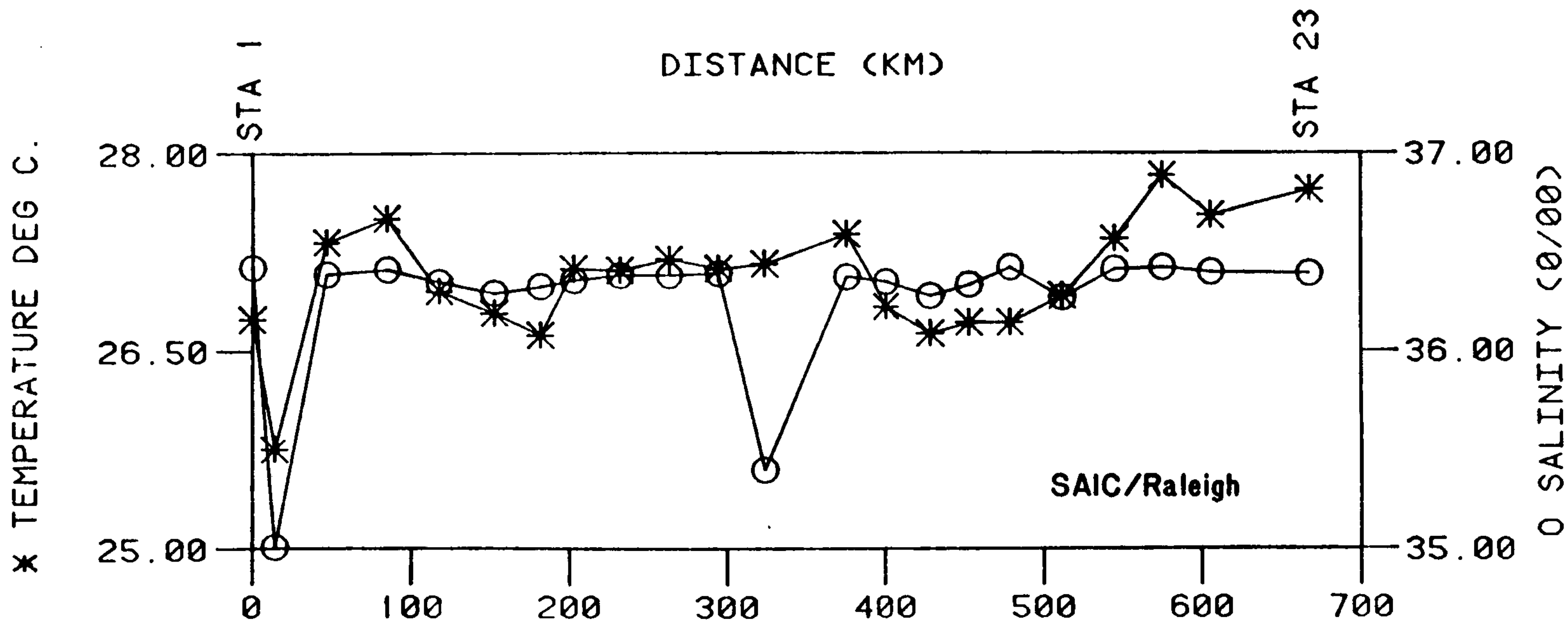


E. M. QUEENY CRUISE 85-Ø6
5/26/85 TO 5/27/85
81 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
23
SAIC/Raleigh

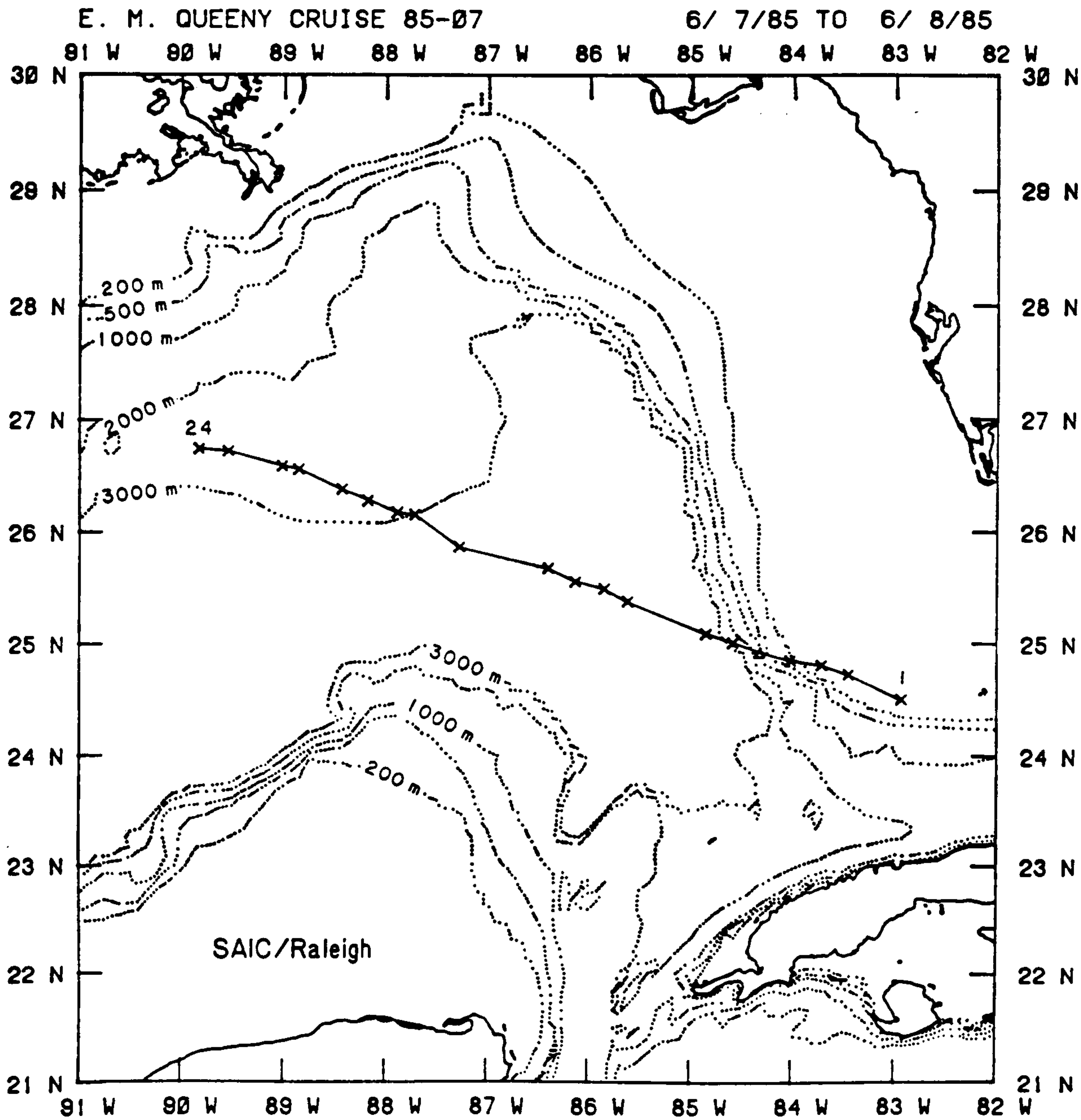


E. M. QUEENY CRUISE 85-06
5/26/85 TO 5/27/85
STATIONS 1 TO 23
TEMPERATURE DEG C
MIN = 6.83 MAX = 27.83
SAIC/Raleigh

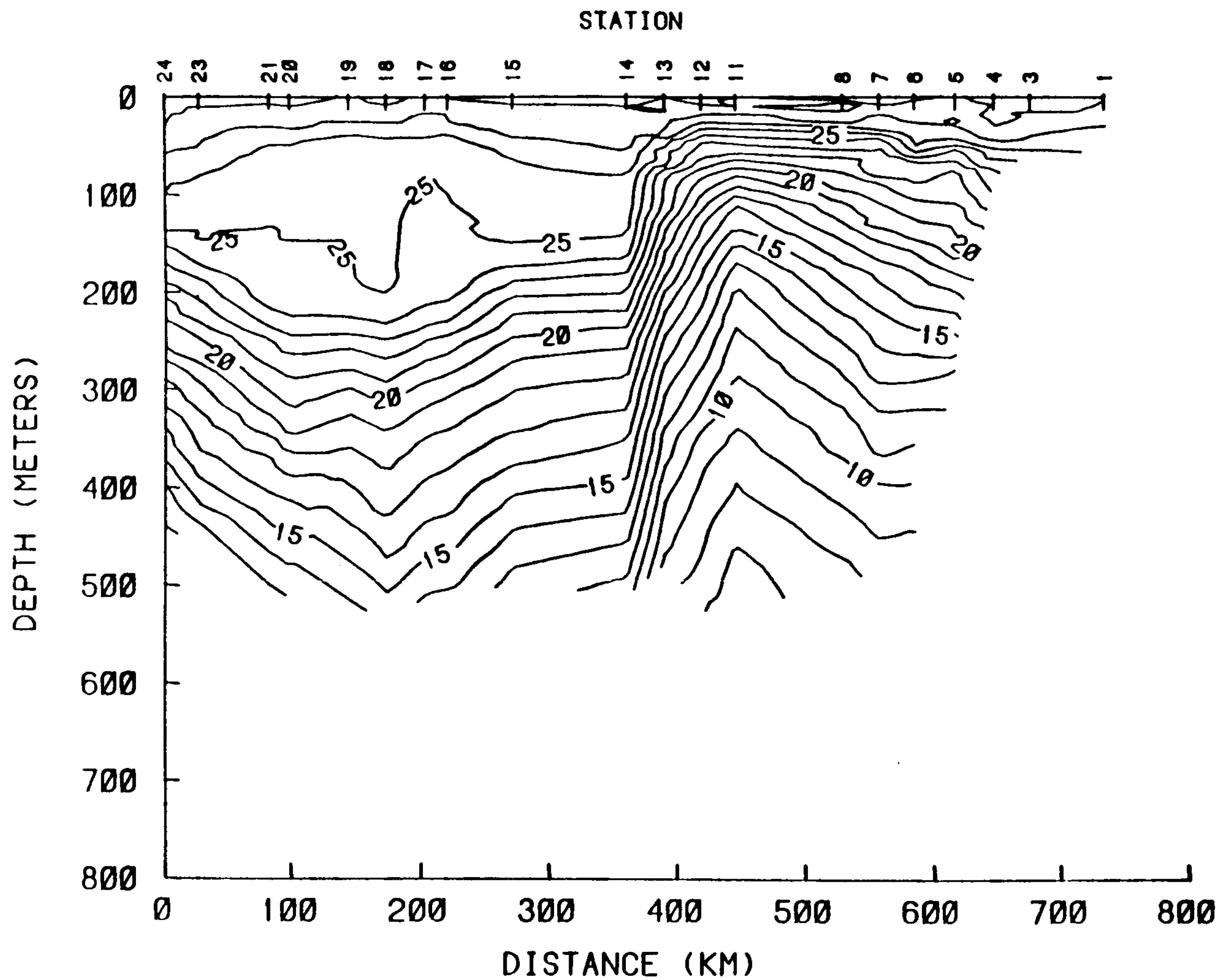

STATION
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 23
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
E. M. QUEENY CRUISE 85-06
5/26/85 TO 5/27/85
STATIONS 1 TO 23
TEMPERATURE DEG C
MIN = 11.69 MAX = 27.83
SAIC/Raleigh



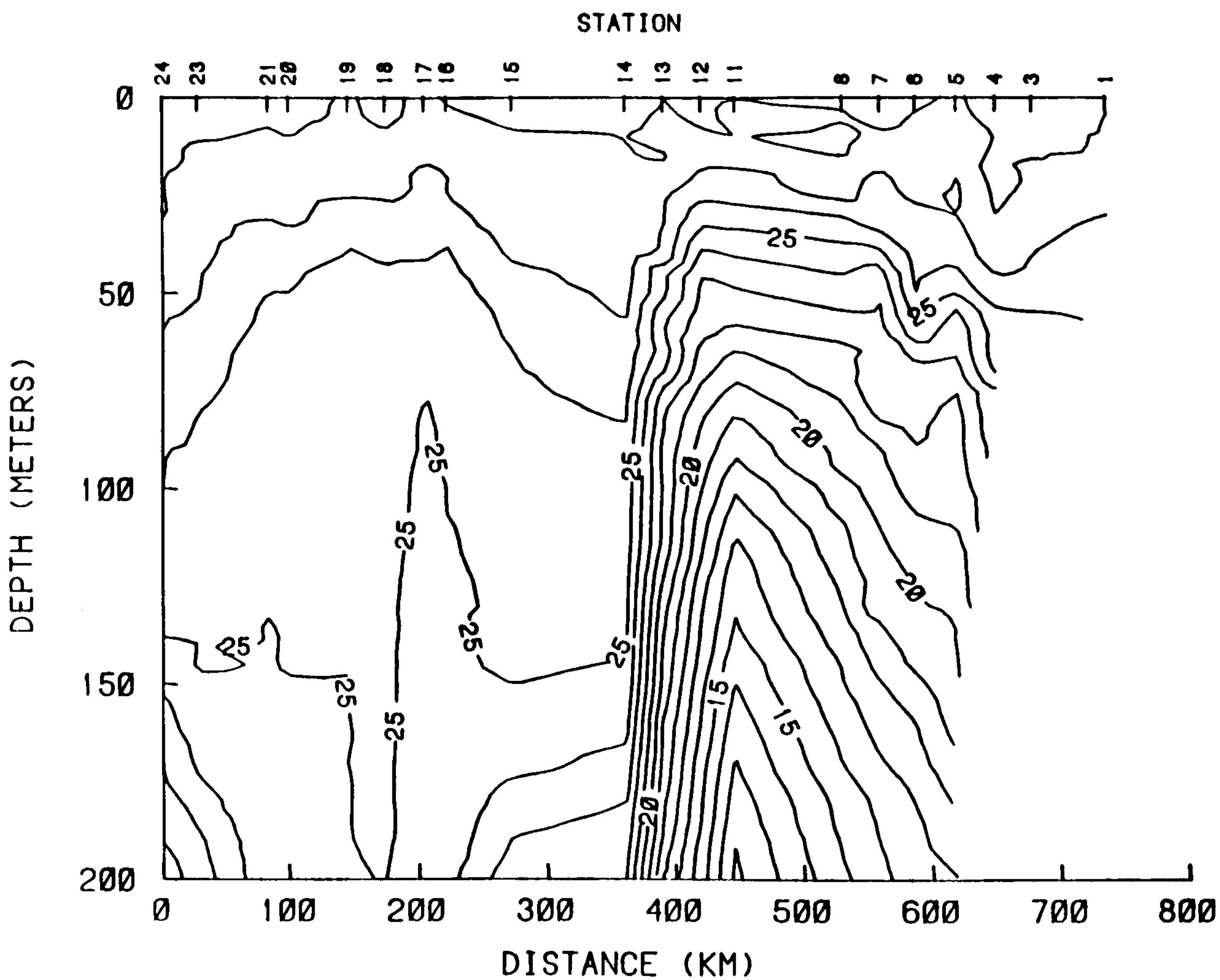
PARAMETERS AT SURFACE E. M. QUEENY CRUISE 85-06



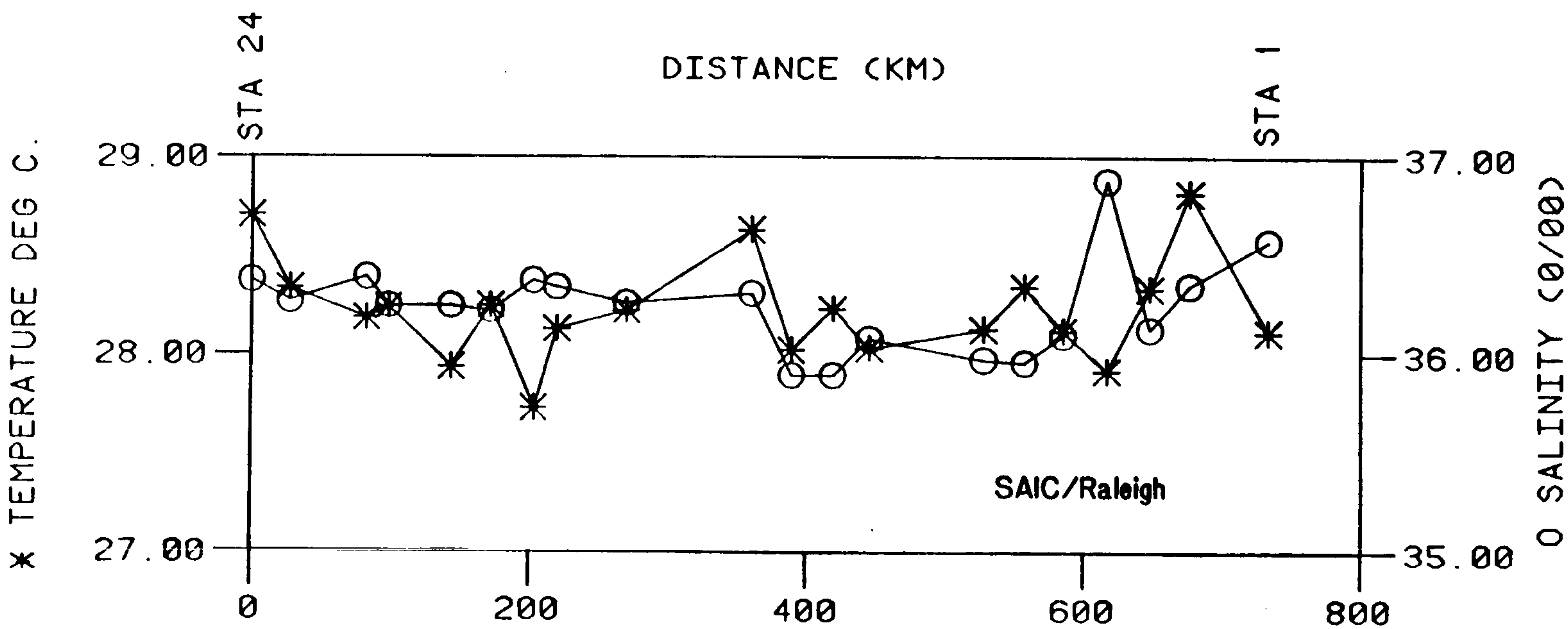
E. M. QUEENY CRUISE 85-Ø7
6/ 7/85 TO 6/ 8/85
91 W
9Ø W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
3Ø N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
24
1
3000 m
1000 m
200 m
SAIC/Raleigh



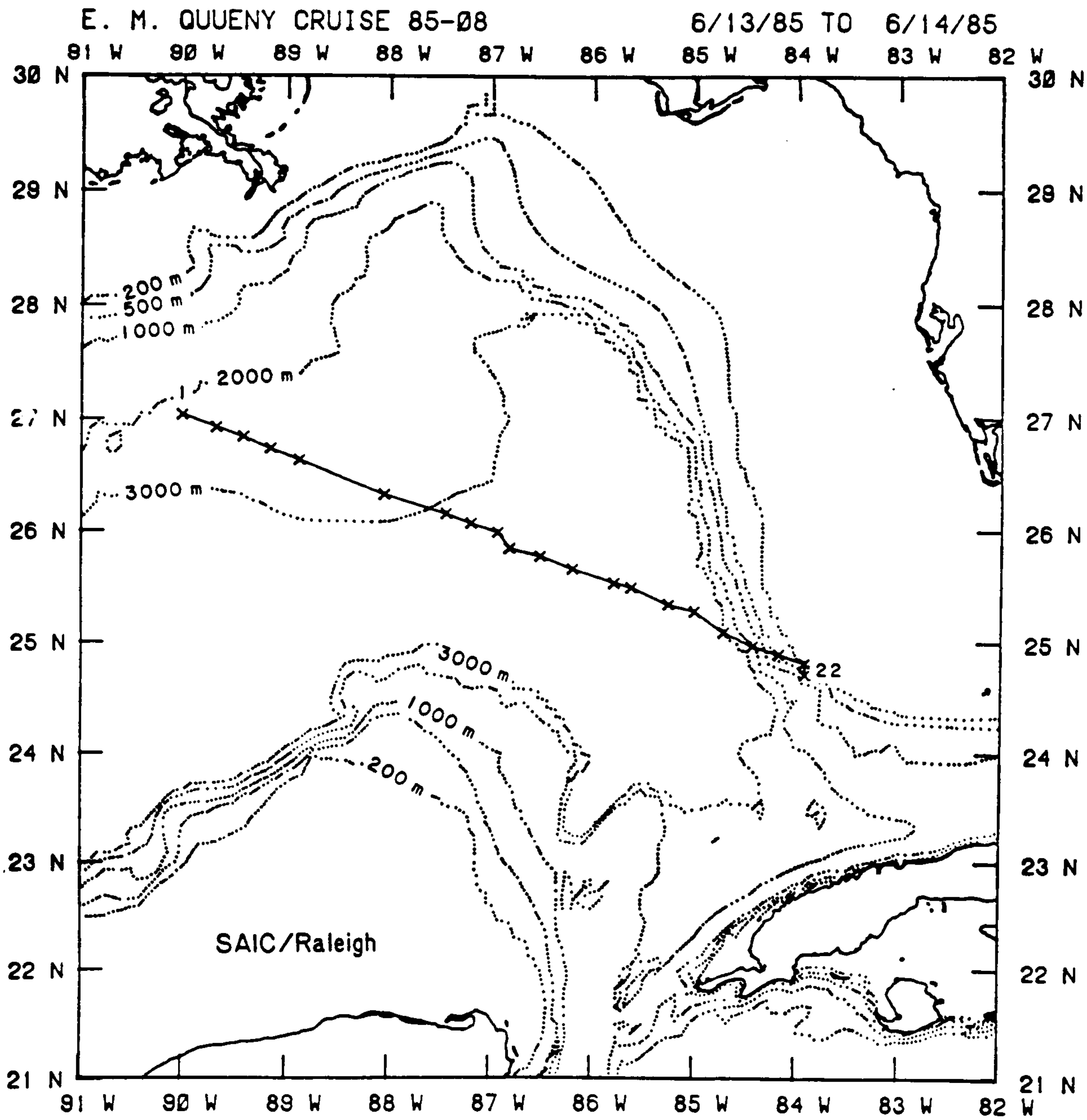
E. M. QUEENY CRUISE 85-07
6/ 7/85 TO 6/ 8/85
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 6.33 MAX = 28.82
SAIC/Raleigh



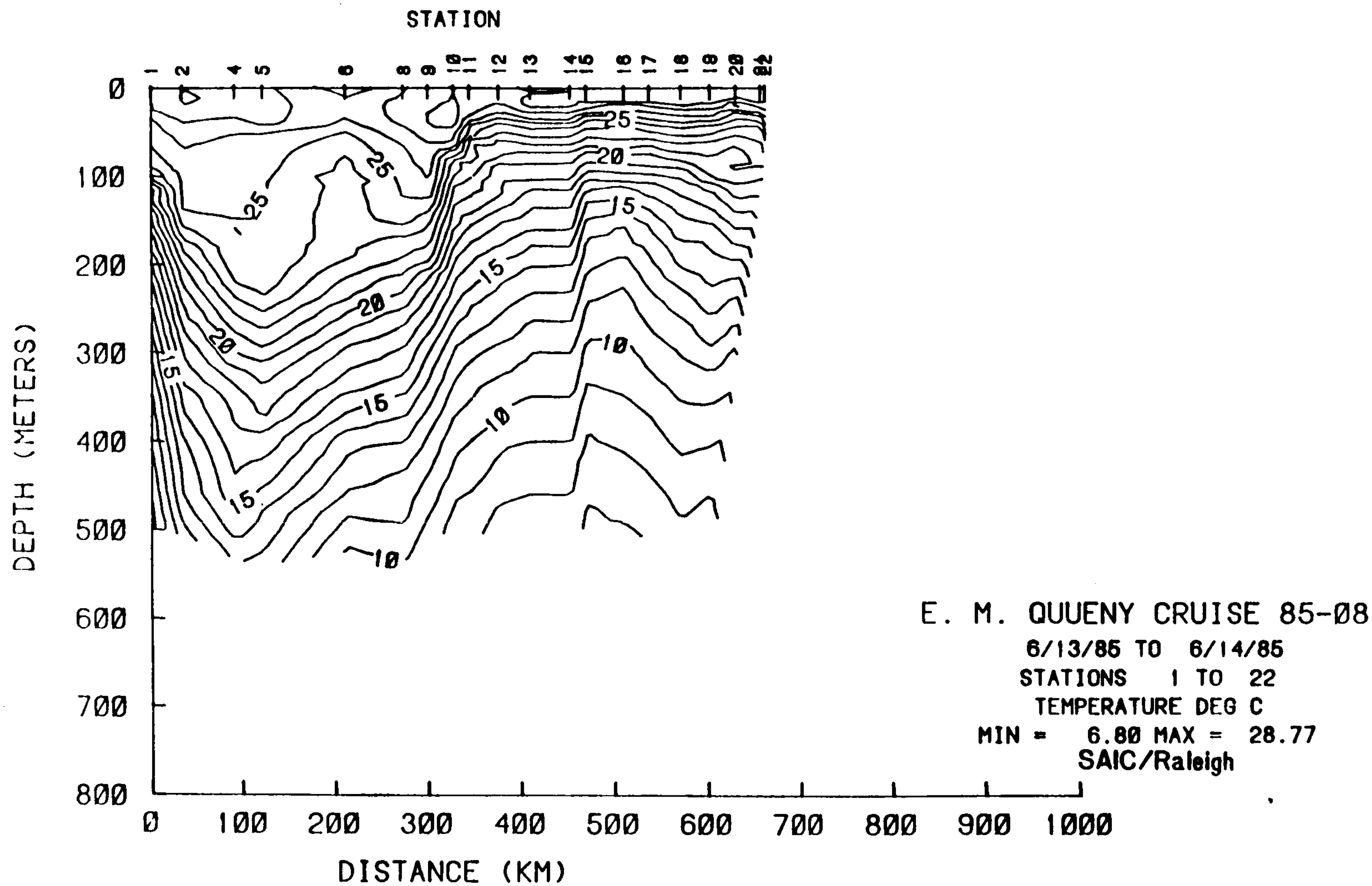
E. M. QUEENY CRUISE 85-07
6/ 7/85 TO 6/ 8/85
STATIONS 1 TO 24
TEMPERATURE DEG C
MIN = 11.80 MAX = 28.82
SAIC/Raleigh

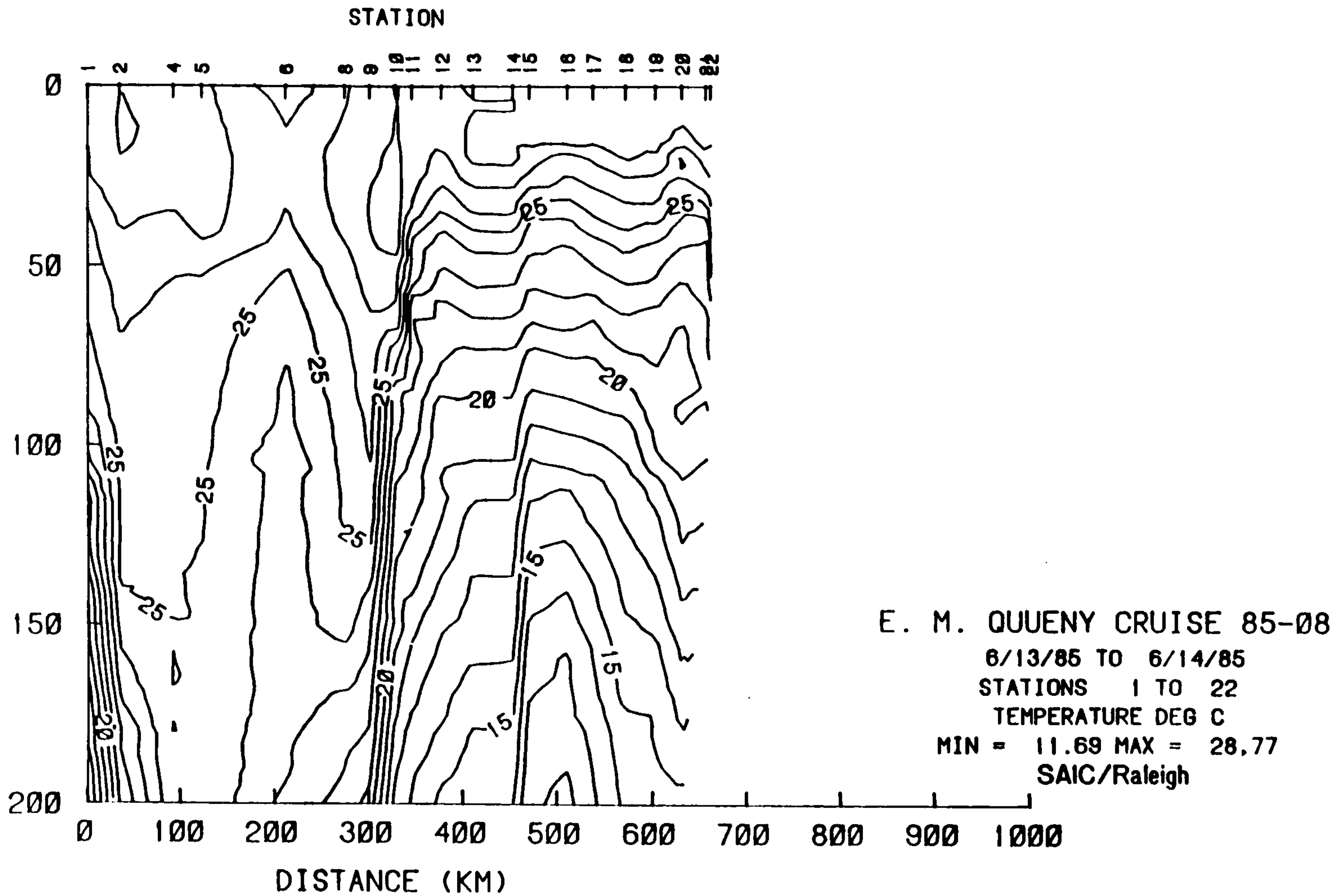


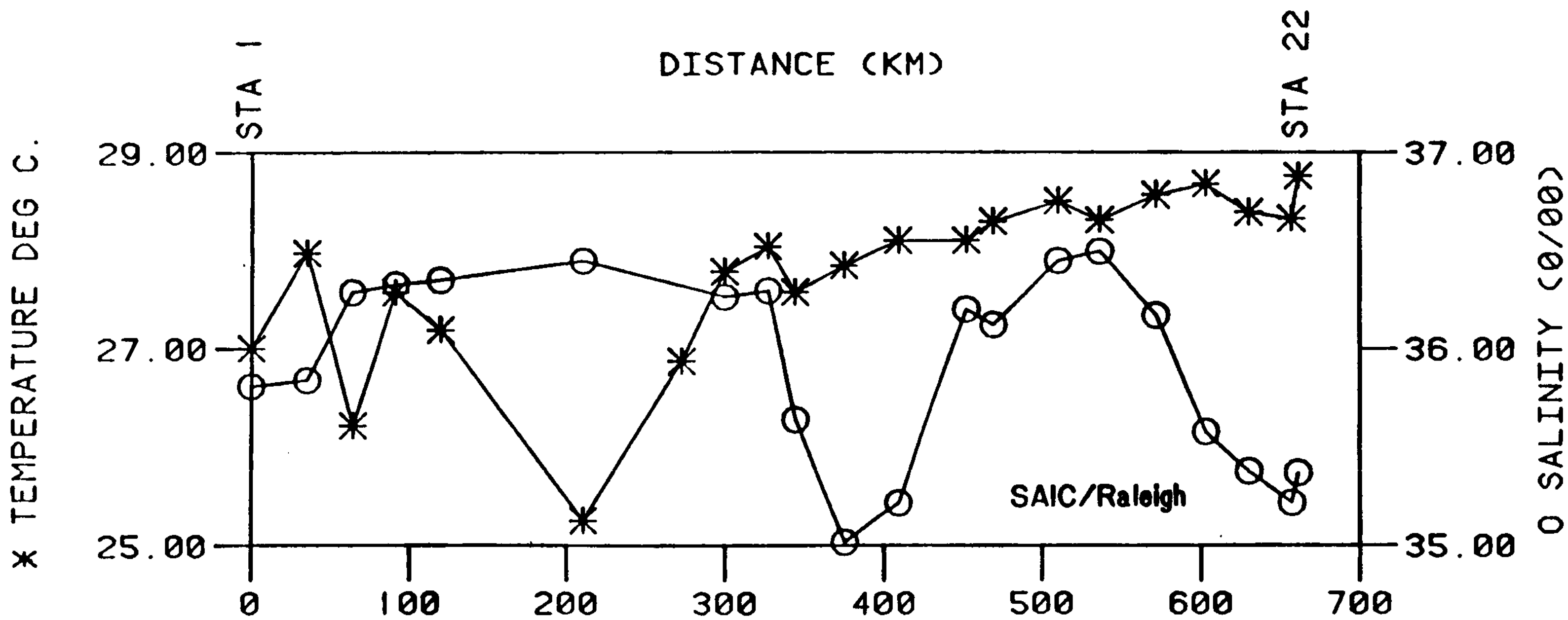
PARAMETERS AT SURFACE E. M. QUEENY CRUISE 85-07



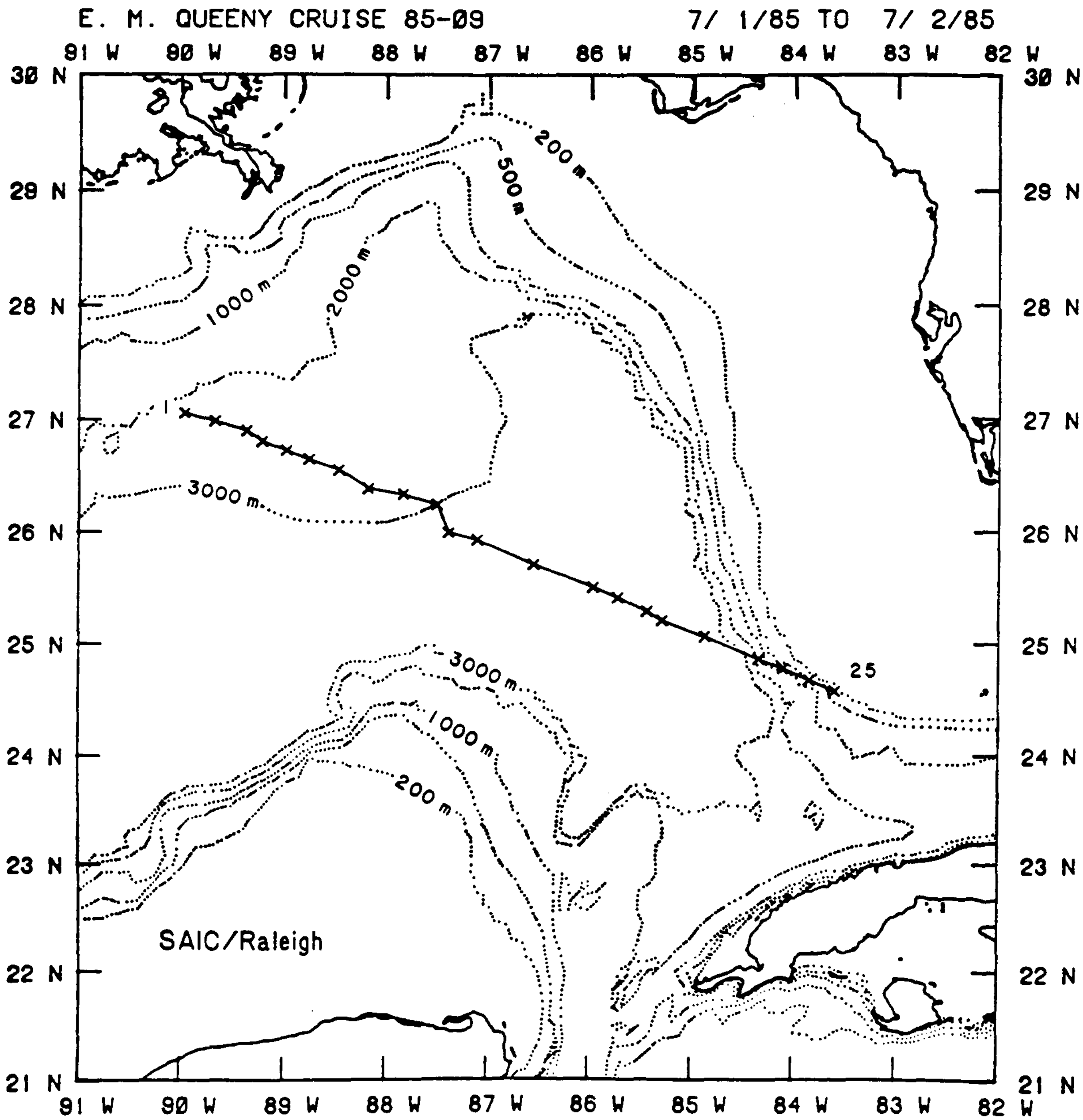
E. M. QUUENY CRUISE 85-Ø8
6/13/85 TO 6/14/85
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
1000 m
200 m
22
SAIC/Raleigh

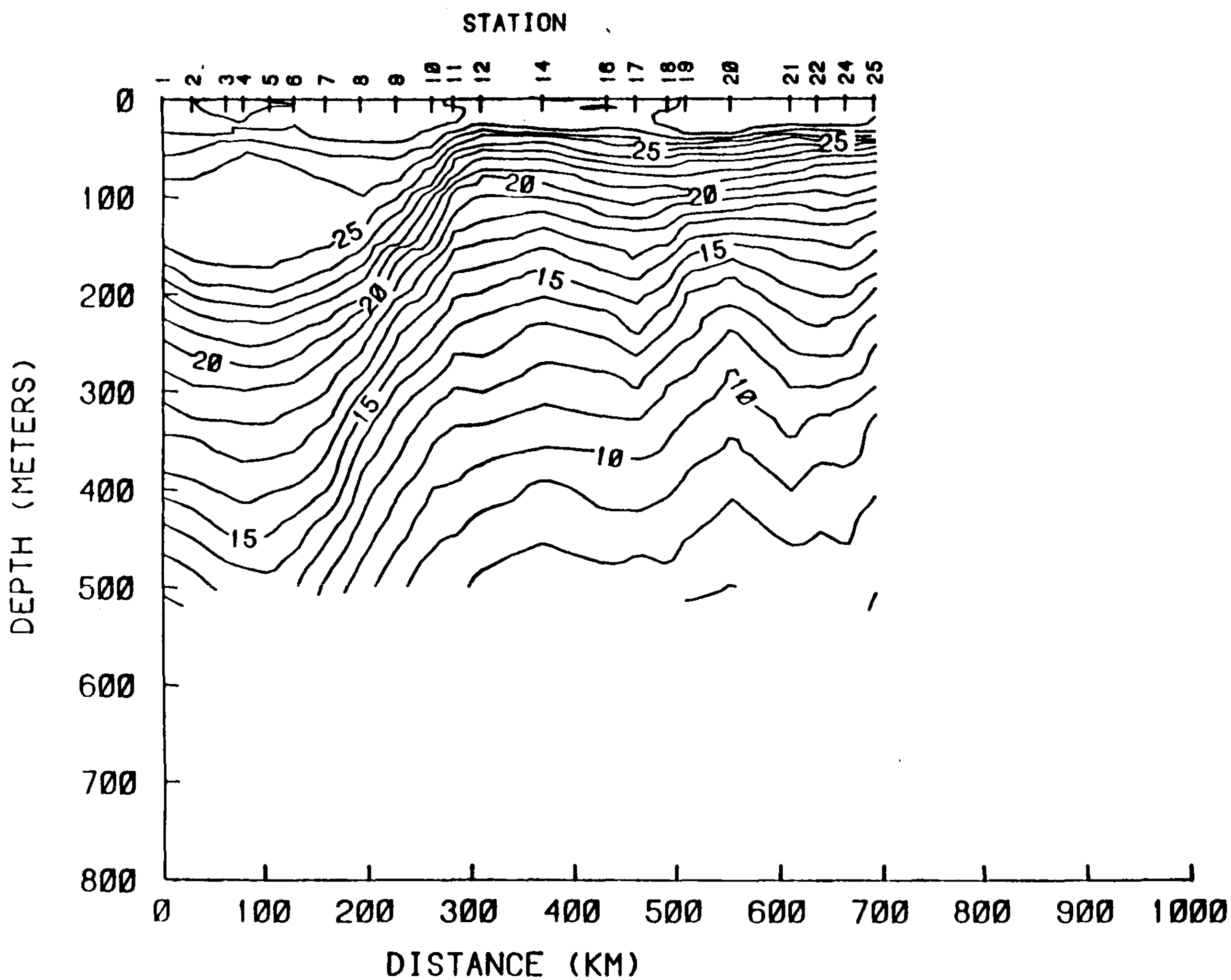

STATION
DEPTH (METERS)
DISTANCE (KM)
E. M. QUUENY CRUISE 85-08
6/13/85 TO 6/14/85
STATIONS 1 TO 22
TEMPERATURE DEG C
MIN = 6.80 MAX = 28.77
SAIC/Raleigh


STATION
1 2 4 5 6 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
DEPTH (METERS)
0
50
100
150
200
25
20
15
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)
E. M. QUUENY CRUISE 85-08
6/13/85 TO 6/14/85
STATIONS 1 TO 22
TEMPERATURE DEG C
MIN = 11.69 MAX = 28.77
SAIC/Raleigh

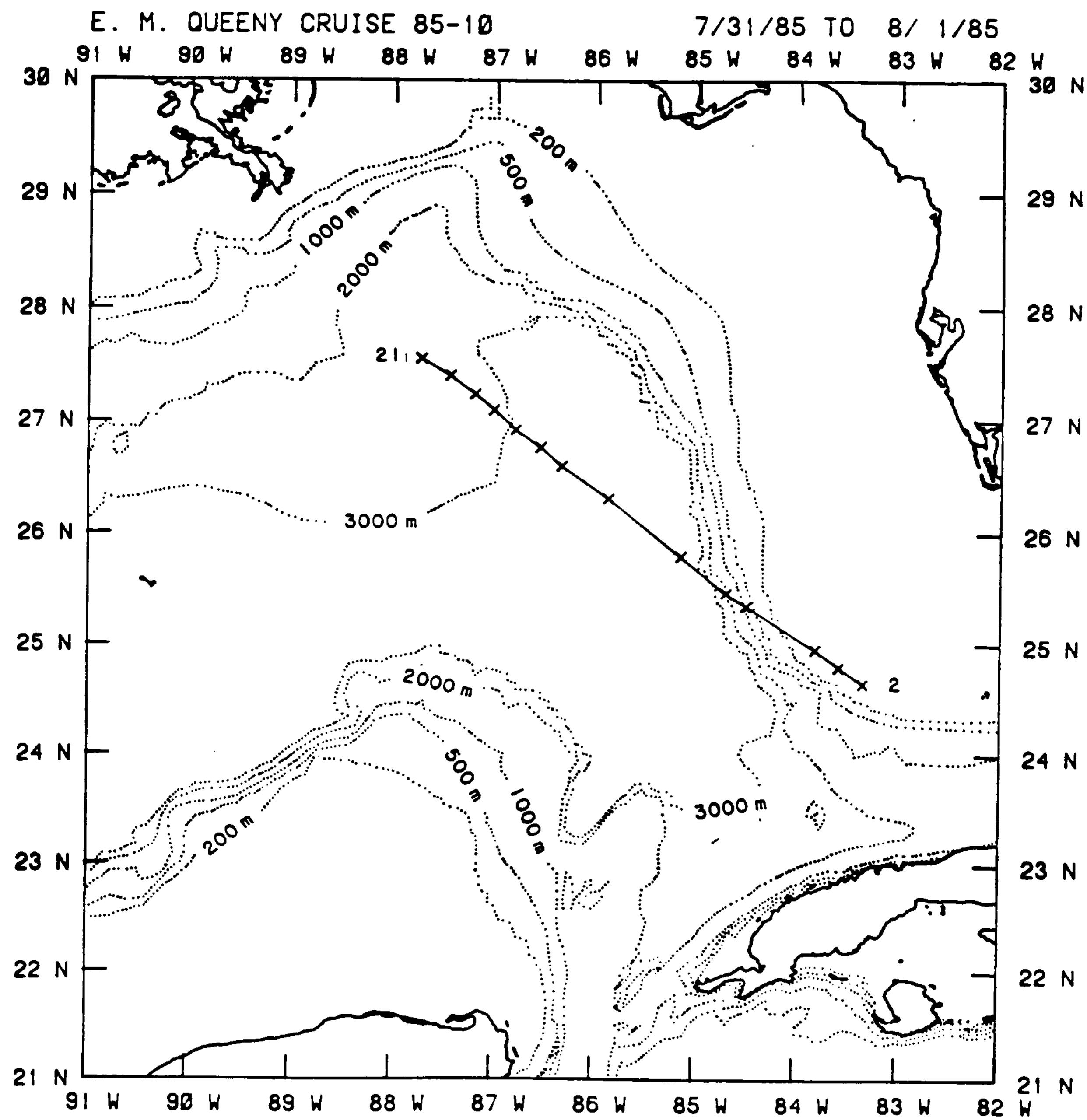


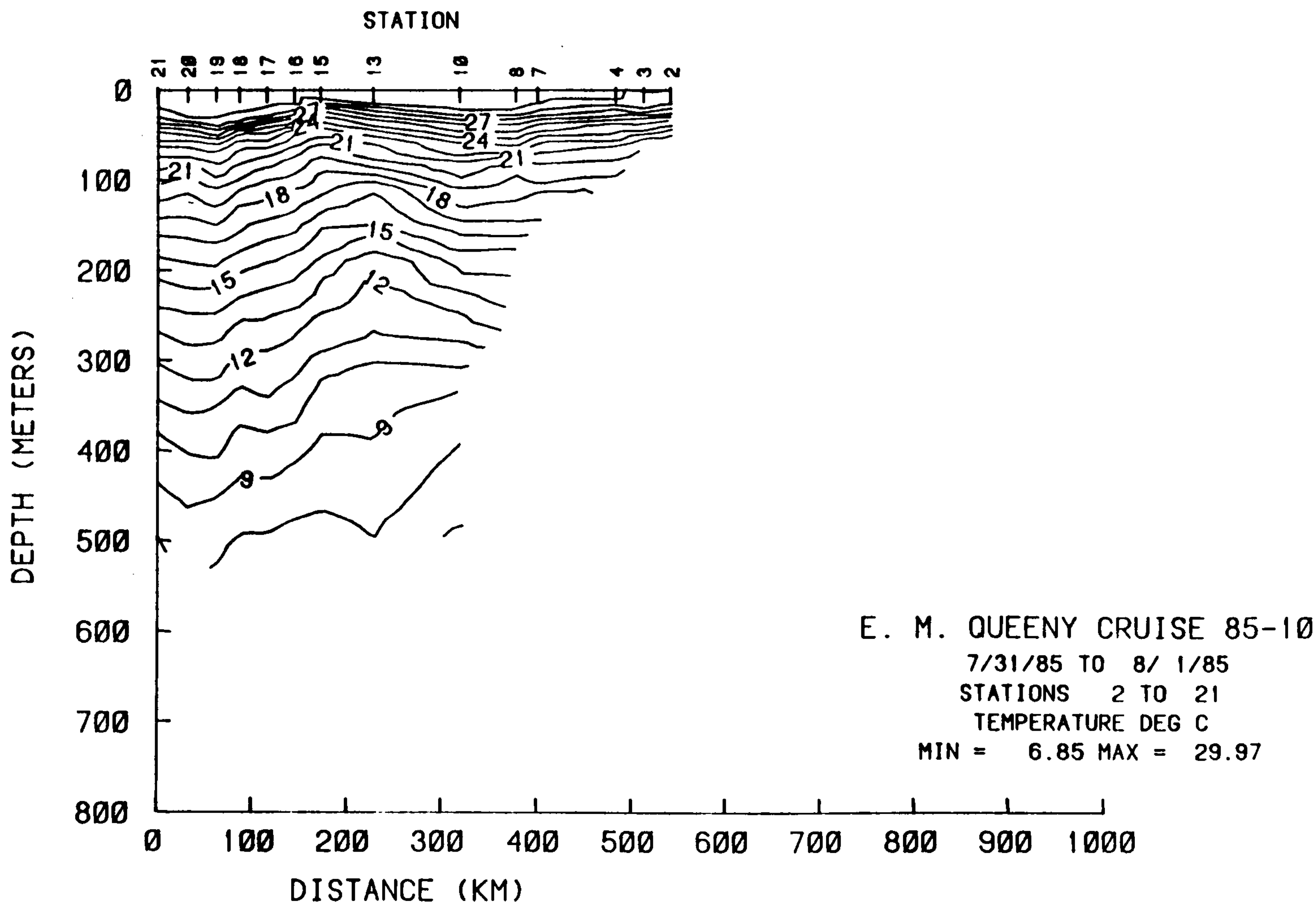
PARAMETERS AT SURFACE E. M. QUUENY CRUISE 85-08

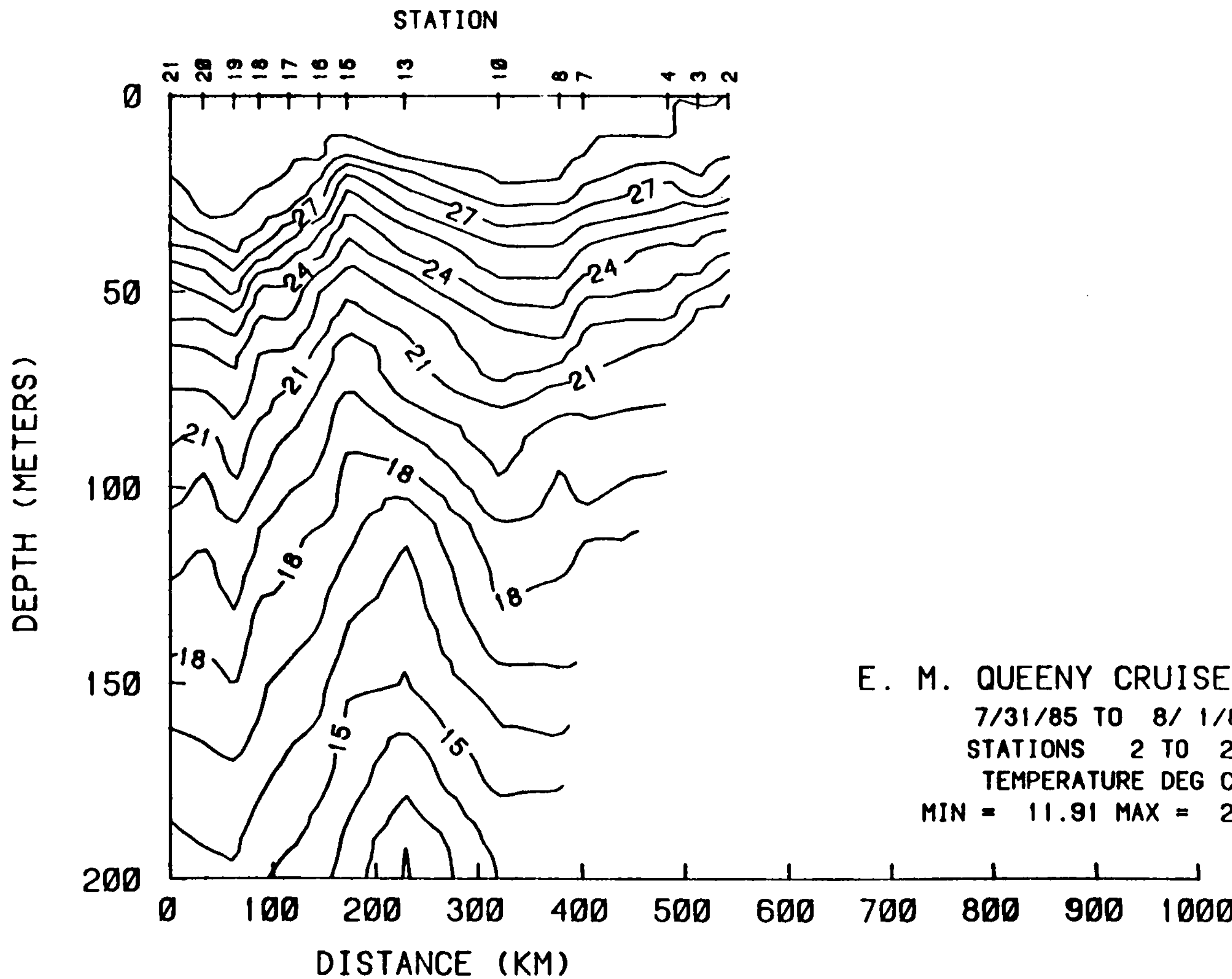

E. M. QUEENY CRUISE 85-09
7/ 1/85 TO 7/ 2/85
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
1000 m
200 m
25
SAIC/Raleigh



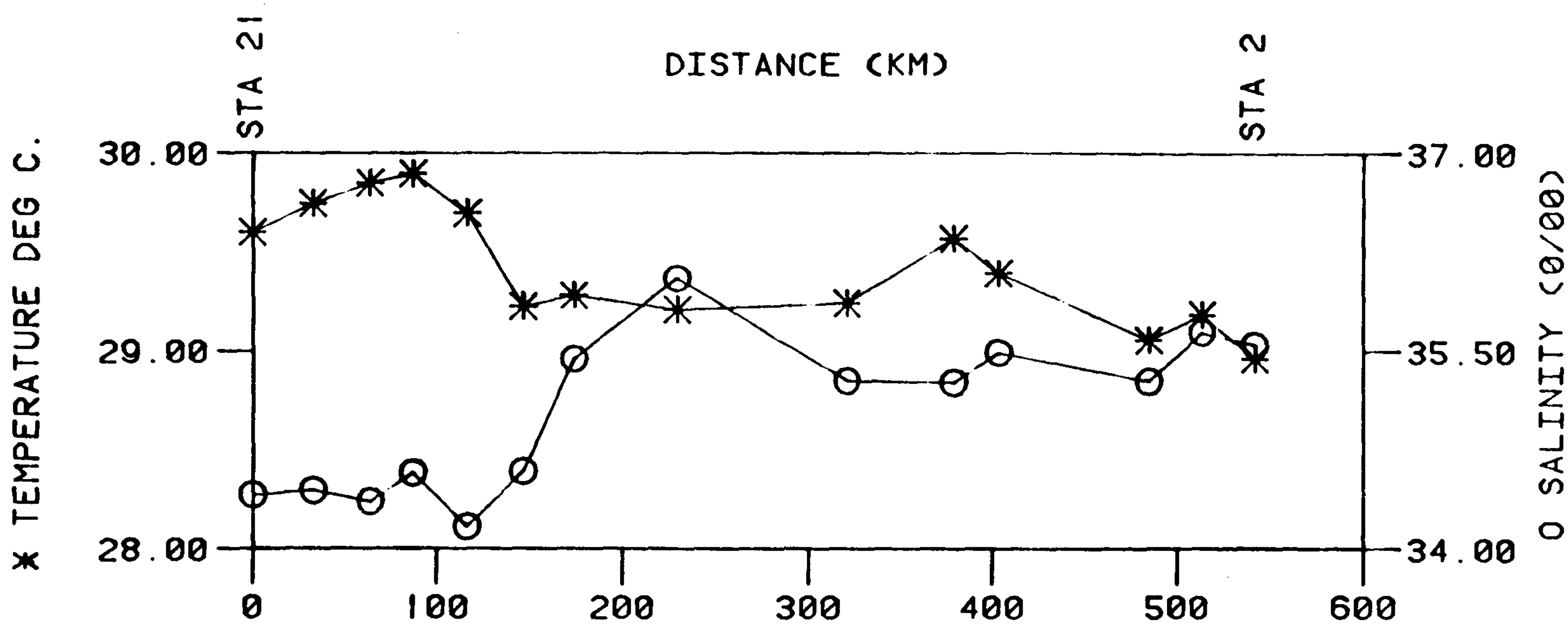
E. M. QUEENY CRUISE 85-09
7/ 1/85 TO 7/ 2/85
STATIONS 1 TO 25
TEMPERATURE DEG C
MIN = 6.82 MAX = 28.61
SAIC/Raleigh


E. M. QUEENY CRUISE 85-10
7/31/85 TO 8/ 1/85
91 W
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
21
2


STATION
21 20 19 18 17 16 15 13 10 8 7 4 3 2
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
27
24
21
18
15
12
9
E. M. QUEENY CRUISE 85-10
7/31/85 TO 8/ 1/85
STATIONS 2 TO 21
TEMPERATURE DEG C
MIN = 6.85 MAX = 29.97

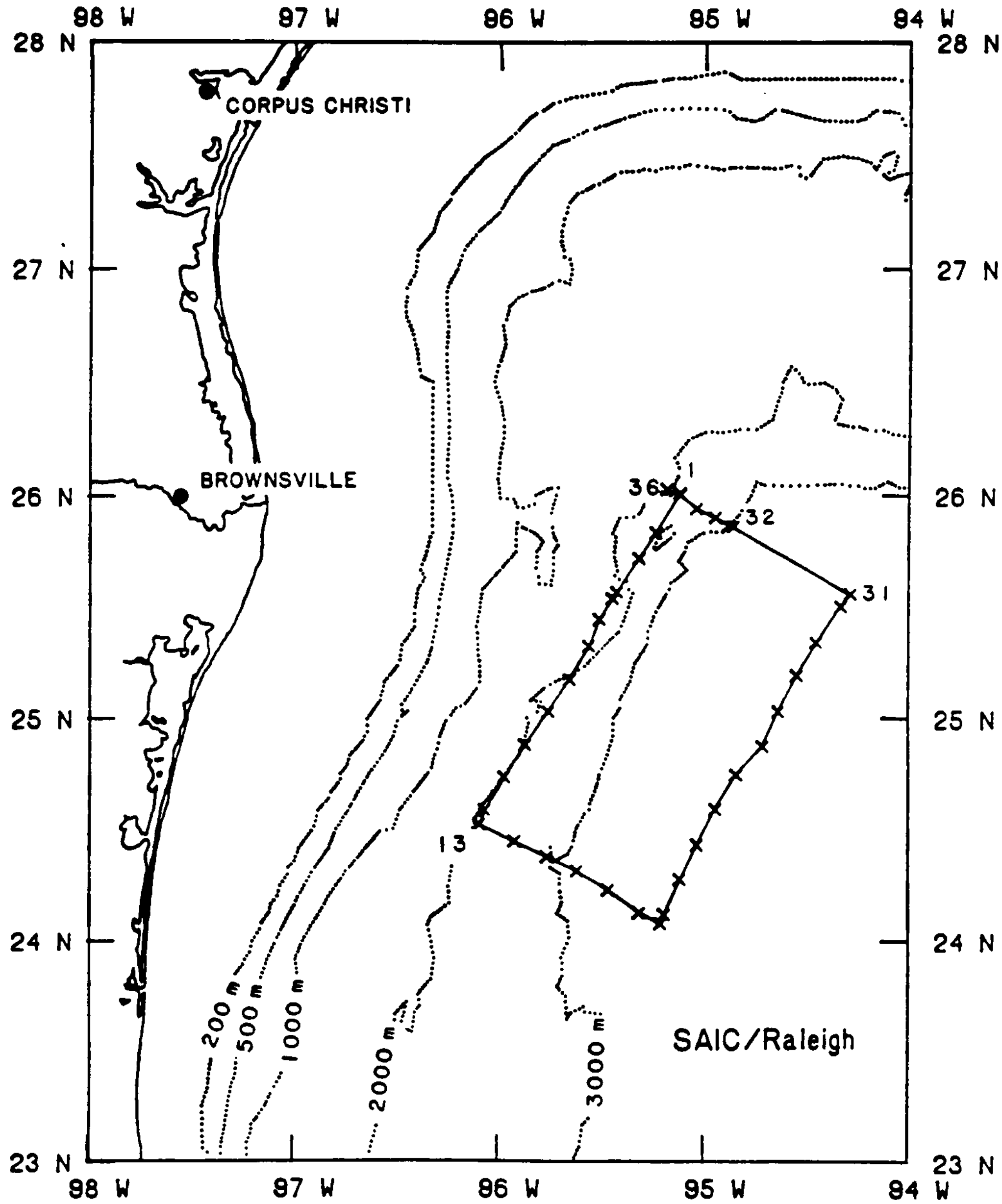


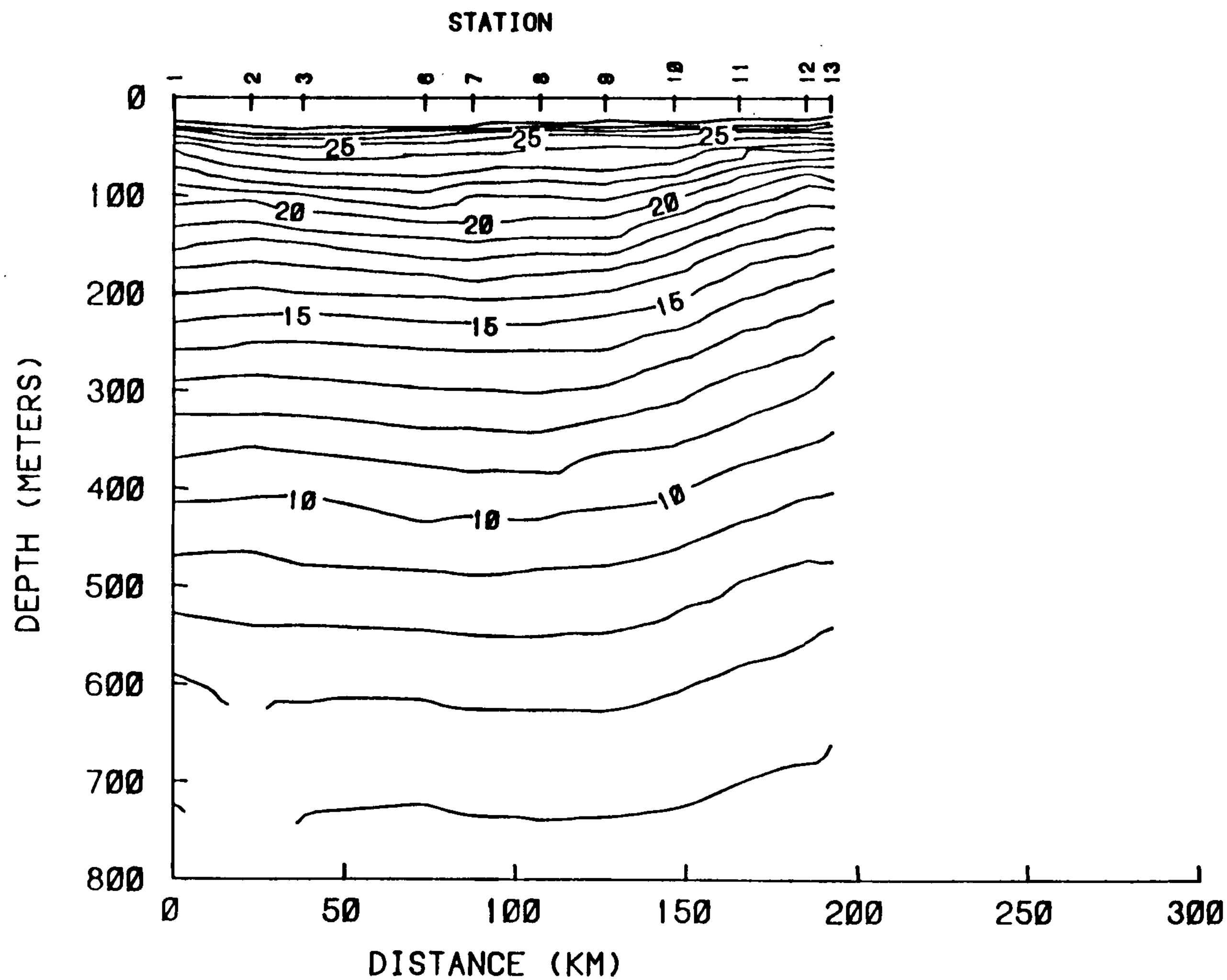
E. M. QUEENY CRUISE 85-10
7/31/85 TO 8/ 1/85
STATIONS 2 TO 21
TEMPERATURE DEG C
MIN = 11.91 MAX = 29.97



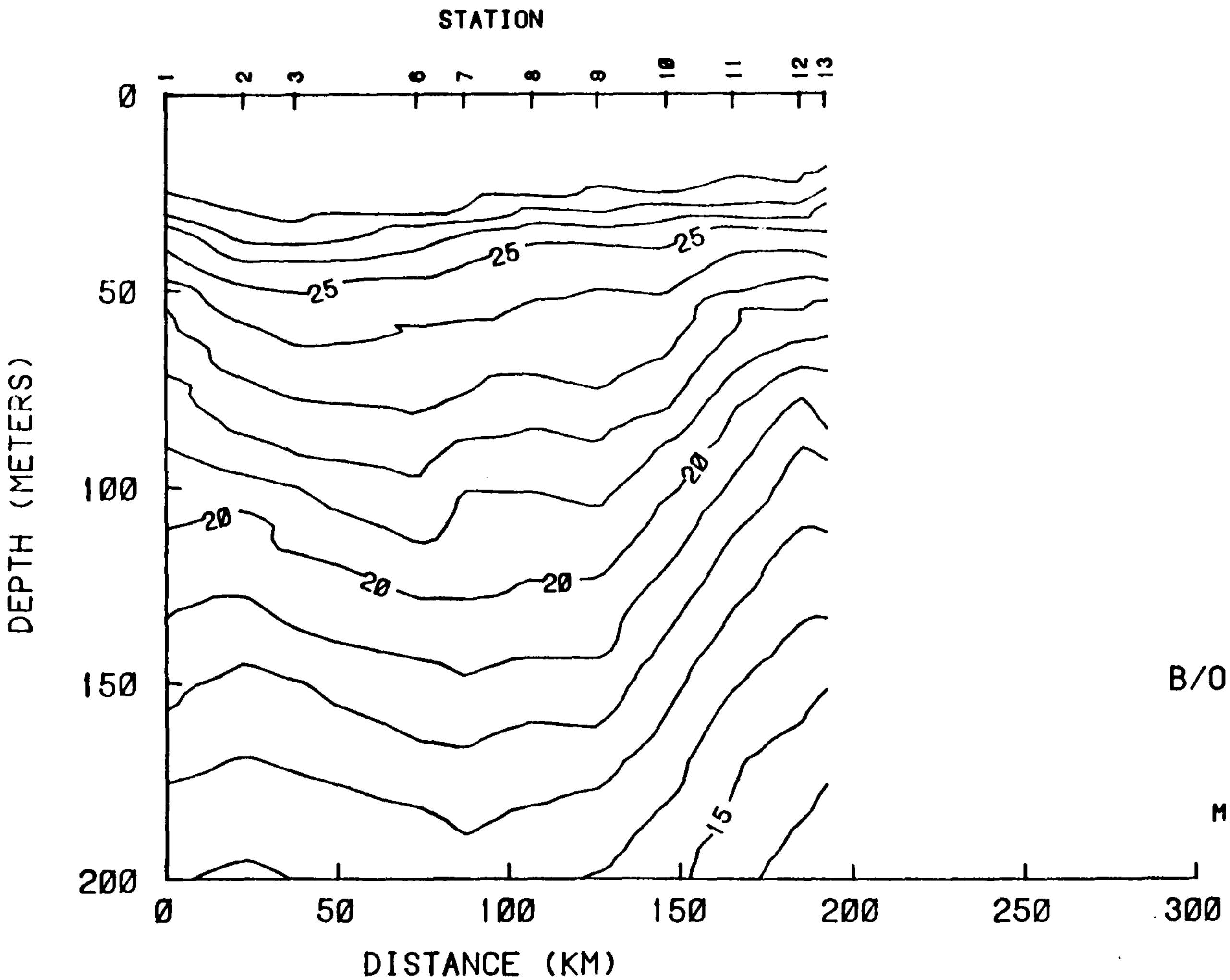
PARAMETERS AT SURFACE E. M. QUEENY CRUISE 85-10

B/O ALTAIR CRUISE 85-Ø1 6/11/85 TO 6/15/85



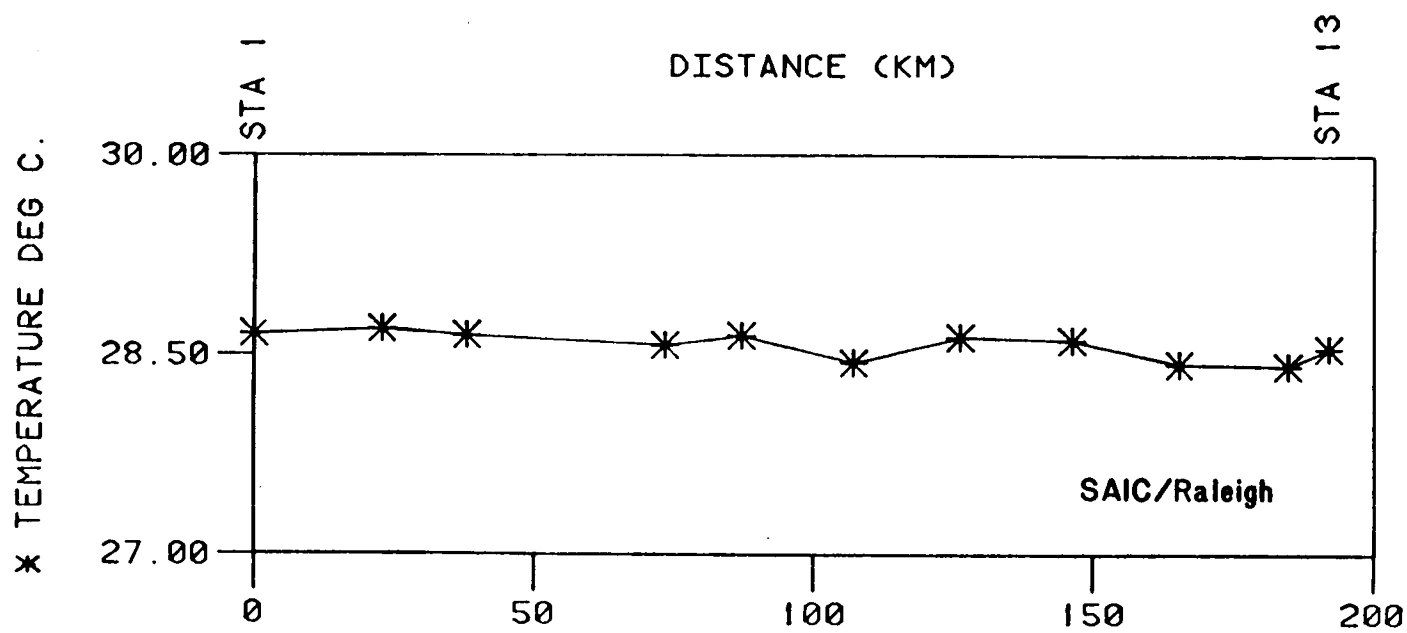


B/O ALTAIR CRUISE 85-01
6/11/85 TO 6/13/85
STATIONS 1 TO 13
TEMPERATURE DEG C
MIN = 5.42 MAX = 28.69
SAIC/Raleigh

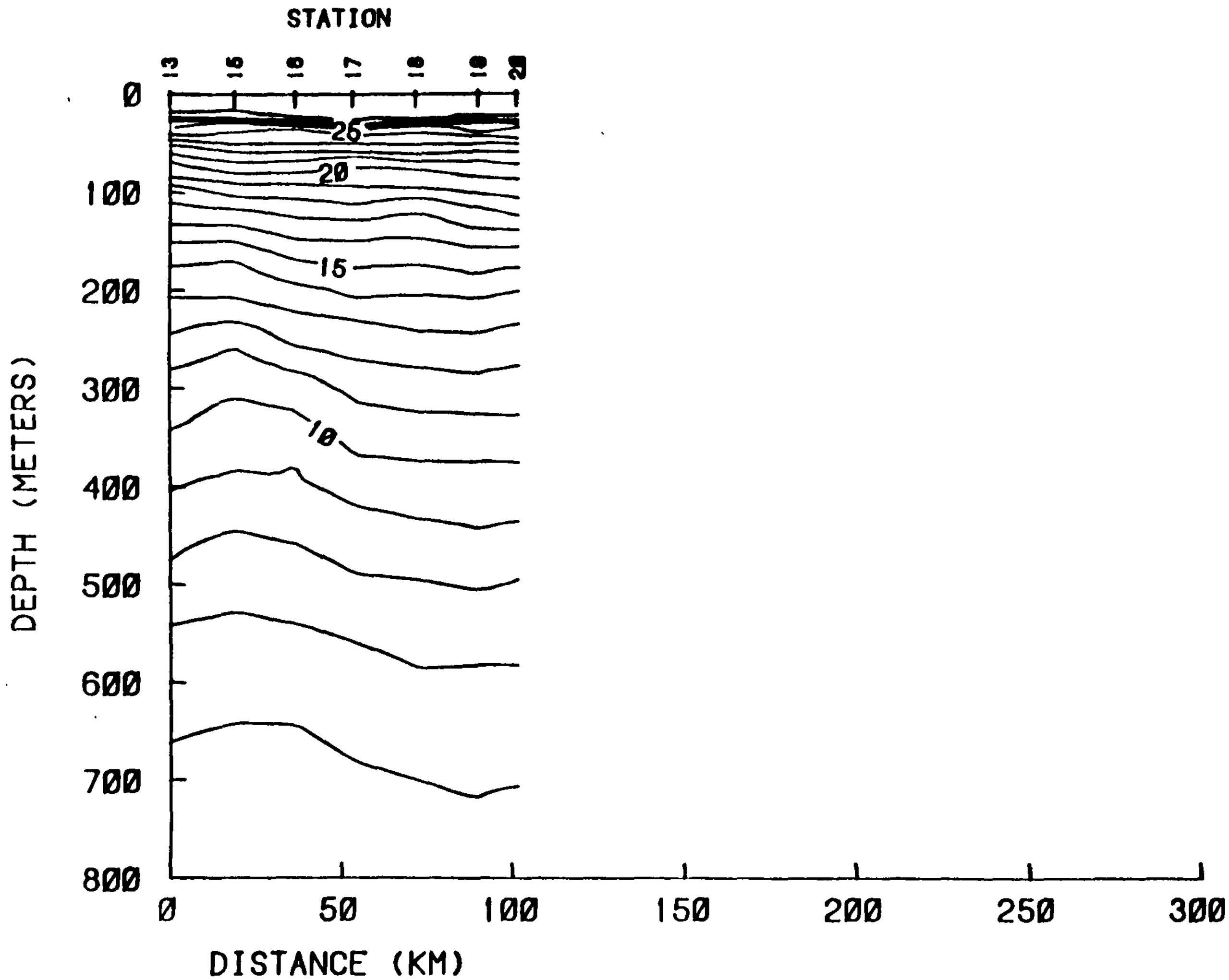


B/O ALTAIR CRUISE 85-01
6/11/85 TO 6/13/85
STATIONS 1 TO 13
TEMPERATURE DEG C
MIN = 13.22 MAX = 28.69
SAIC/Raleigh

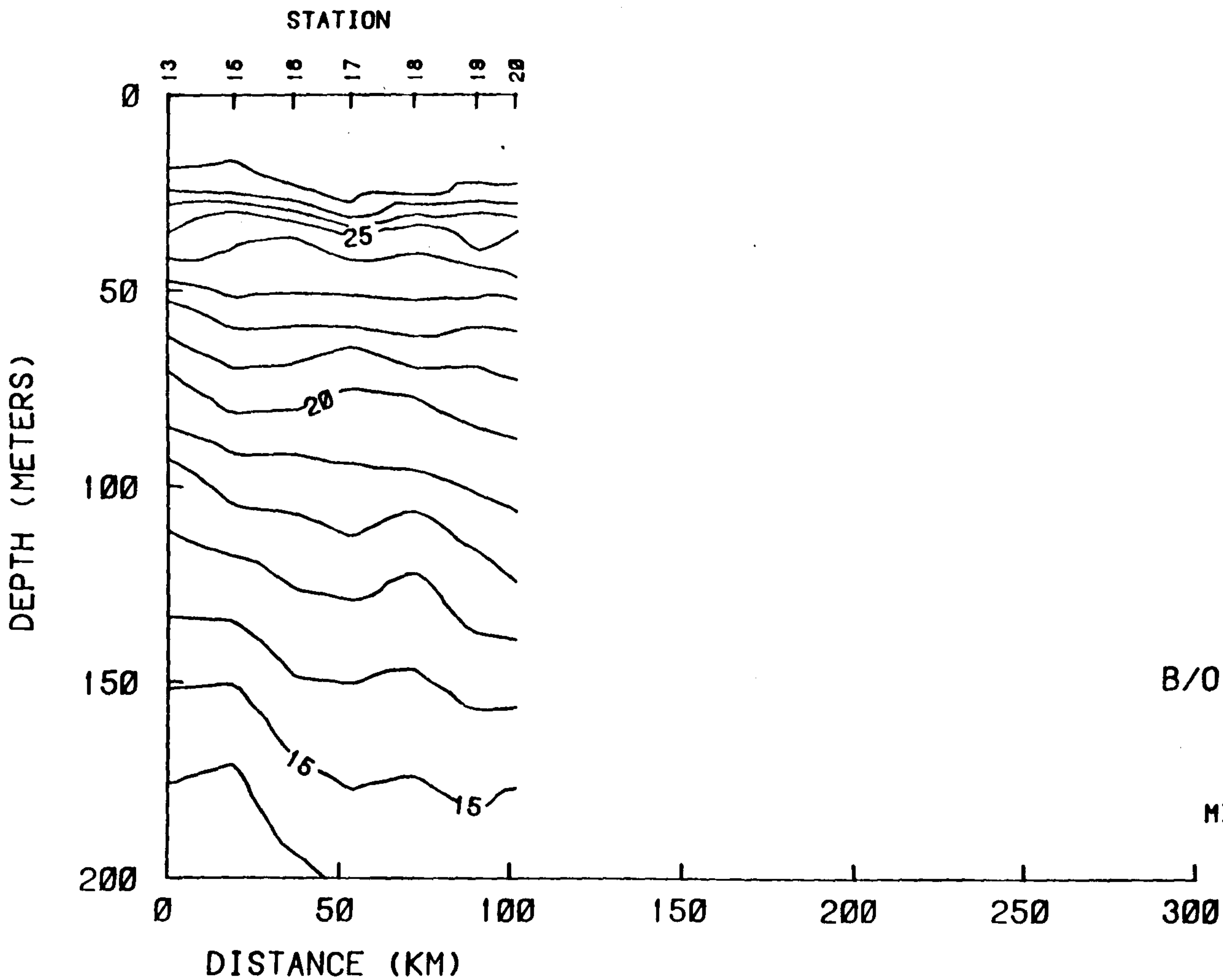
544



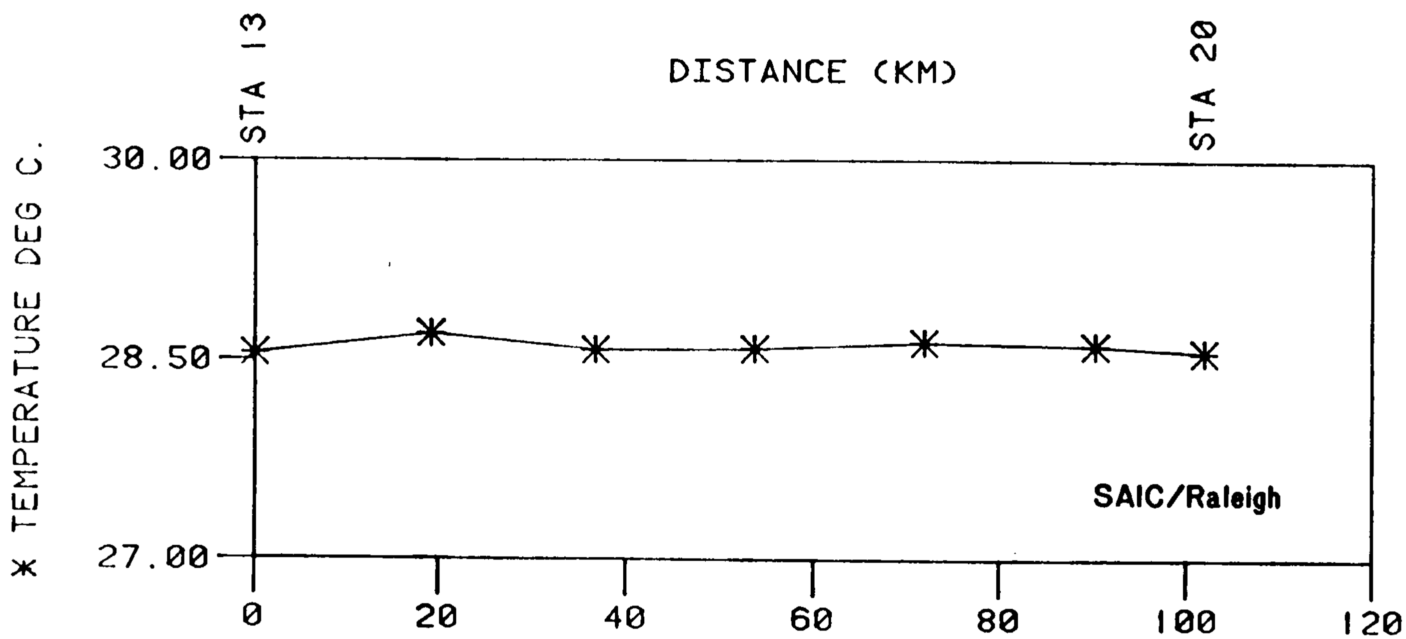
PARAMETERS AT SURFACE B/O ALTAIR CRUISE 85-01



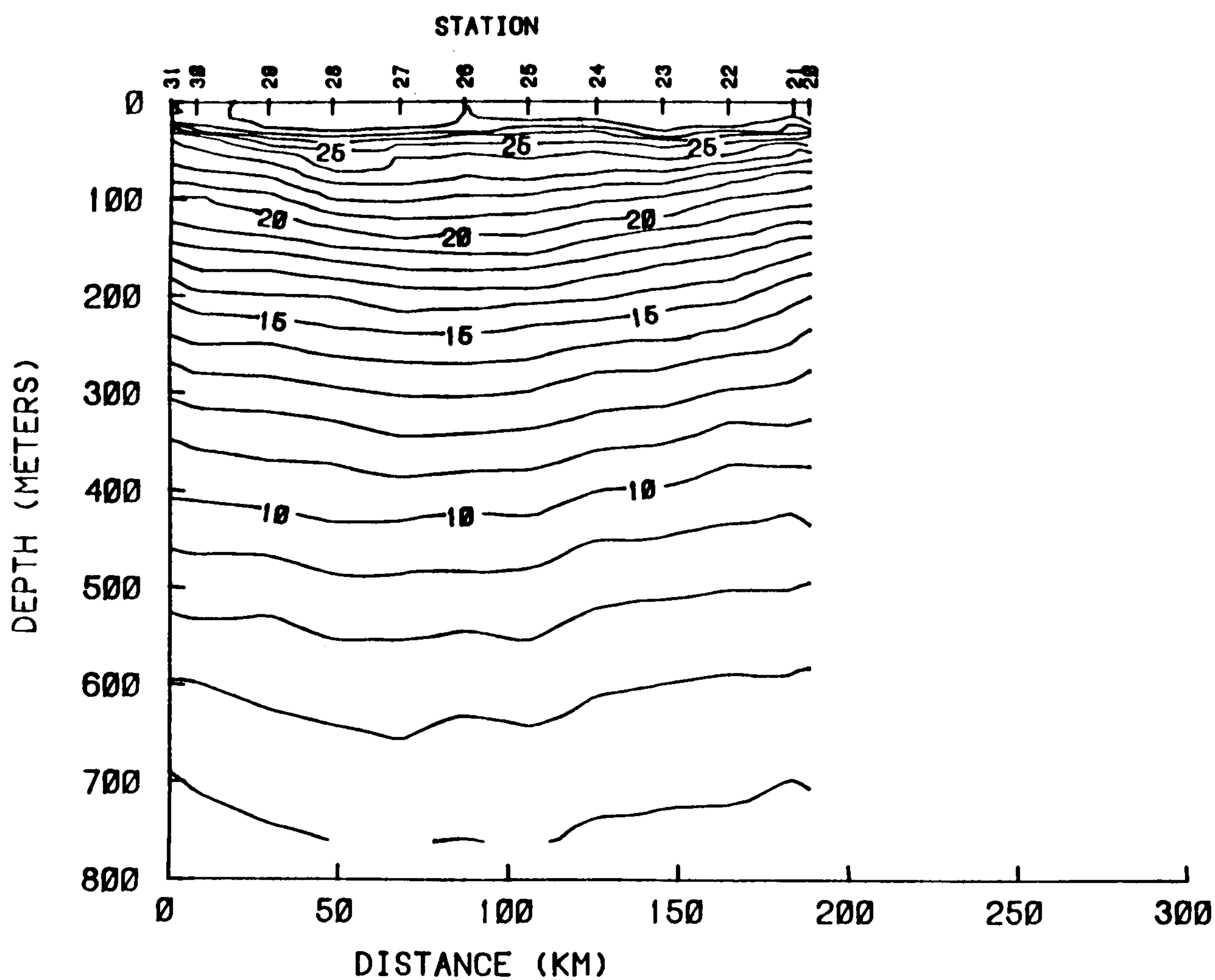
B/O ALTAIR CRUISE 85-01
6/13/85 TO 6/13/85
STATIONS 13 TO 20
TEMPERATURE DEG C
MIN = 5.34 MAX = 28.68
SAIC/Raleigh



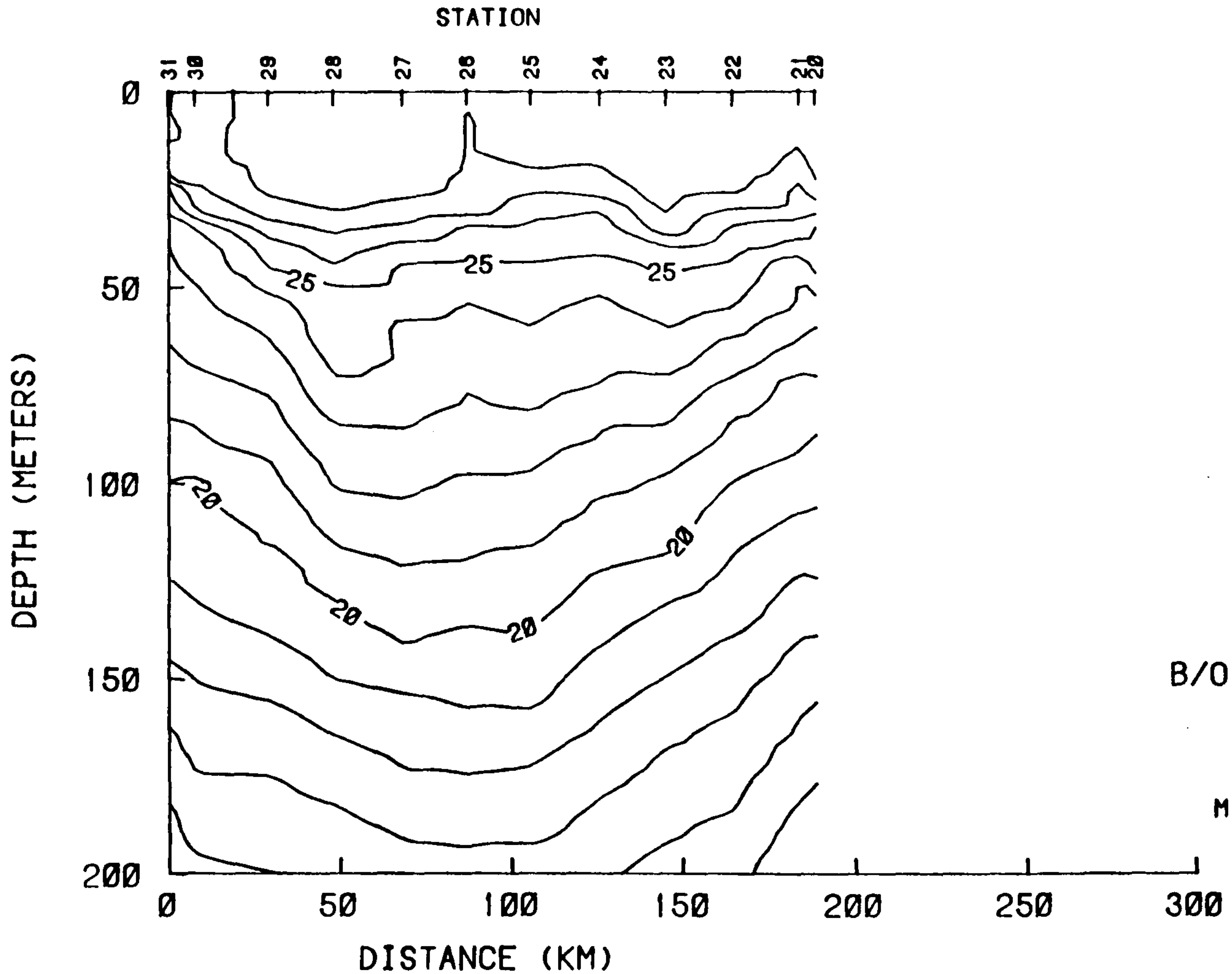
B/O ALTAIR CRUISE 85-Ø1
6/13/85 TO 6/13/85
STATIONS 13 TO 2Ø
TEMPERATURE DEG C
MIN = 13.22 MAX = 28.69
SAIC/Raleigh



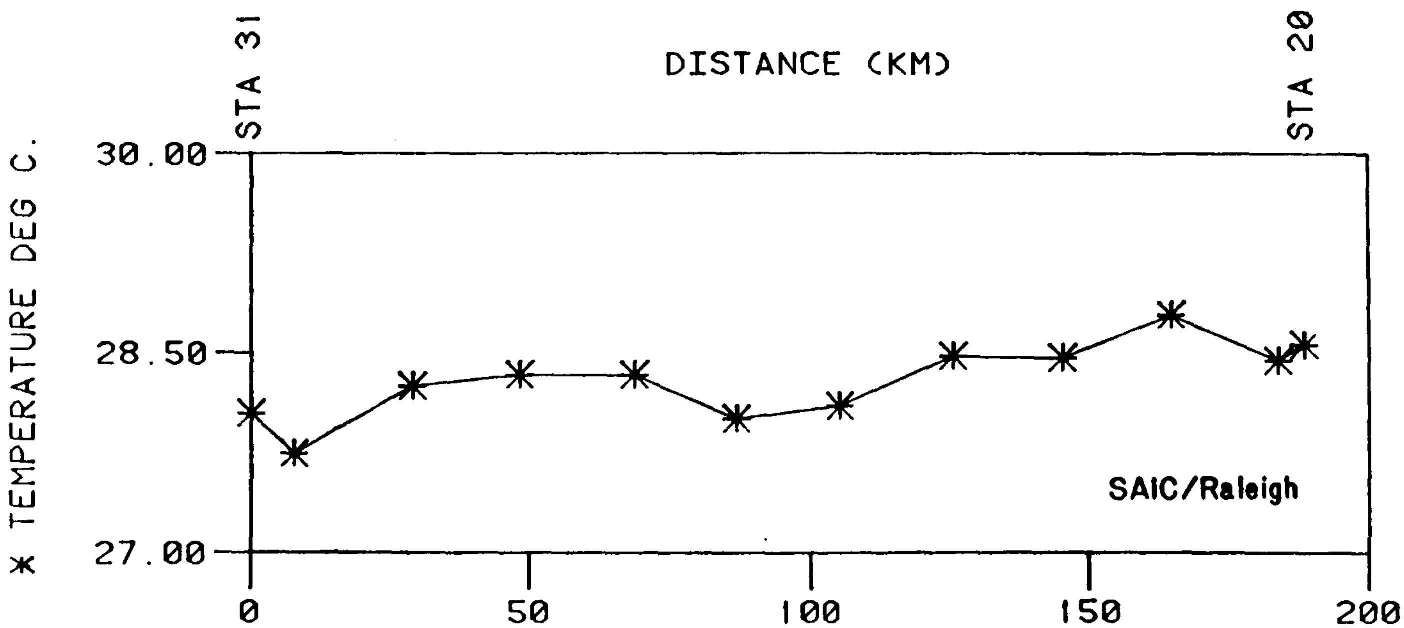
PARAMETERS AT SURFACE B/O ALTAIR CRUISE 85-01



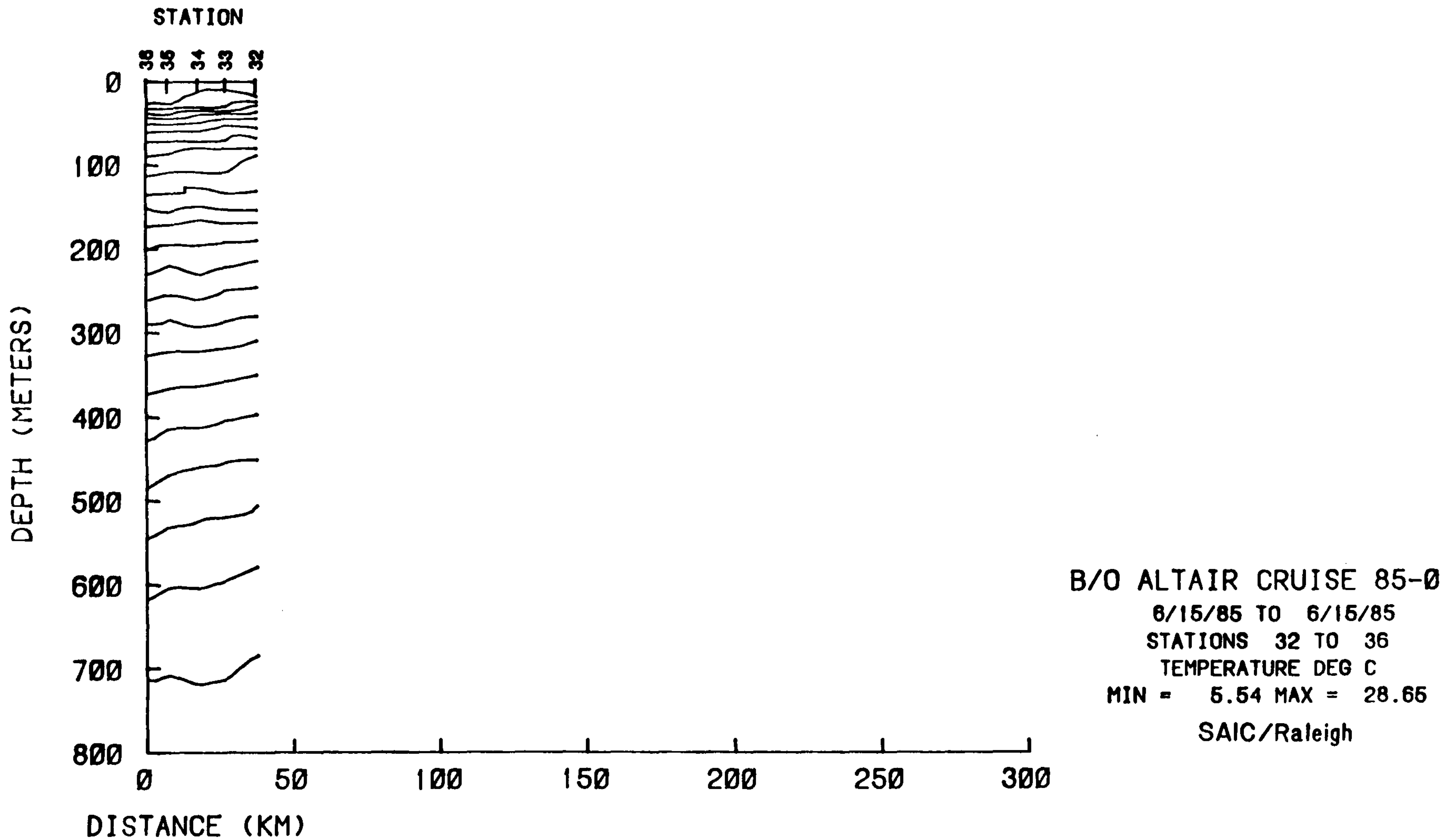
B/O ALTAIR CRUISE 85-01
6/13/85 TO 6/13/85
STATIONS 20 TO 31
TEMPERATURE DEG C
MIN = 5.65 MAX = 28.79
SAIC/Raleigh

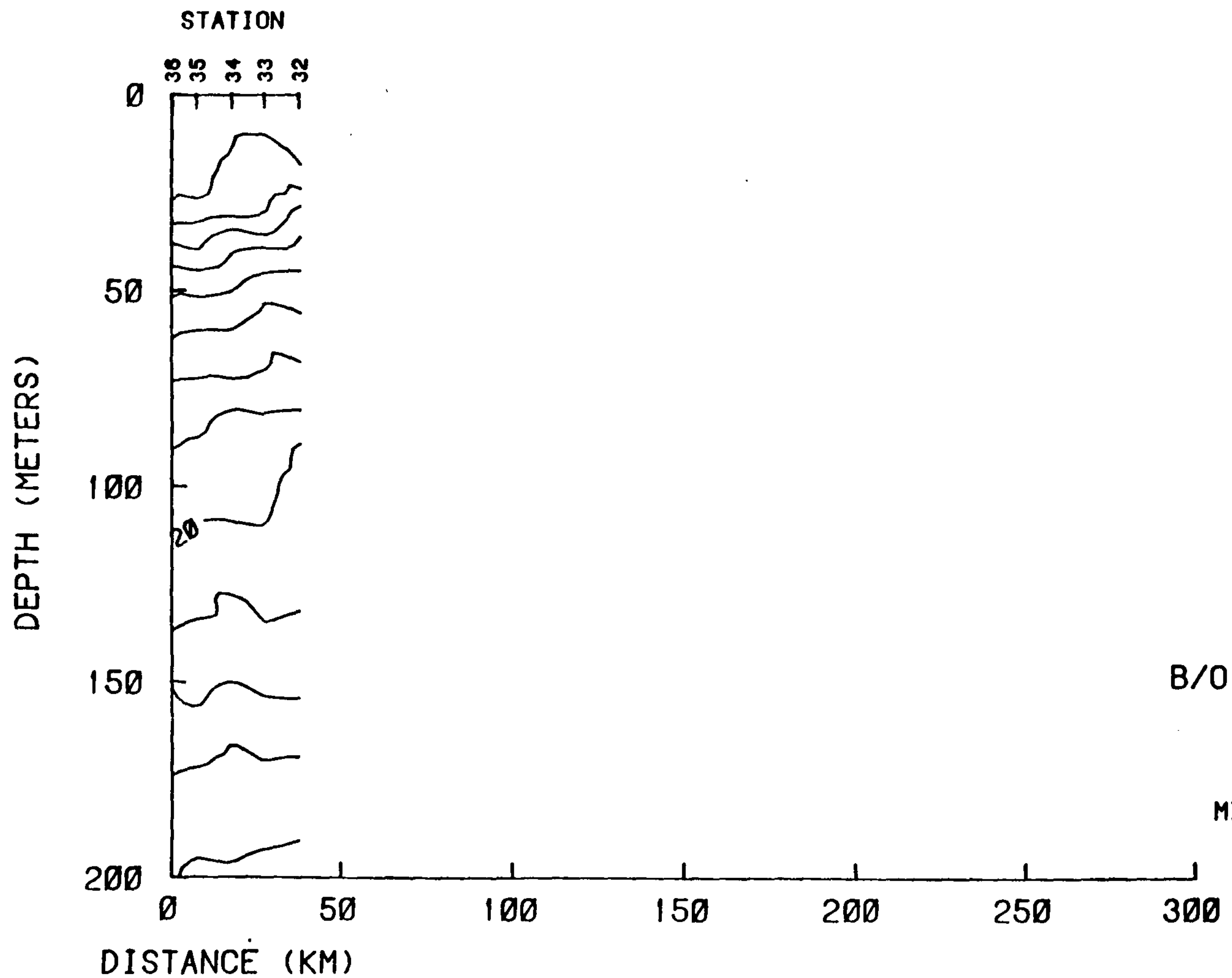


B/O ALTAIR CRUISE 85-01
6/13/85 TO 6/13/85
STATIONS 20 TO 31
TEMPERATURE DEG C
MIN = 14.03 MAX = 28.79
SAIC/Raleigh

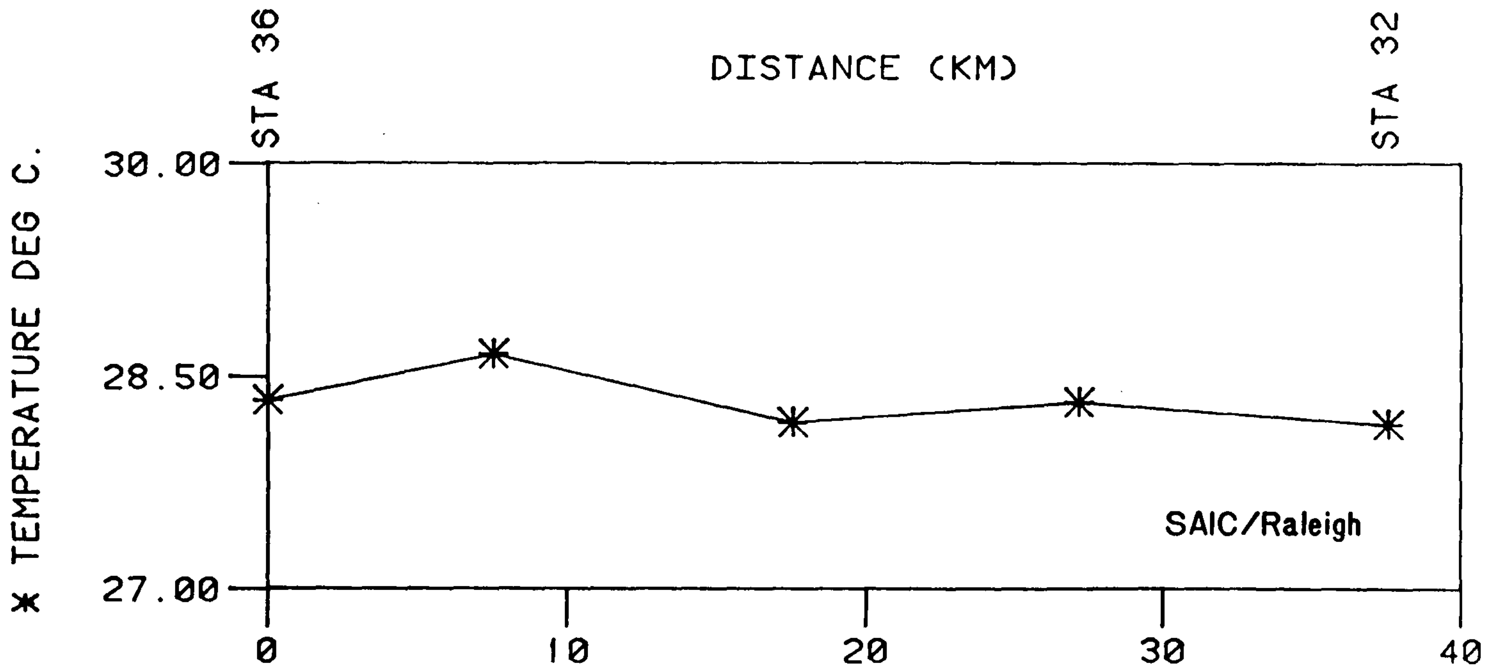


PARAMETERS AT SURFACE B/O ALTAIR CRUISE 85-01

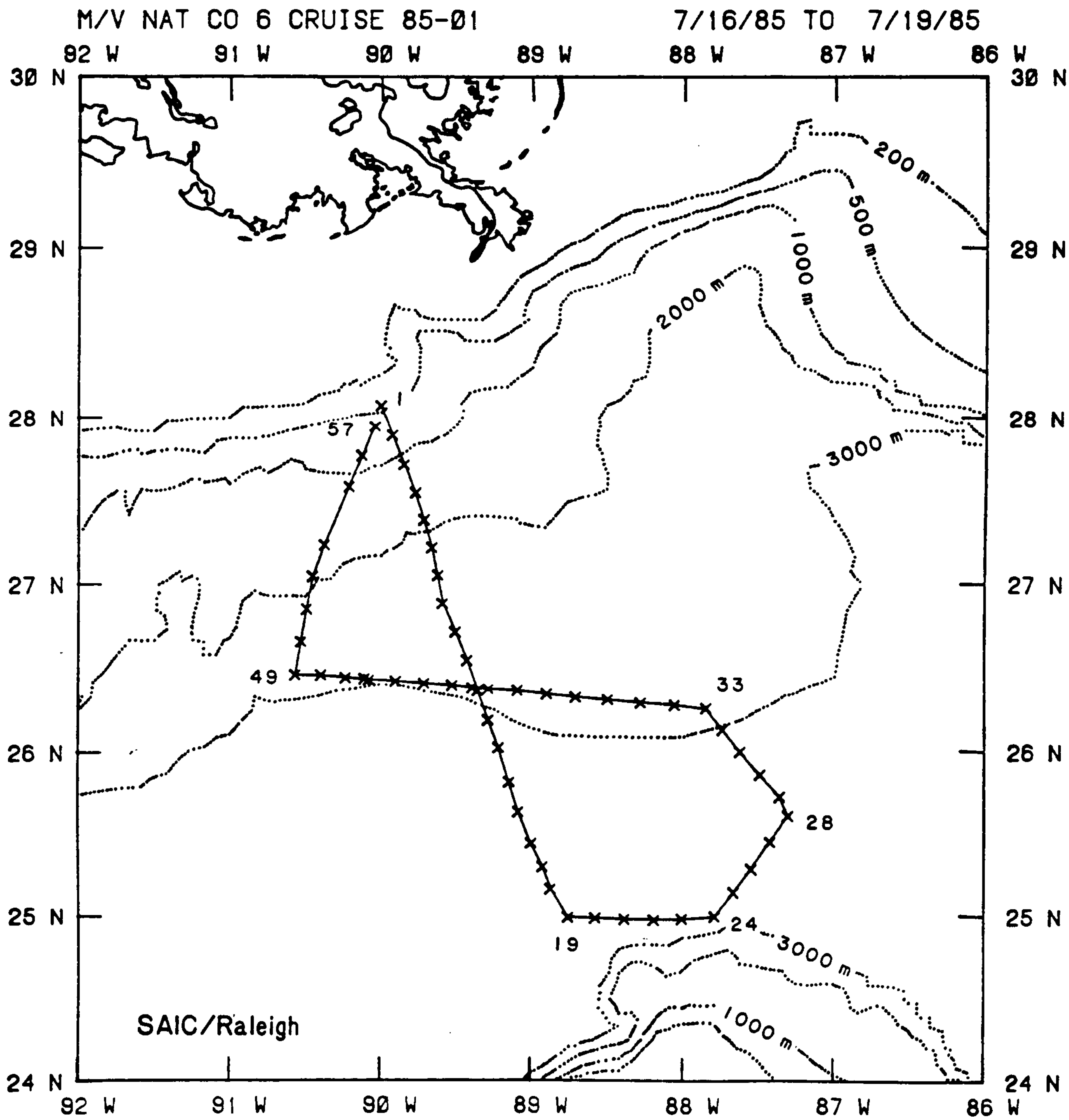

STATION
36 35 34 33 32
0
100
200
300
400
500
600
700
800
DEPTH (METERS)
0
50
100
150
200
250
300
DISTANCE (KM)
B/O ALTAIR CRUISE 85-01
6/15/85 TO 6/15/85
STATIONS 32 TO 36
TEMPERATURE DEG C
MIN = 5.54 MAX = 28.65
SAIC/Raleigh



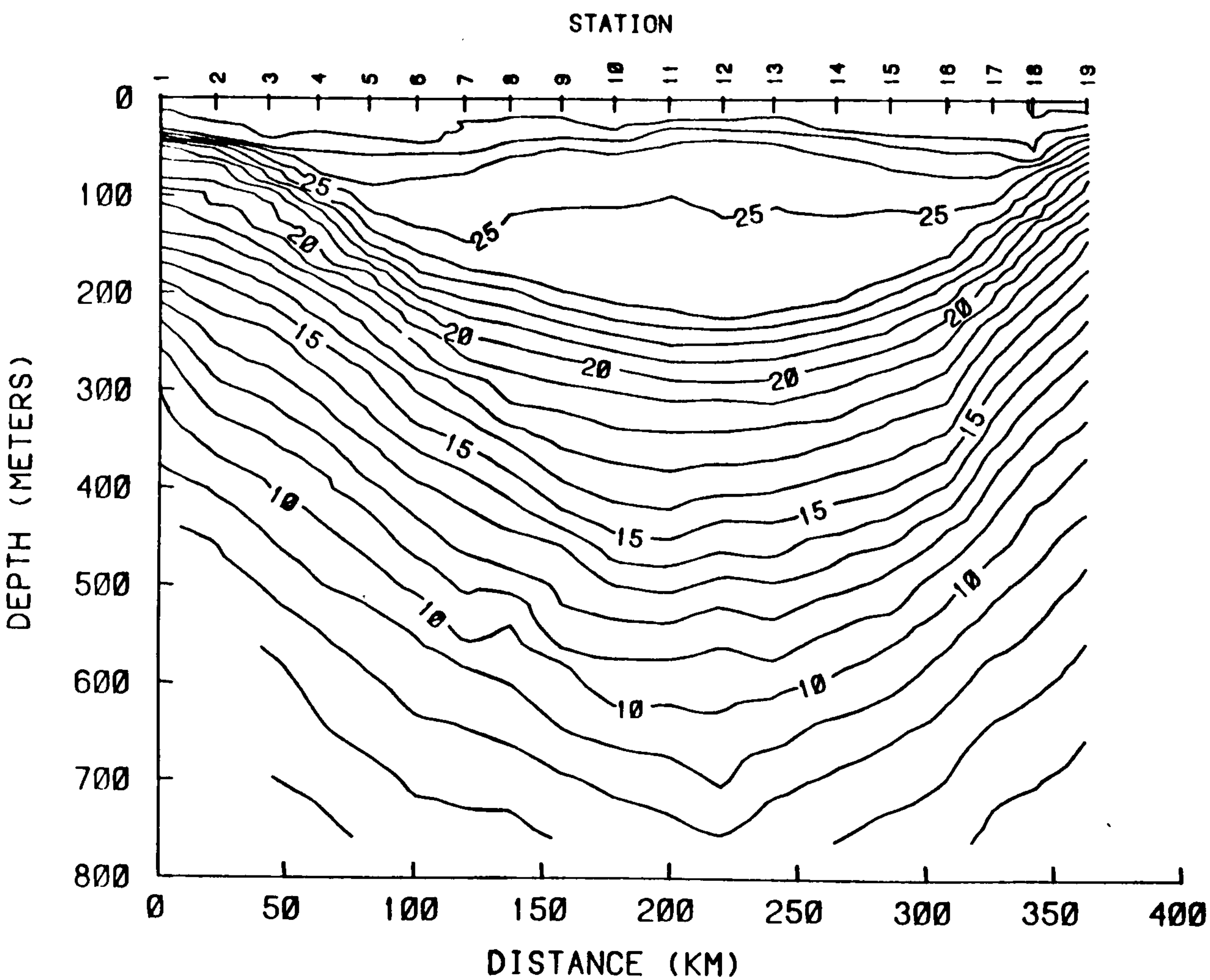
B/O ALTAIR CRUISE 85-Ø1
6/15/85 TO 6/15/85
STATIONS 32 TO 36
TEMPERATURE DEG C
MIN = 15.62 MAX = 28.65
SAIC/Raleigh



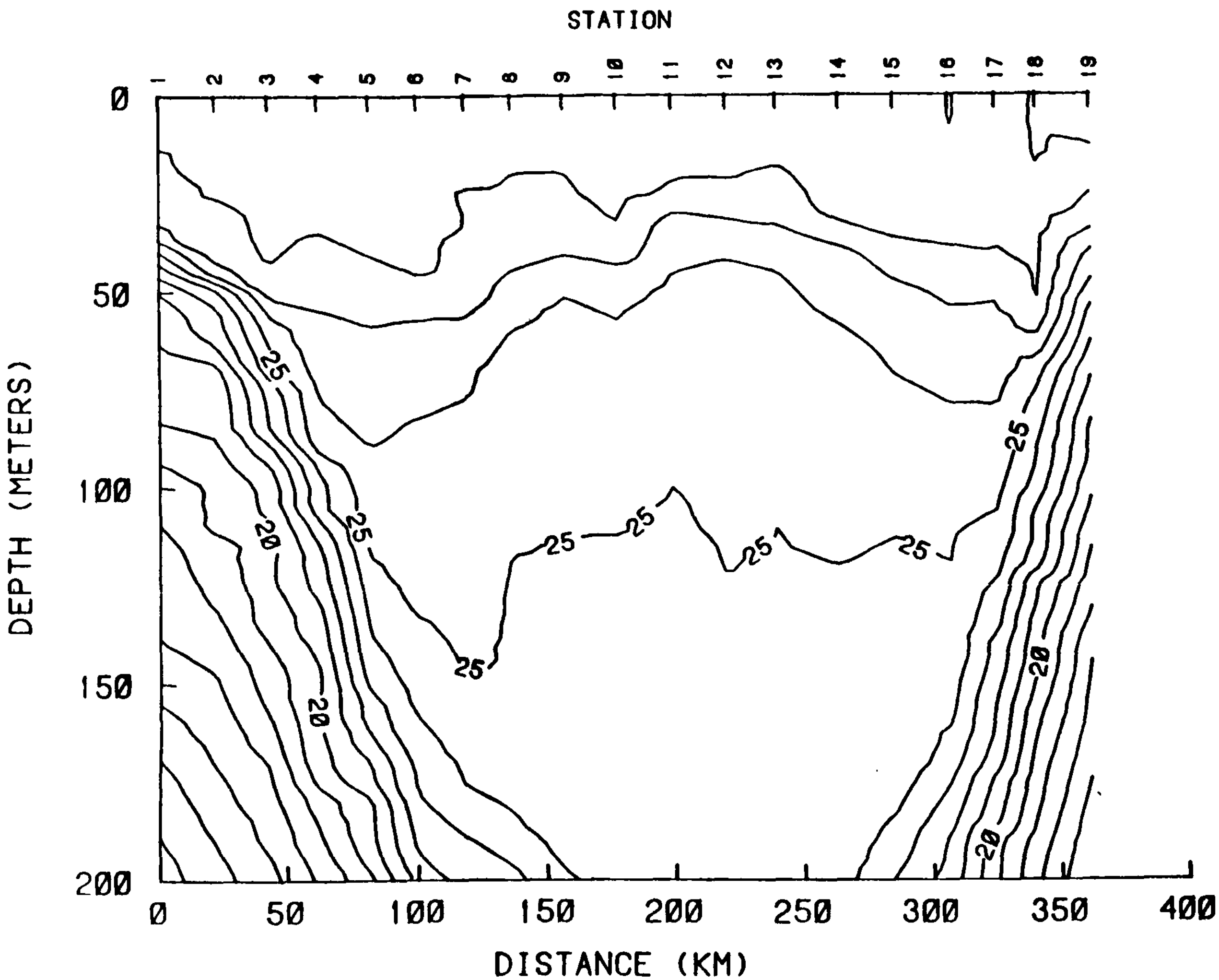
PARAMETERS AT SURFACE B/O ALTAIR CRUISE 85-01



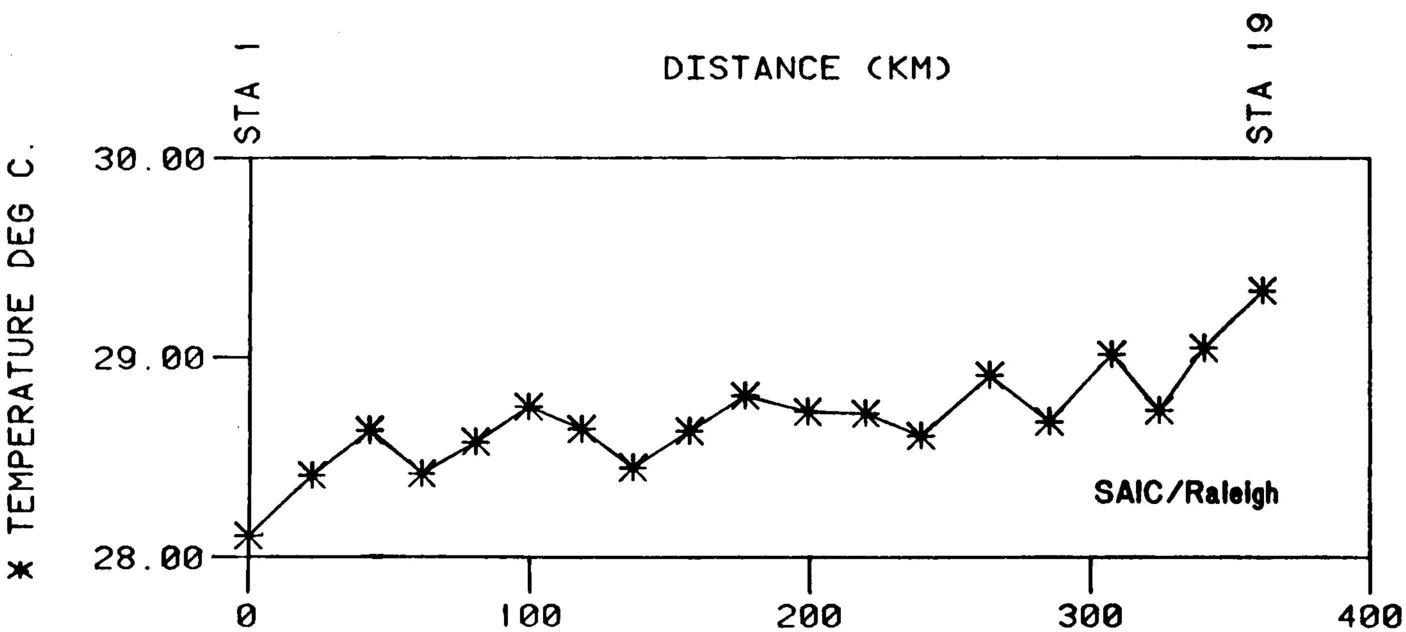
M/V NAT CO 6 CRUISE 85-Ø1
7/16/85 TO 7/19/85
92 W
91 W
9Ø W
89 W
88 W
87 W
86 W
3Ø N
29 N
28 N
27 N
26 N
25 N
24 N
200 m
500 m
1000 m
2000 m
3000 m
1
57
49
33
28
24
19
SAIC/Raleigh



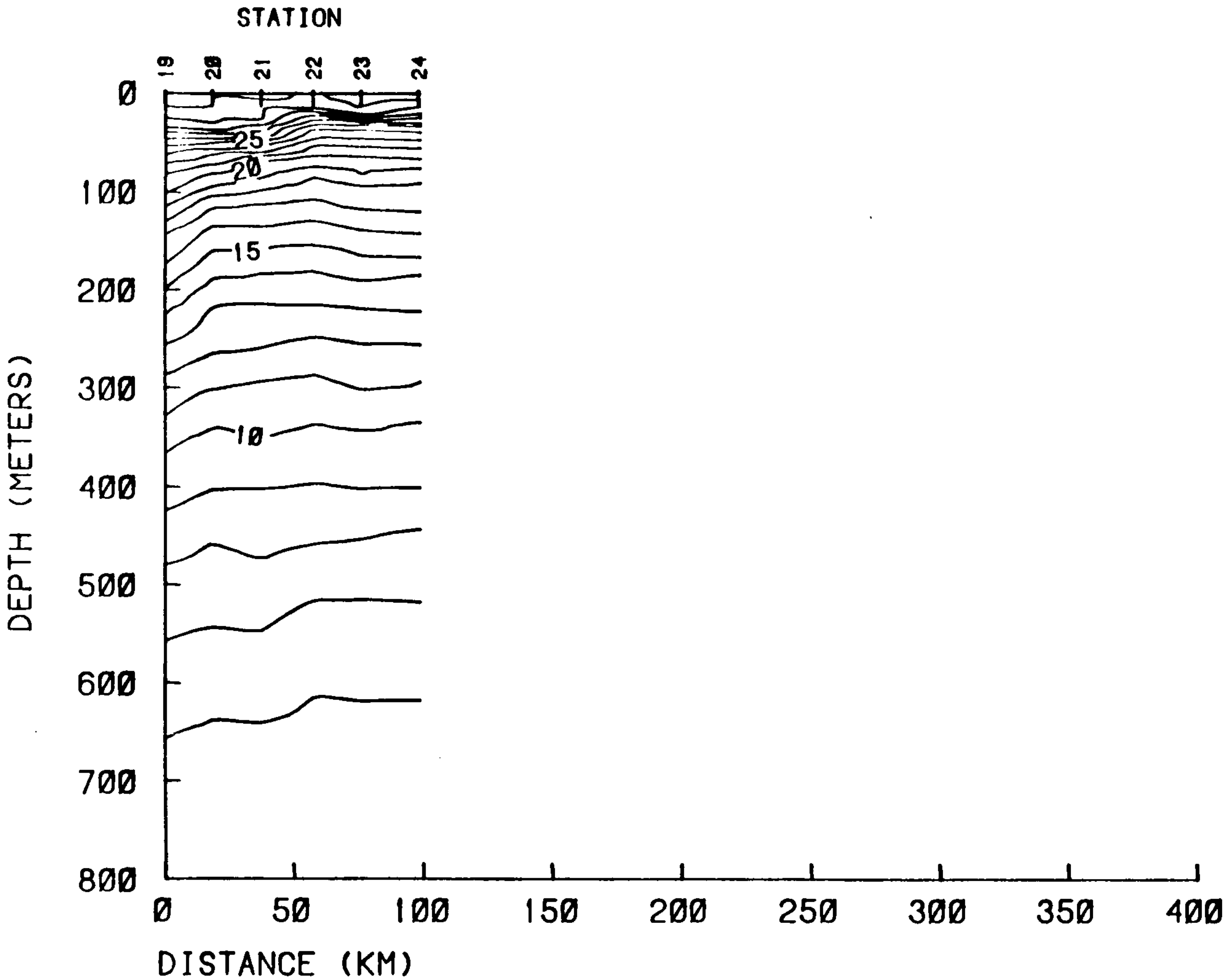
M/V NAT CO 6 CRUISE 85-01
7/16/85 TO 7/17/85
STATIONS 1 TO 19
TEMPERATURE DEG C
MIN = 5.36 MAX = 29.35
SAIC/Raleigh



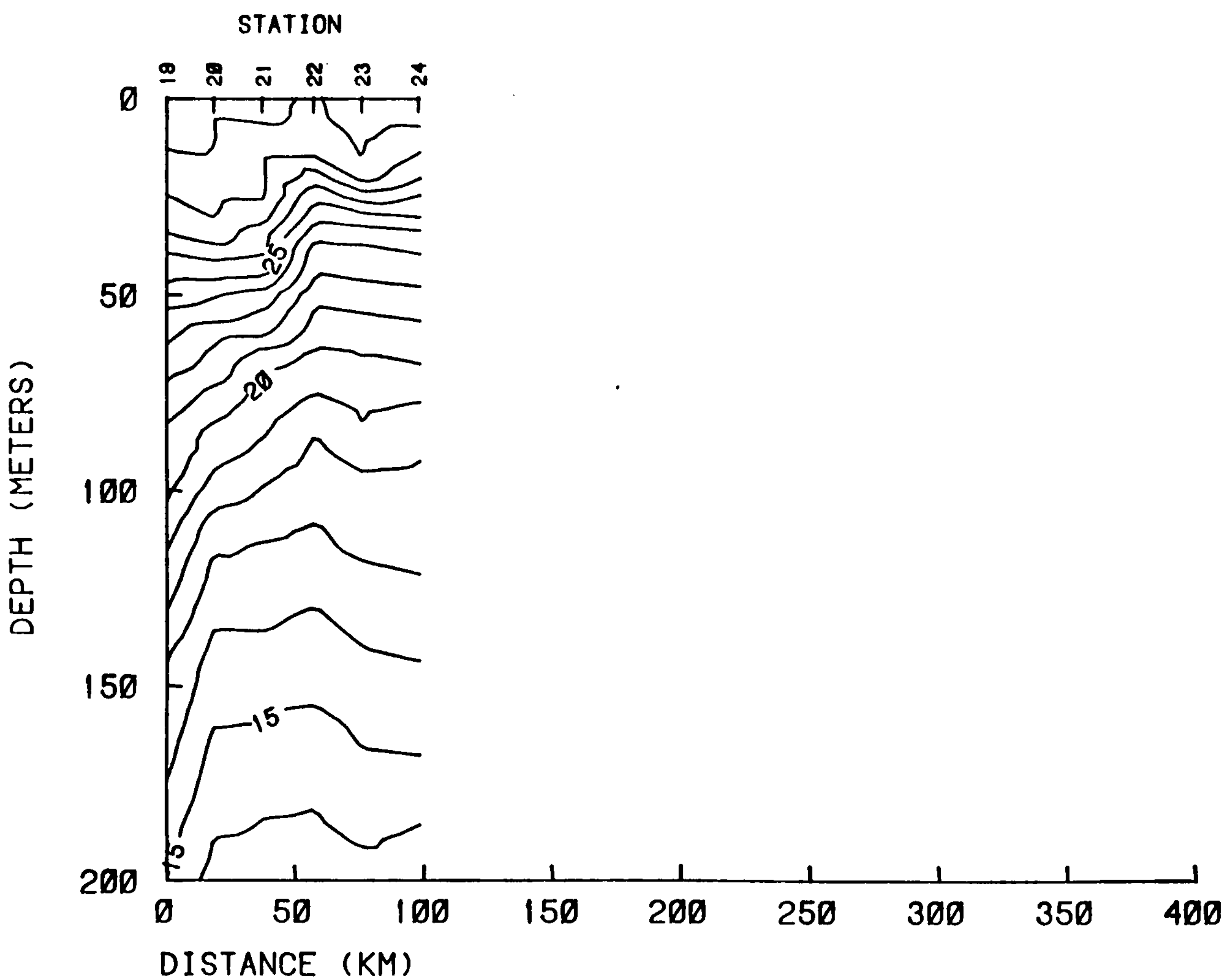
M/V NAT CO 6 CRUISE 85-Ø1
7/16/85 TO 7/17/85
STATIONS 1 TO 19
TEMPERATURE DEG C
MIN = 13.52 MAX = 29.35
SAIC/Raleigh



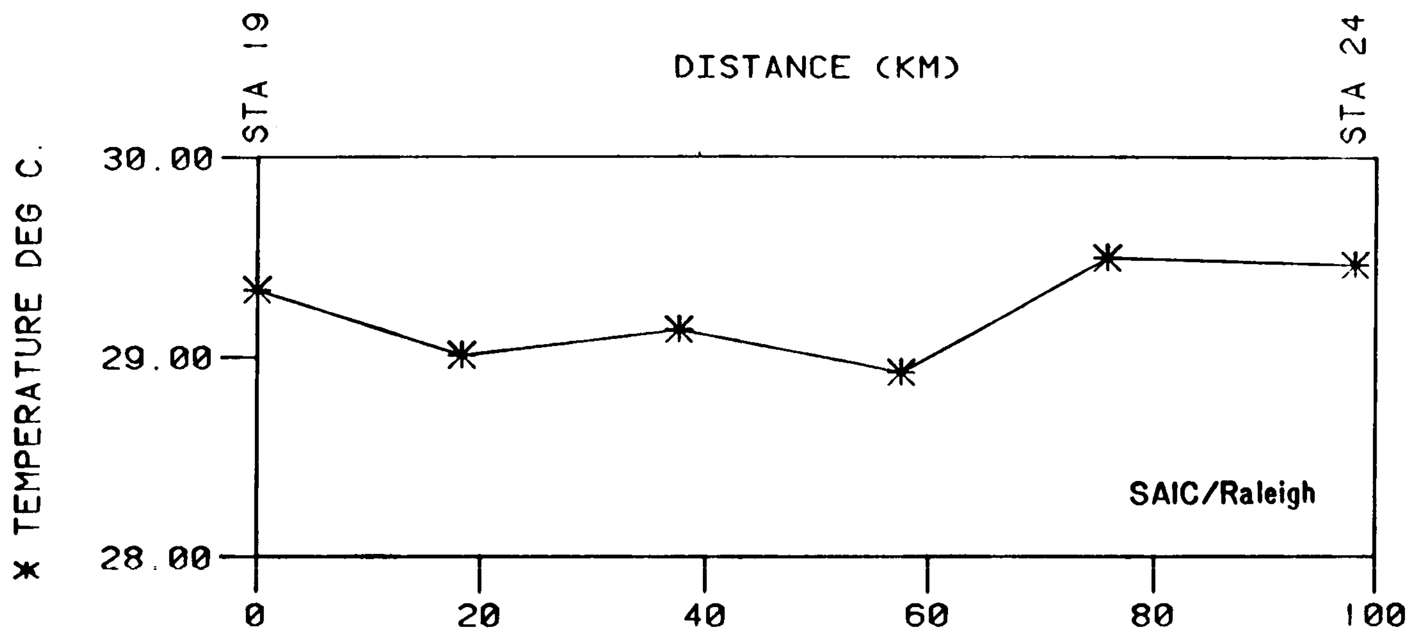
PARAMETERS AT SURFACE M/V NAT CO 6 CRUISE 85-01



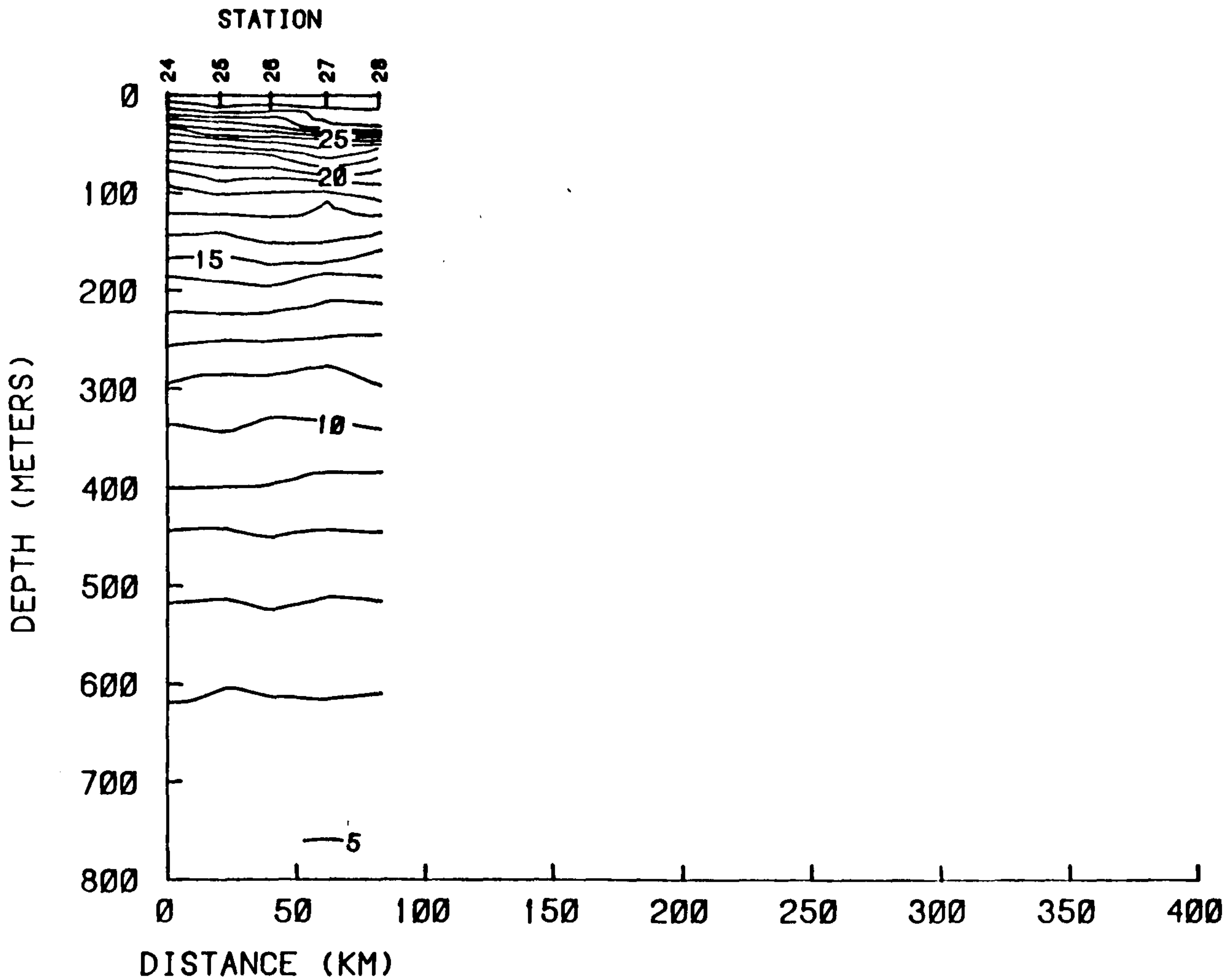
M/V NAT CO 6 CRUISE 85-Ø1
7/17/85 TO 7/17/85
STATIONS 19 TO 24
TEMPERATURE DEG C
MIN = 5.Ø2 MAX = 29.49



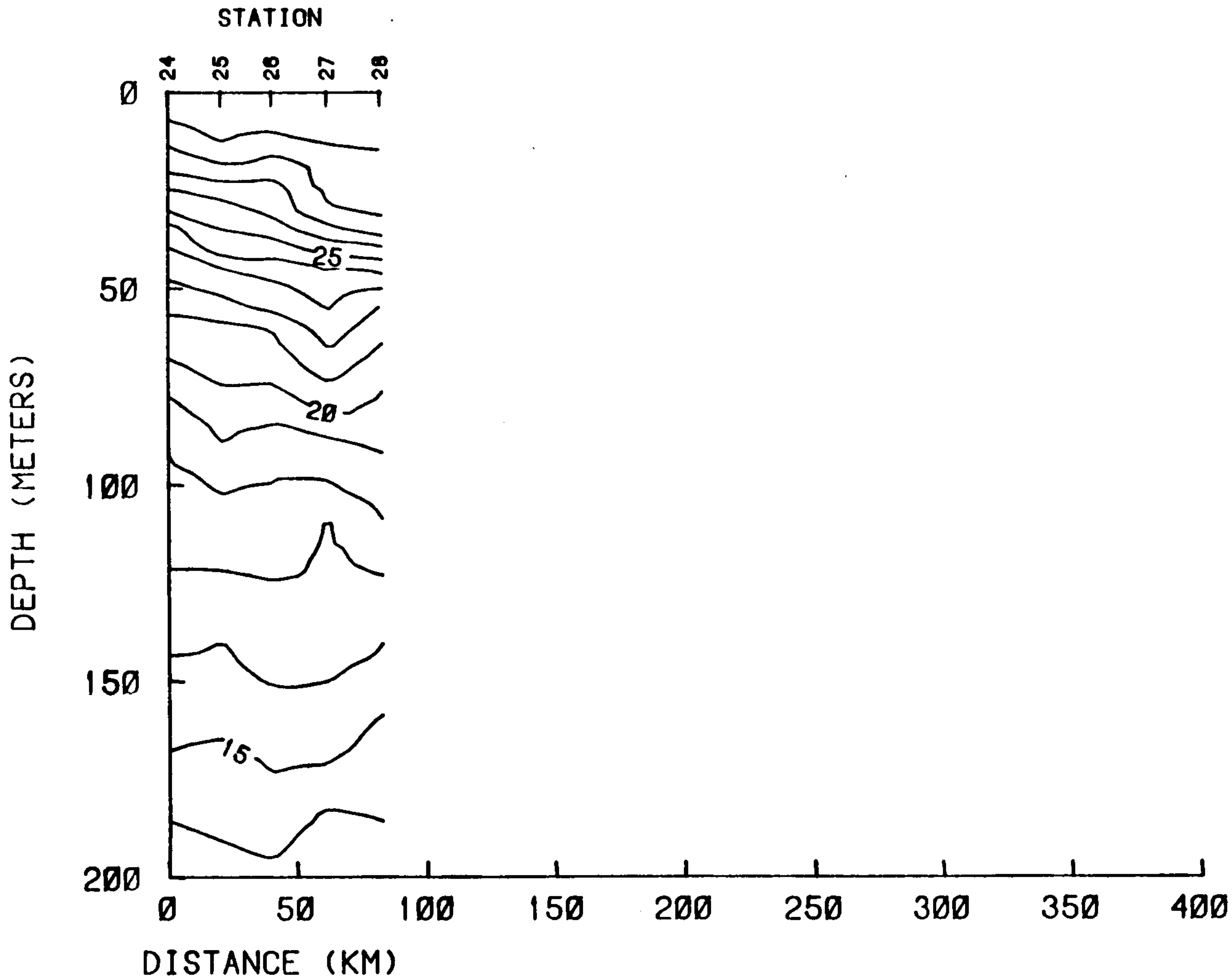
M/V NAT CO 6 CRUISE 85-01
7/17/85 TO 7/17/85
STATIONS 19 TO 24
TEMPERATURE DEG C
MIN = 13.43 MAX = 29.49
SAIC/Raleigh



PARAMETERS AT SURFACE M/V NAT CO 6 CRUISE 85-01



M/V NAT CO 6 CRUISE 85-01
7/17/85 TO 7/17/85
STATIONS 24 TO 28
TEMPERATURE DEG C
MIN = 4.99 MAX = 29.73
SAIC/Raleigh



M/V NAT CO 6 CRUISE 85-Ø1

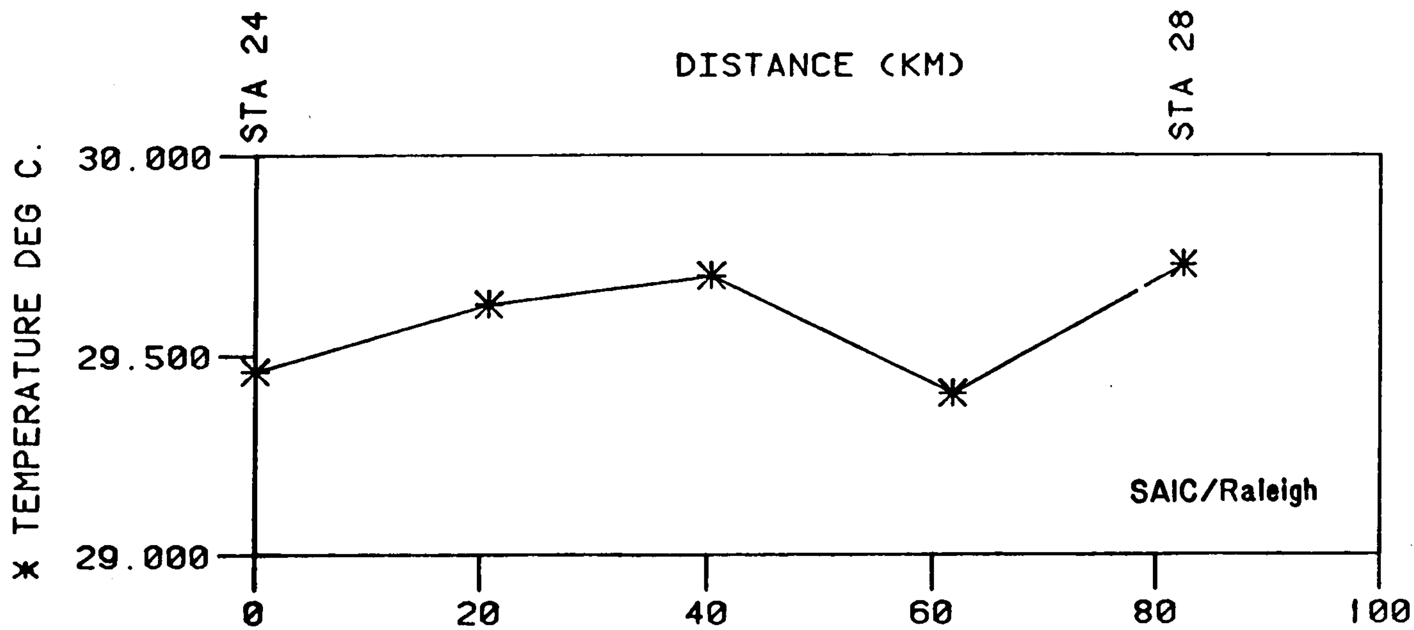
7/17/85 TO 7/17/85

STATIONS 24 TO 28

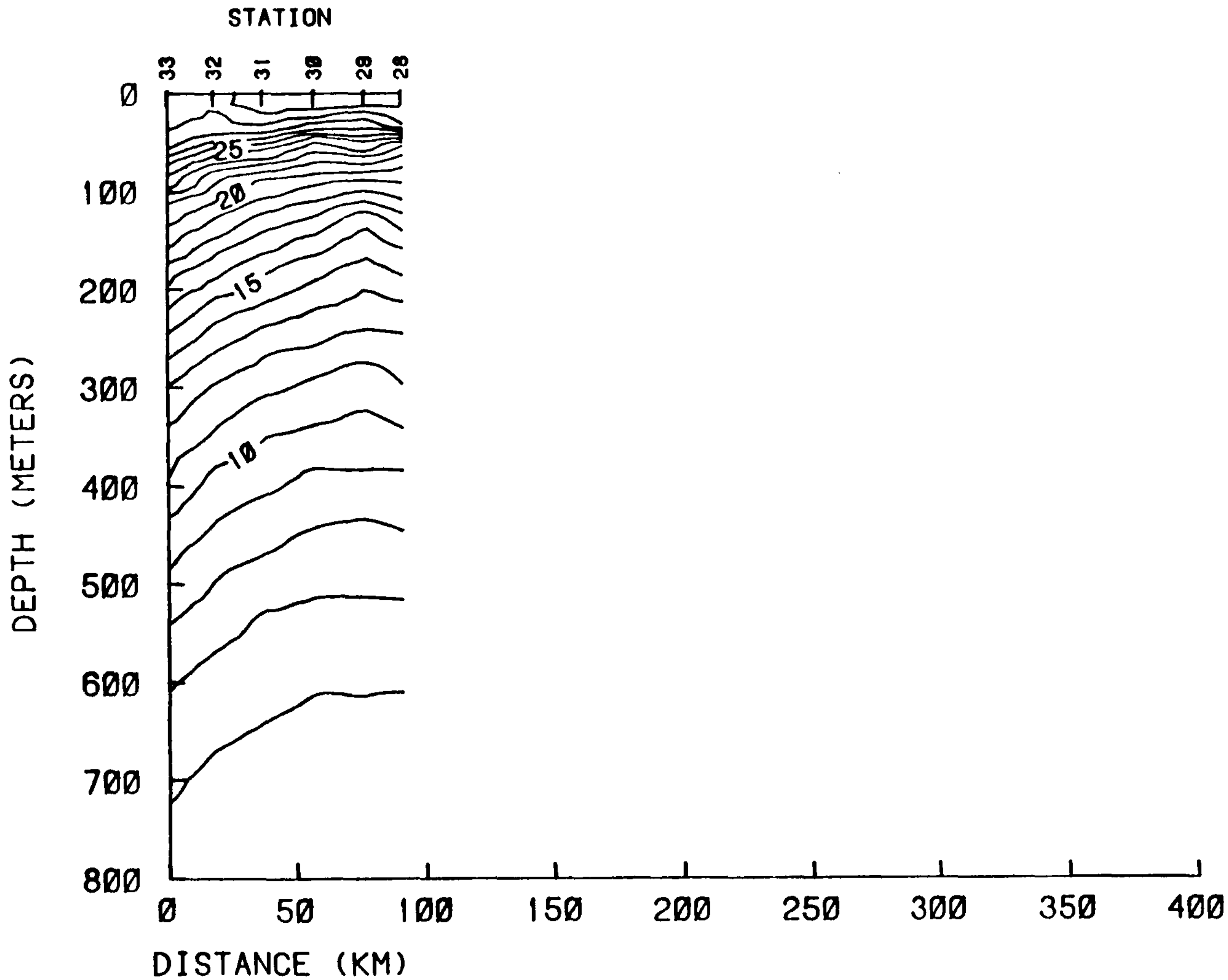
TEMPERATURE DEG C

MIN = 13.25 MAX = 29.73

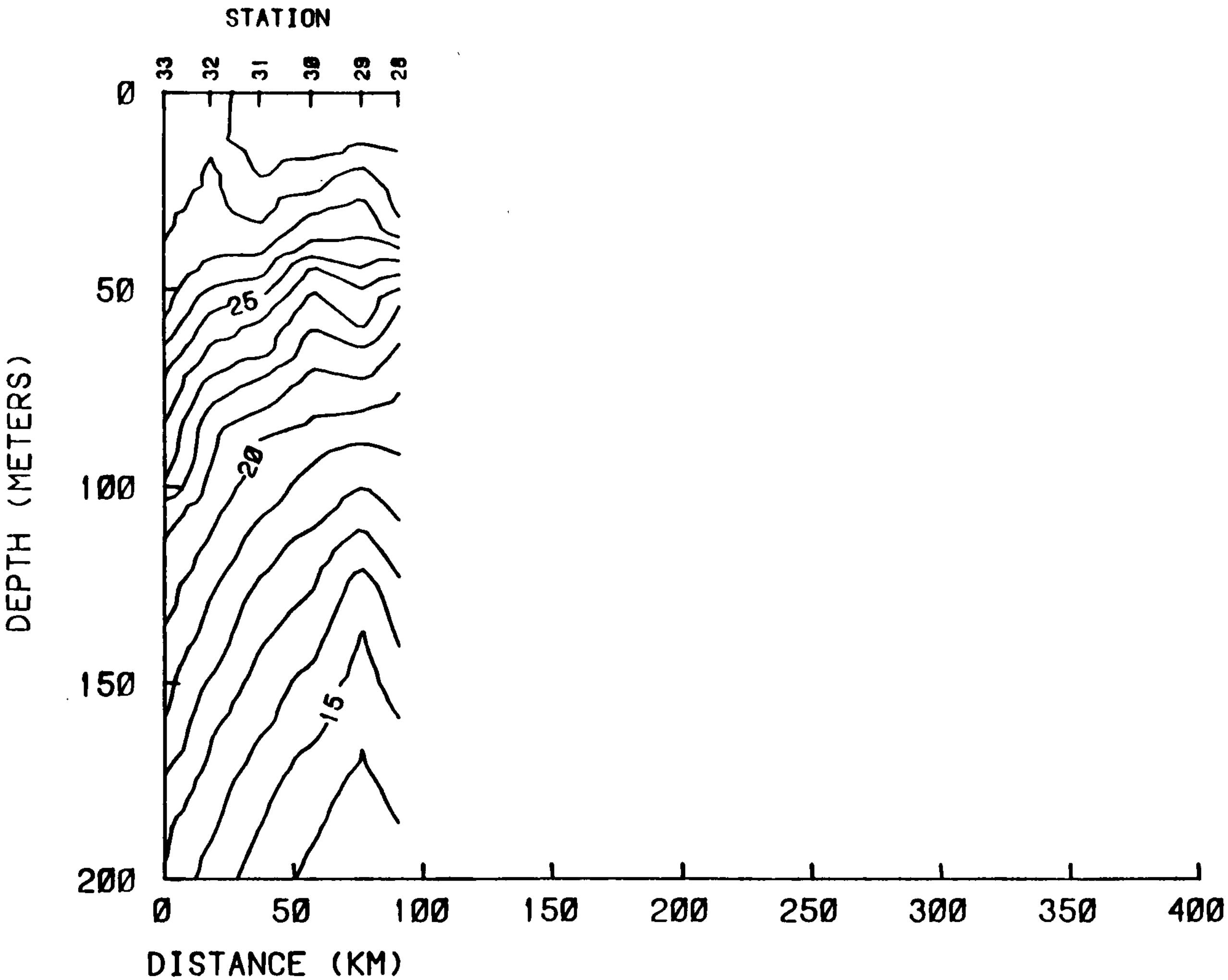
SAIC/Raleigh



PARAMETERS AT SURFACE M/V NAT CO 6 CRUISE 85-01



M/V NAT CO 6 CRUISE 85-01
7/17/85 TO 7/18/85
STATIONS 28 TO 33
TEMPERATURE DEG C
MIN = 5.00 MAX = 29.73
SAIC/Raleigh



M/V NAT CO 6 CRUISE 85-01

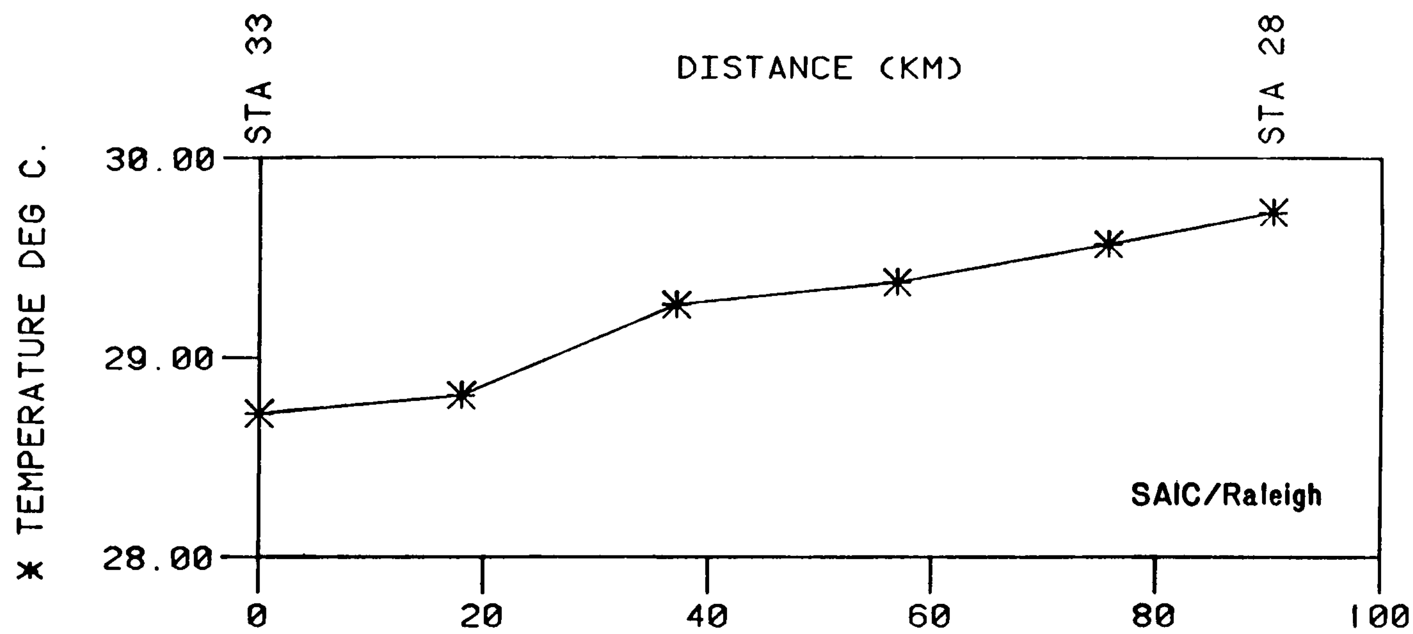
7/17/85 TO 7/18/85

STATIONS 28 TO 33

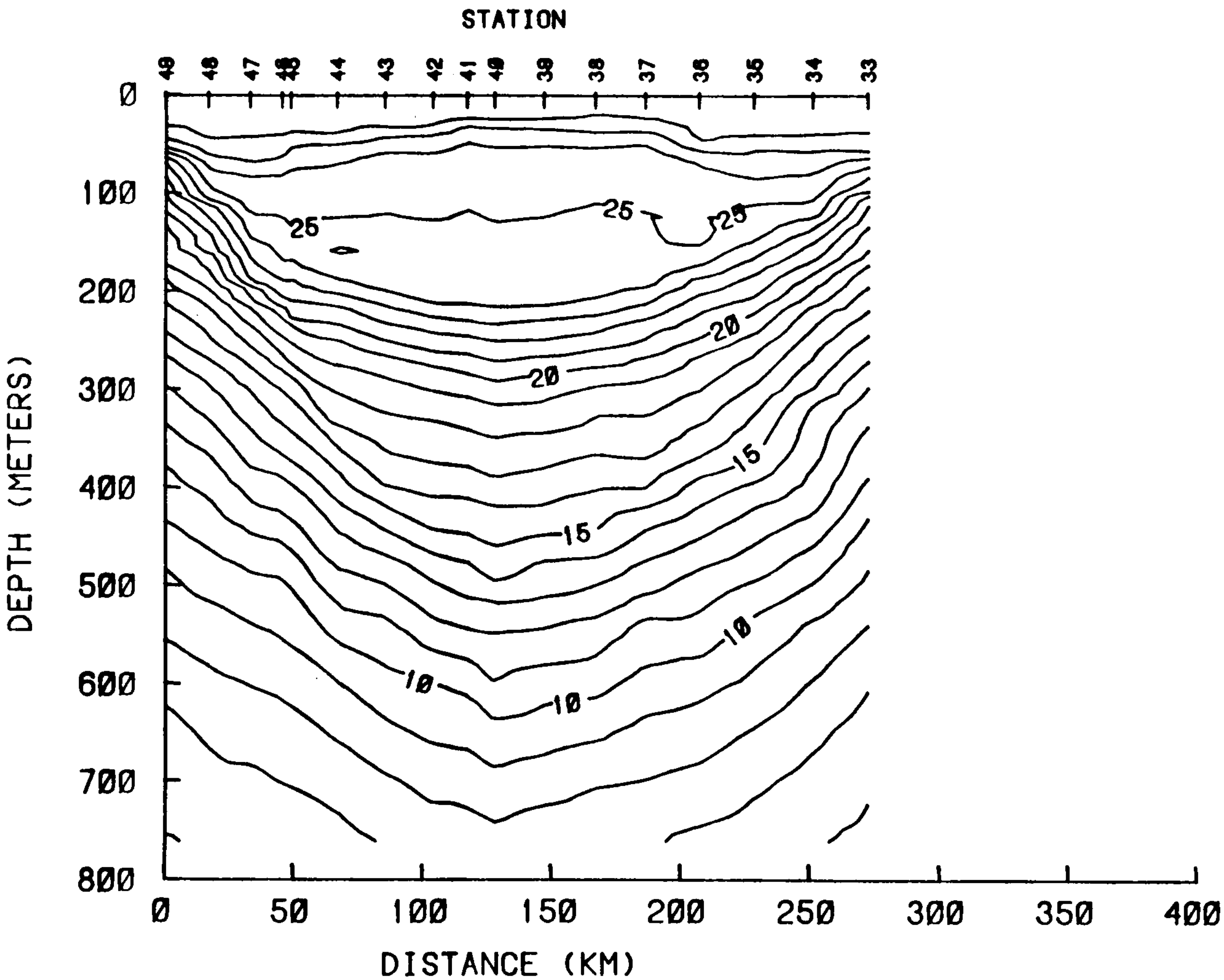
TEMPERATURE DEG C

MIN = 13.02 MAX = 29.73

SAIC/Raleigh

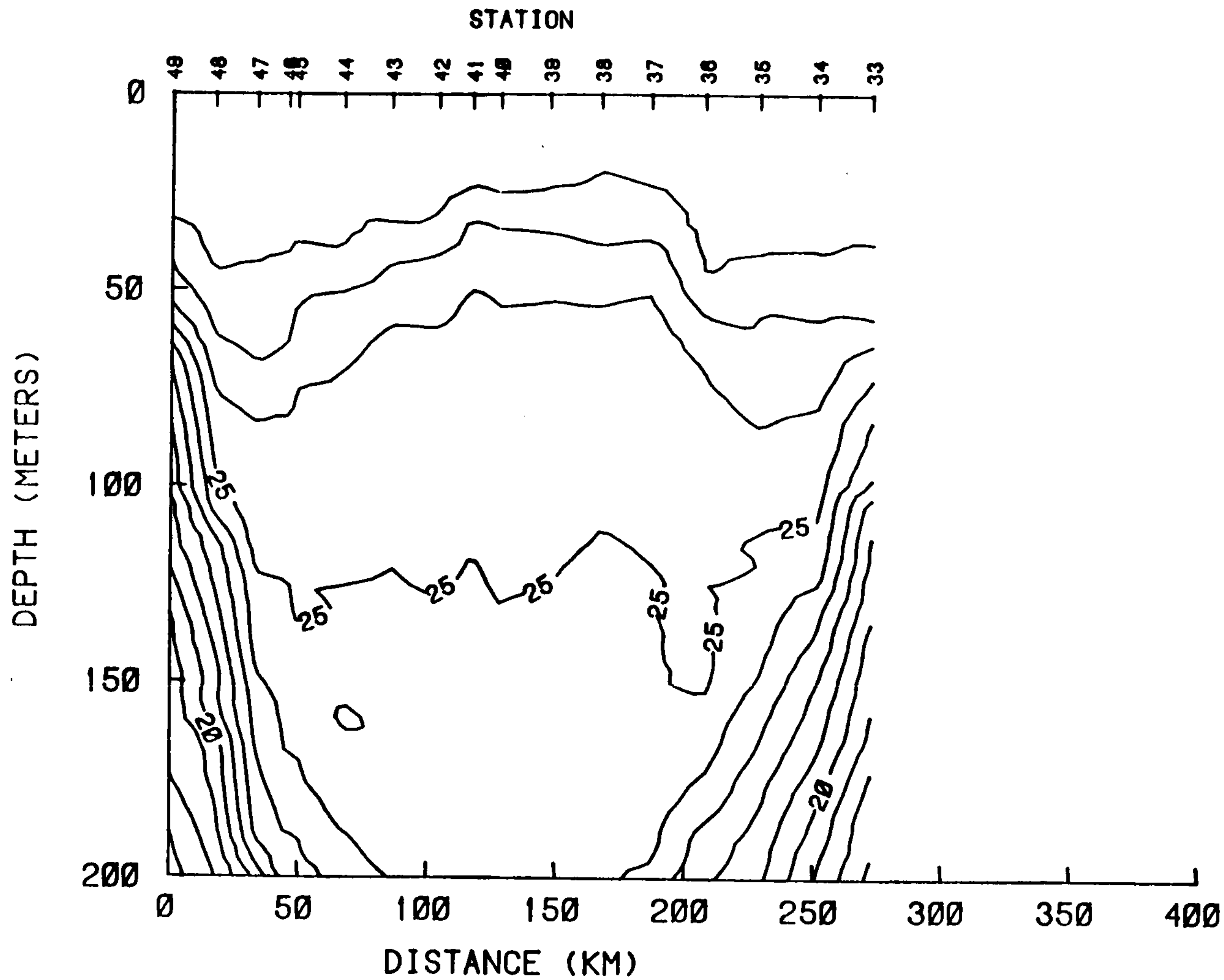


PARAMETERS AT SURFACE M/V NAT CO 6 CRUISE 85-01

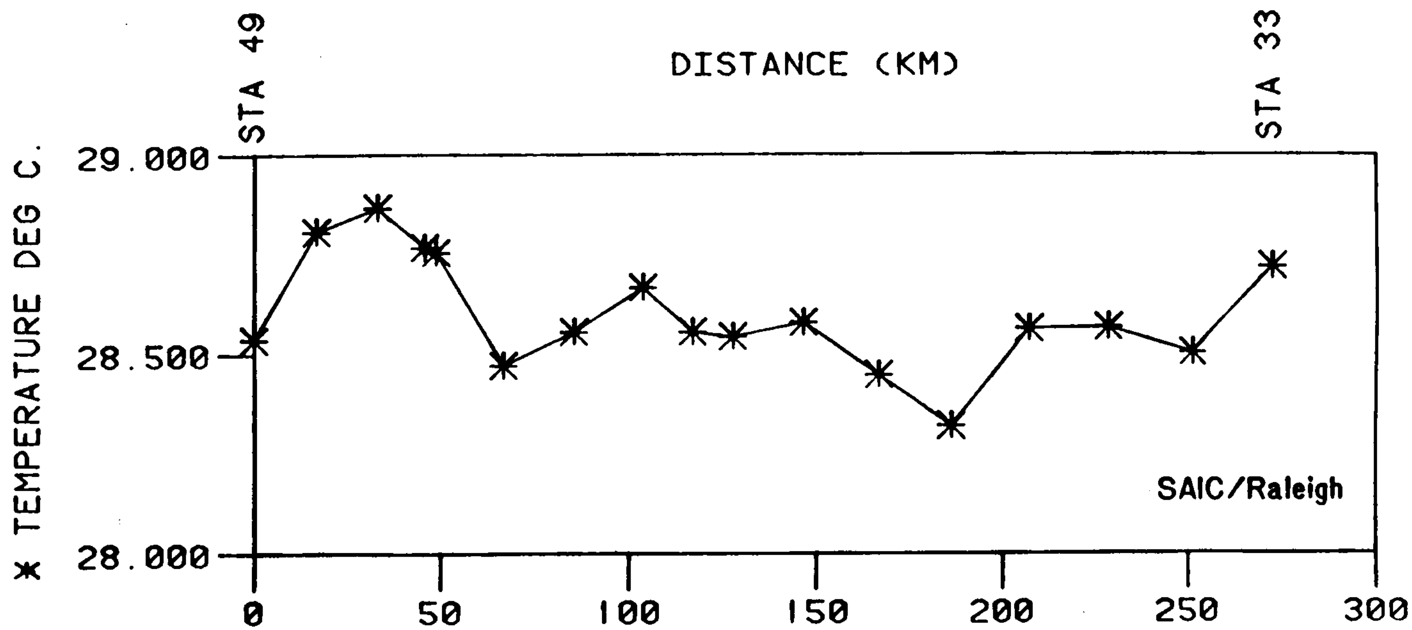


M/V NAT CO 6 CRUISE 85-01
7/18/85 TO 7/18/85
STATIONS 33 TO 49
TEMPERATURE DEG C
MIN = 5.78 MAX = 28.89

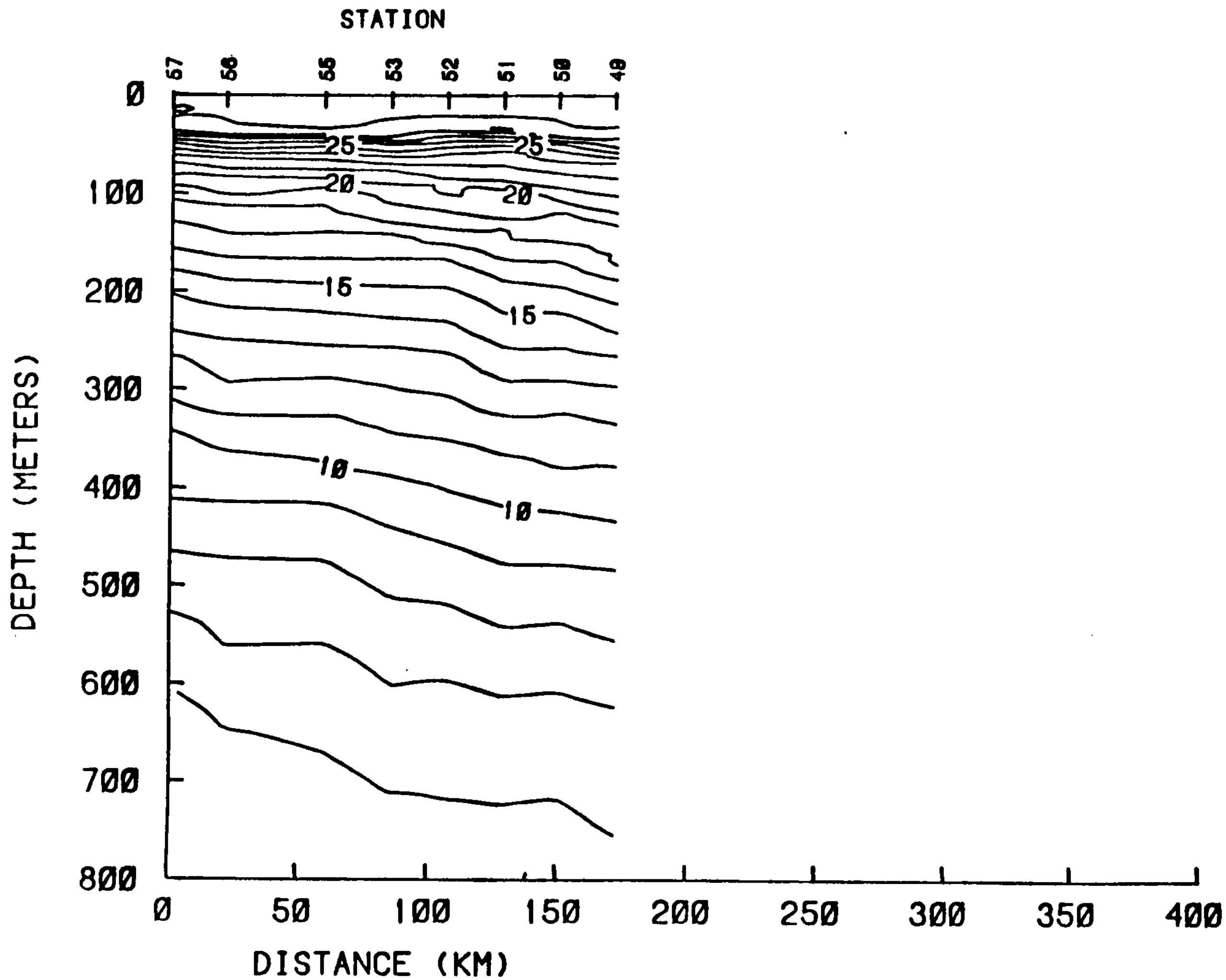
SAIC/Raleigh



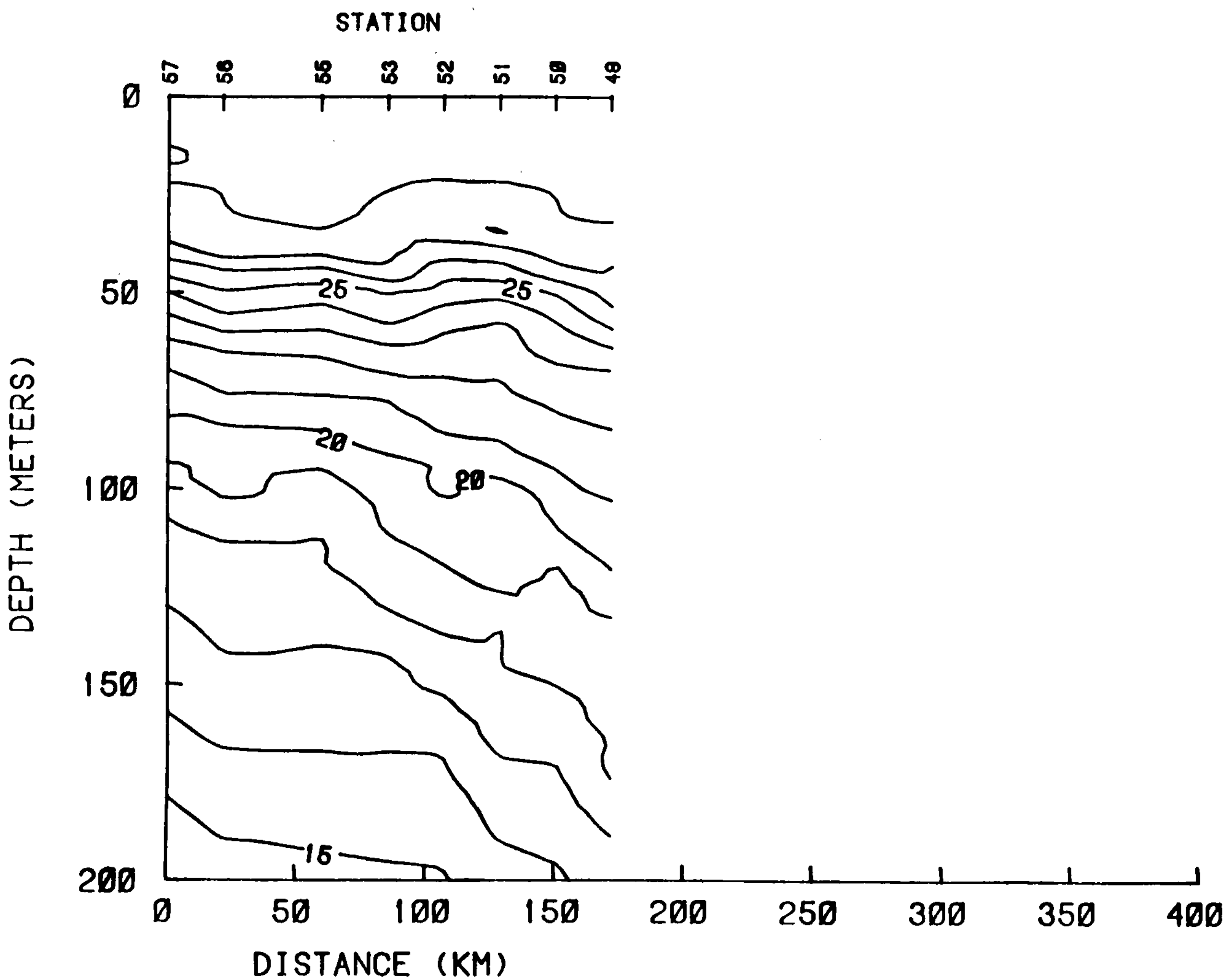
M/V NAT CO 6 CRUISE 85-Ø1
7/18/85 TO 7/18/85
STATIONS 33 TO 49
TEMPERATURE DEG C
MIN = 16.55 MAX = 28.89
SAIC/Raleigh



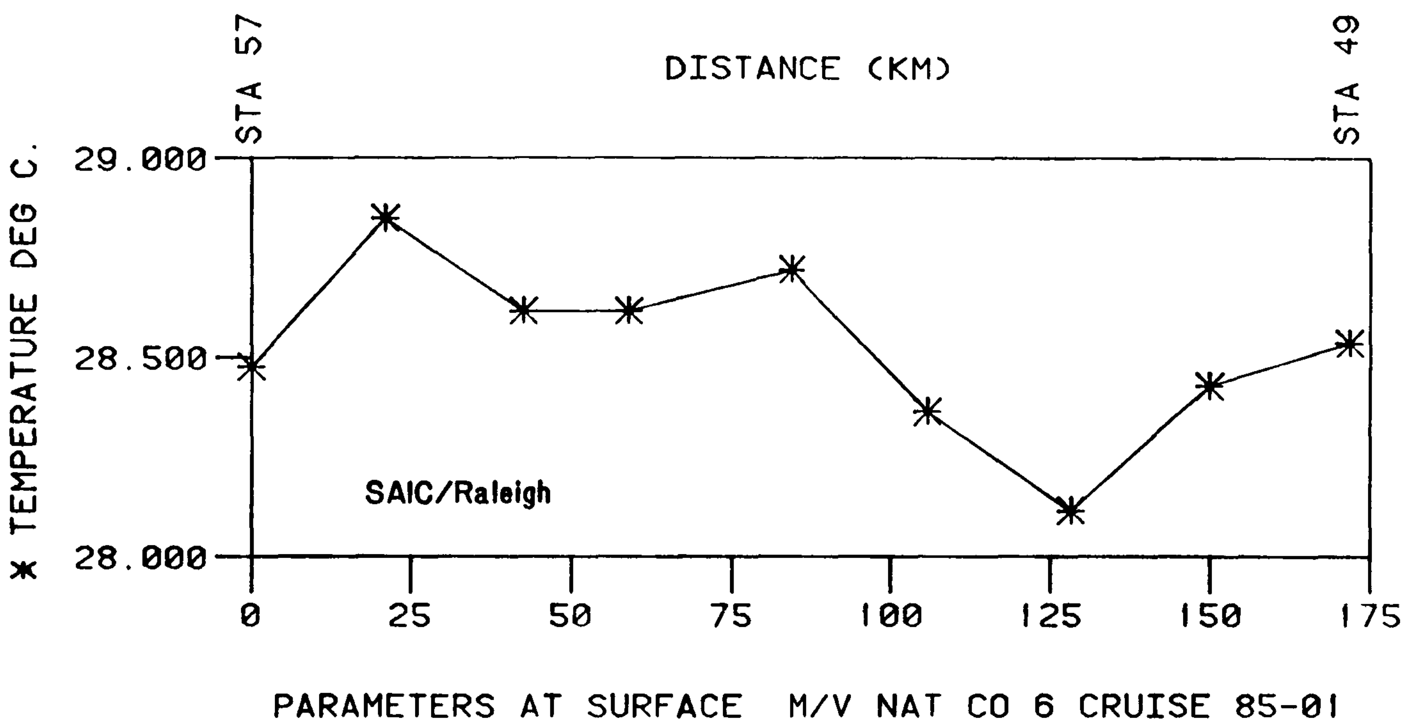
PARAMETERS AT SURFACE M/V NAT CO 6 CRUISE 85-01



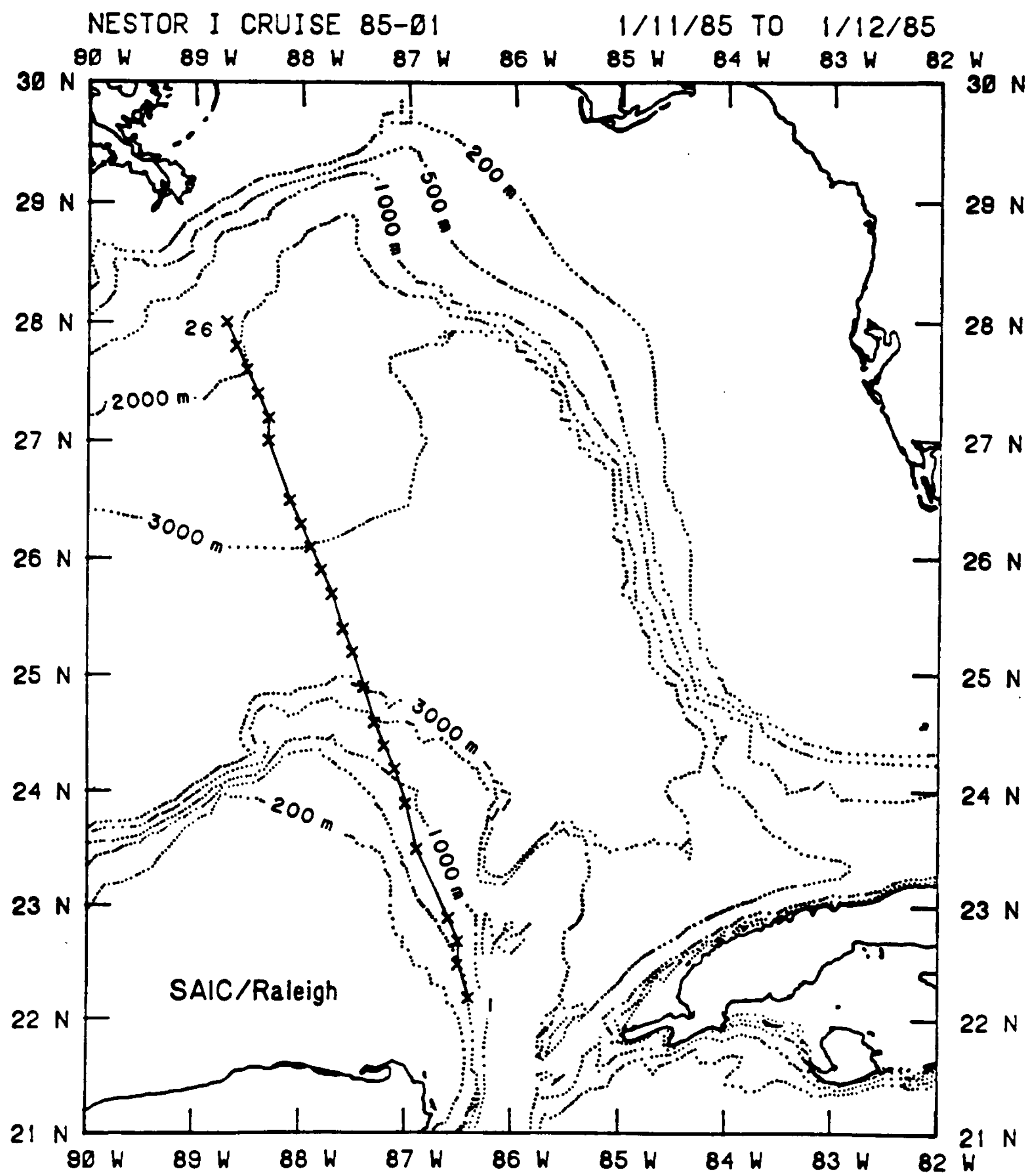
M/V NAT CO 6 CRUISE 85-01
7/18/85 TO 7/19/85
STATIONS 49 TO 57
TEMPERATURE DEG C
MIN = 5.39 MAX = 28.85

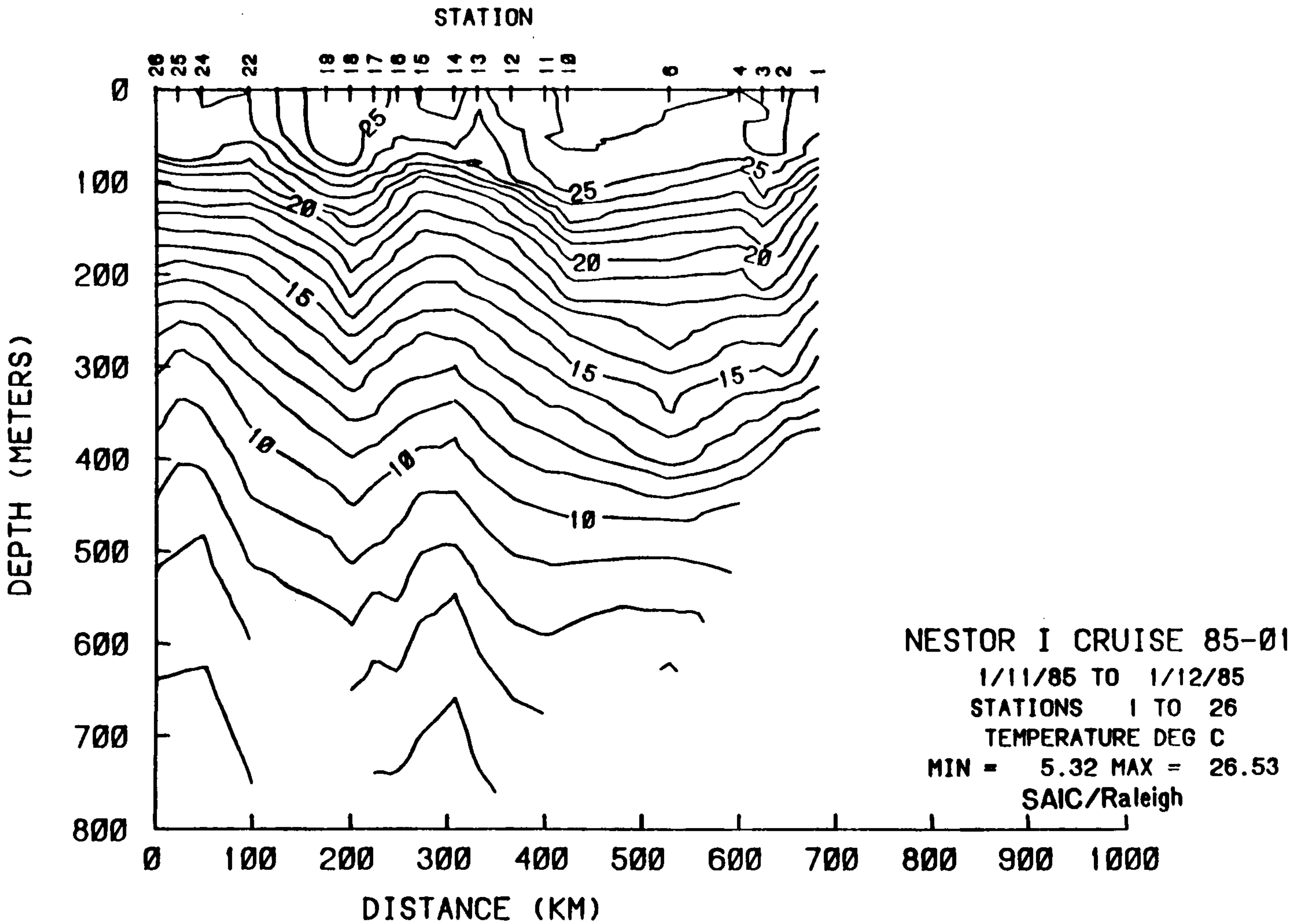


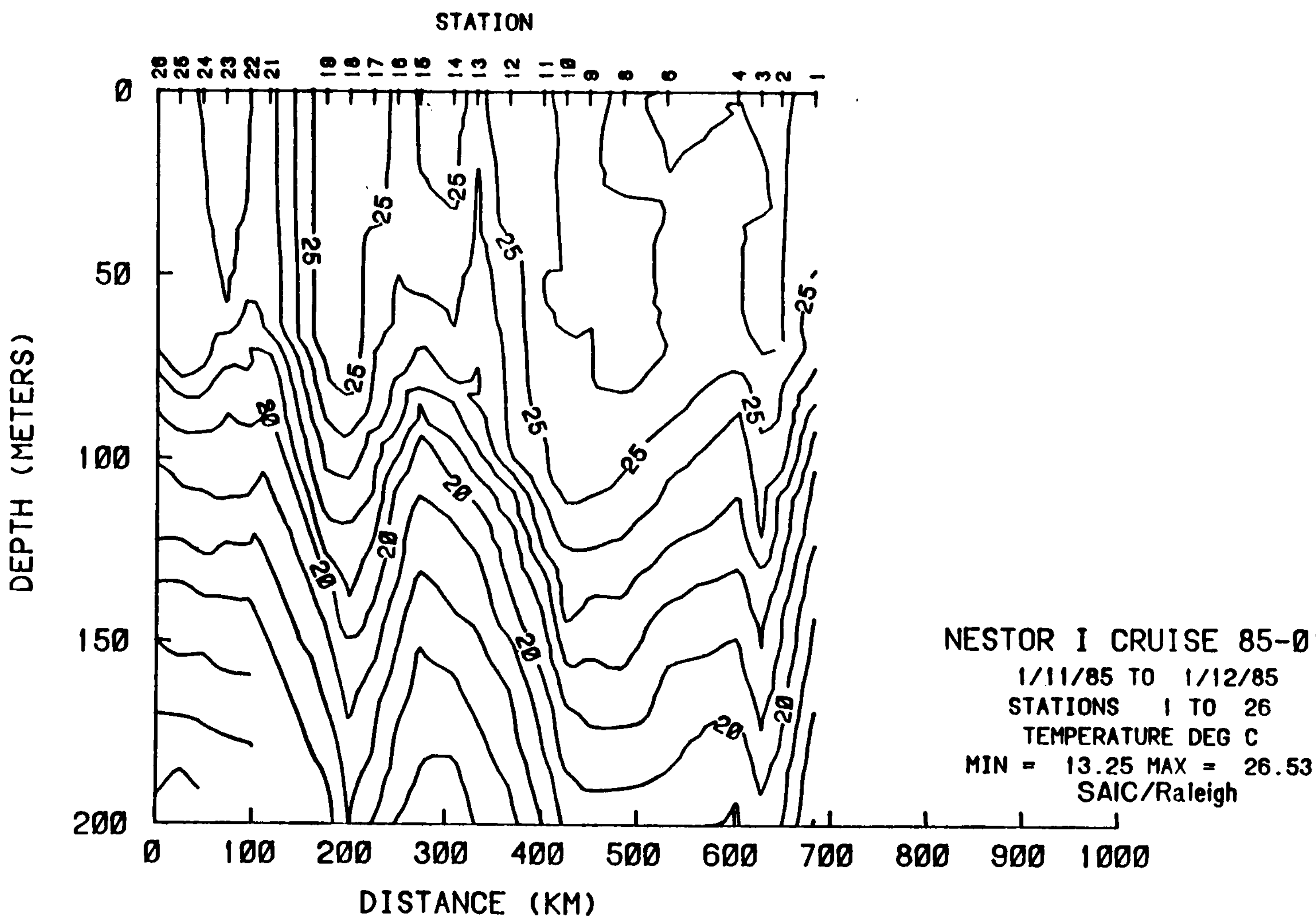
M/V NAT CO 6 CRUISE 85-01
7/18/85 TO 7/19/85
STATIONS 49 TO 57
TEMPERATURE DEG C
MIN = 14.15 MAX = 28.85
SAIC/Raleigh

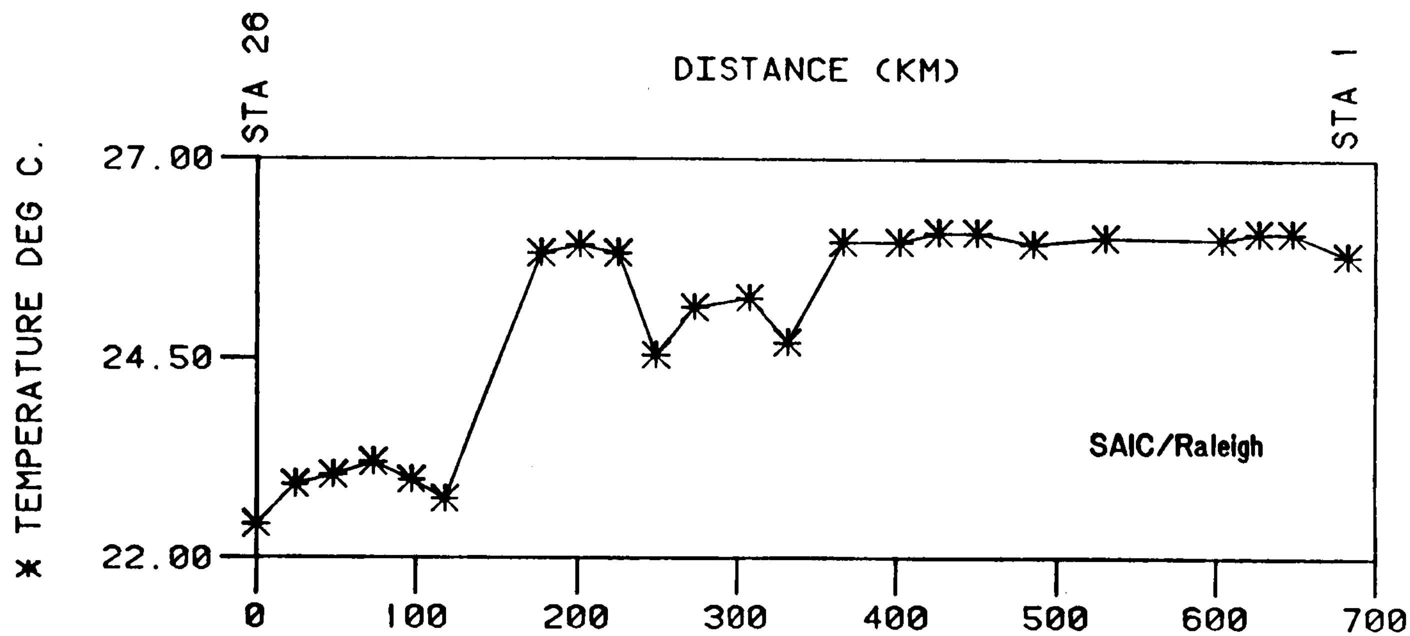


DISTANCE (KM)
STA 57
STA 49
29.000
28.500
28.000
* TEMPERATURE DEG C.
SAIC/Raleigh
0
25
50
75
100
125
150
175
PARAMETERS AT SURFACE M/V NAT CO 6 CRUISE 85-01

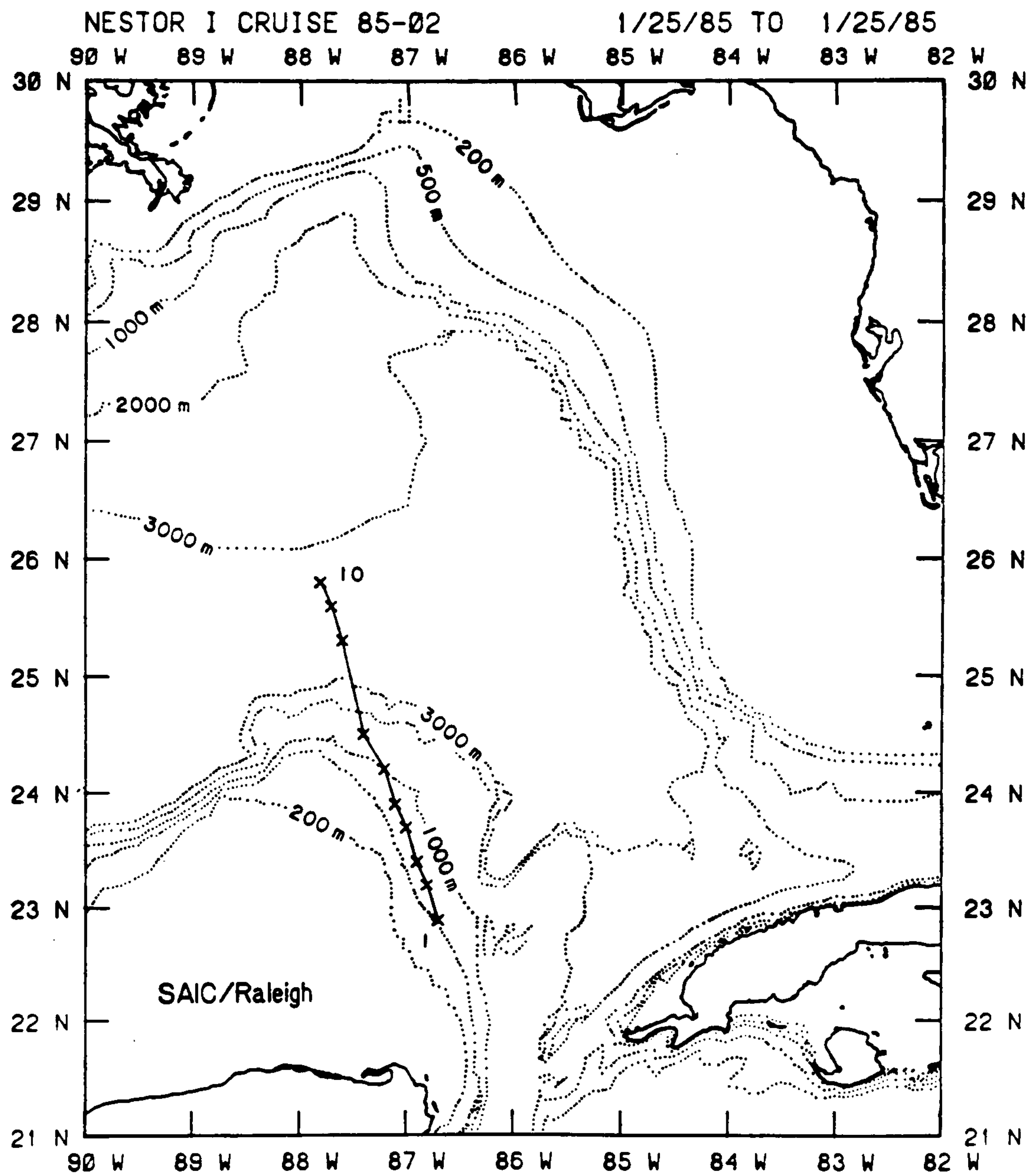

NESTOR I CRUISE 85-Ø1
1/11/85 TO 1/12/85
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
26
1
SAIC/Raleigh

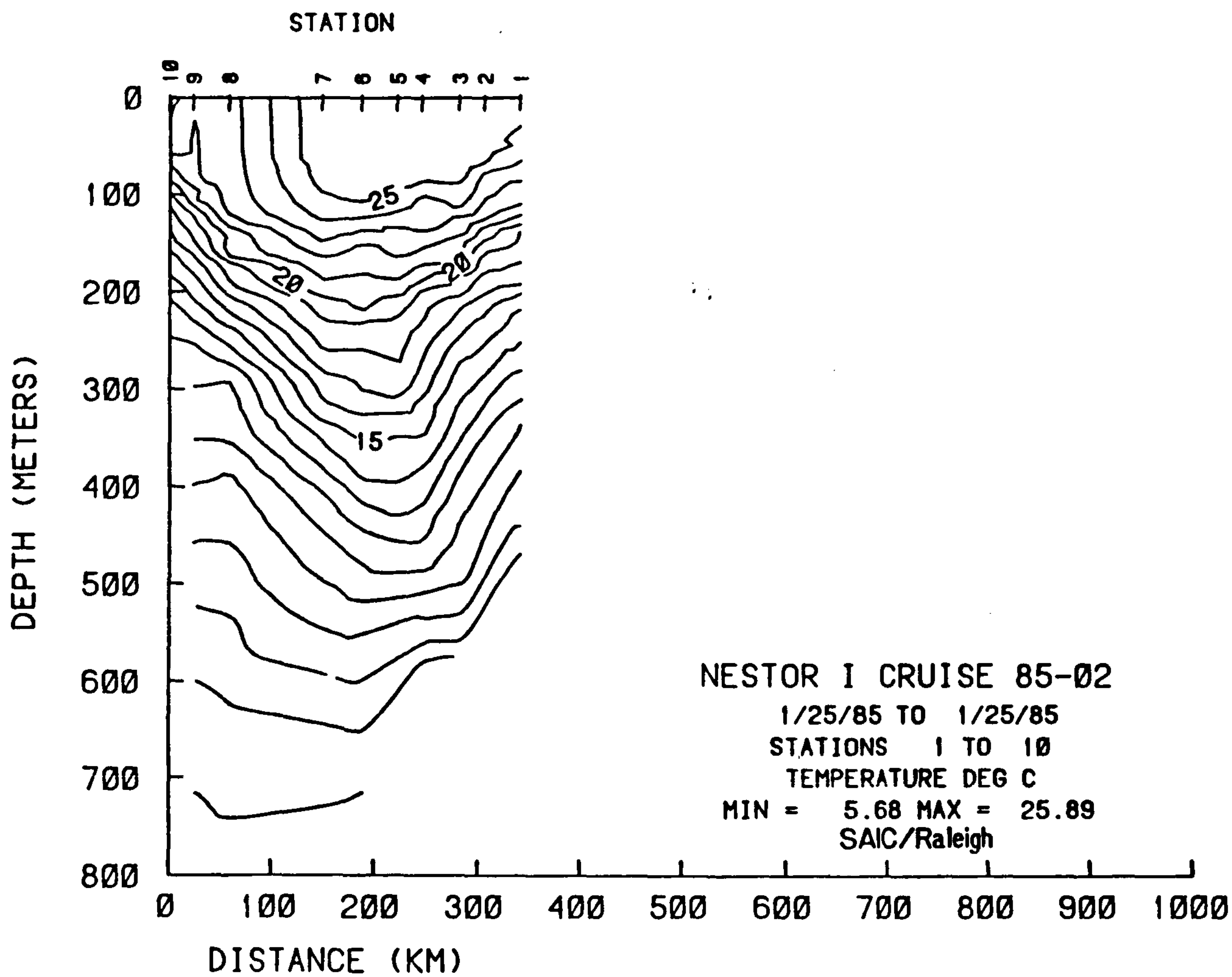

STATION
26 25 24 22 19 18 17 16 15 14 13 12 11 10 6 4 3 2 1
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
25
20
15
10
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)
NESTOR I CRUISE 85-01
1/11/85 TO 1/12/85
STATIONS 1 TO 26
TEMPERATURE DEG C
MIN = 5.32 MAX = 26.53
SAIC/Raleigh

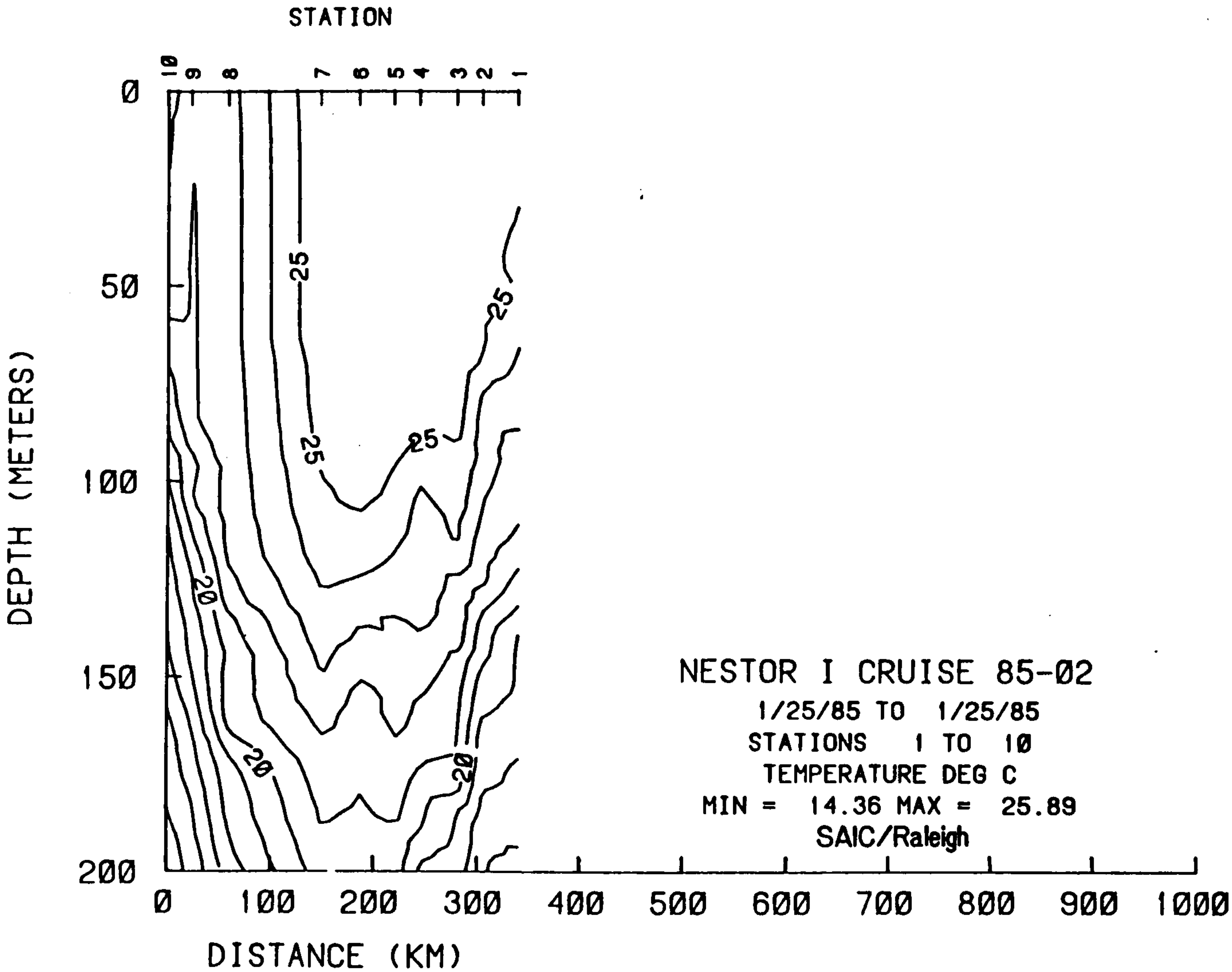

STATION
DEPTH (METERS)
DISTANCE (KM)
NESTOR I CRUISE 85-01
1/11/85 TO 1/12/85
STATIONS 1 TO 26
TEMPERATURE DEG C
MIN = 13.25 MAX = 26.53
SAIC/Raleigh

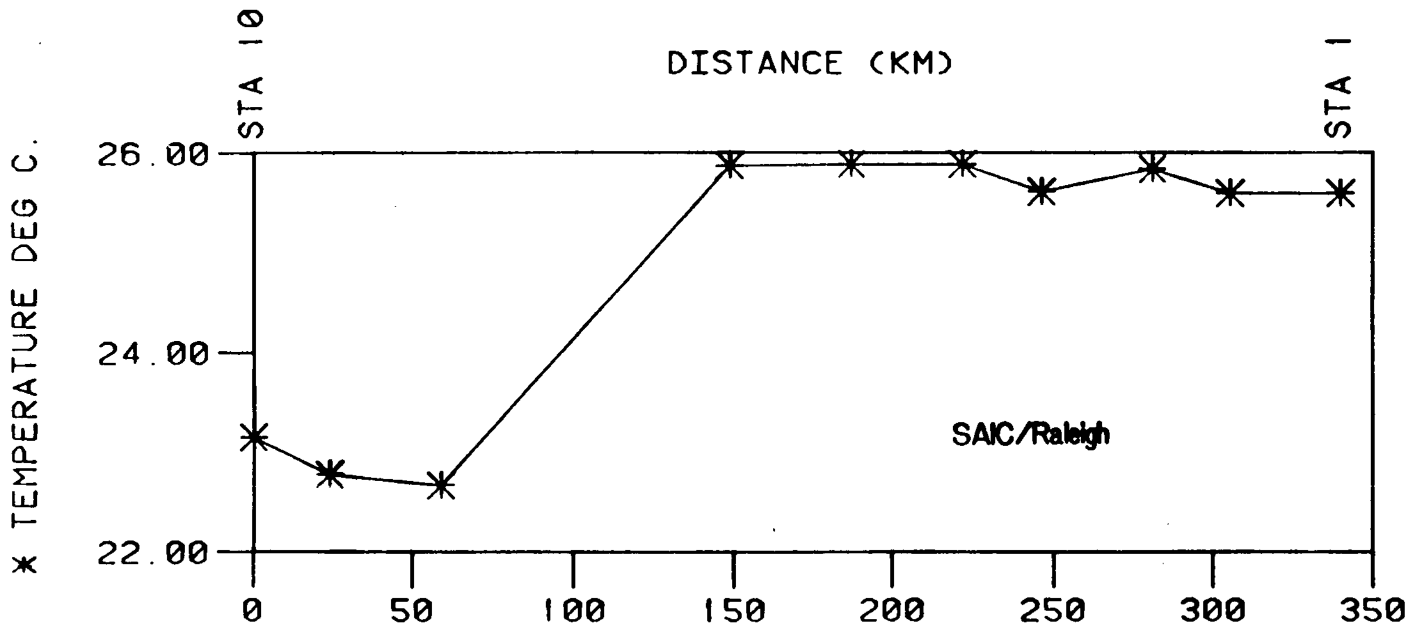


PARAMETERS AT SURFACE NESTOR I CRUISE 85-01

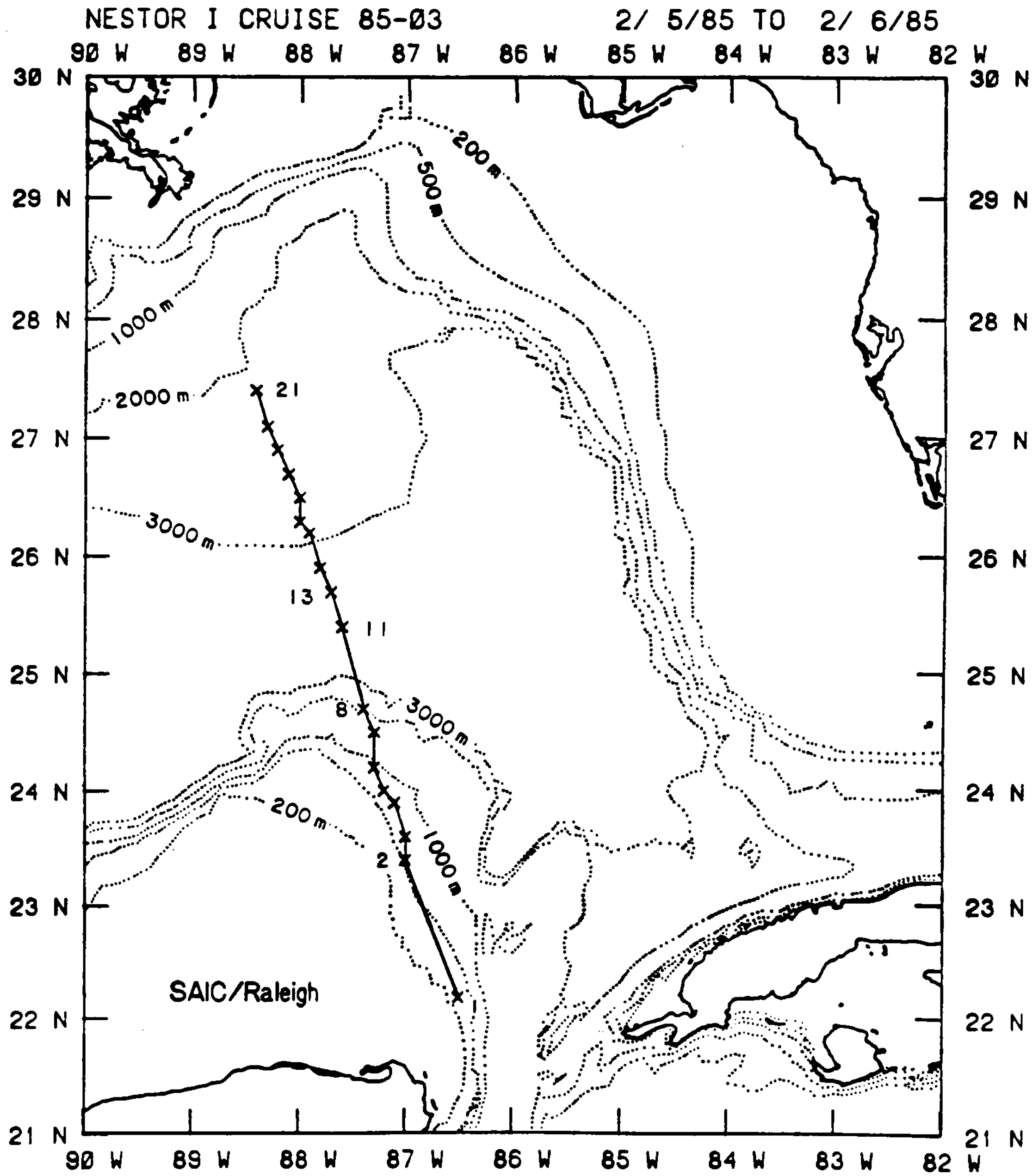

NESTOR I CRUISE 85-02
1/25/85 TO 1/25/85
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
200 m
1000 m
10
1
SAIC/Raleigh


STATION
10 9 8 7 6 5 4 3 2 1
25
20
20
15
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
NESTOR I CRUISE 85-02
1/25/85 TO 1/25/85
STATIONS 1 TO 10
TEMPERATURE DEG C
MIN = 5.68 MAX = 25.89
SAIC/Raleigh

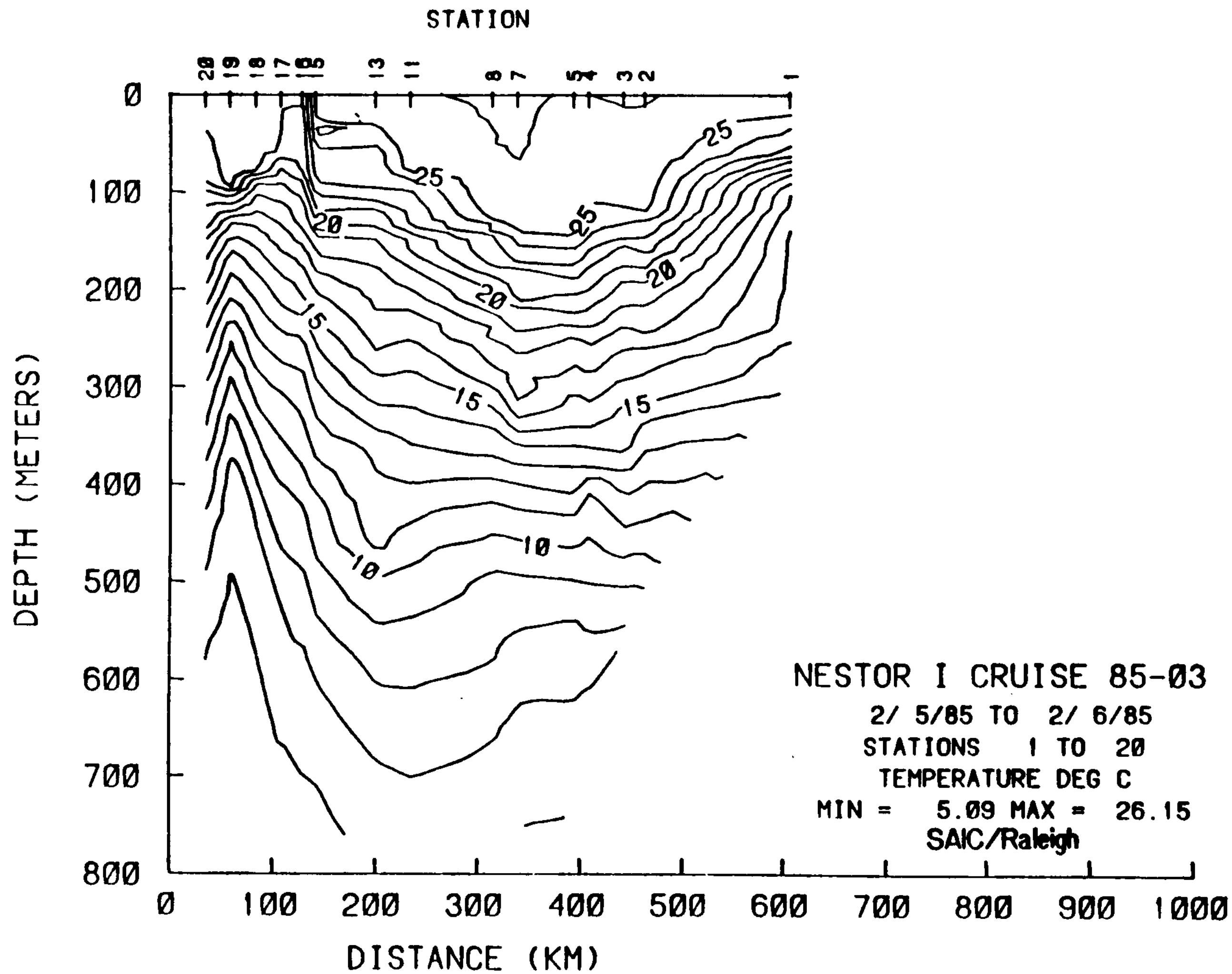

STATION
10
9
8
7
6
5
4
3
2
1
DEPTH (METERS)
0
50
100
150
200
25
25
25
25
20
20
20
DISTANCE (KM)
0
100
200
300
400
500
600
700
800
900
1000
NESTOR I CRUISE 85-02
1/25/85 TO 1/25/85
STATIONS 1 TO 10
TEMPERATURE DEG C
MIN = 14.36 MAX = 25.89
SAIC/Raleigh

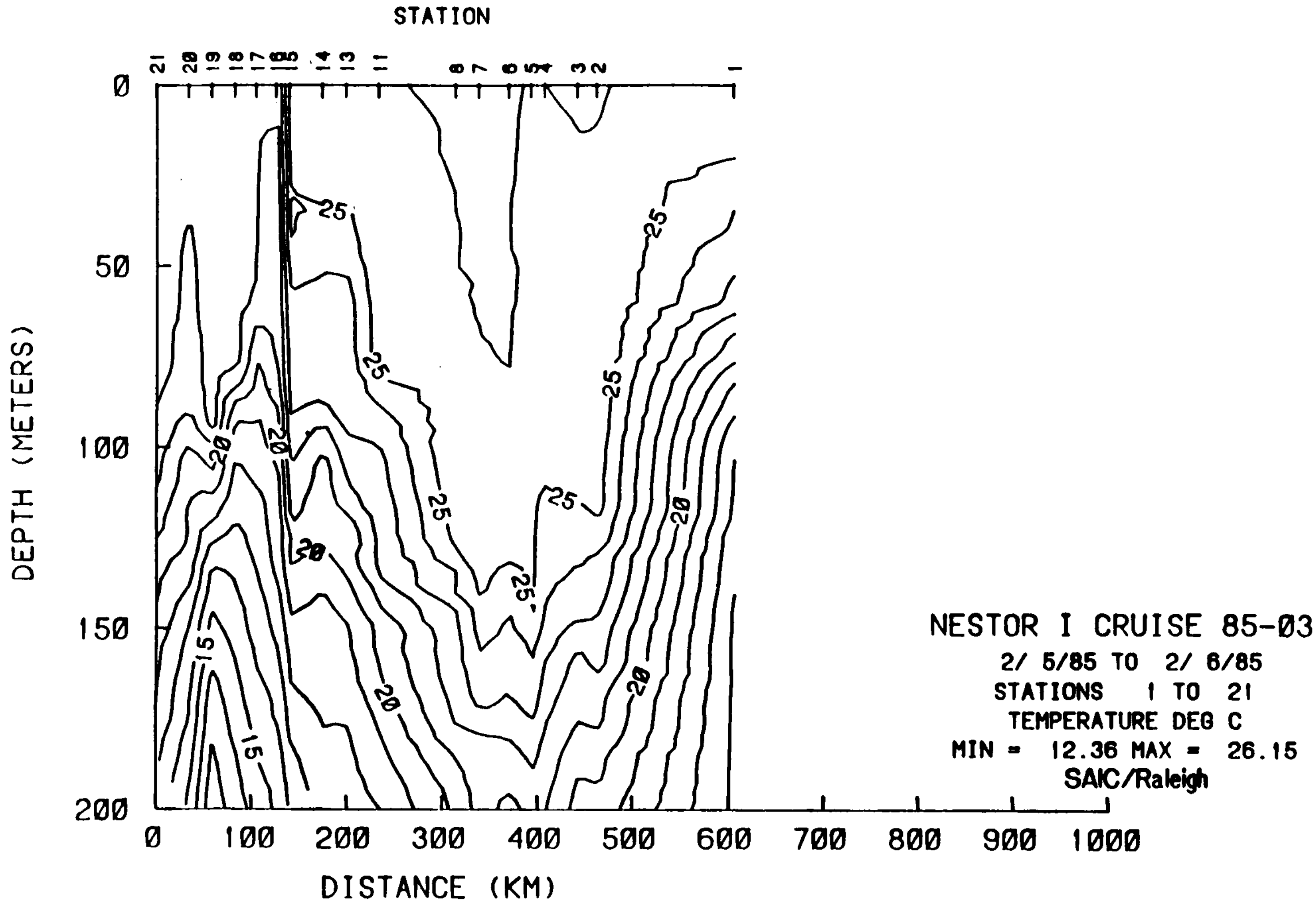


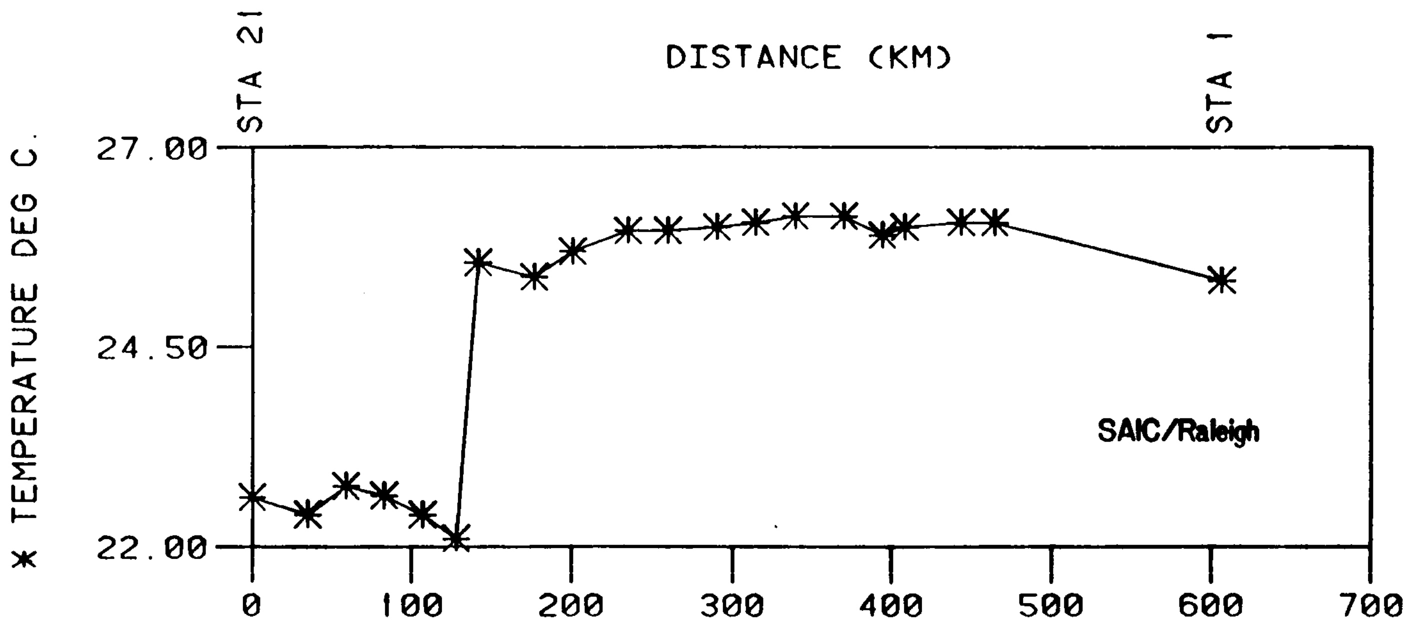
PARAMETERS AT SURFACE NESTOR I CRUISE 85-02



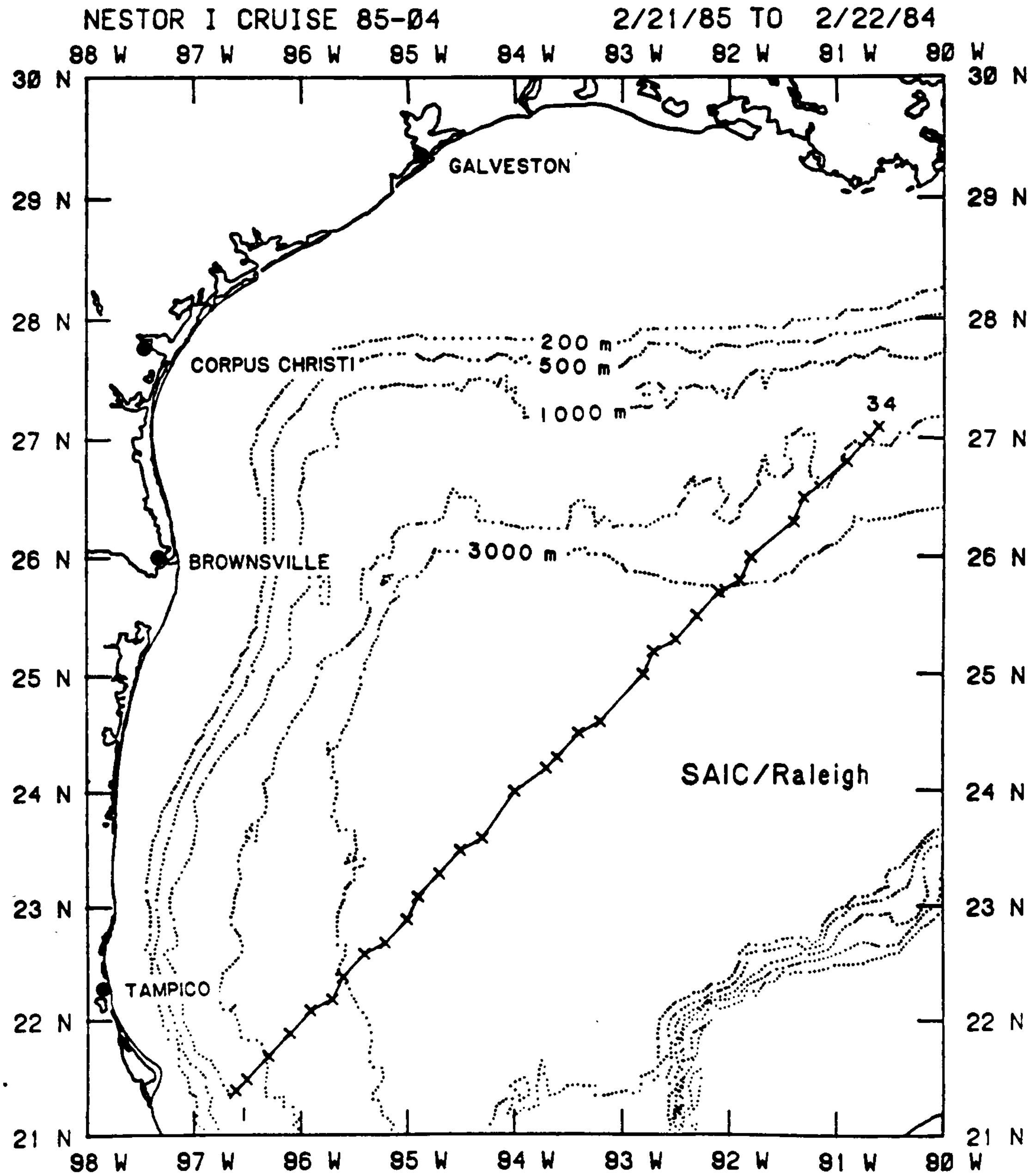
NESTOR I CRUISE 85-03
2/ 5/85 TO 2/ 6/85
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
21
13
11
8
2
SAIC/Raleigh

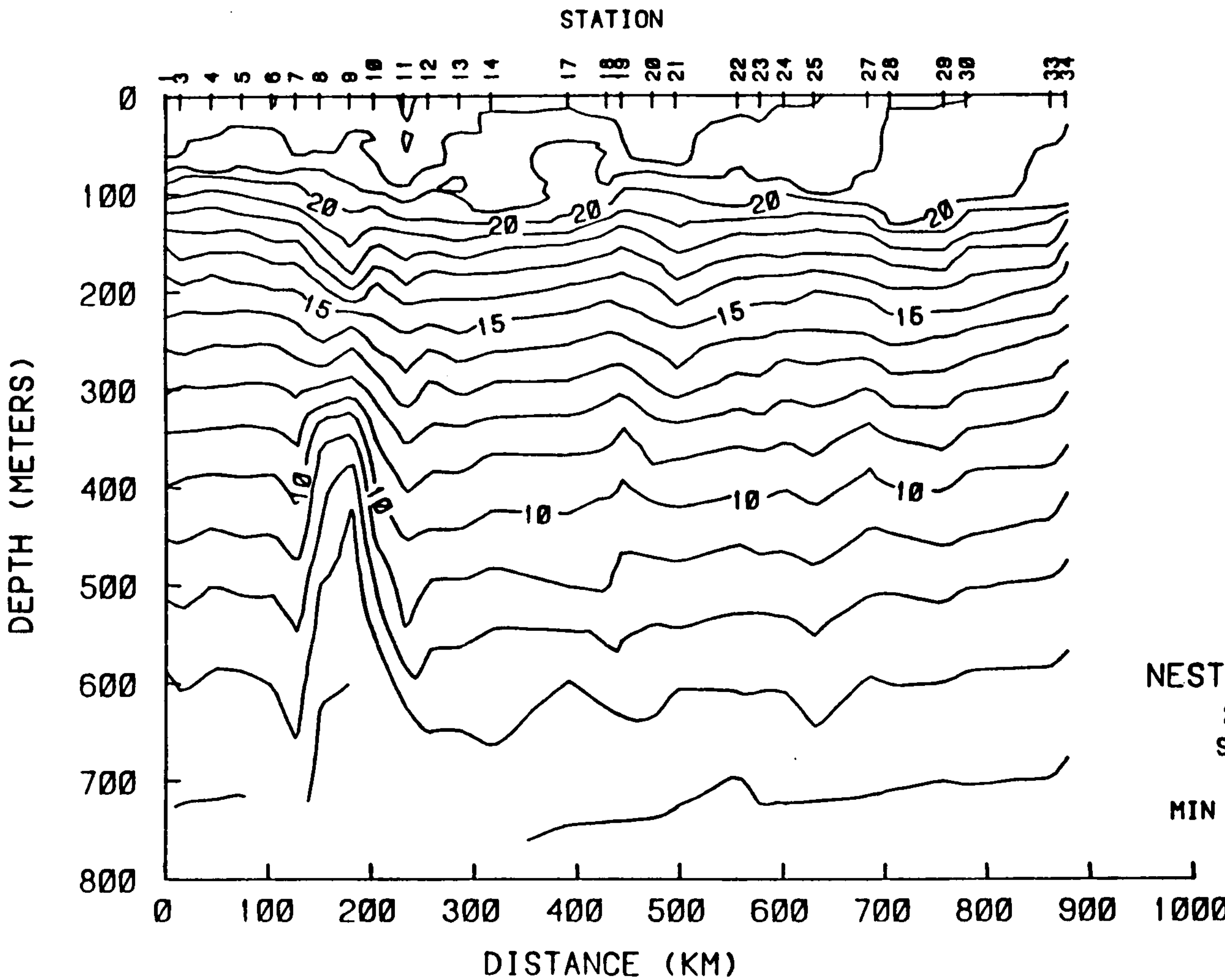

STATION
20 19 18 17 16 15 13 11 8 7 5 4 3 2 1
25
20
15
10
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
NESTOR I CRUISE 85-03
2/ 5/85 TO 2/ 6/85
STATIONS 1 TO 20
TEMPERATURE DEG C
MIN = 5.09 MAX = 26.15
SAIC/Raleigh


STATION
21 20 19 18 17 16 15 14 13 11 8 7 6 5 4 3 2 1
DEPTH (METERS)
0
50
100
150
200
25
20
15
0
100
200
300
400
500
600
700
800
900
1000
DISTANCE (KM)
NESTOR I CRUISE 85-03
2/ 5/85 TO 2/ 6/85
STATIONS 1 TO 21
TEMPERATURE DEG C
MIN = 12.36 MAX = 26.15
SAIC/Raleigh

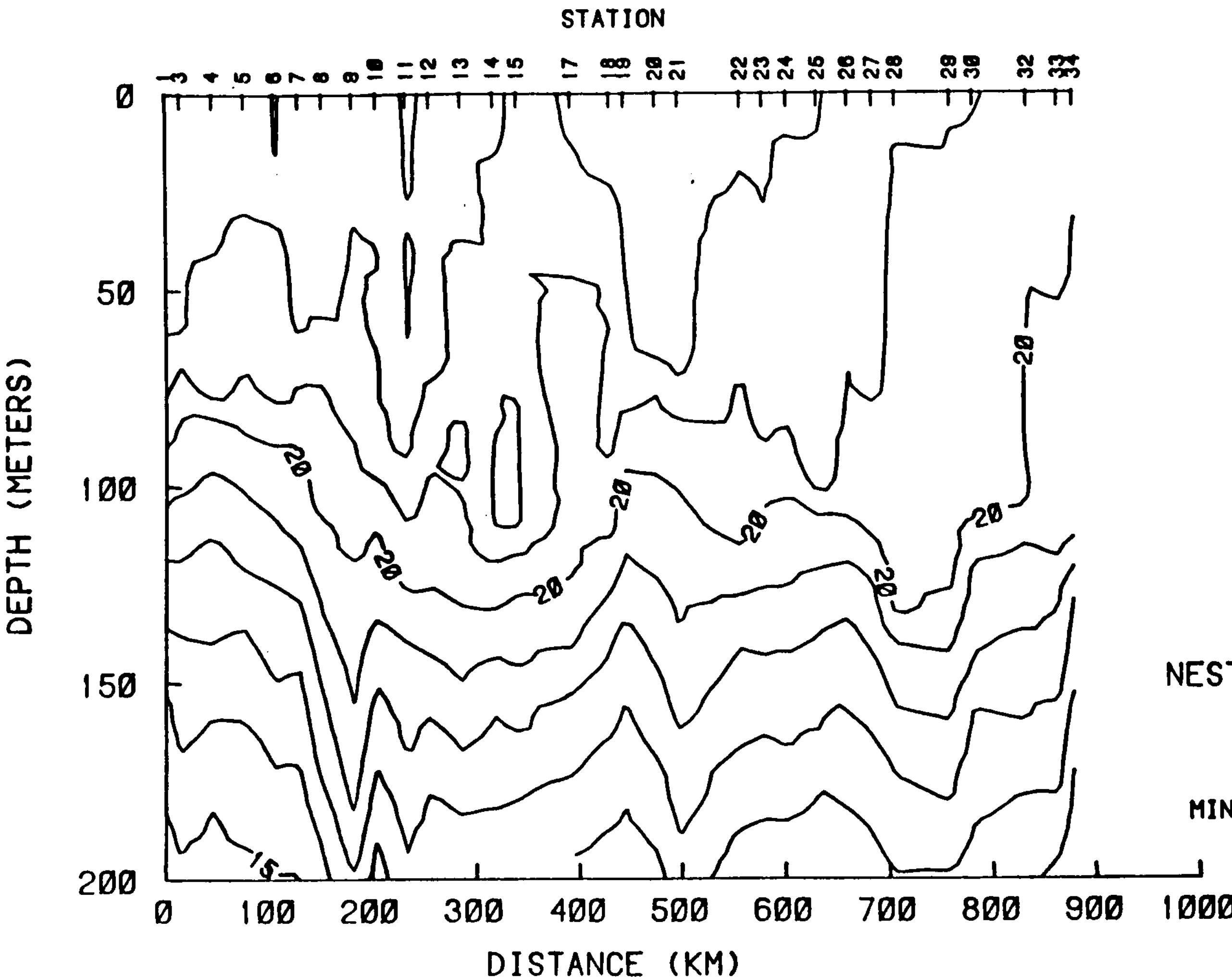


PARAMETERS AT SURFACE NESTOR I CRUISE 85-03

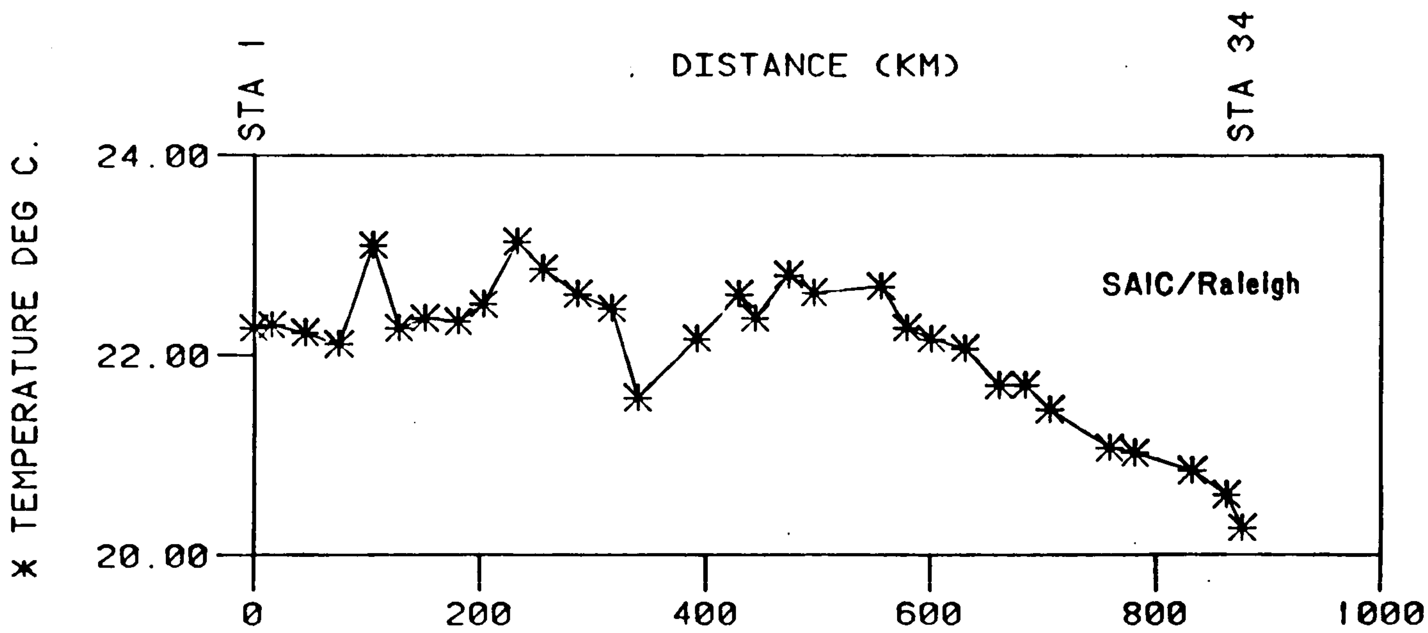

NESTOR I CRUISE 85-Ø4
2/21/85 TO 2/22/84
98 W
97 W
96 W
95 W
94 W
93 W
92 W
91 W
9Ø W
3Ø N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
GALVESTON
CORPUS CHRISTI
BROWNSVILLE
TAMPICO
200 m
500 m
1000 m
3000 m
34
1
SAIC/Raleigh



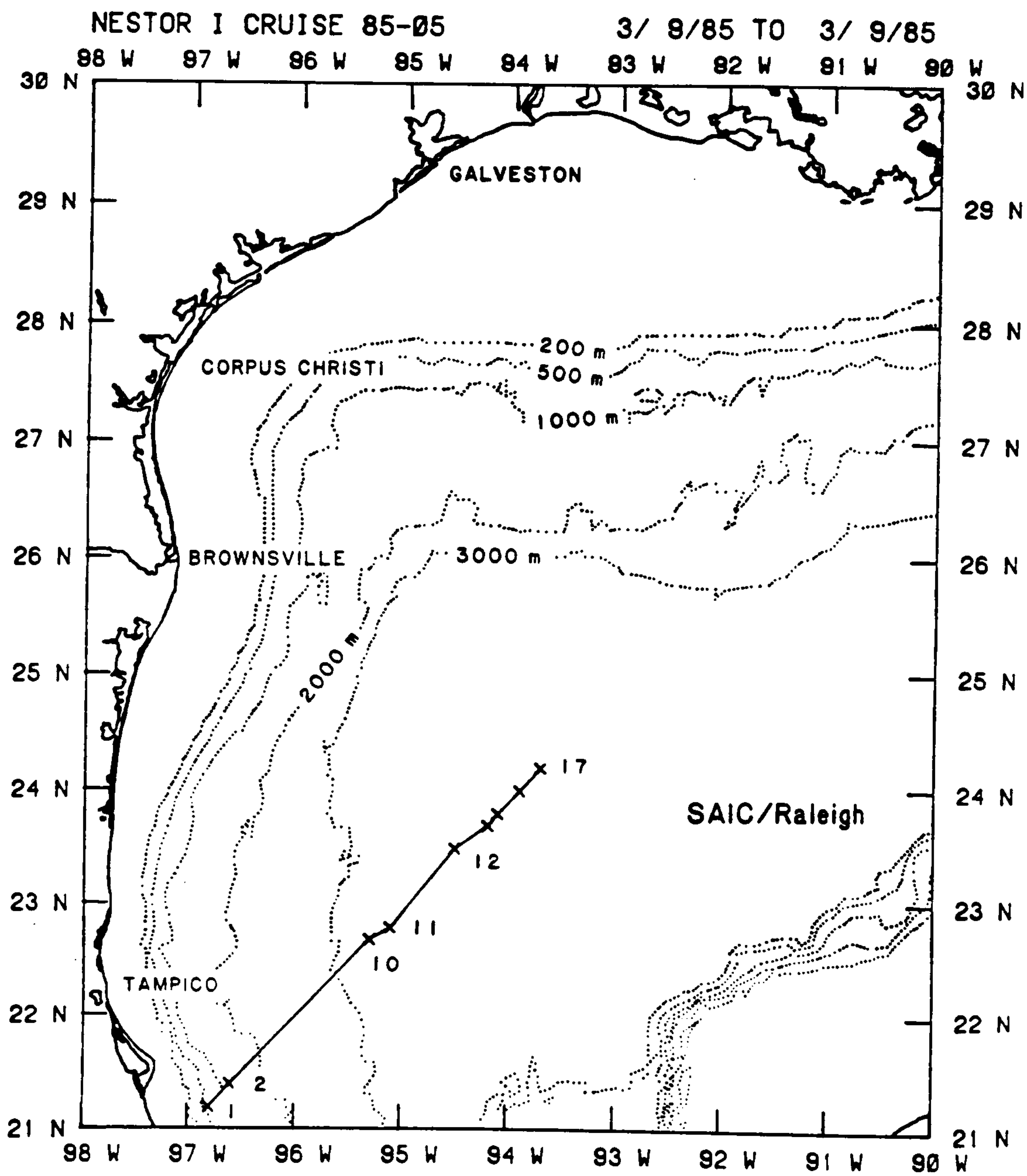
NESTOR I CRUISE 85-04
2/21/85 TO 2/22/85
STATIONS 1 TO 34
TEMPERATURE DEG C
MIN = 5.44 MAX = 23.13
SAIC/Raleigh

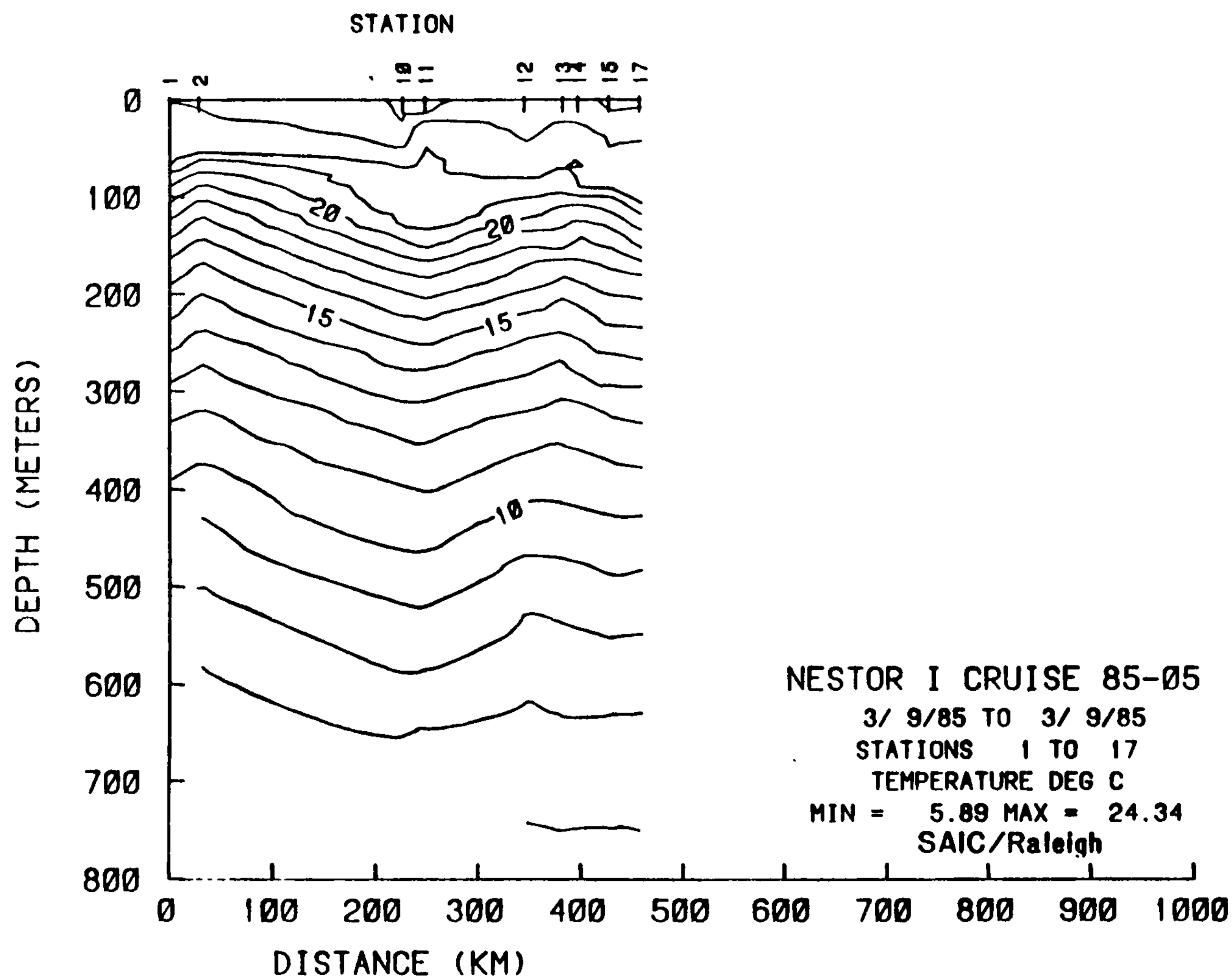


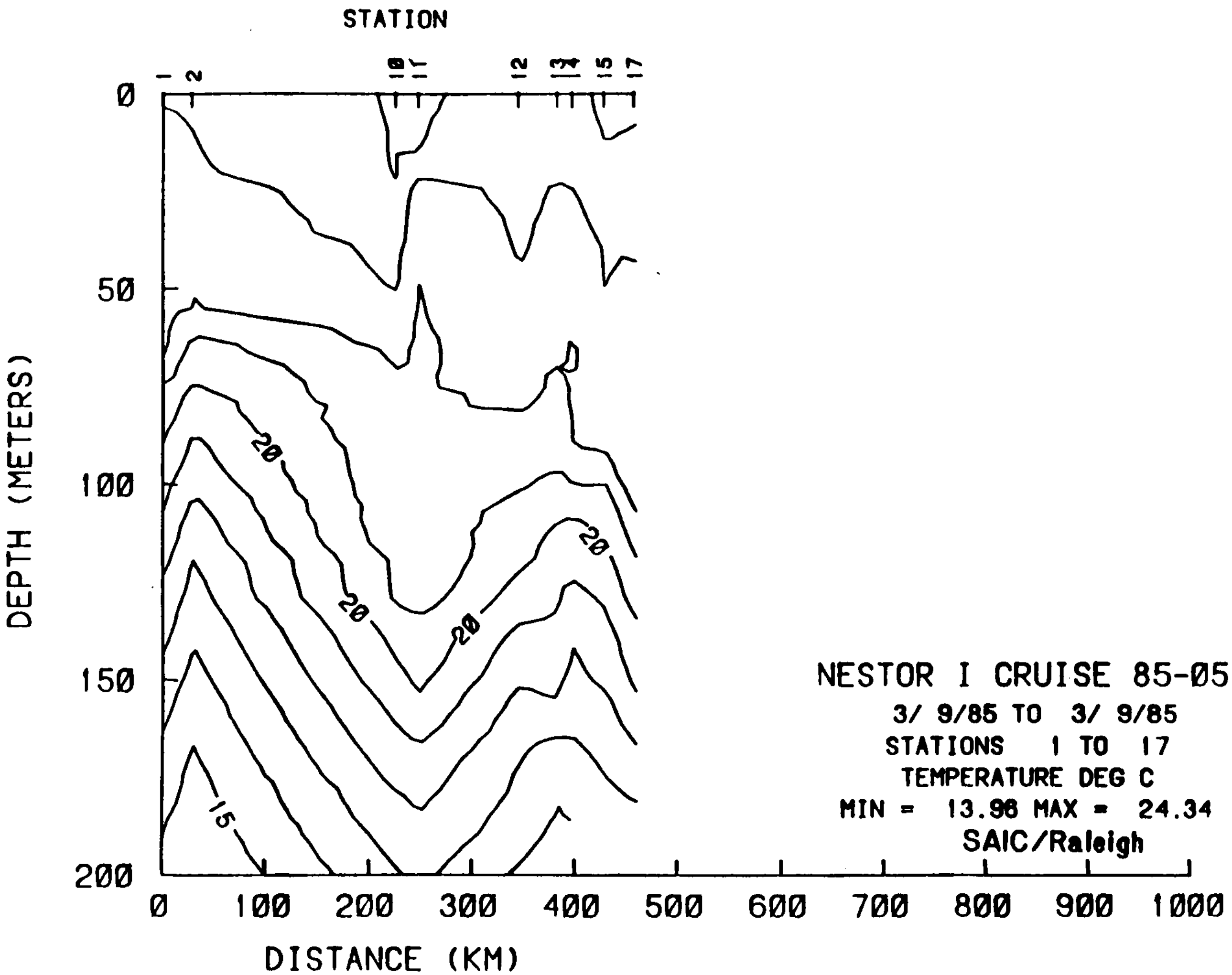
NESTOR I CRUISE 85-04
2/21/85 TO 2/22/85
STATIONS 1 TO 34
TEMPERATURE DEG C
MIN = 14.15 MAX = 23.13
SAIC/Raleigh



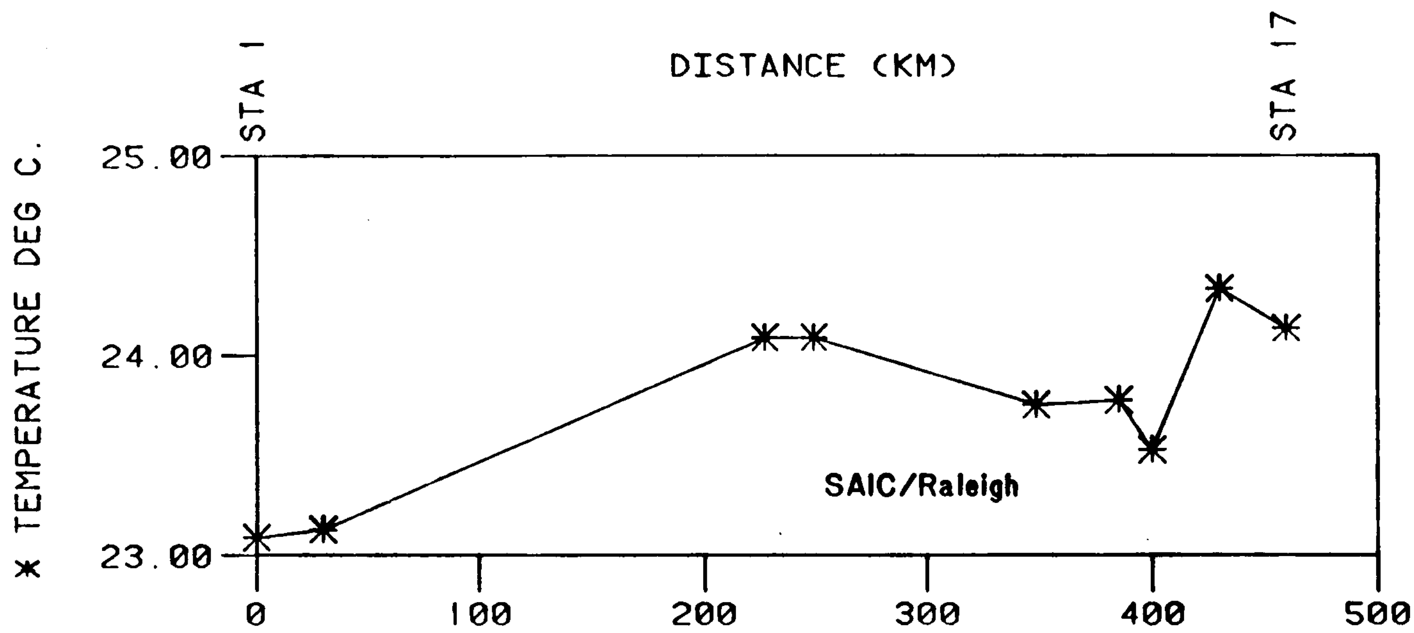
PARAMETERS AT SURFACE NESTOR I CRUISE 85-04


NESTOR I CRUISE 85-05
3/ 9/85 TO 3/ 9/85
98 W
97 W
96 W
95 W
94 W
93 W
92 W
91 W
90 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
GALVESTON
CORPUS CHRISTI
BROWNSVILLE
TAMPICO
200 m
500 m
1000 m
2000 m
3000 m
SAIC/Raleigh
1
2
10
11
12
17

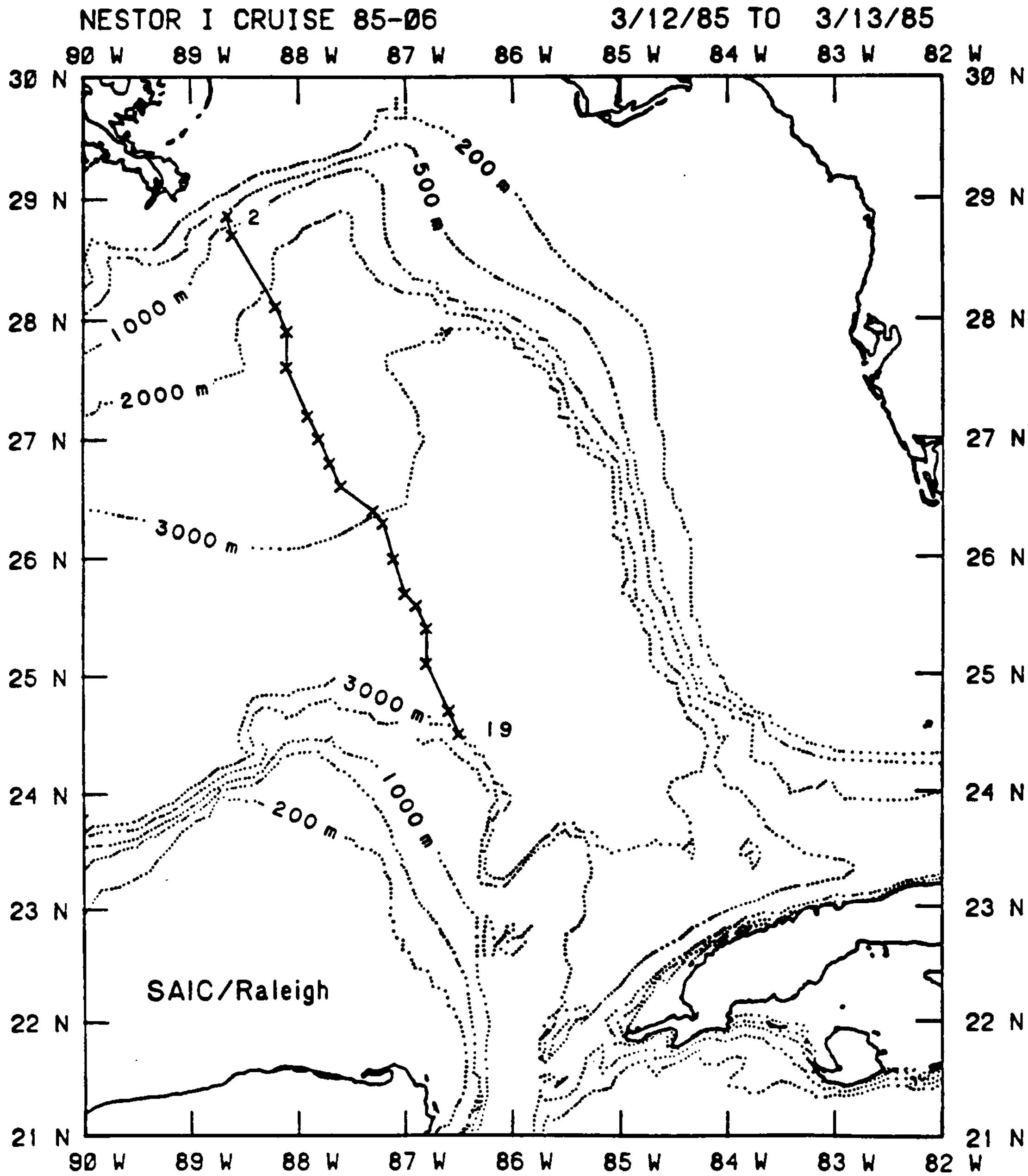

STATION
1 2 10 11 12 13 14 15 17
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
20
15
10
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
NESTOR I CRUISE 85-05
3/ 9/85 TO 3/ 9/85
STATIONS 1 TO 17
TEMPERATURE DEG C
MIN = 5.89 MAX = 24.34
SAIC/Raleigh

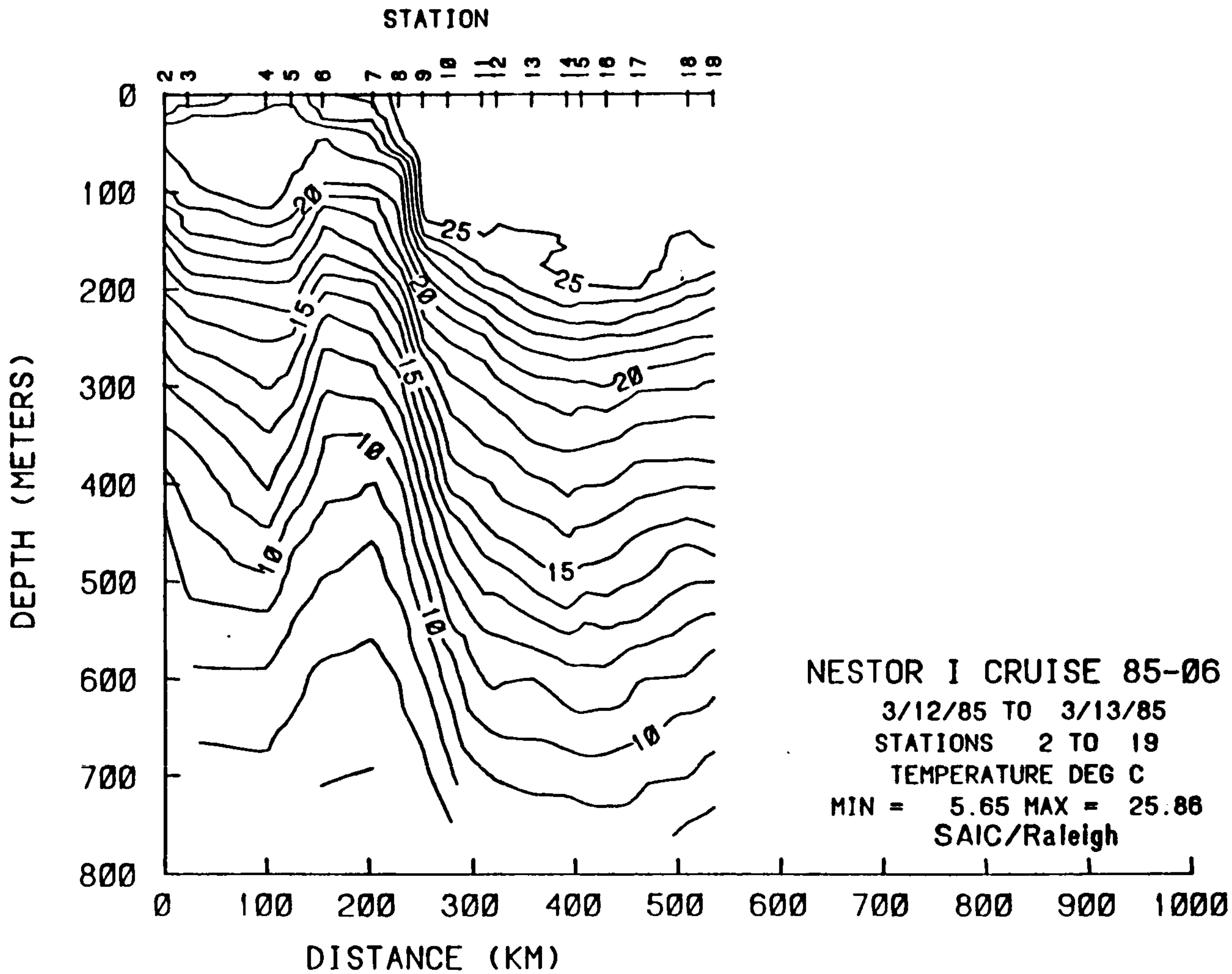


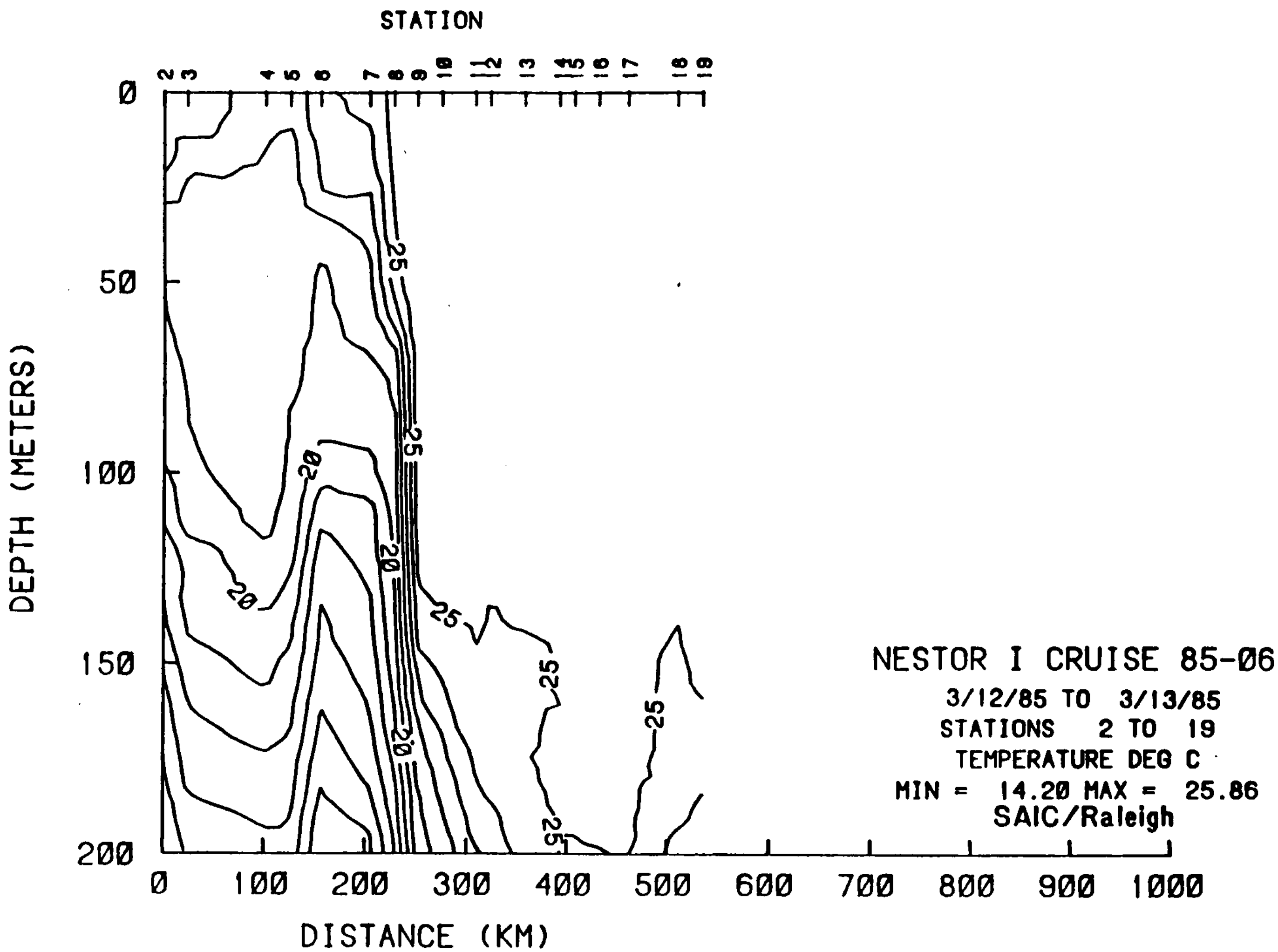
STATION
1 2 10 11 12 13 14 15 17
0
50
100
150
200
DEPTH (METERS)
20
20
20
20
15
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)
NESTOR I CRUISE 85-05
3/ 9/85 TO 3/ 9/85
STATIONS 1 TO 17
TEMPERATURE DEG C
MIN = 13.96 MAX = 24.34
SAIC/Raleigh

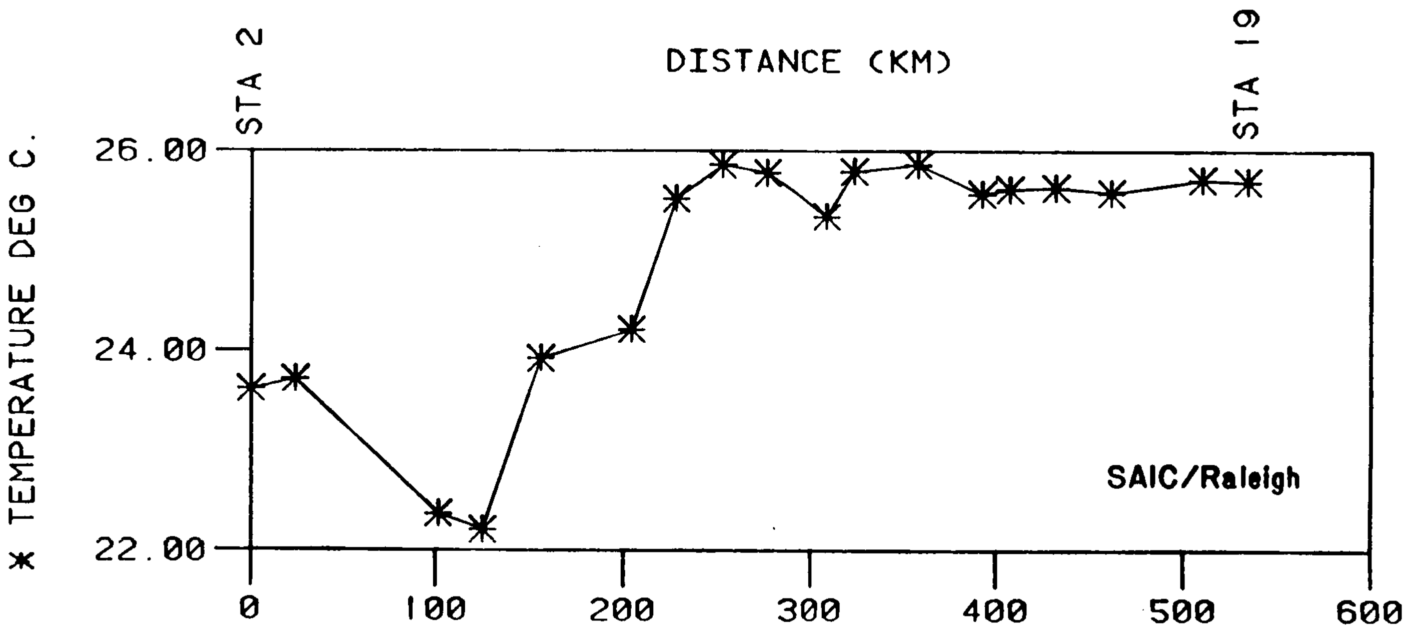


PARAMETERS AT SURFACE NESTOR I CRUISE 85-05


NESTOR I CRUISE 85-Ø6
3/12/85 TO 3/13/85
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
2
19
SAIC/Raleigh

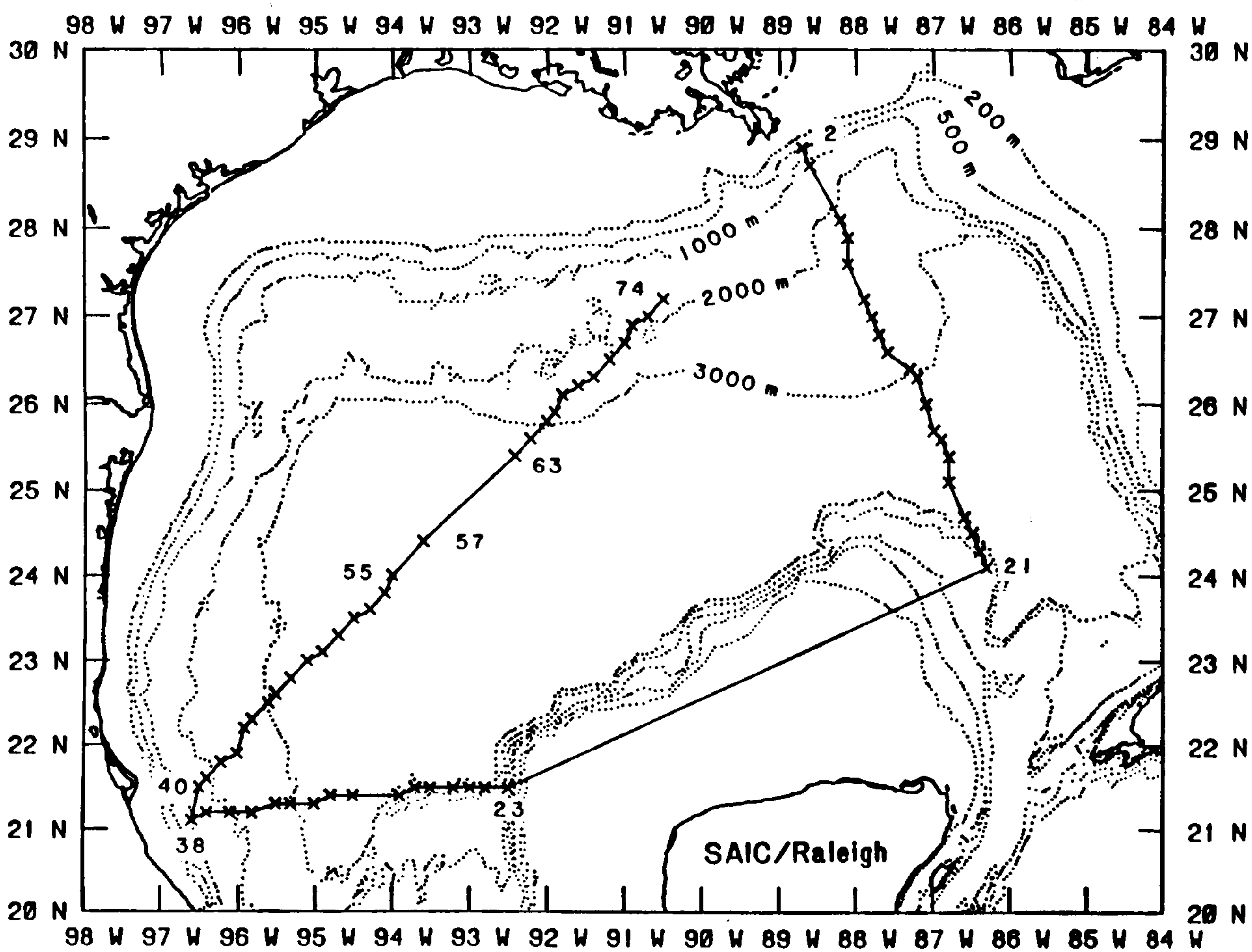

STATION
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
DEPTH (METERS)
Ø
100
200
300
400
500
600
700
800
DISTANCE (KM)
Ø 100 200 300 400 500 600 700 800 900 1000
25
20
15
10
NESTOR I CRUISE 85-Ø6
3/12/85 TO 3/13/85
STATIONS 2 TO 19
TEMPERATURE DEG C
MIN = 5.65 MAX = 25.86
SAIC/Raleigh

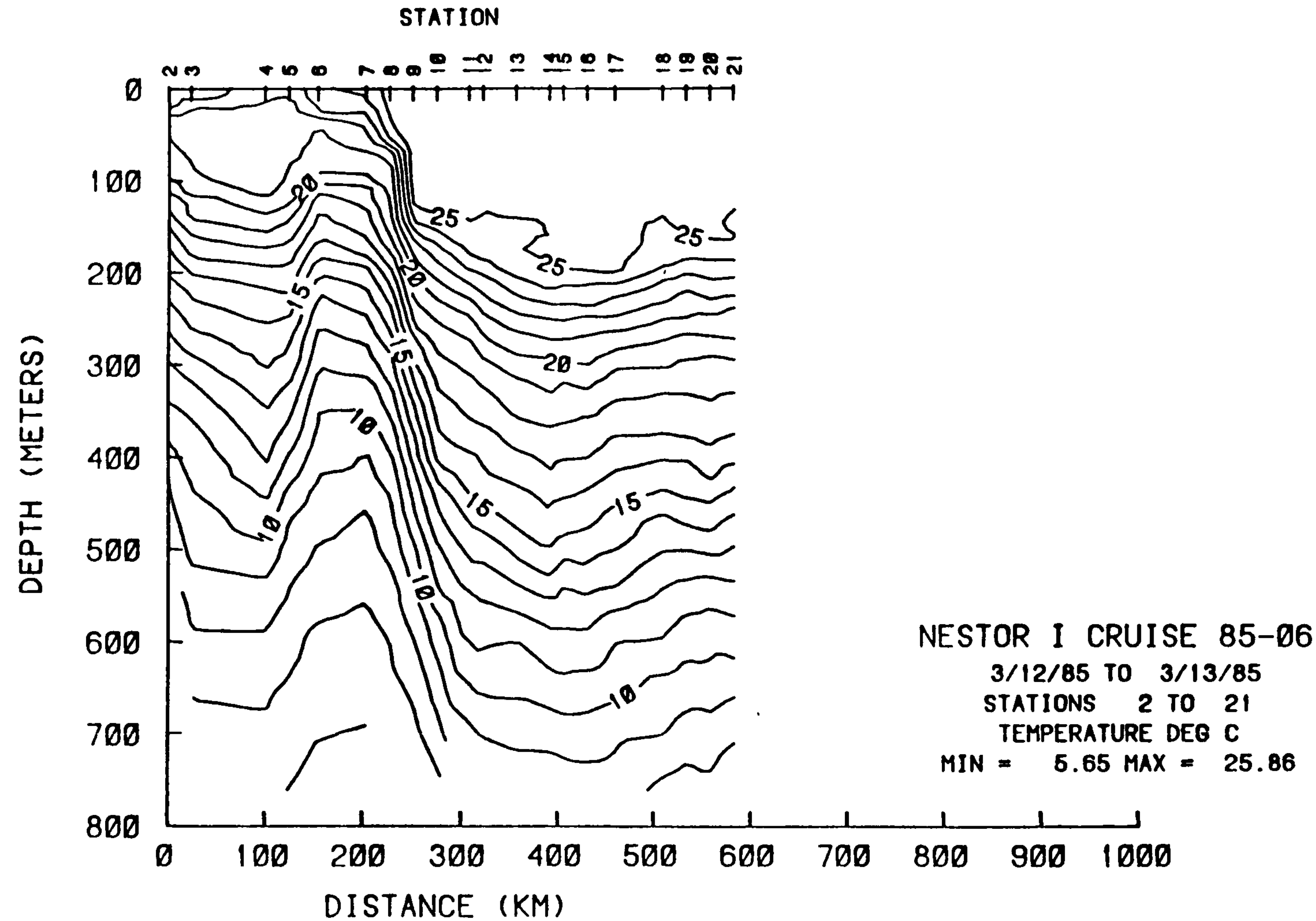

STATION
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
20
25
NESTOR I CRUISE 85-06
3/12/85 TO 3/13/85
STATIONS 2 TO 19
TEMPERATURE DEG C
MIN = 14.20 MAX = 25.86
SAIC/Raleigh

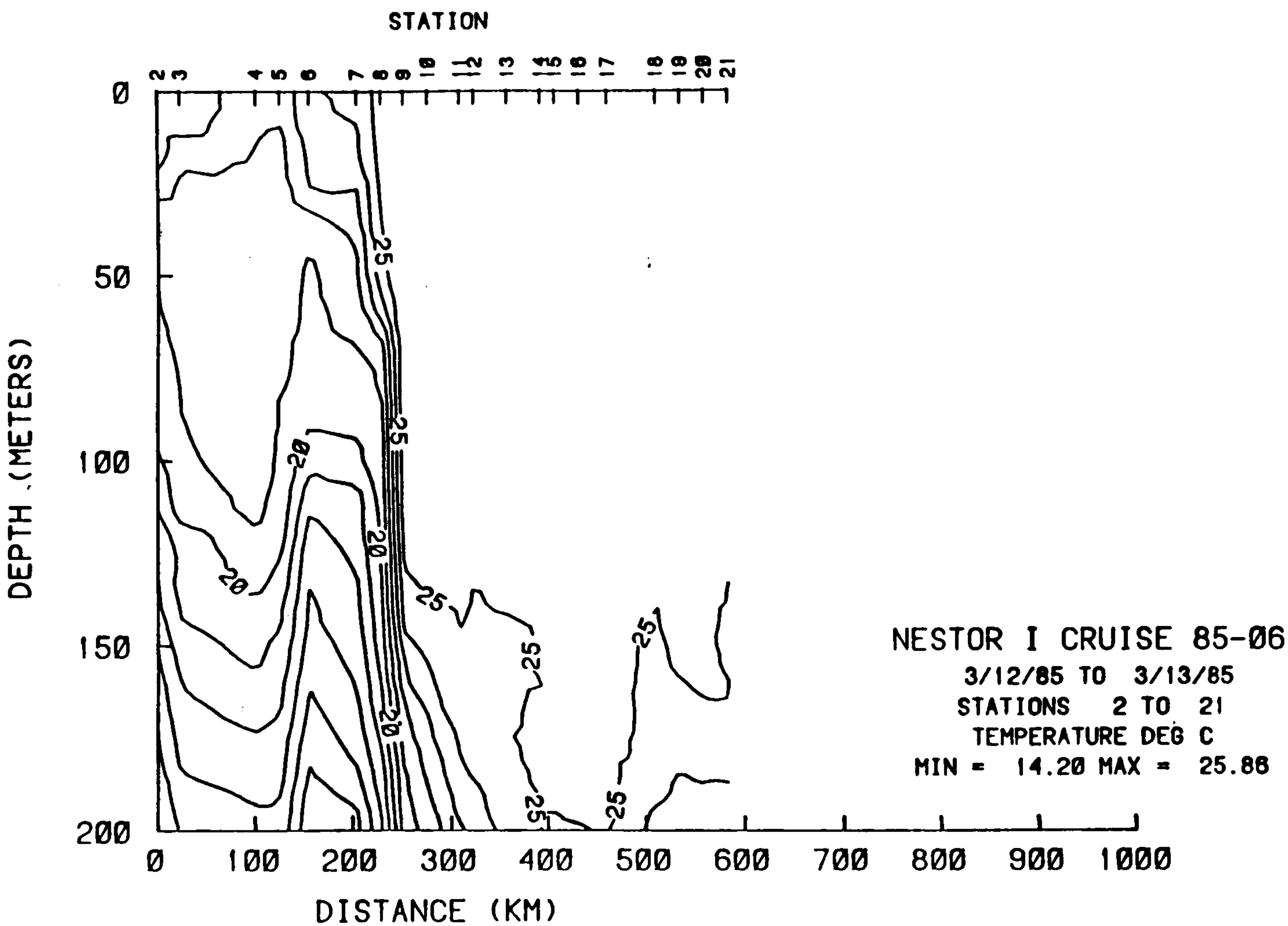


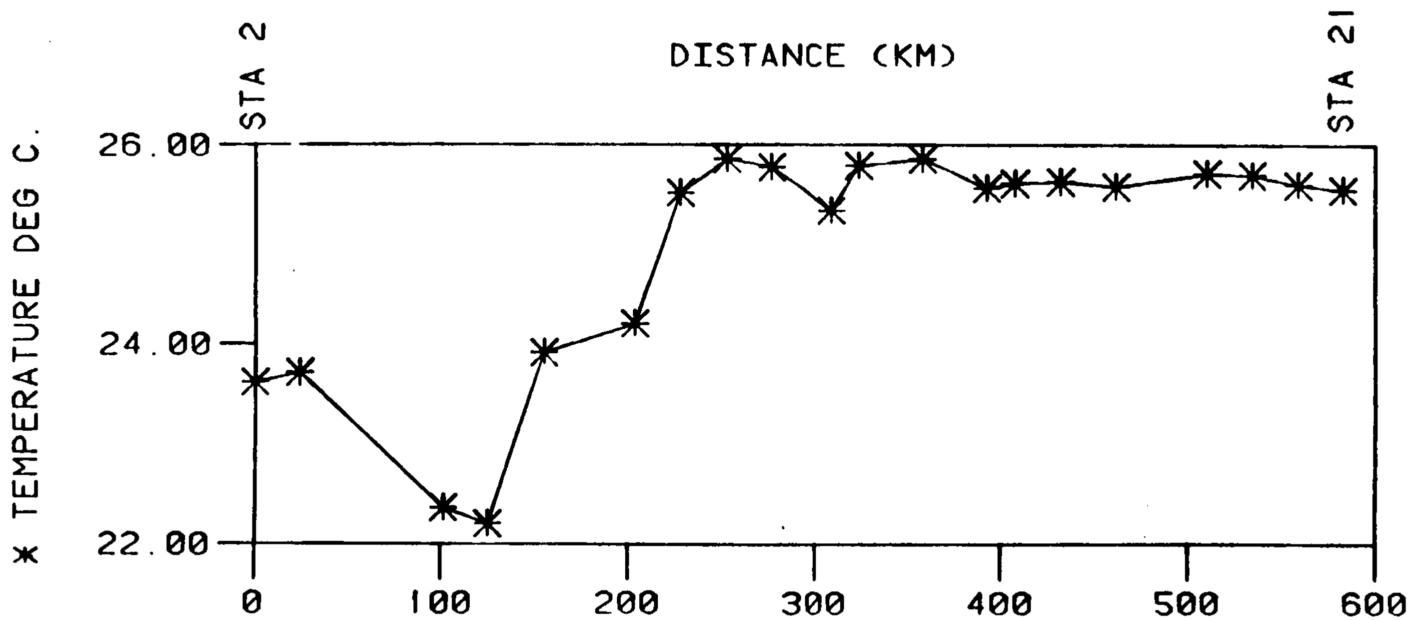
PARAMETERS AT SURFACE NESTOR I CRUISE 85-06

NESTOR I CRUISE 85-06 3/12/85 TO 3/26/85

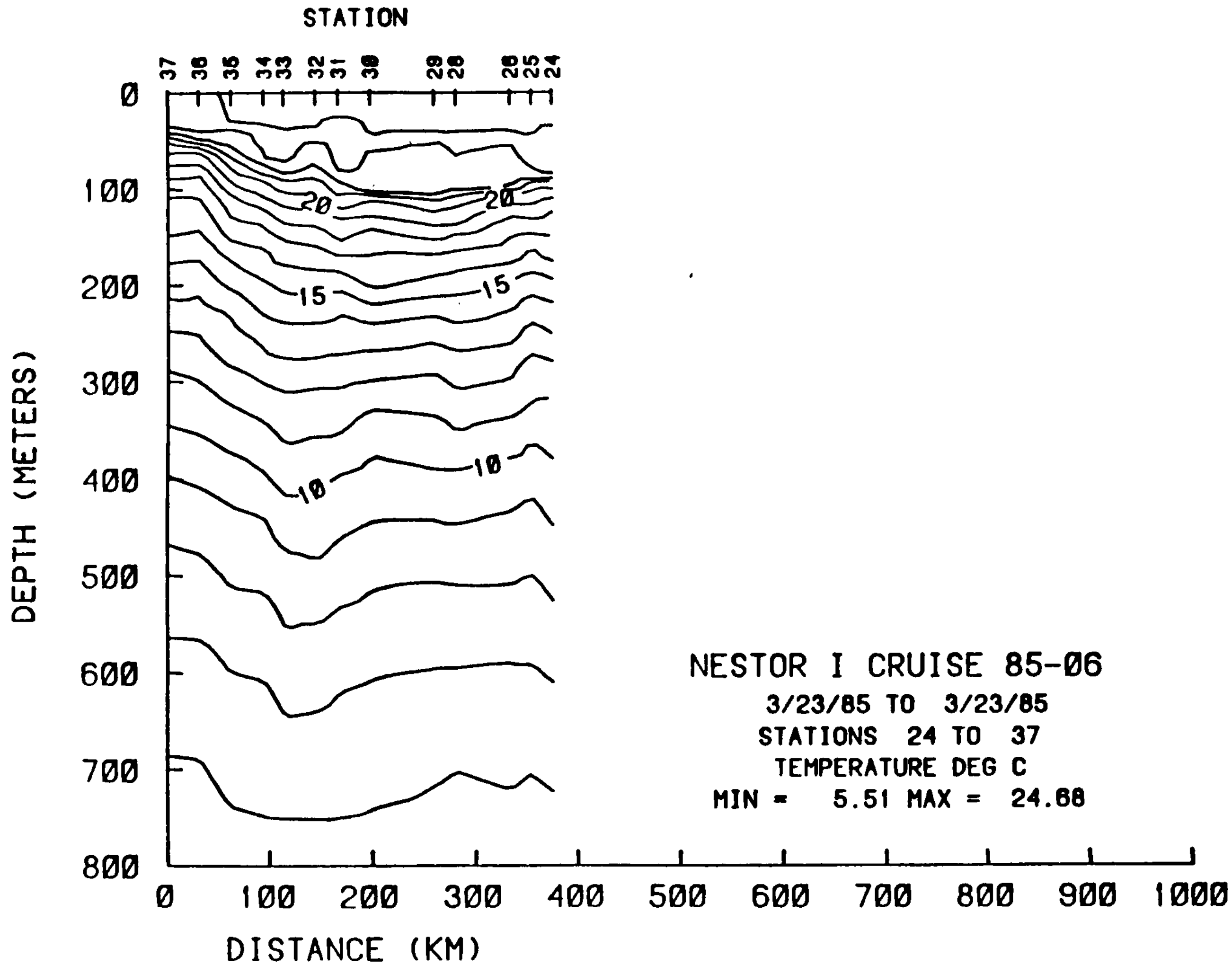


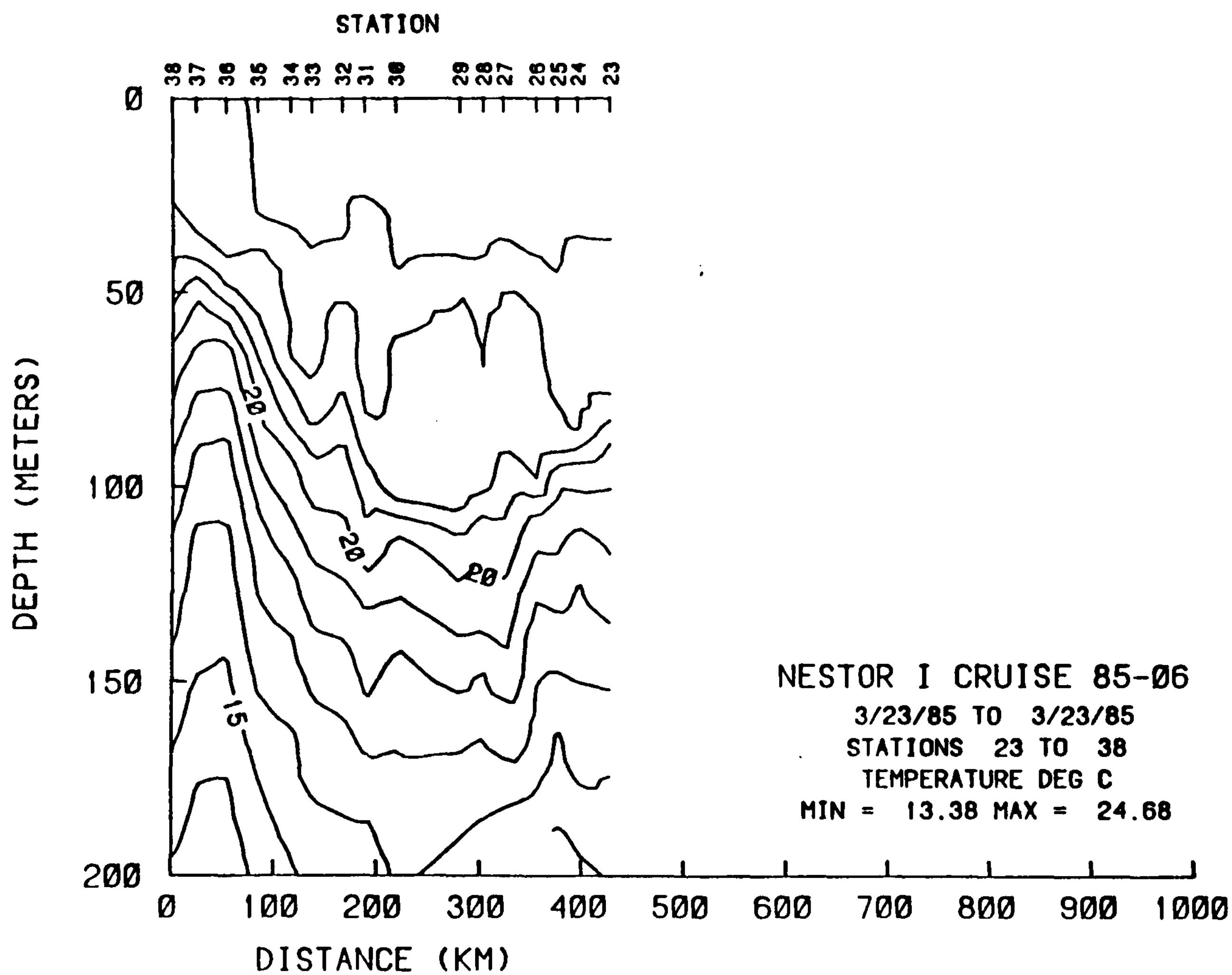

STATION
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
10
NESTOR I CRUISE 85-06
3/12/85 TO 3/13/85
STATIONS 2 TO 21
TEMPERATURE DEG C
MIN = 5.65 MAX = 25.86

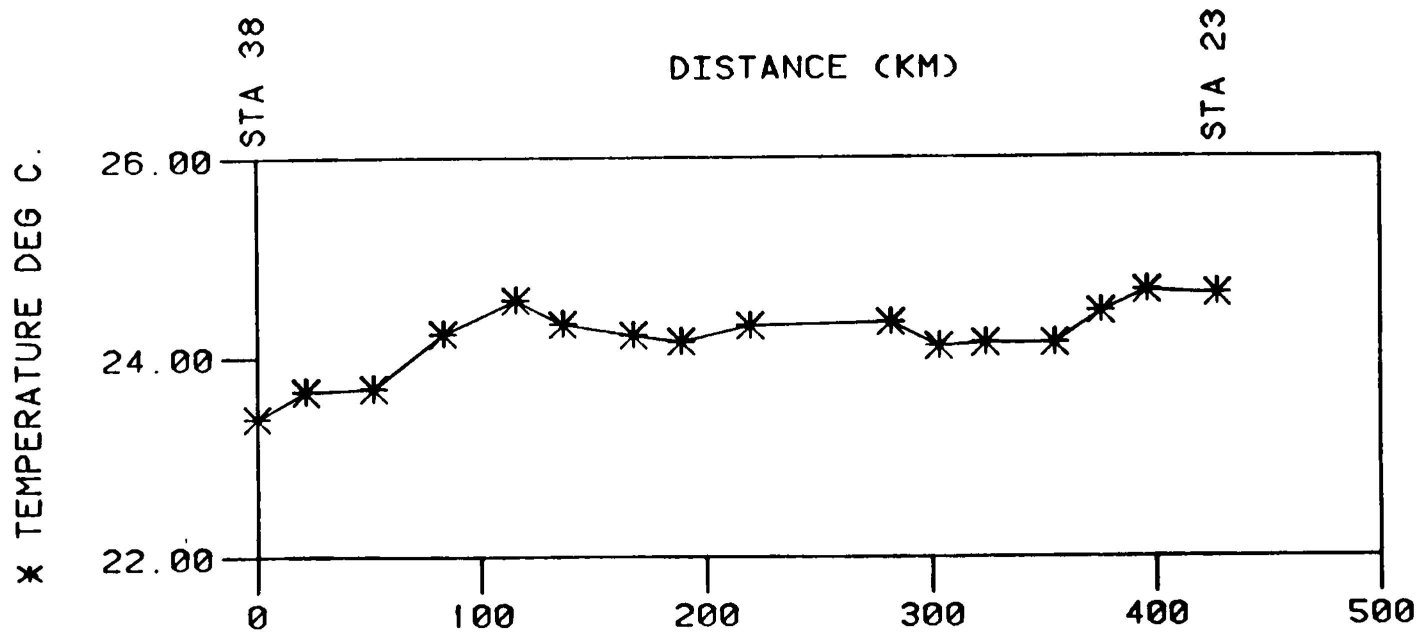

STATION
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
NESTOR I CRUISE 85-06
3/12/85 TO 3/13/85
STATIONS 2 TO 21
TEMPERATURE DEG C
MIN = 14.20 MAX = 25.86



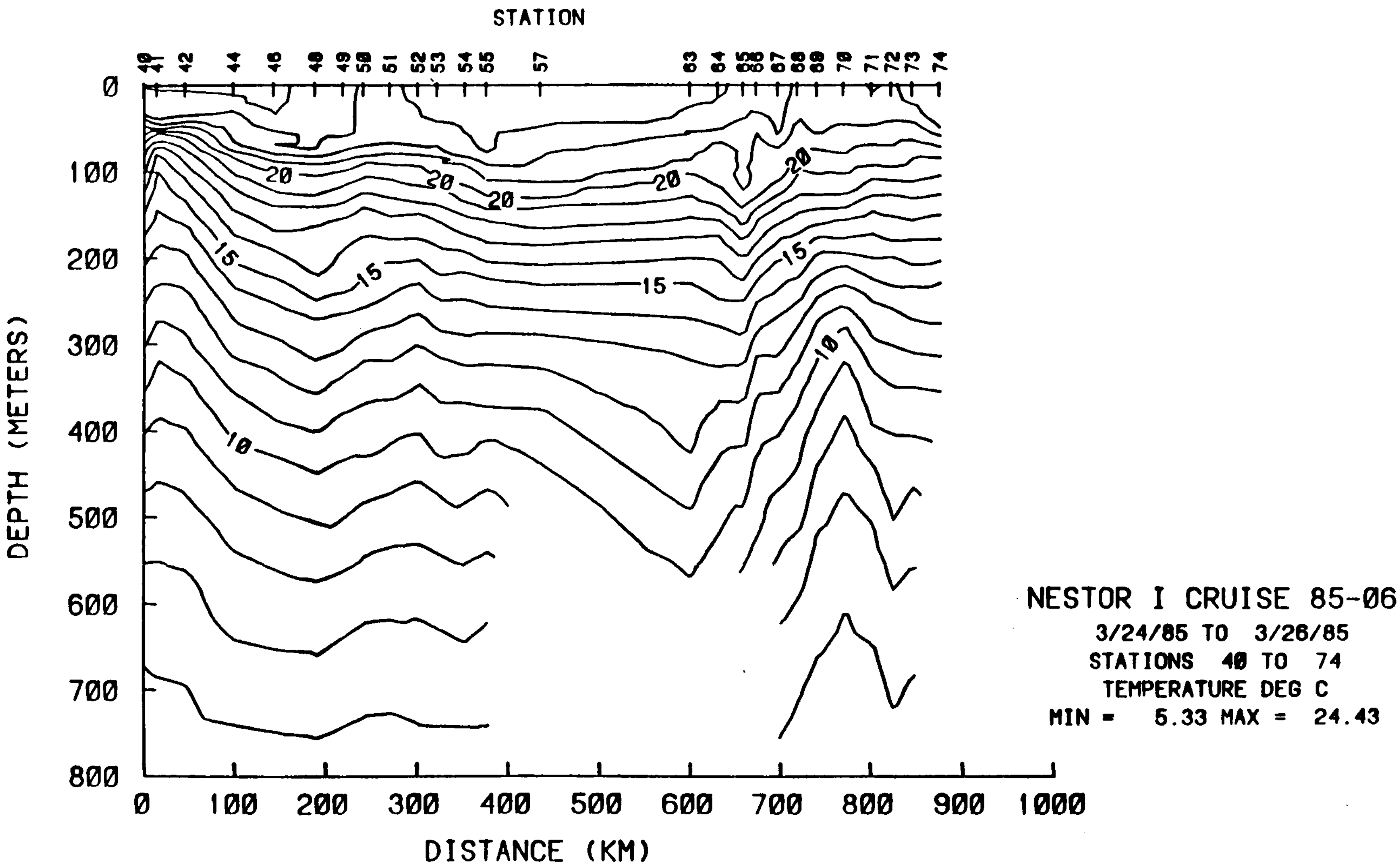
PARAMETERS AT SURFACE NESTOR I CRUISE 85-06

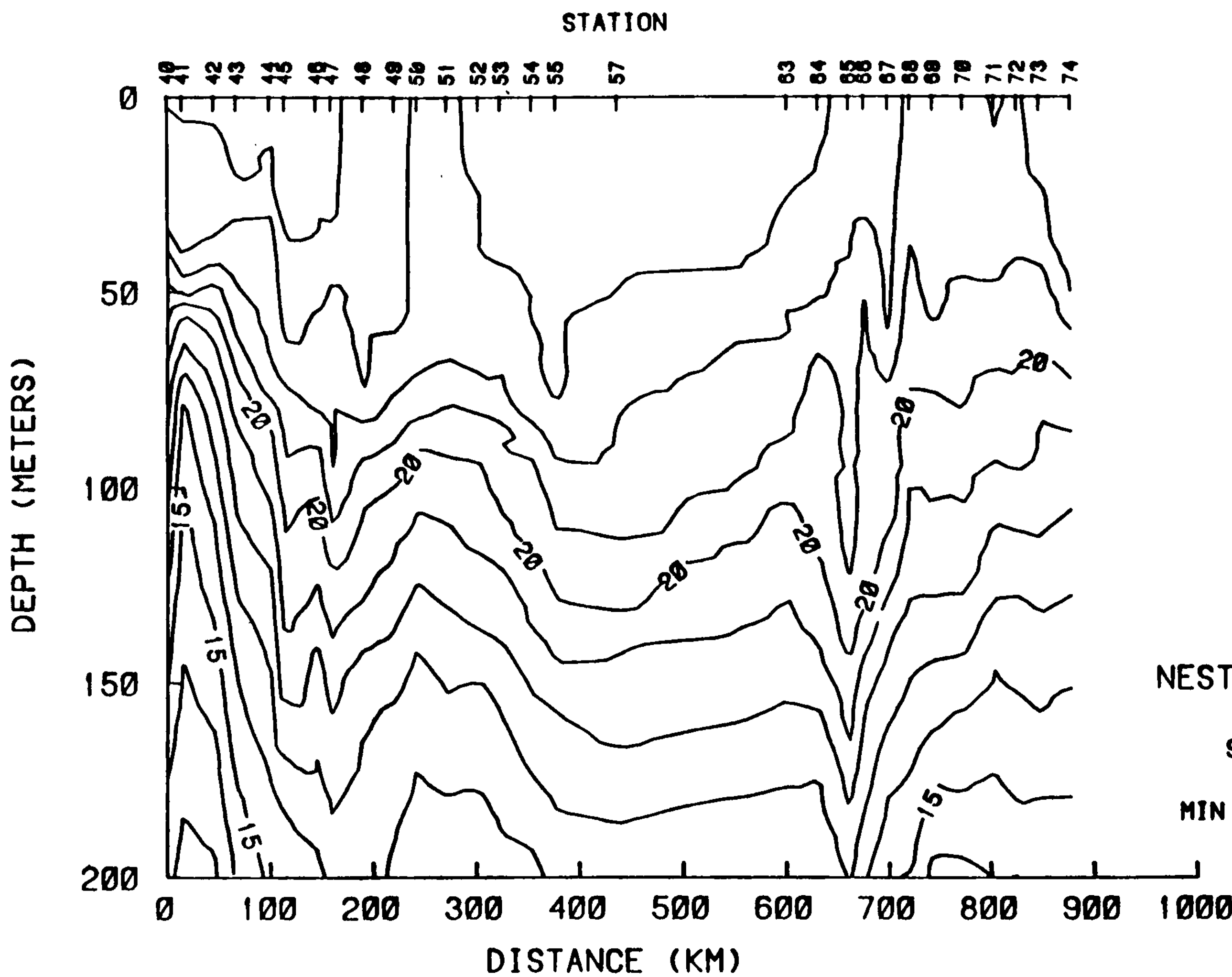

STATION
37 36 35 34 33 32 31 30 29 28 26 25 24
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
20
20
15
15
10
10
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)
NESTOR I CRUISE 85-06
3/23/85 TO 3/23/85
STATIONS 24 TO 37
TEMPERATURE DEG C
MIN = 5.51 MAX = 24.68


STATION
38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23
DEPTH (METERS)
0
50
100
150
200
20
20
20
15
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)
NESTOR I CRUISE 85-06
3/23/85 TO 3/23/85
STATIONS 23 TO 38
TEMPERATURE DEG C
MIN = 13.38 MAX = 24.68

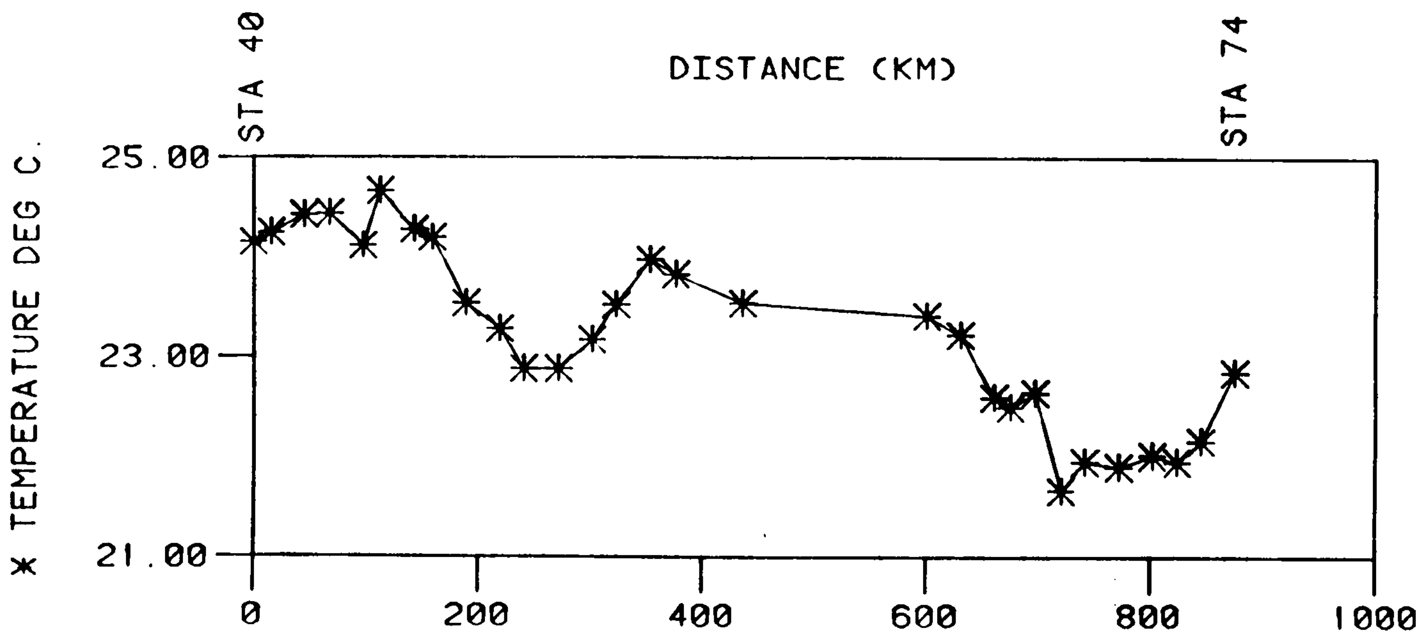


PARAMETERS AT SURFACE NESTOR I CRUISE 85-06

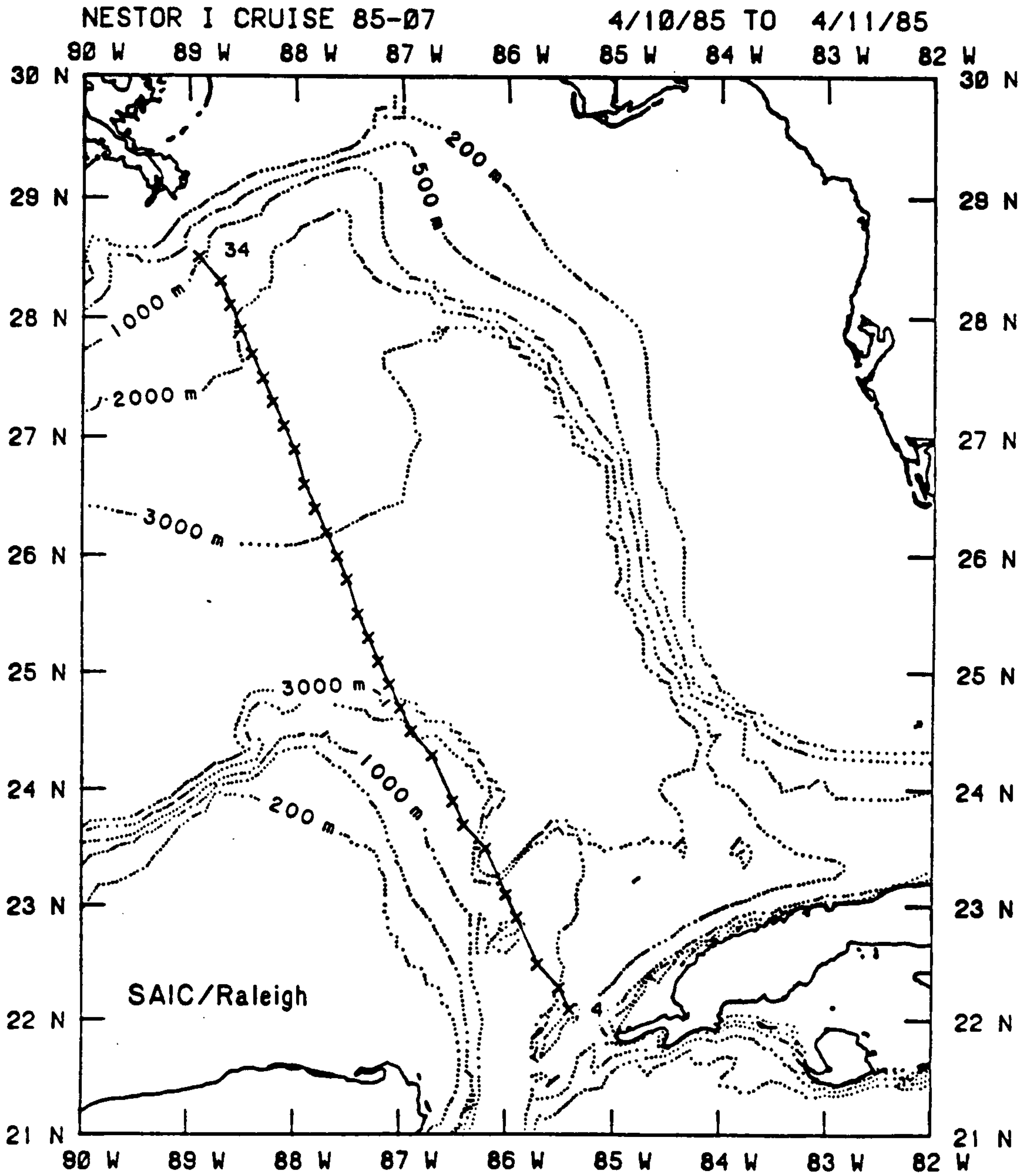

STATION
40 41 42 44 46 48 49 50 51 52 53 54 55 57 63 64 65 66 67 68 69 70 71 72 73 74
20
15
10
DEPTH (METERS)
DISTANCE (KM)
NESTOR I CRUISE 85-06
3/24/85 TO 3/26/85
STATIONS 40 TO 74
TEMPERATURE DEG C
MIN = 5.33 MAX = 24.43

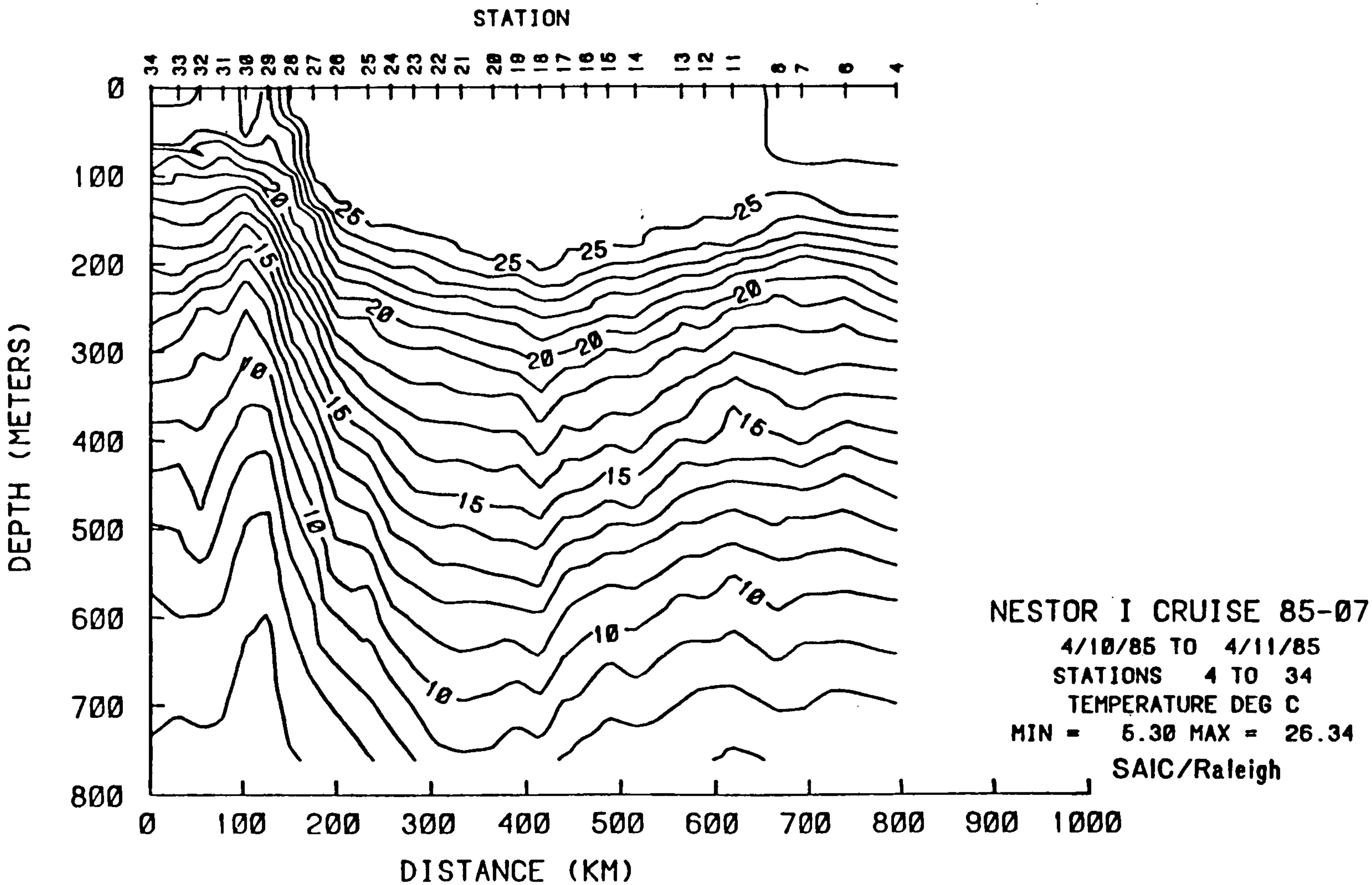


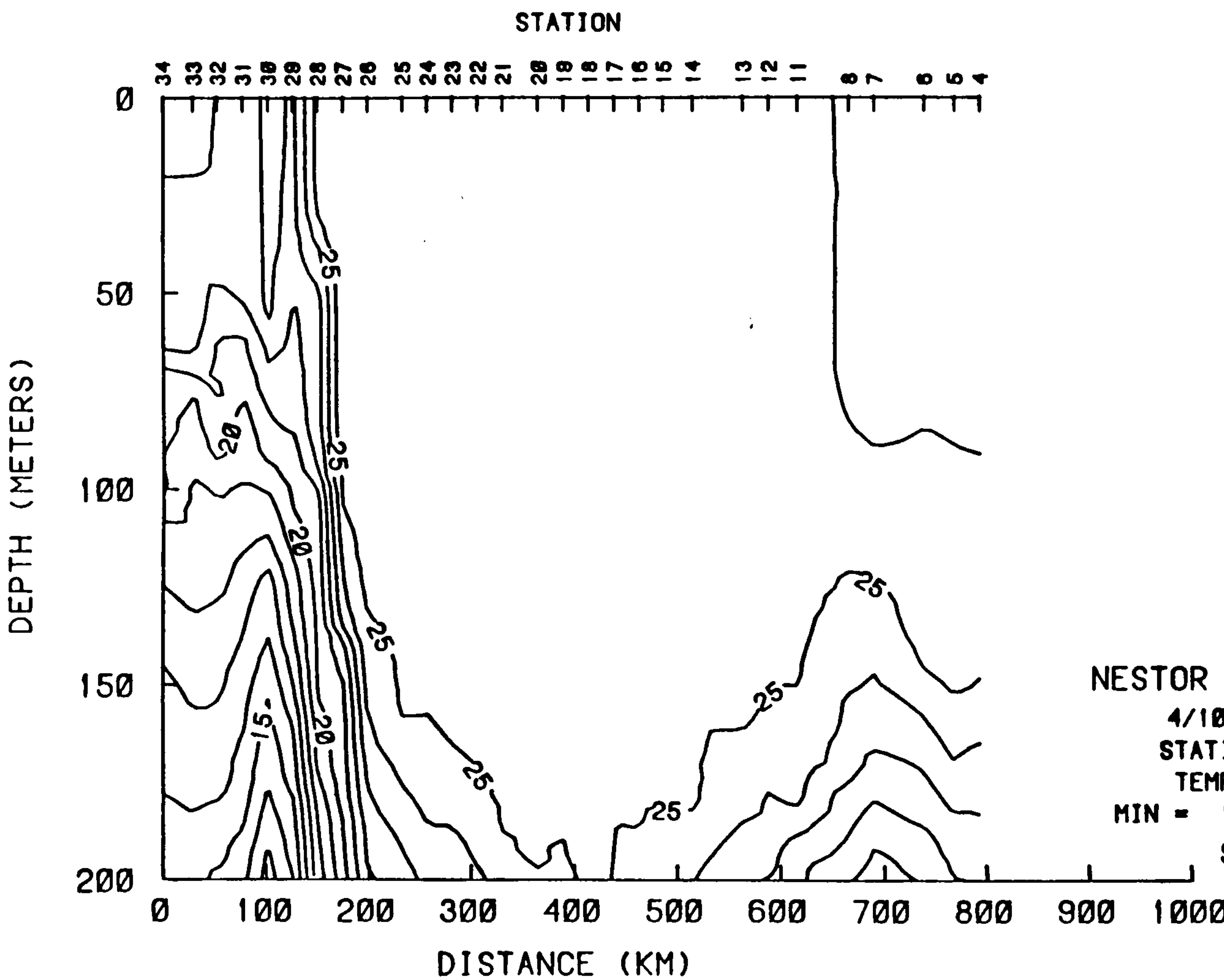
NESTOR I CRUISE 85-06
3/24/85 TO 3/26/85
STATIONS 40 TO 74
TEMPERATURE DEG C
MIN = 12.61 MAX = 24.66



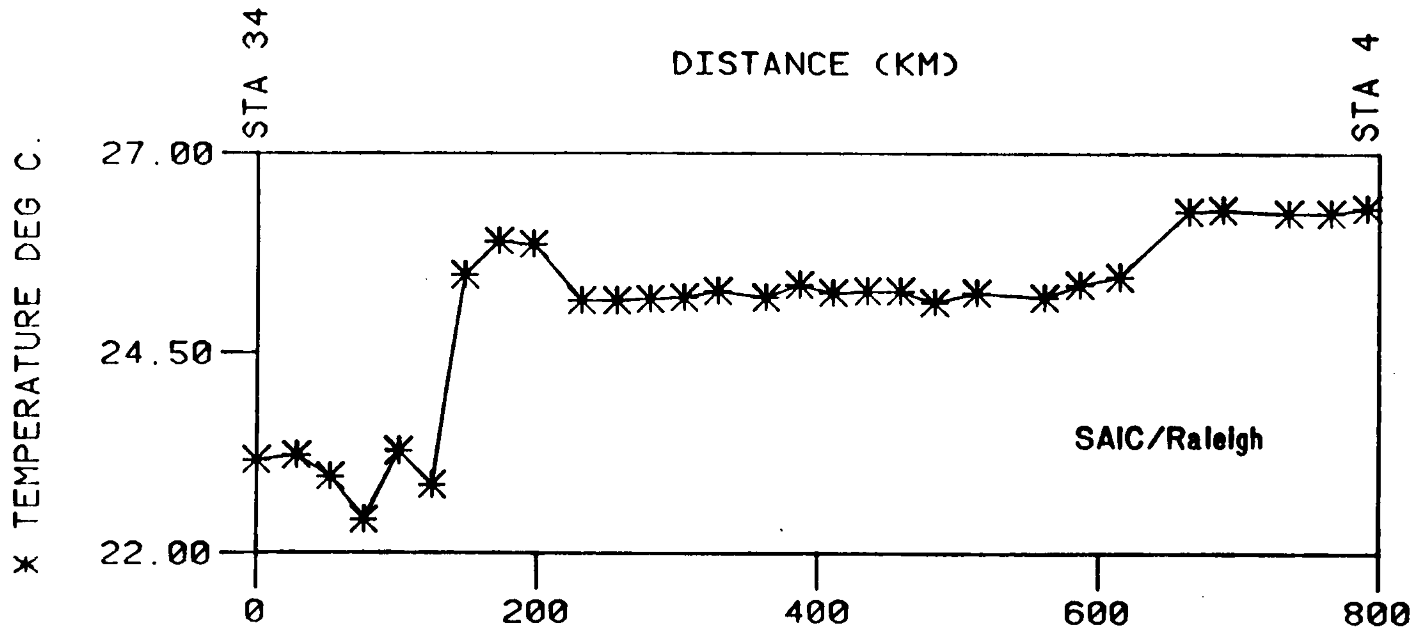
PARAMETERS AT SURFACE NESTOR I CRUISE 85-06


NESTOR I CRUISE 85-07
4/10/85 TO 4/11/85
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
34
4
SAIC/Raleigh

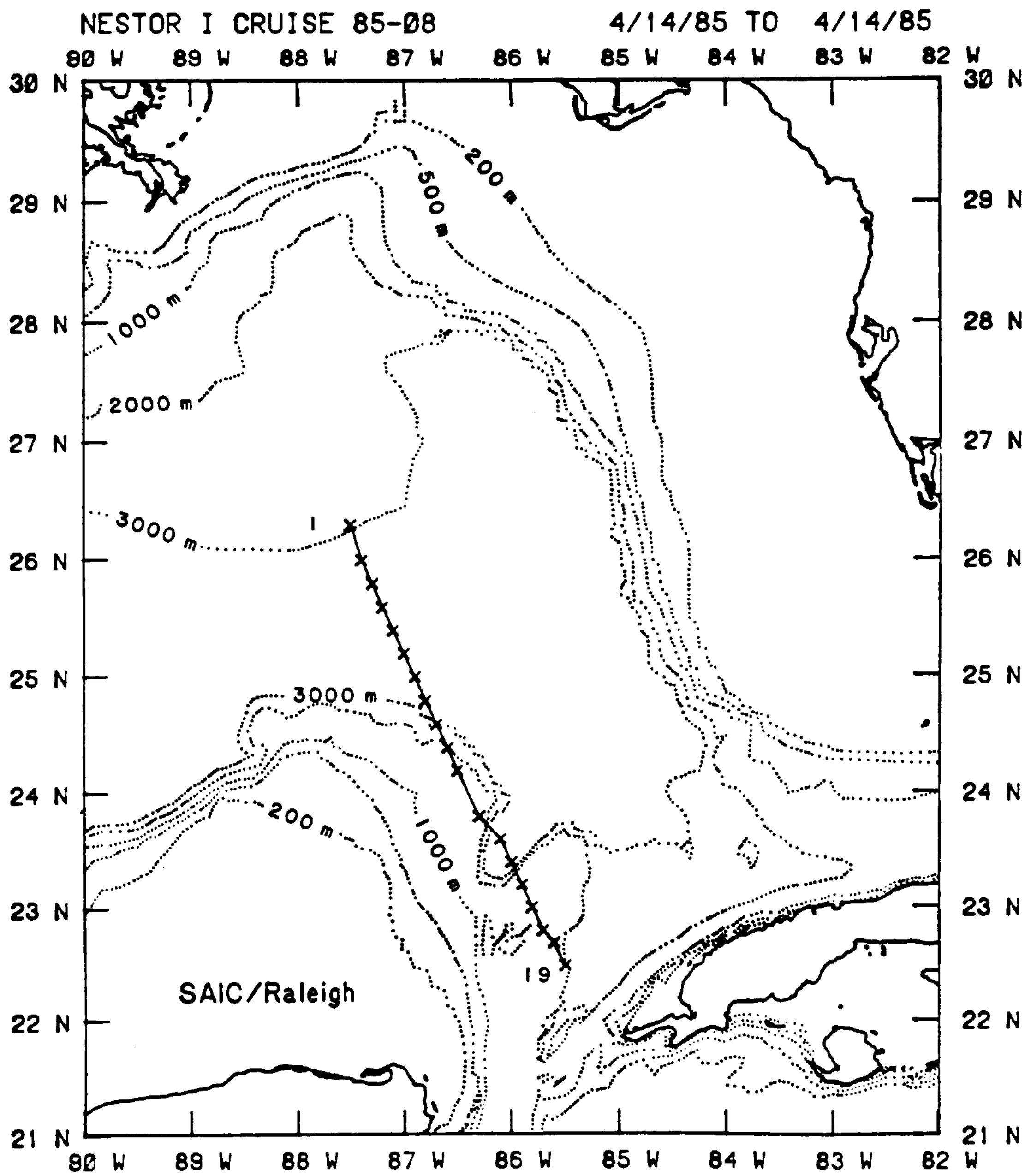

STATION
34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 8 7 6 4
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
10
NESTOR I CRUISE 85-07
4/10/85 TO 4/11/85
STATIONS 4 TO 34
TEMPERATURE DEG C
MIN = 5.30 MAX = 26.34
SAIC/Raleigh

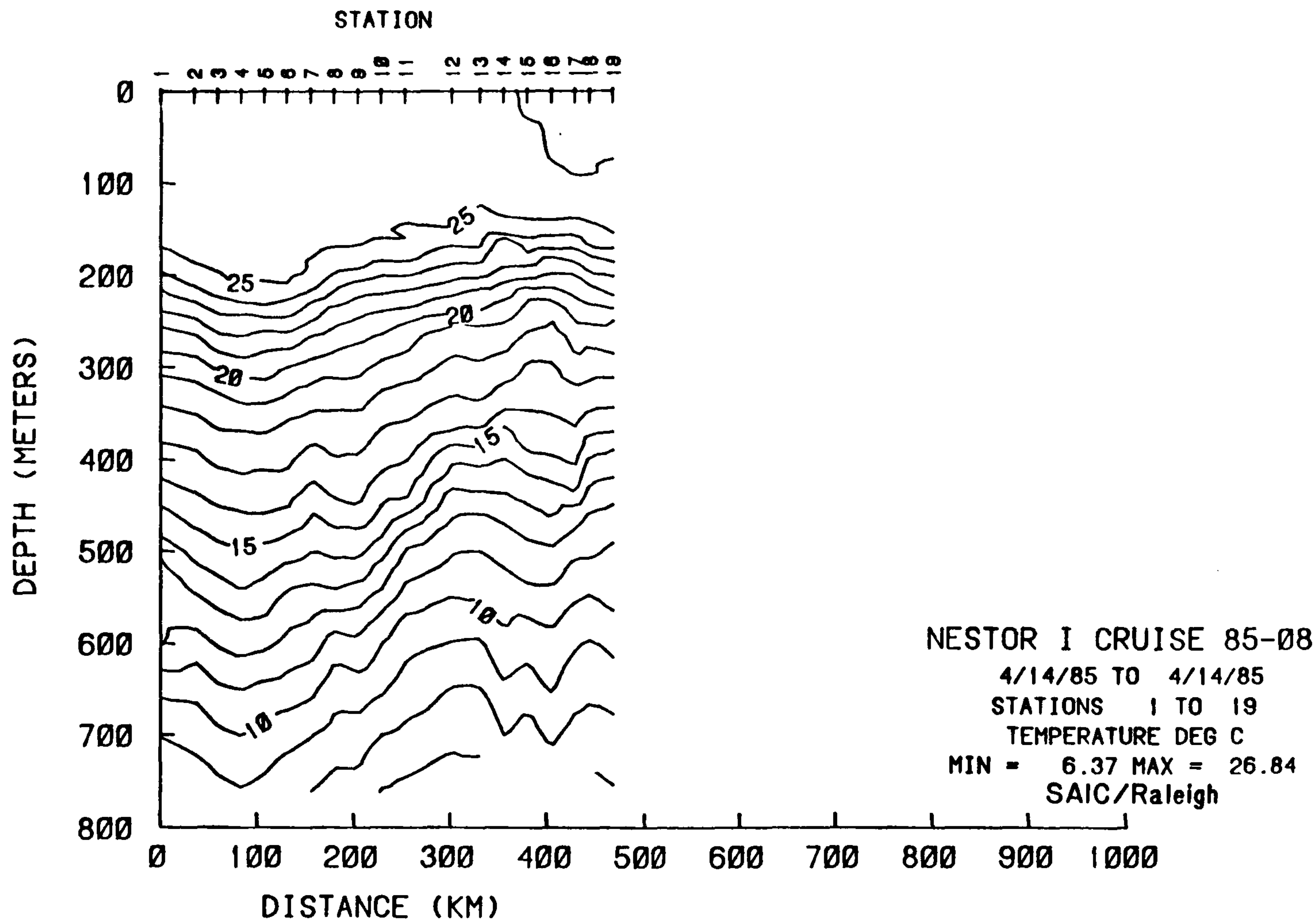


NESTOR I CRUISE 85-07
4/10/85 TO 4/11/85
STATIONS 4 TO 34
TEMPERATURE DEG C
MIN = 12.57 MAX = 26.34
SAIC/Raleigh

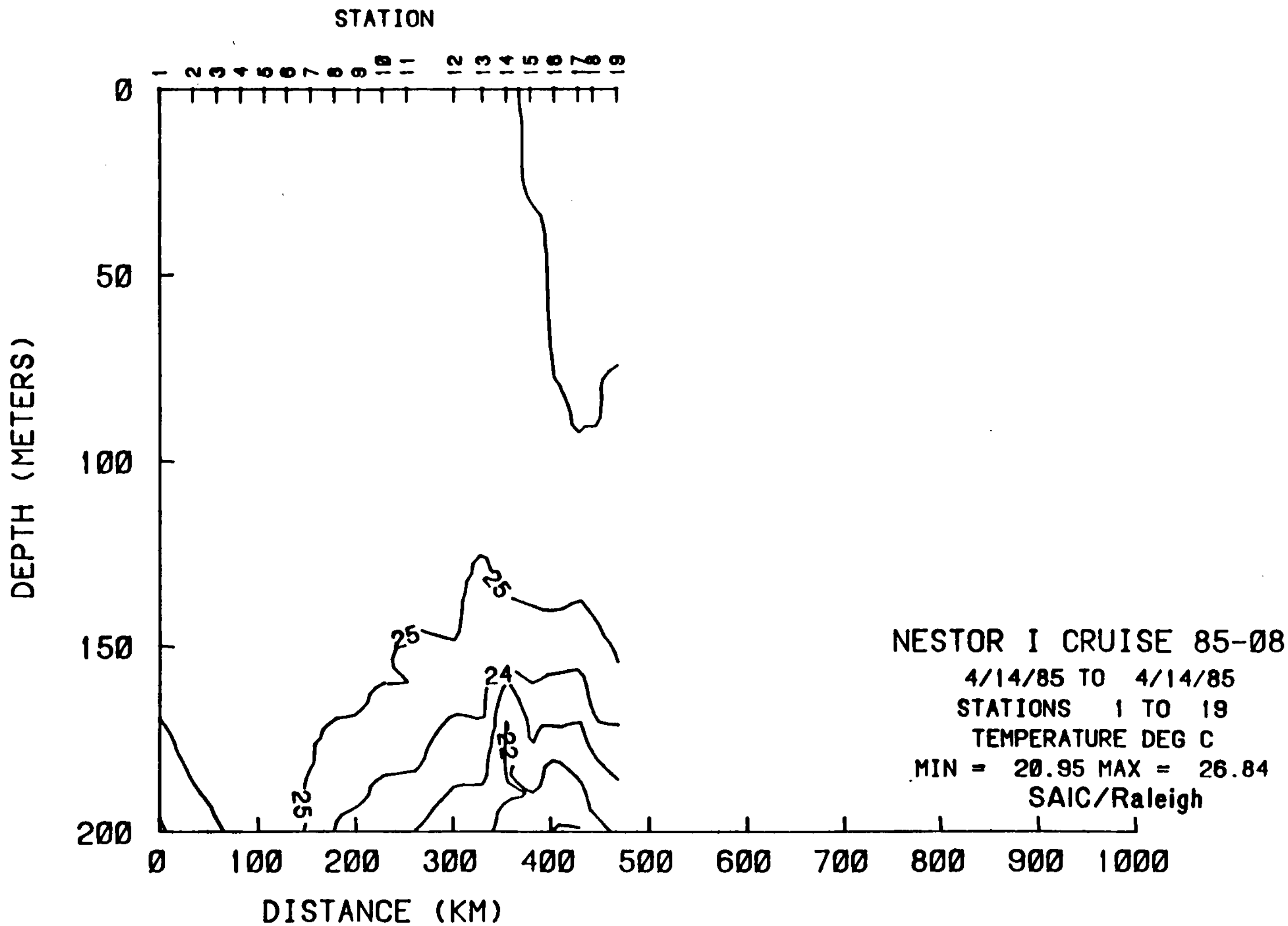


PARAMETERS AT SURFACE NESTOR I CRUISE 85-07

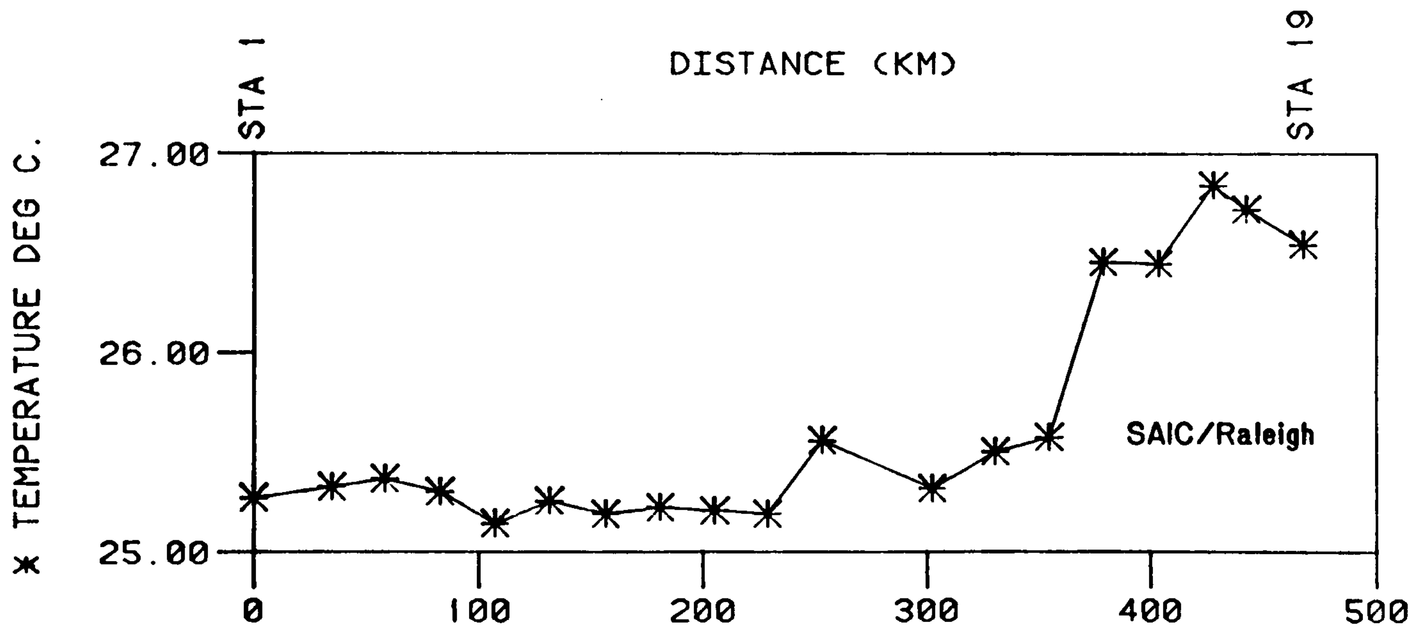

NESTOR I CRUISE 85-08 4/14/85 TO 4/14/85
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
200 m
500 m
1000 m
2000 m
3000 m
1
19
SAIC/Raleigh


STATION
DEPTH (METERS)
DISTANCE (KM)
NESTOR I CRUISE 85-08
4/14/85 TO 4/14/85
STATIONS 1 TO 19
TEMPERATURE DEG C
MIN = 6.37 MAX = 26.84
SAIC/Raleigh

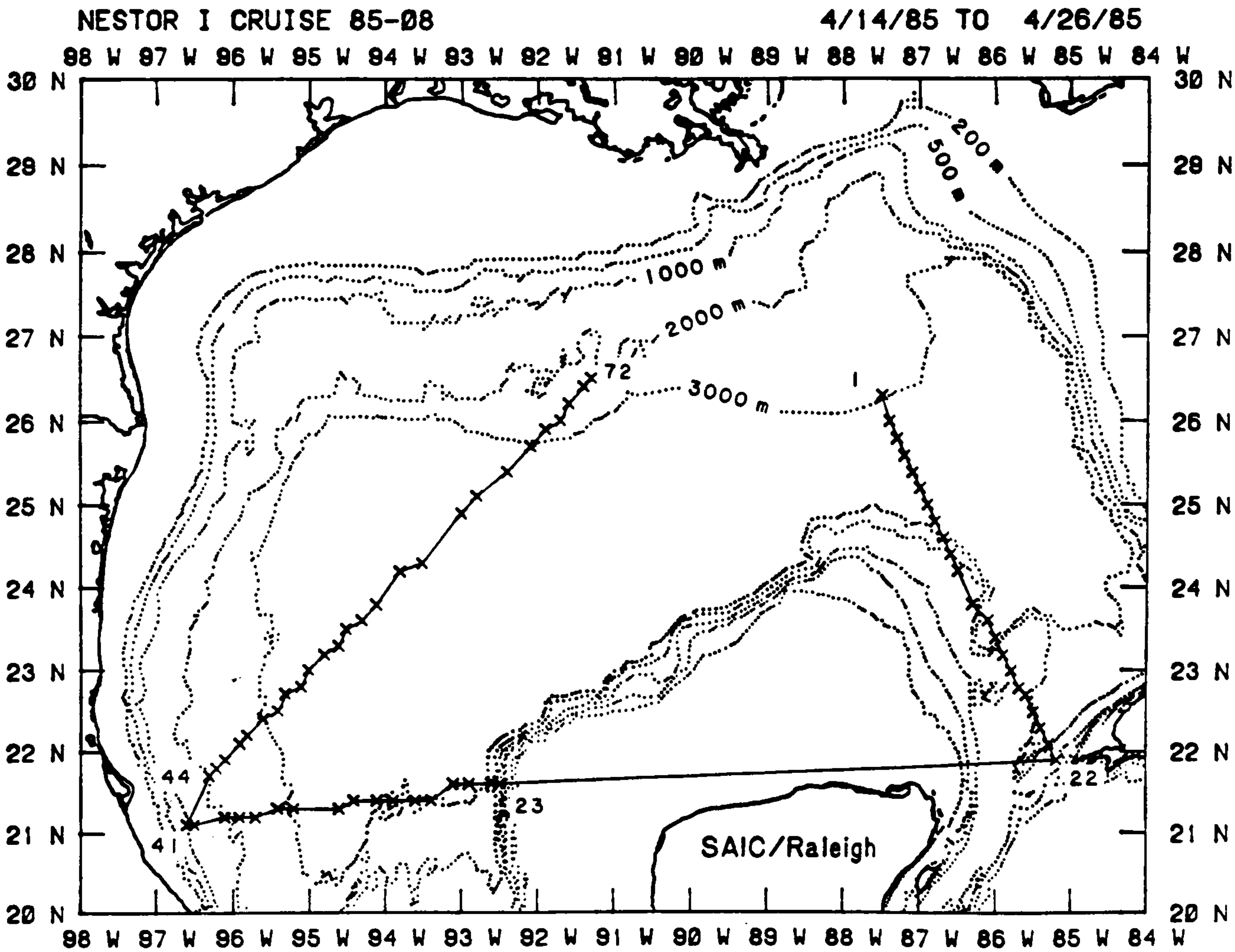
613

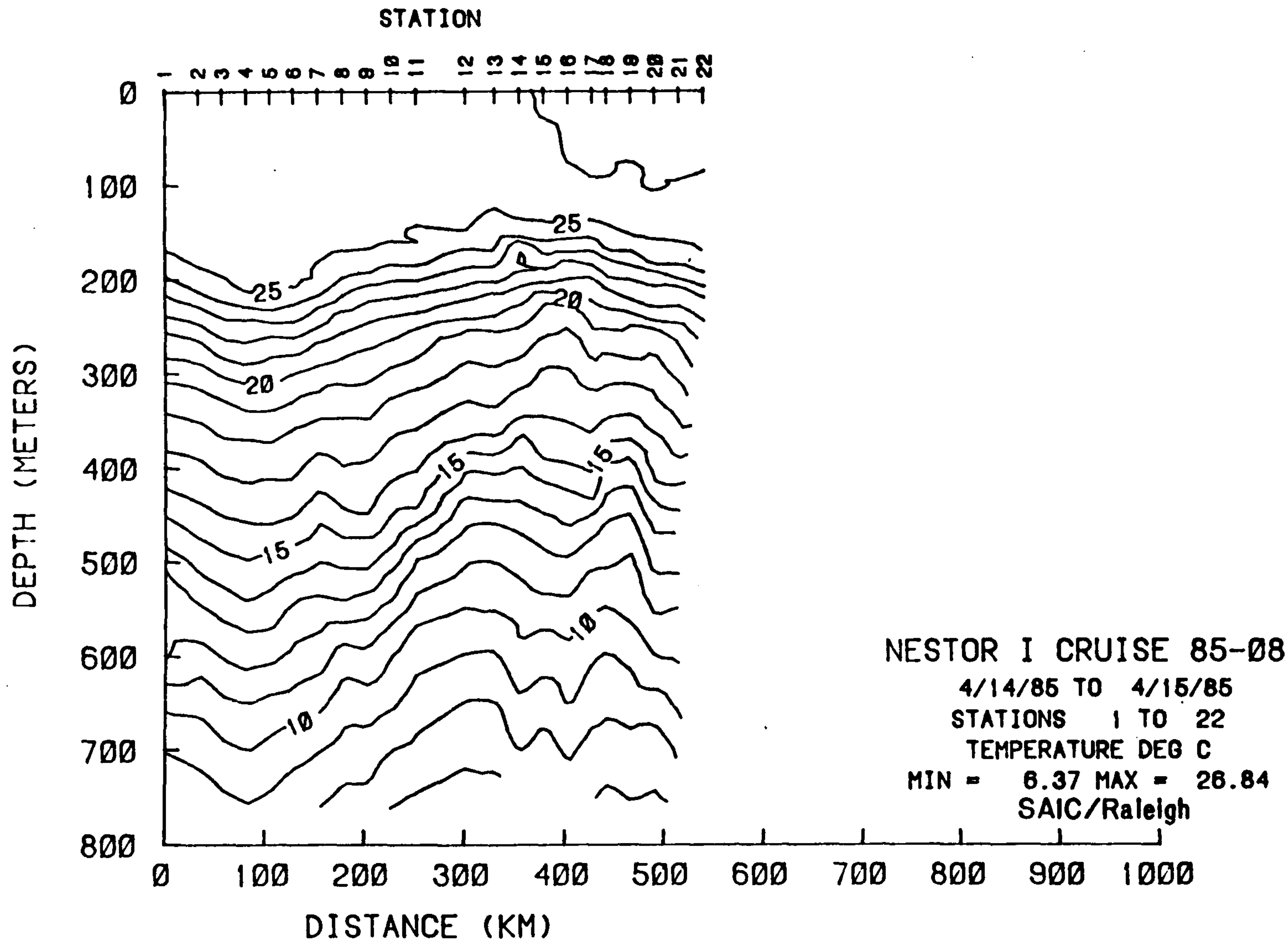


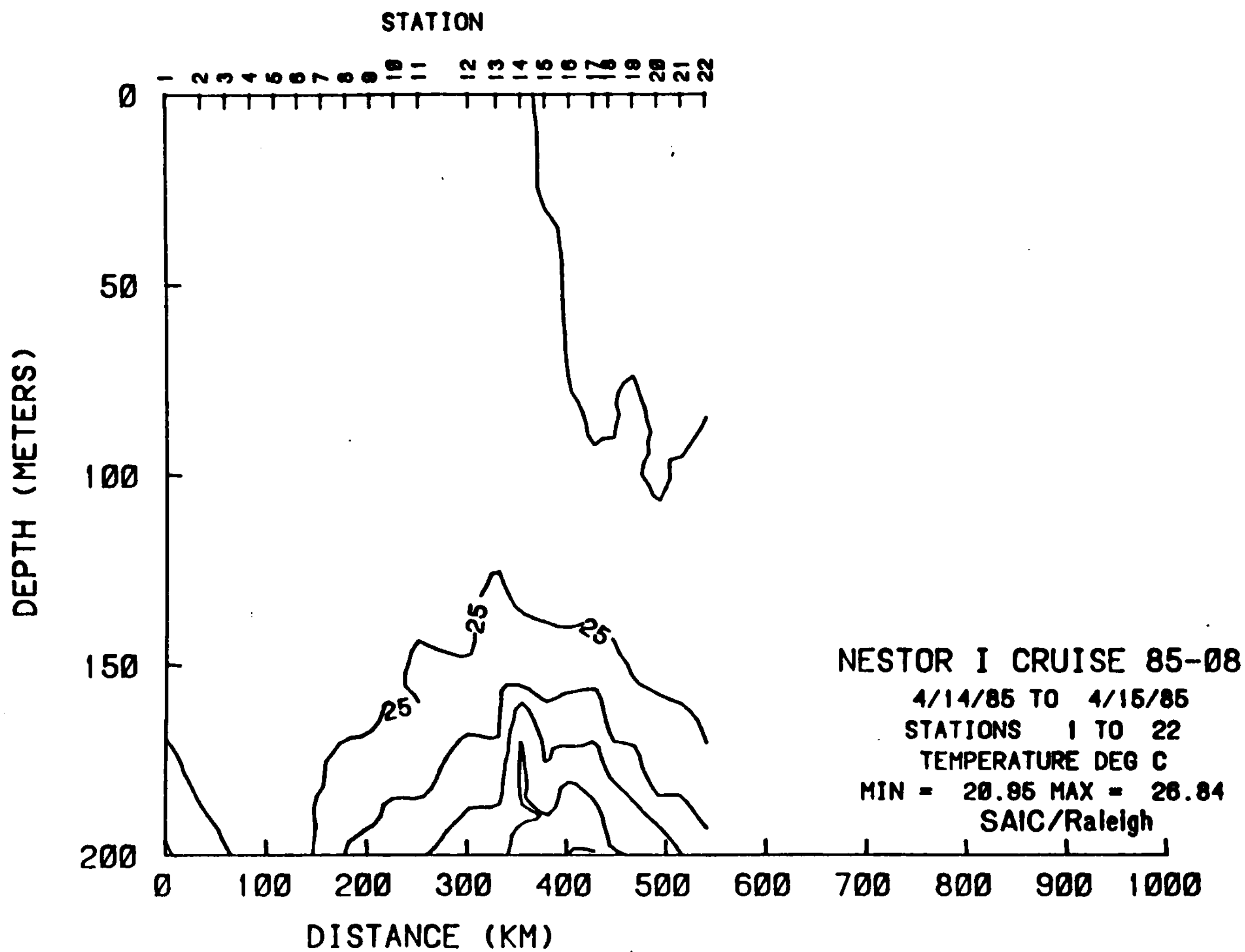
STATION
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19
0
50
100
150
200
DEPTH (METERS)
25
25
25
24
22
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)
NESTOR I CRUISE 85-08
4/14/85 TO 4/14/85
STATIONS 1 TO 19
TEMPERATURE DEG C
MIN = 20.95 MAX = 26.84
SAIC/Raleigh

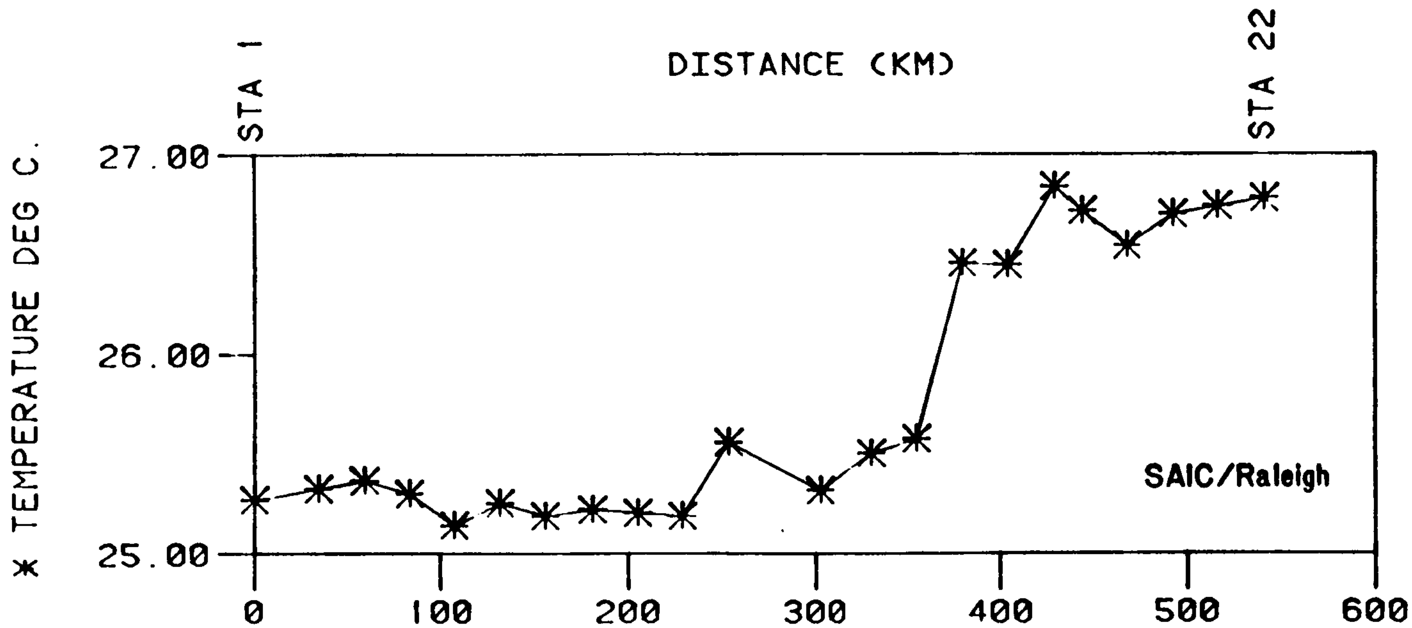


PARAMETERS AT SURFACE NESTOR I CRUISE 85-08

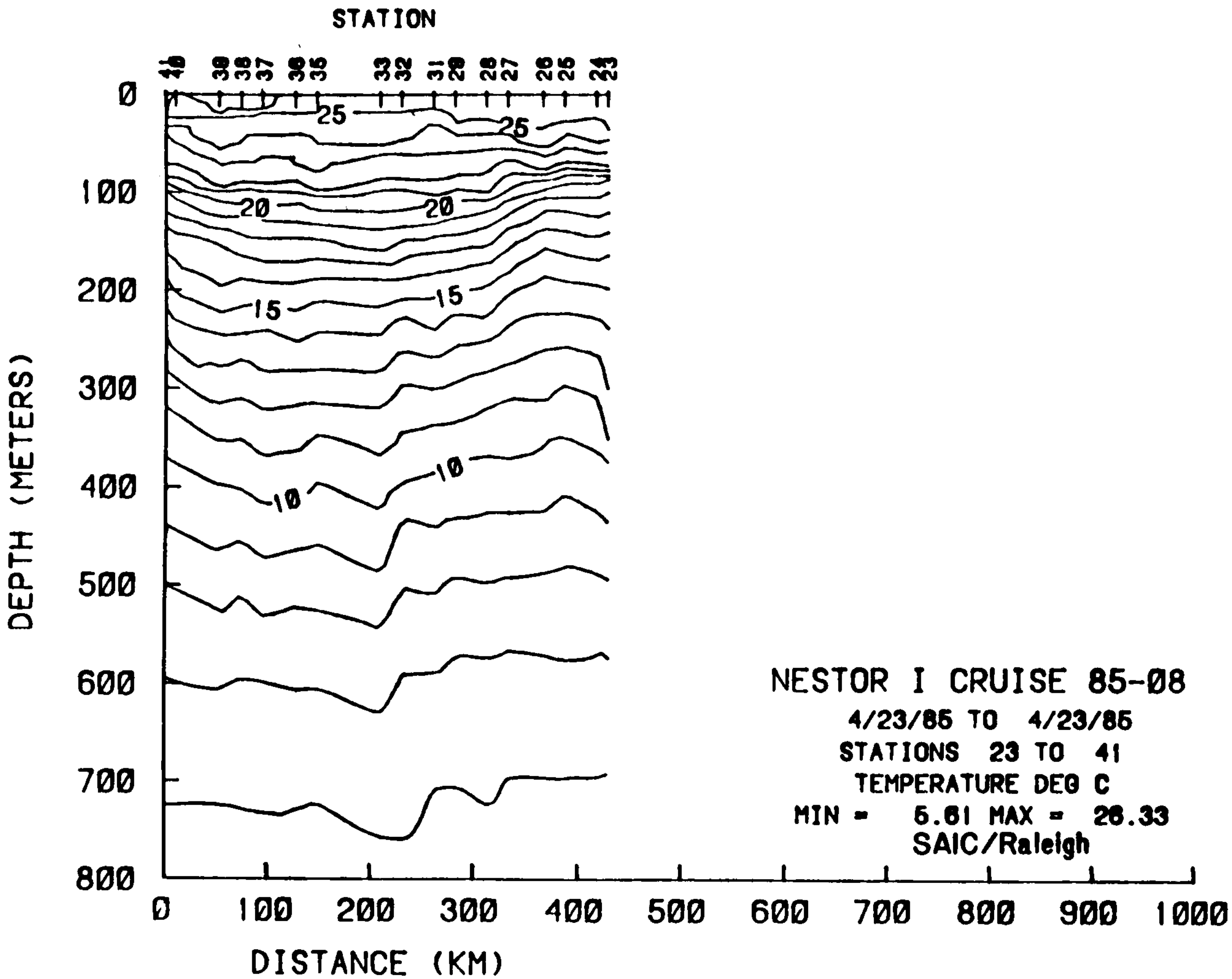

NESTOR I CRUISE 85-Ø8
4/14/85 TO 4/26/85
98 W 97 W 96 W 95 W 94 W 93 W 92 W 91 W 9Ø W 89 W 88 W 87 W 86 W 85 W 84 W
3Ø N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
2Ø N
200 m
500 m
1000 m
2000 m
3000 m
1
22
23
41
44
72
SAIC/Raleigh

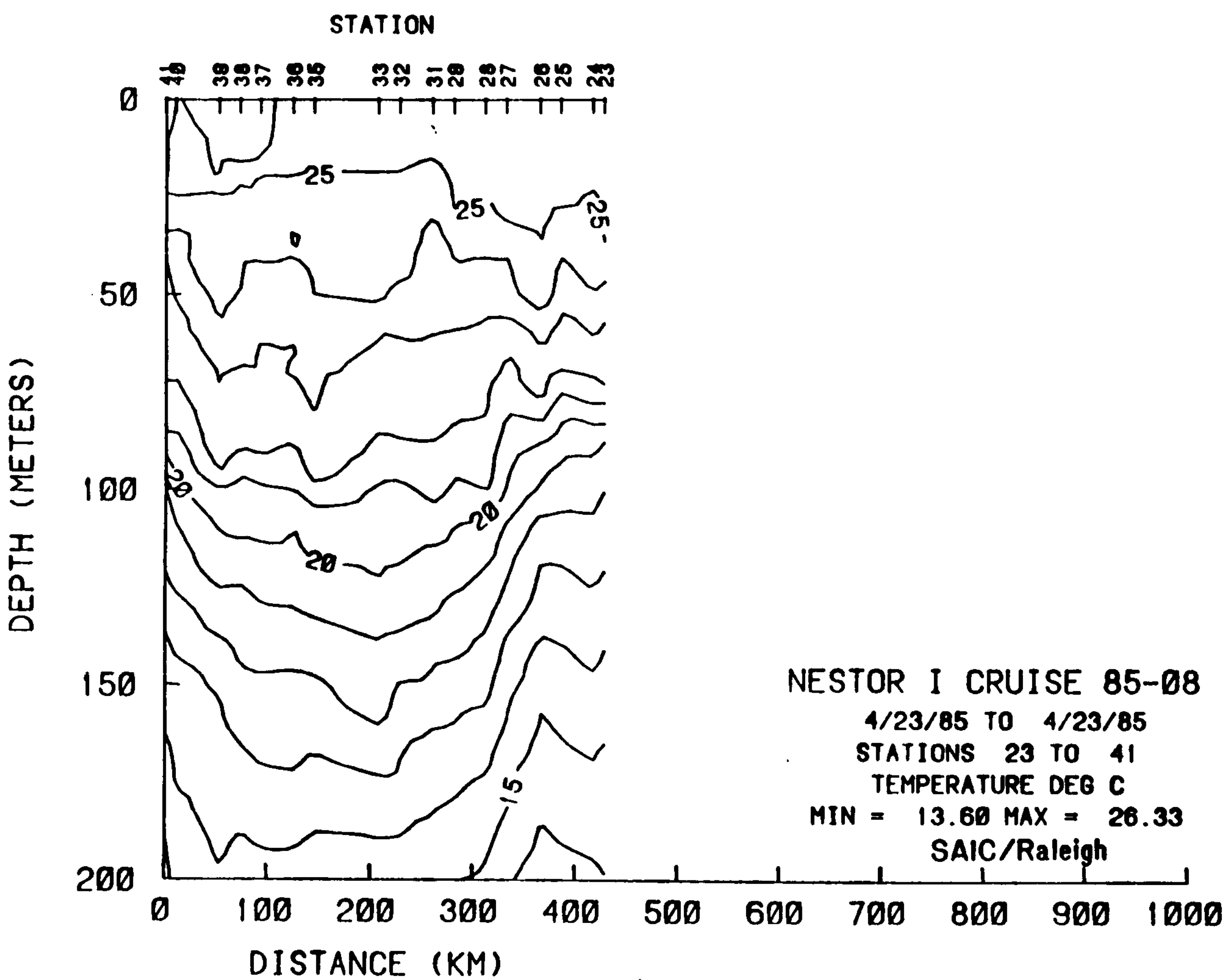

STATION
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
DEPTH (METERS)
0
100
200
300
400
500
600
700
800
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
10
NESTOR I CRUISE 85-08
4/14/85 TO 4/15/85
STATIONS 1 TO 22
TEMPERATURE DEG C
MIN = 6.37 MAX = 26.84
SAIC/Raleigh

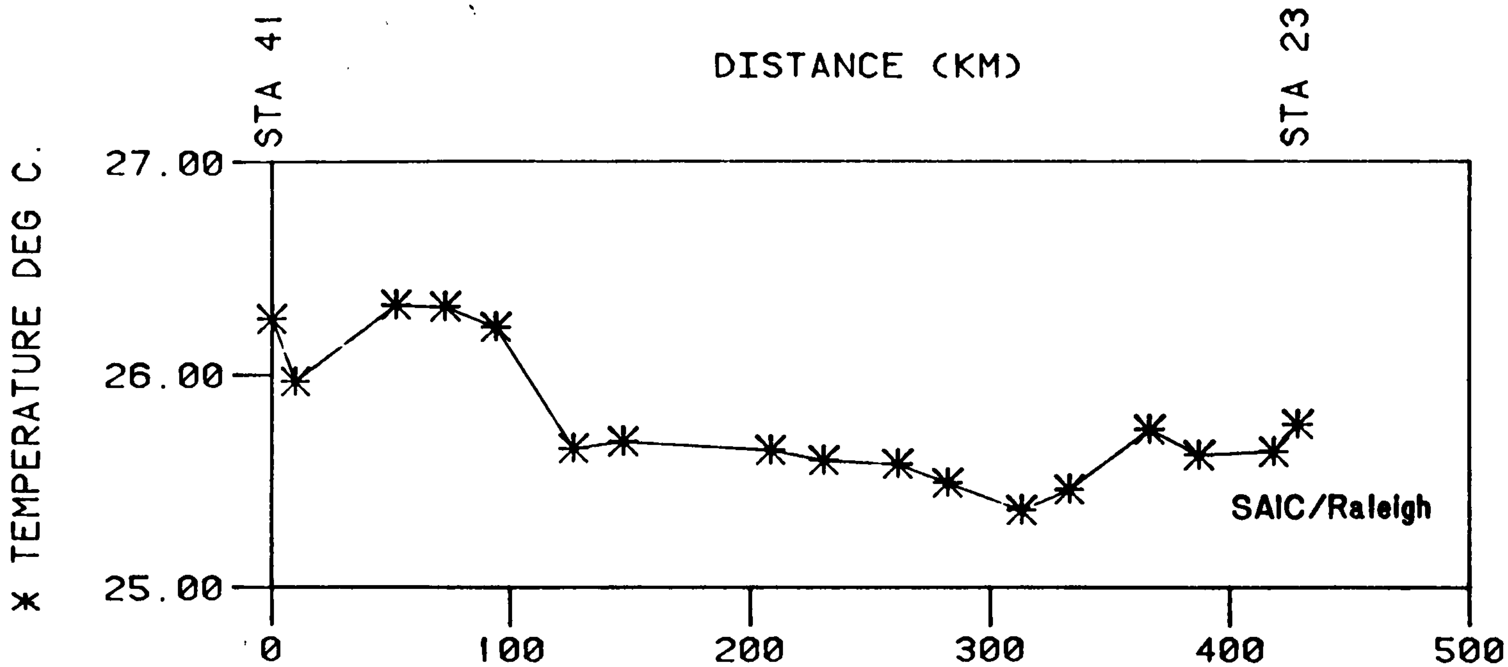

STATION
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
0
50
100
150
200
DEPTH (METERS)
25
0 100 200 300 400 500 600 700 800 900 1000
DISTANCE (KM)
NESTOR I CRUISE 85-08
4/14/85 TO 4/15/85
STATIONS 1 TO 22
TEMPERATURE DEG C
MIN = 20.95 MAX = 26.84
SAIC/Raleigh



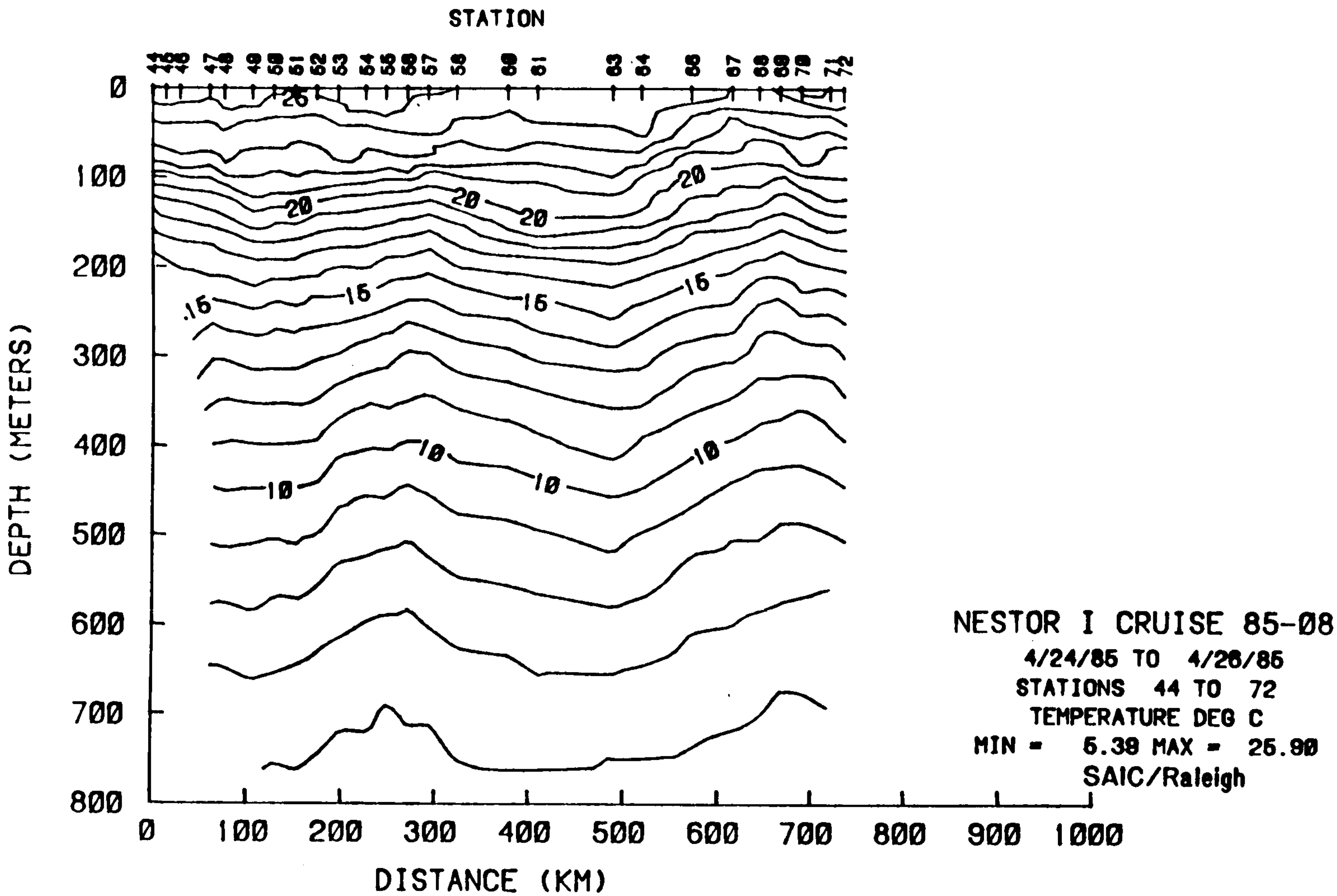
PARAMETERS AT SURFACE NESTOR I CRUISE 85-08

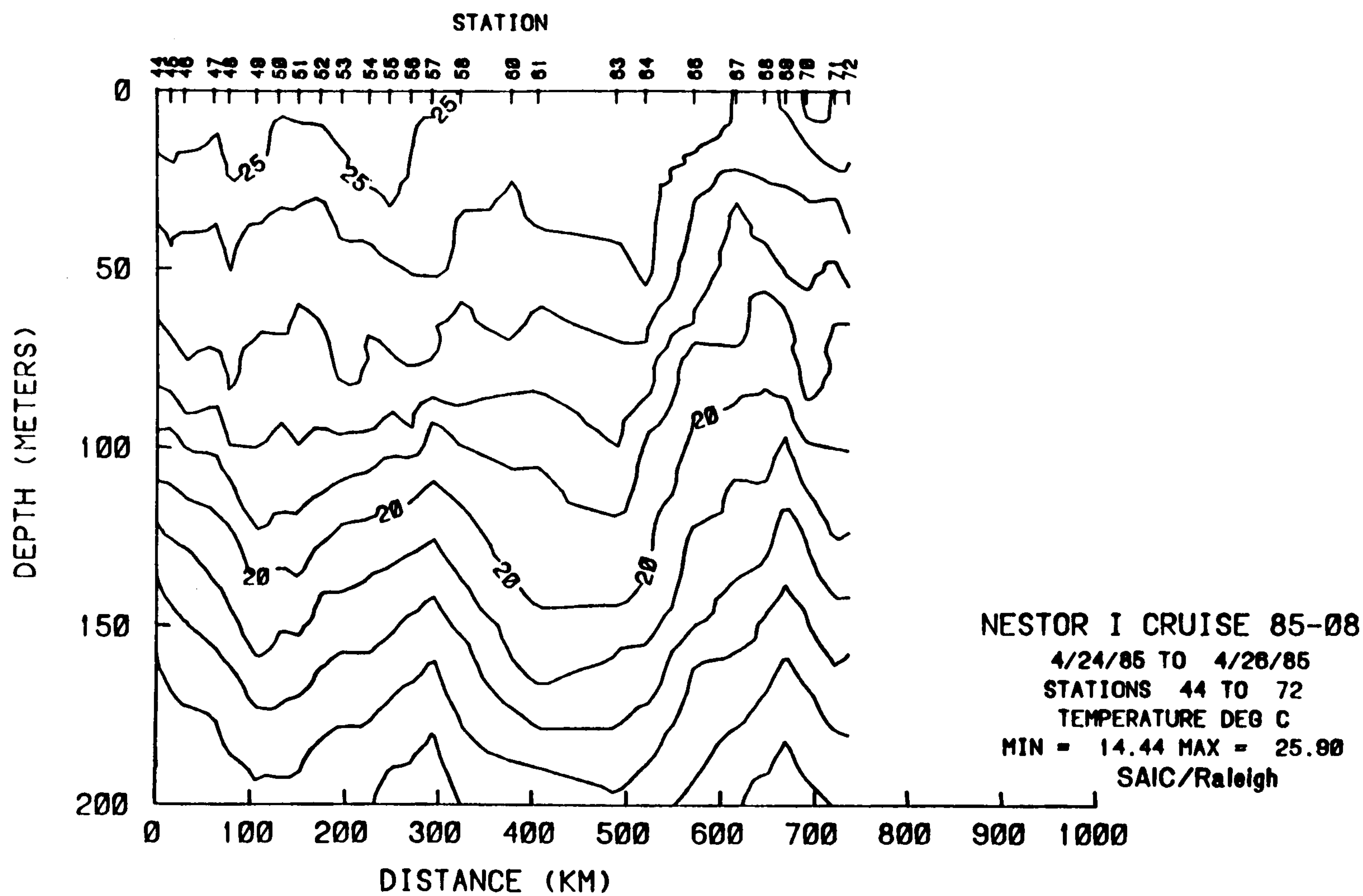

STATION
DEPTH (METERS)
DISTANCE (KM)
0
100
200
300
400
500
600
700
800
900
1000
25
20
15
10
NESTOR I CRUISE 85-08
4/23/85 TO 4/23/85
STATIONS 23 TO 41
TEMPERATURE DEG C
MIN = 5.61 MAX = 26.33
SAIC/Raleigh

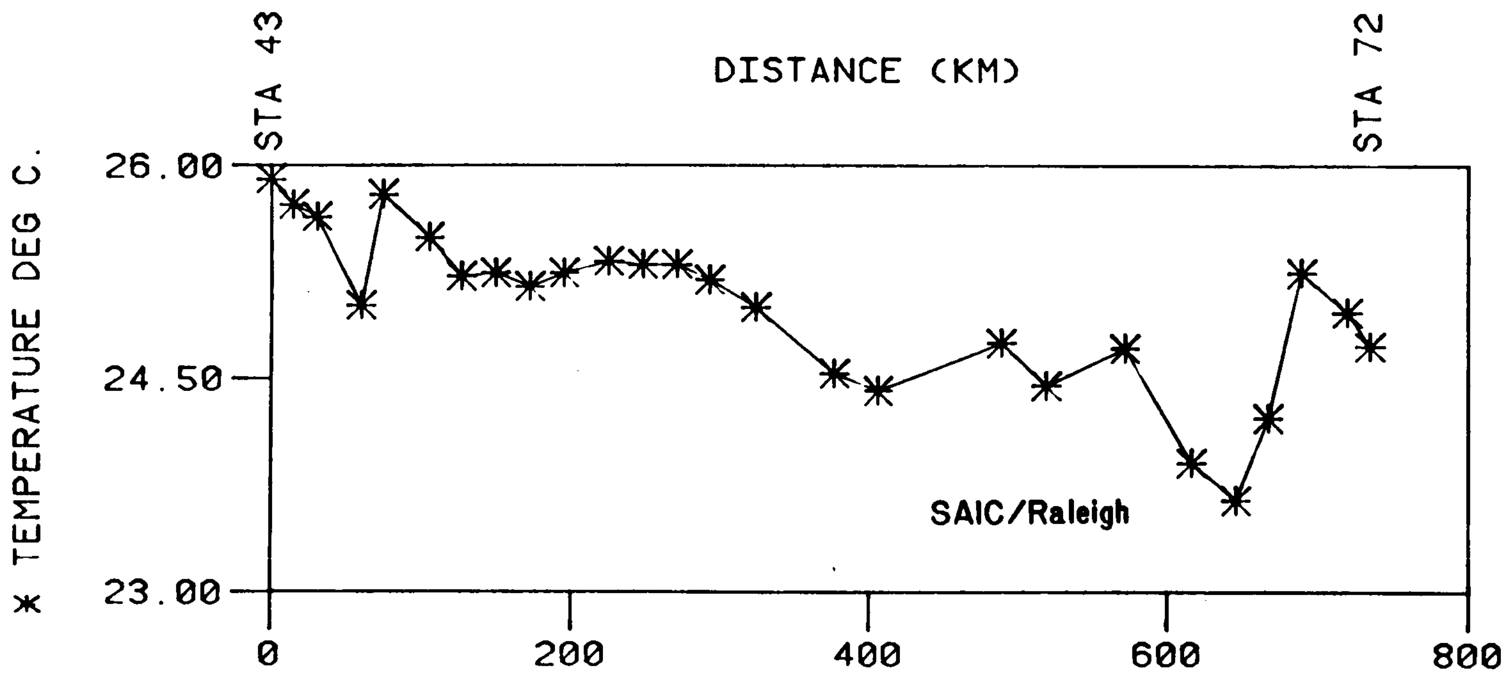

STATION
41 40 39 38 37 36 35 33 32 31 29 28 27 26 25 24 23
DEPTH (METERS)
0
50
100
150
200
25
25
25
20
20
20
15
0
100
200
300
400
500
600
700
800
900
1000
DISTANCE (KM)
NESTOR I CRUISE 85-08
4/23/85 TO 4/23/85
STATIONS 23 TO 41
TEMPERATURE DEG C
MIN = 13.60 MAX = 26.33
SAIC/Raleigh



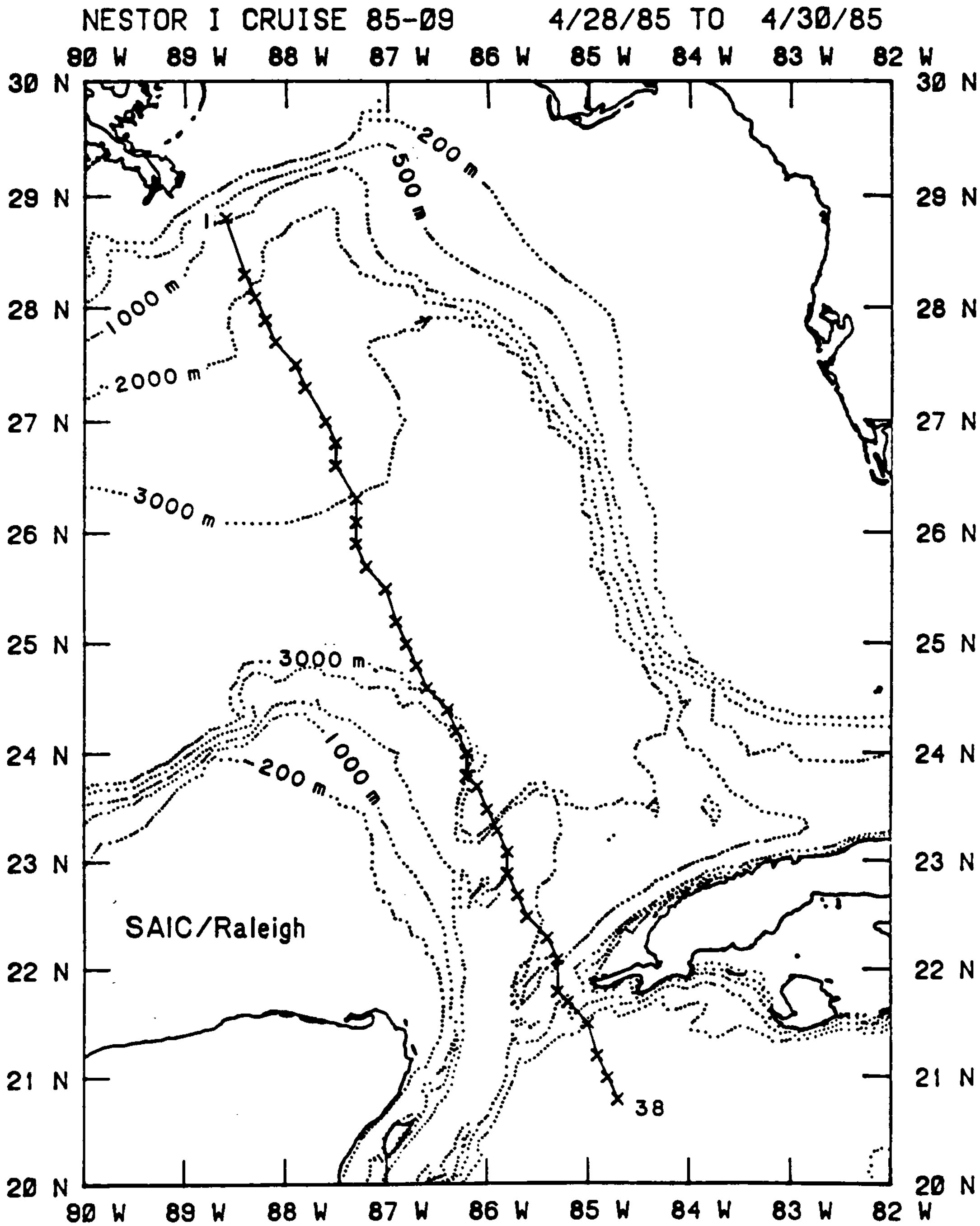
PARAMETERS AT SURFACE NESTOR I CRUISE 85-08

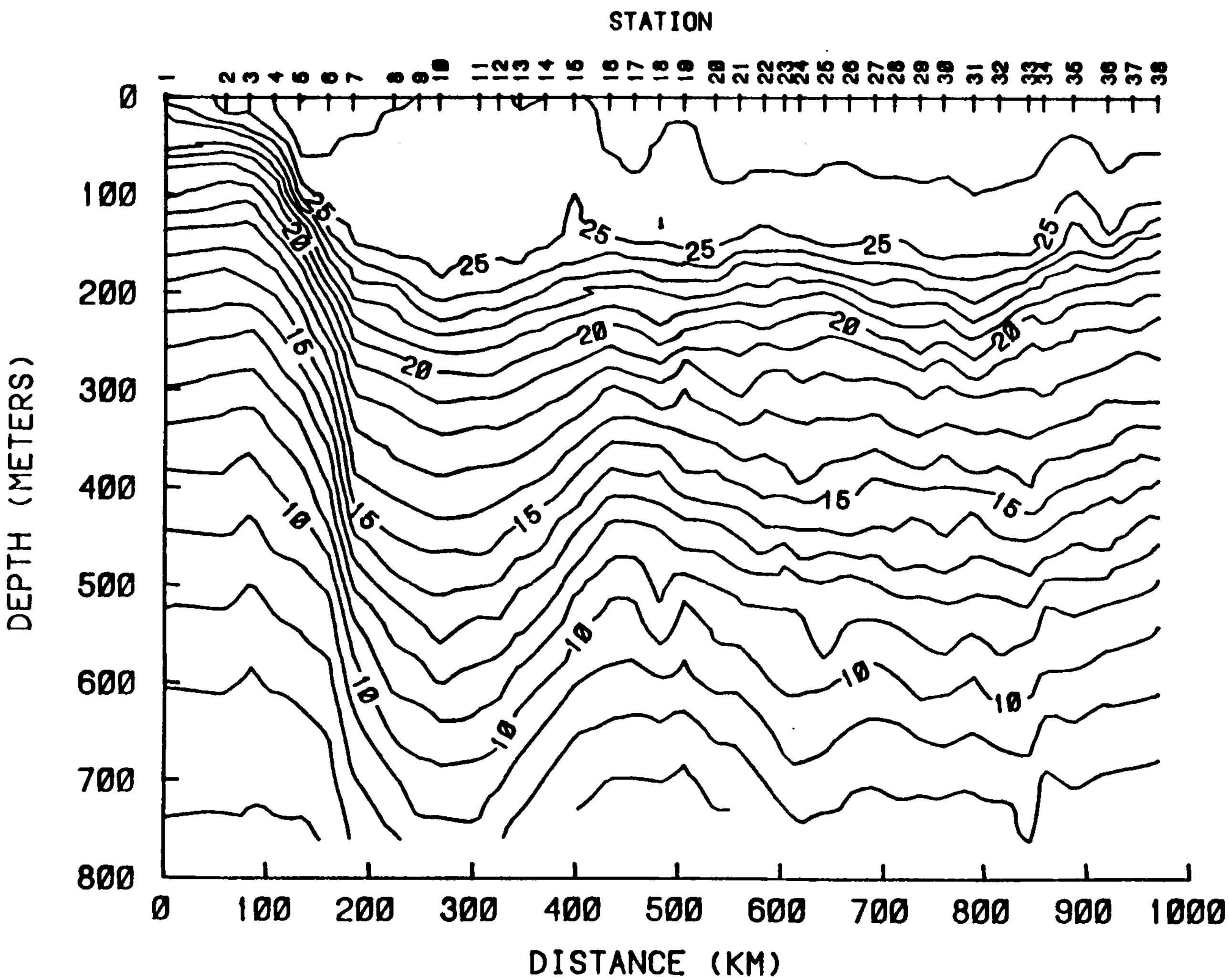

STATION
DEPTH (METERS)
DISTANCE (KM)
NESTOR I CRUISE 85-08
4/24/85 TO 4/26/85
STATIONS 44 TO 72
TEMPERATURE DEG C
MIN = 5.39 MAX = 25.90
SAIC/Raleigh


STATION
44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 60 61 63 64 66 67 68 69 70 71 72
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
NESTOR I CRUISE 85-08
4/24/85 TO 4/26/85
STATIONS 44 TO 72
TEMPERATURE DEG C
MIN = 14.44 MAX = 25.90
SAIC/Raleigh

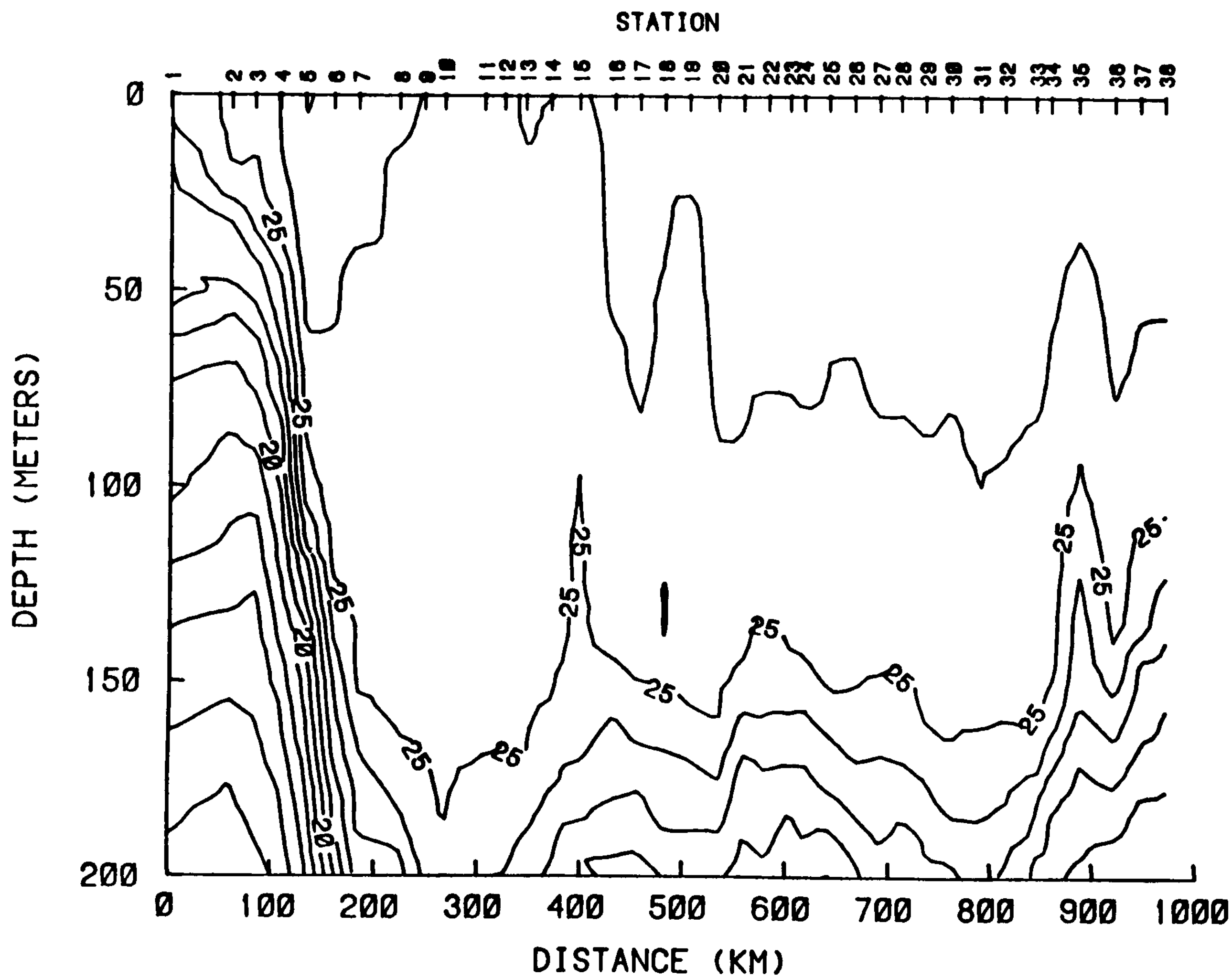


PARAMETERS AT SURFACE NESTOR I CRUISE 85-08

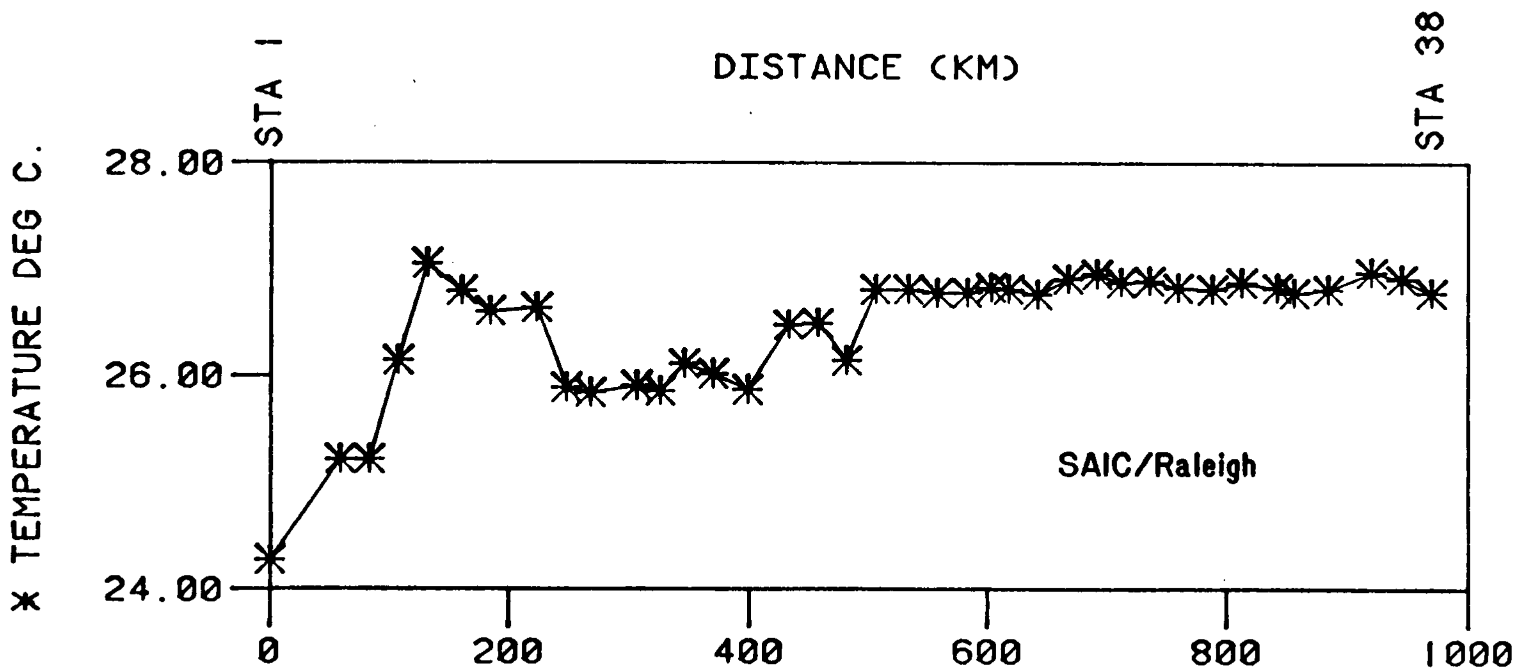

NESTOR I CRUISE 85-09 4/28/85 TO 4/30/85
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
20 N
200 m
500 m
1000 m
2000 m
3000 m
3000 m
1000 m
200 m
1
38
SAIC/Raleigh



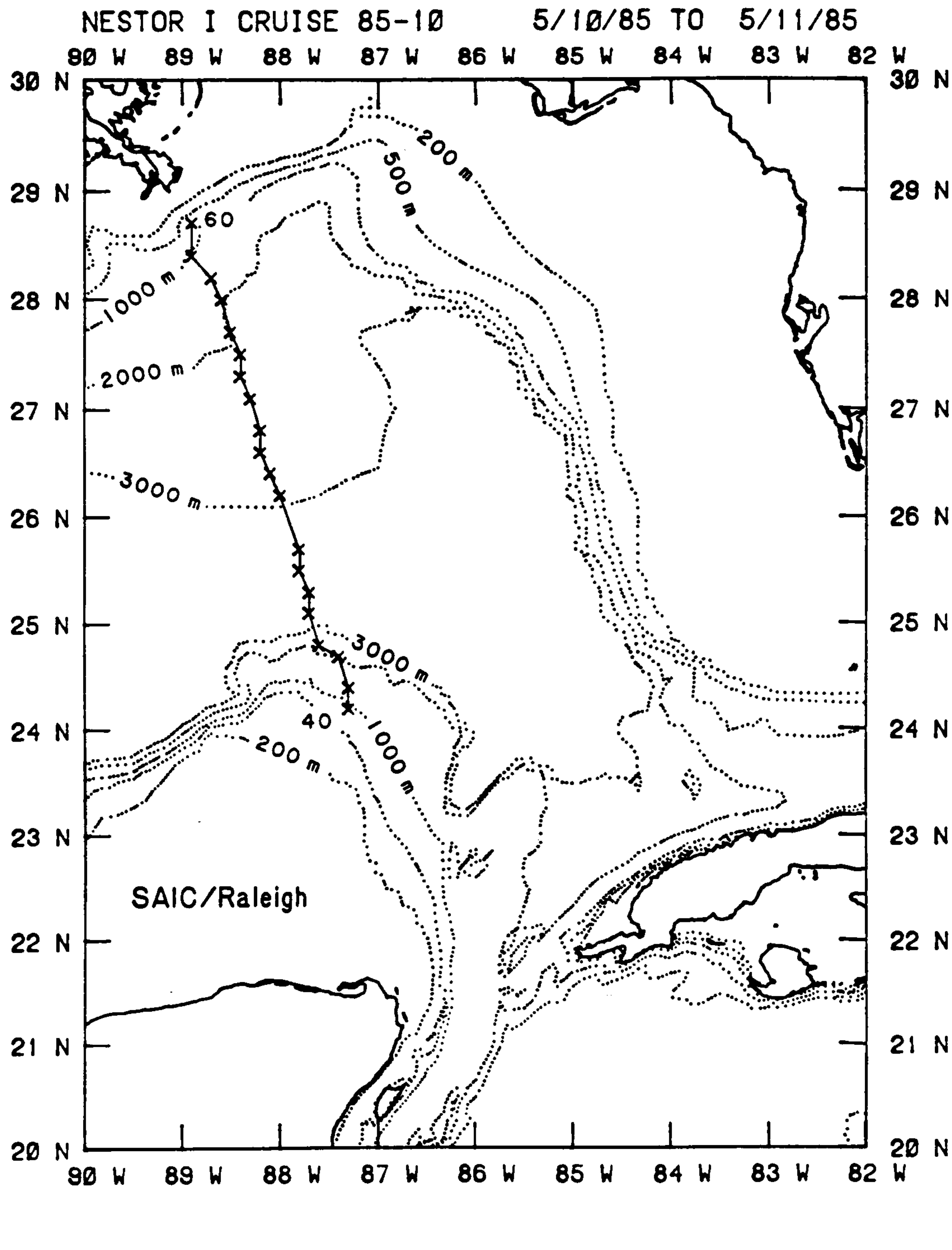
NESTOR I CRUISE 85-09
4/28/85 TO 4/30/85
STATIONS 1 TO 38
TEMPERATURE DEG C
MIN = 5.79 MAX = 27.06
SAIC/Raleigh



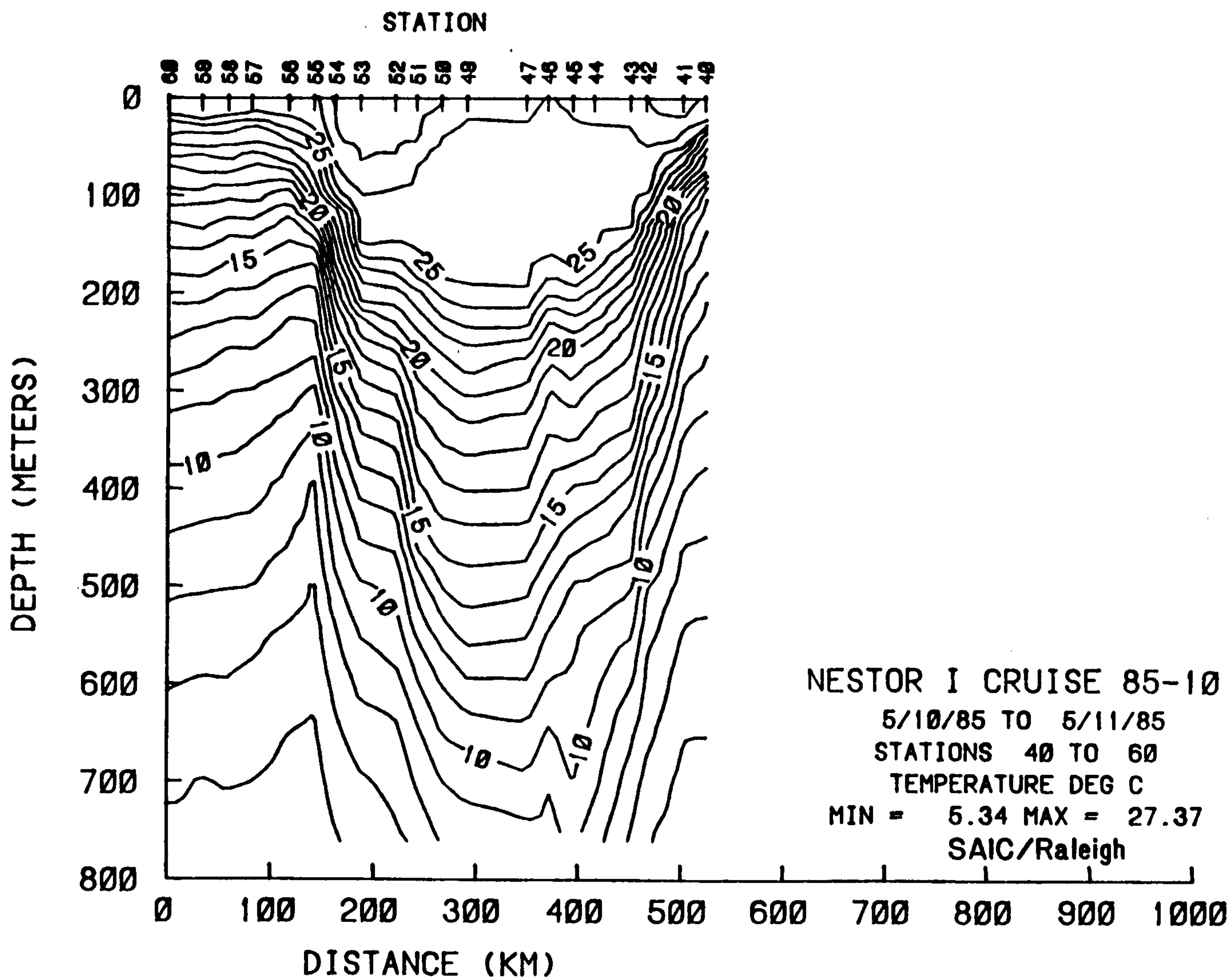
NESTOR I CRUISE 85-09
4/28/85 TO 4/30/85
STATIONS 1 TO 38
TEMPERATURE DEG C
MIN = 14.32 MAX = 27.06
SAIC/Raleigh

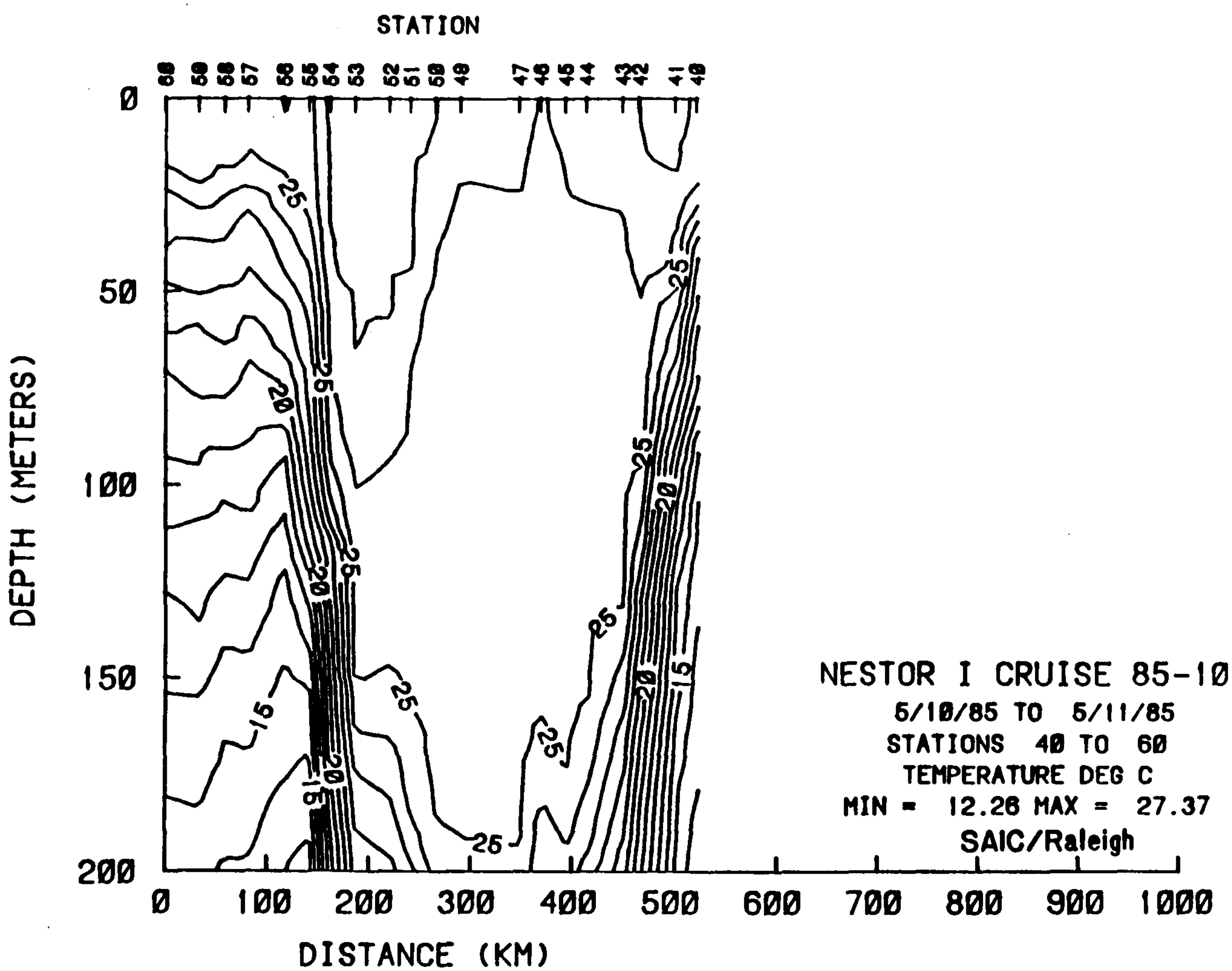


PARAMETERS AT SURFACE NESTOR I CRUISE 85-09

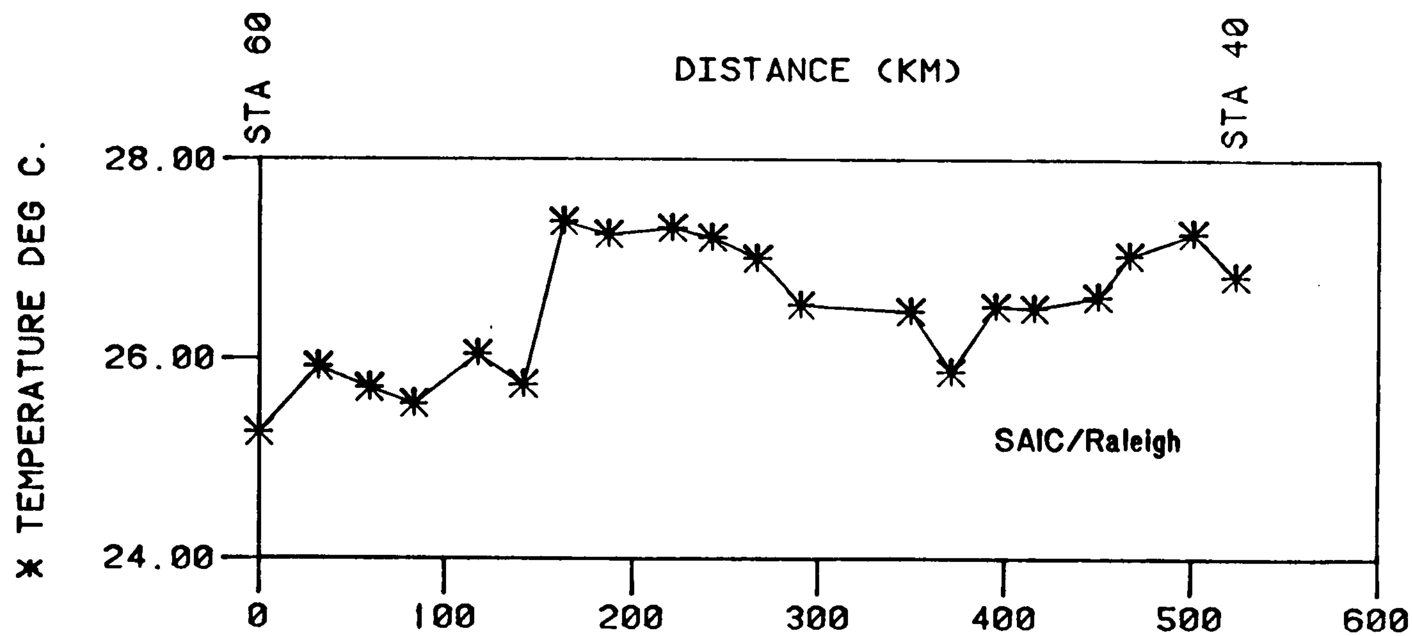


NESTOR I CRUISE 85-10 5/10/85 TO 5/11/85
90 W
89 W
88 W
87 W
86 W
85 W
84 W
83 W
82 W
30 N
29 N
28 N
27 N
26 N
25 N
24 N
23 N
22 N
21 N
20 N
200 m
500 m
1000 m
2000 m
3000 m
60
40
SAIC/Raleigh


STATION
60 59 58 57 56 55 54 53 52 51 50 49 47 46 45 44 43 42 41 40
DEPTH (METERS)
DISTANCE (KM)
NESTOR I CRUISE 85-10
5/10/85 TO 5/11/85
STATIONS 40 TO 60
TEMPERATURE DEG C
MIN = 5.34 MAX = 27.37
SAIC/Raleigh



STATION
60 59 58 57 56 55 54 53 52 51 50 49 47 46 45 44 43 42 41 40
DEPTH (METERS)
0
50
100
150
200
DISTANCE (KM)
0 100 200 300 400 500 600 700 800 900 1000
25
20
15
NESTOR I CRUISE 85-10
5/10/85 TO 5/11/85
STATIONS 40 TO 60
TEMPERATURE DEG C
MIN = 12.26 MAX = 27.37
SAIC/Raleigh



PARAMETERS AT SURFACE NESTOR I CRUISE 85-10

The Department of the Interior Mission

As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering sound use of our land and water resources; protecting our fish, wildlife, and biological diversity; preserving the environmental and cultural values of our national parks and historical places; and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to ensure that their development is in the best interests of all our people by encouraging stewardship and citizen participation in their care. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.

The Minerals Management Service Mission

As a bureau of the Department of the Interior, the Minerals Management Service's (MMS) primary responsibilities are to manage the mineral resources located on the Nation's Outer Continental Shelf (OCS), collect revenue from the Federal OCS and onshore Federal and Indian lands, and distribute those revenues.

Moreover, in working to meet its responsibilities, the **Offshore Minerals Management Program** administers the OCS competitive leasing program and oversees the safe and environmentally sound exploration and production of our Nation's offshore natural gas, oil and other mineral resources. The MMS **Minerals Revenue Management** meets its responsibilities by ensuring the efficient, timely and accurate collection and disbursement of revenue from mineral leasing and production due to Indian tribes and allottees, States and the U.S. Treasury.

The MMS strives to fulfill its responsibilities through the general guiding principles of: (1) being responsive to the public's concerns and interests by maintaining a dialogue with all potentially affected parties and (2) carrying out its programs with an emphasis on working to enhance the quality of life for all Americans by lending MMS assistance and expertise to economic development and environmental protection.