MODIS Sea Surface Temperatures

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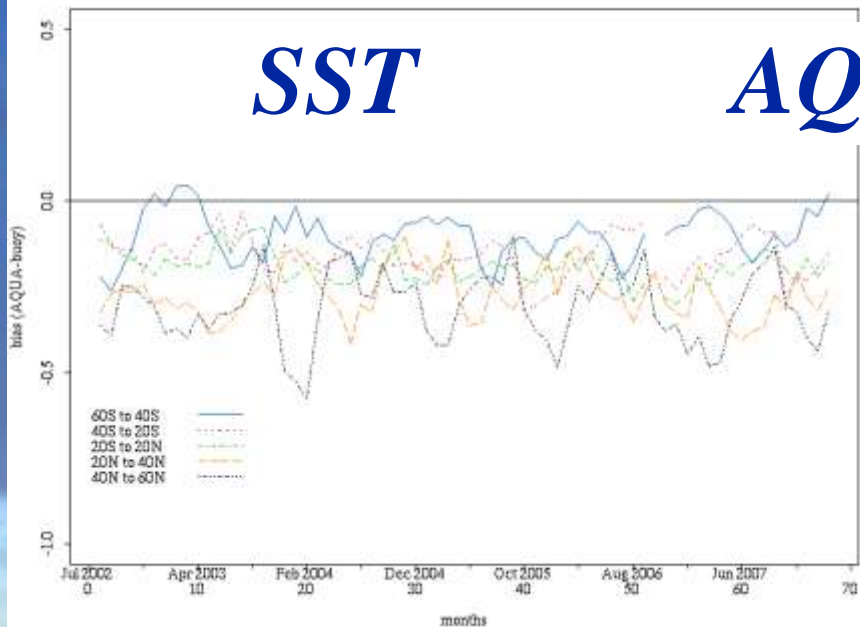
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MODIS SST update

- **Latitude Band – seasonal offsets, correction approach to use separate SST retrieval coefficients per lat band. SST4 not affected.**

- **SST coverage – current quality tests can results in loss of SST in high gradient regions, GS core – correction approach to test only for 'too cold'. Test with OGBP last week shows revised test successful.**

- **TERRA mirror side offset – requires revised mirror side bias correction**

- **Worked with OBPG to correct coding errors**

- **Transfer match-up extraction**

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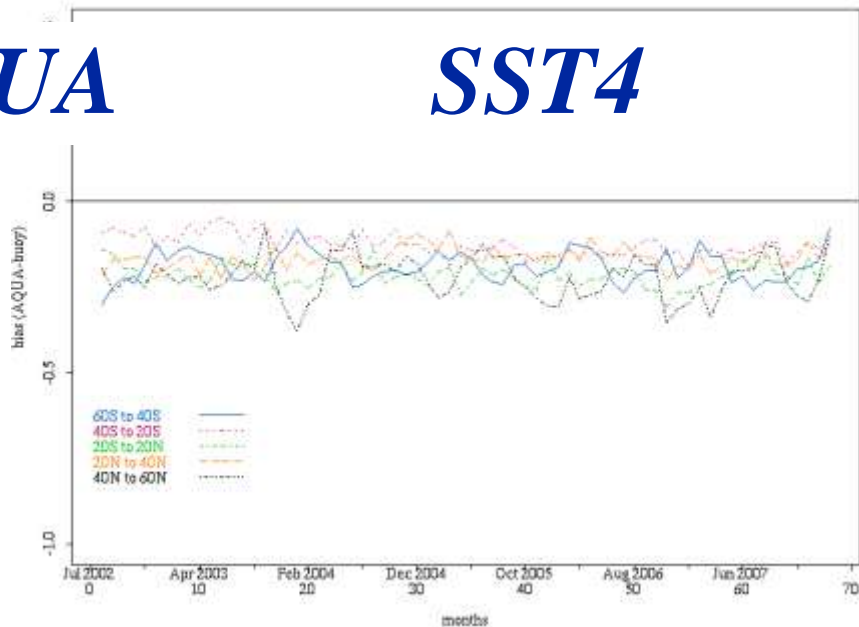
ROSENSTIEL SCHOOL
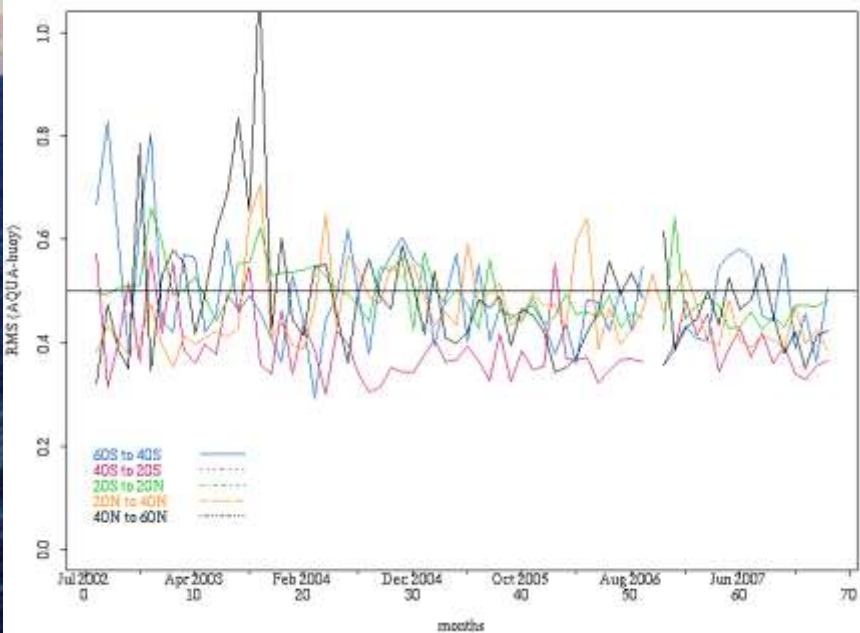OF MARINE & ATMOSPHERIC SCIENCE

SST AQUA SST4
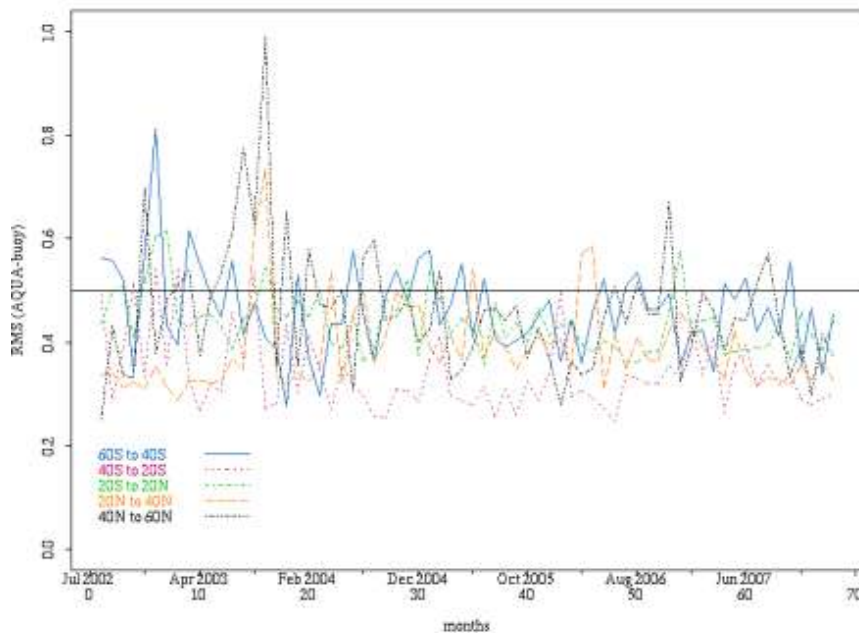
median bias AQUA SST night v5.0.7.X relative to buoy

median bias AQUA SST4 night v5.0.7.X relative to buoy

RMS AQUA SST night v5.0.7.X relative to buoy

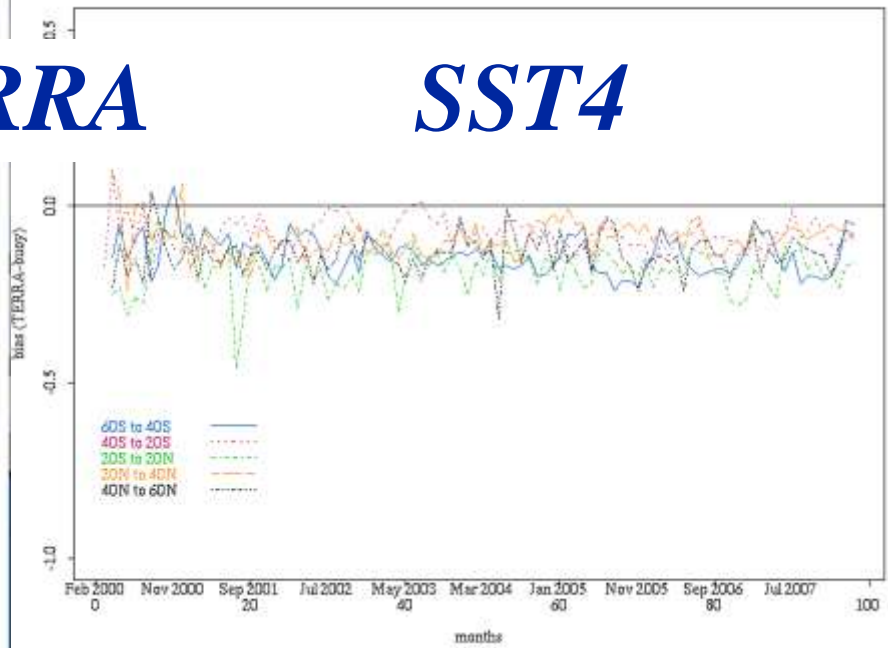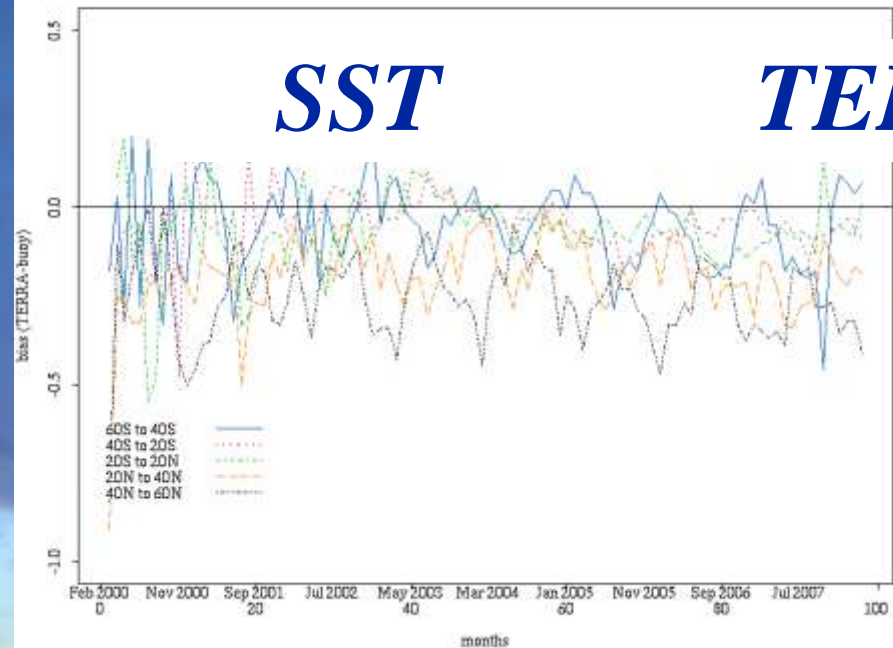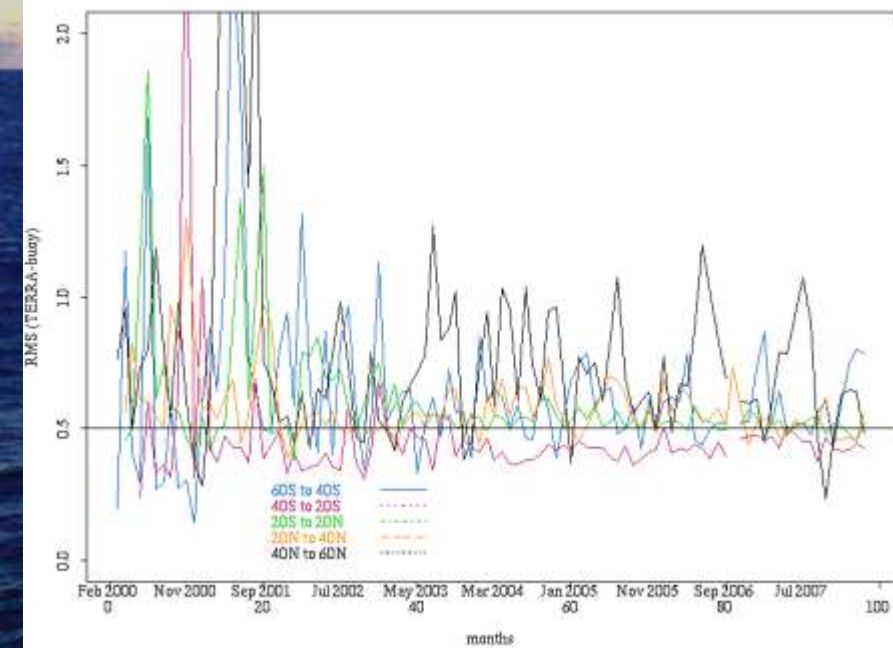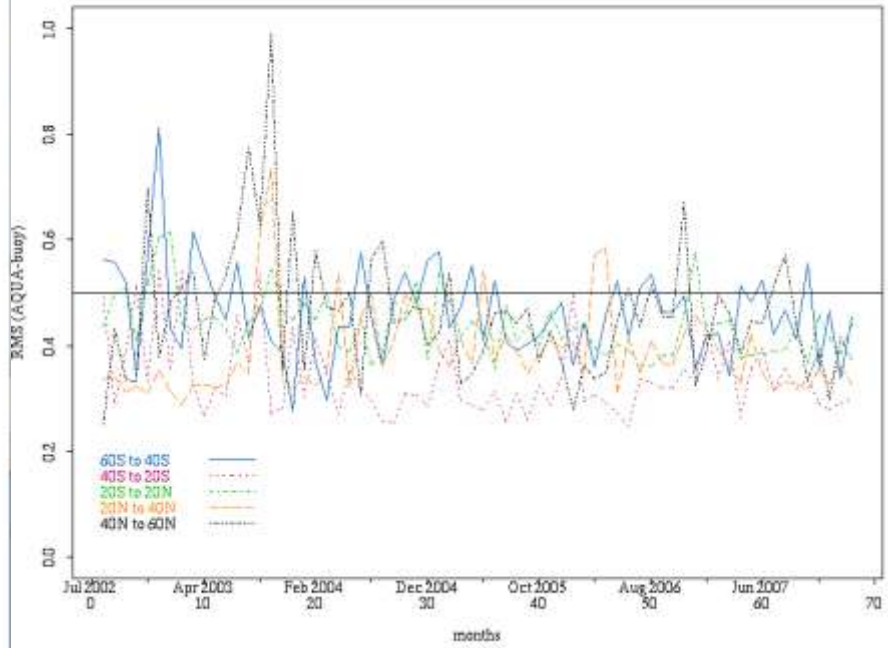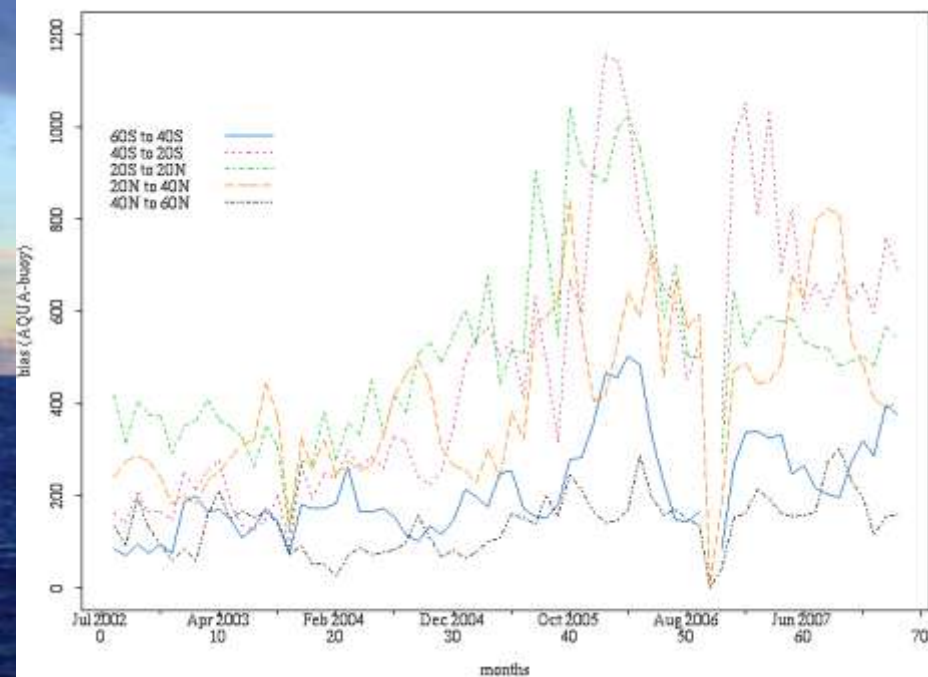RMS AQUA SST4 night v5.0.7.X relative to buoy
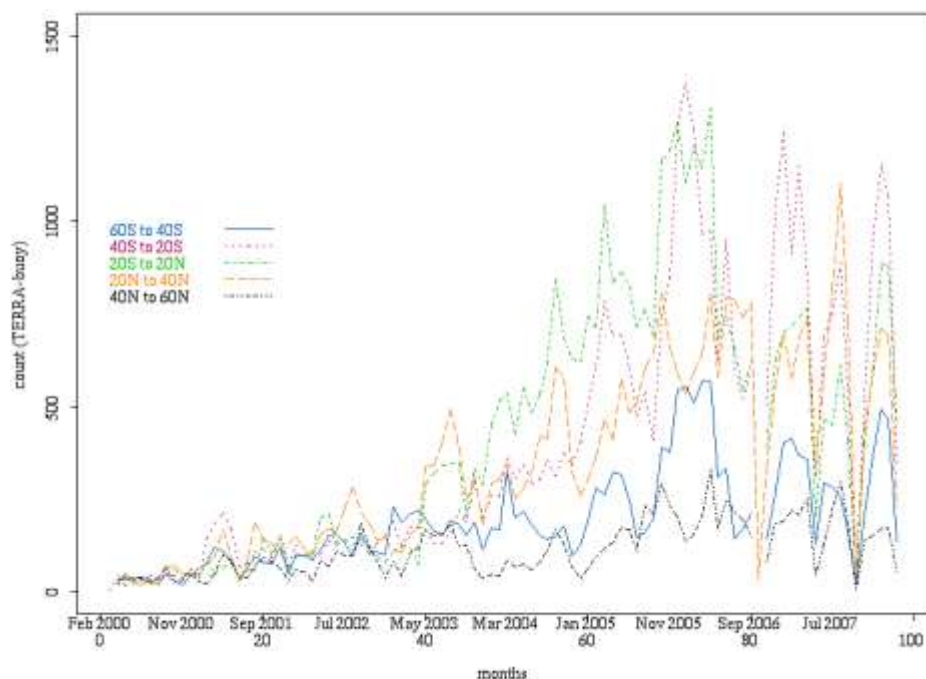
SST   TERRA   SST4

AQUA & TERRA Match-ups vs time by latitude band

record count AQUA SST night v5.0.7.X relative to buoy

recor count TERRA SST4 night v5.0.6.X relative to buoy

SST4 residuals (left) and in situ data density (right)
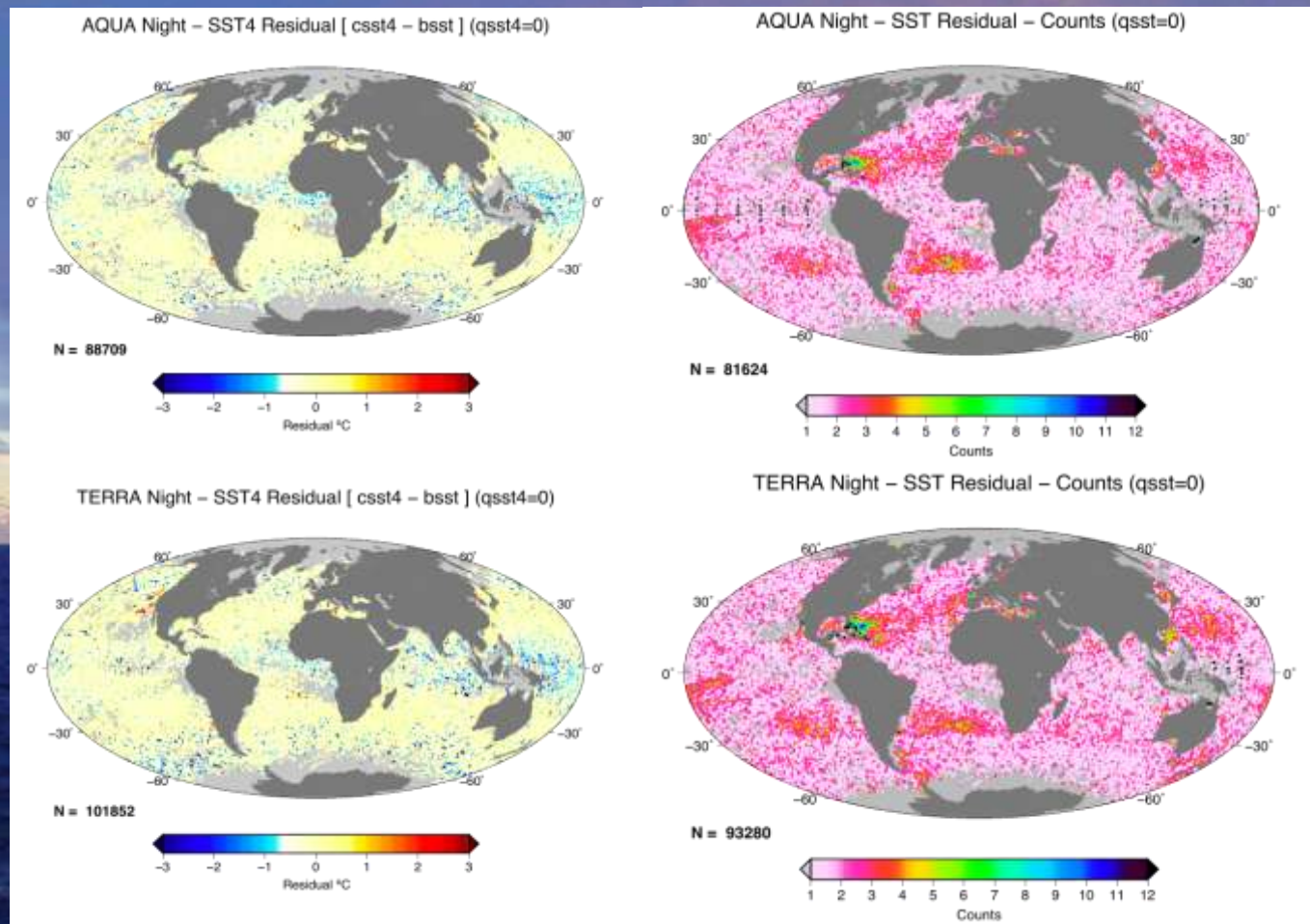
Improved SST outlier testing GS core, slope-stream boundary
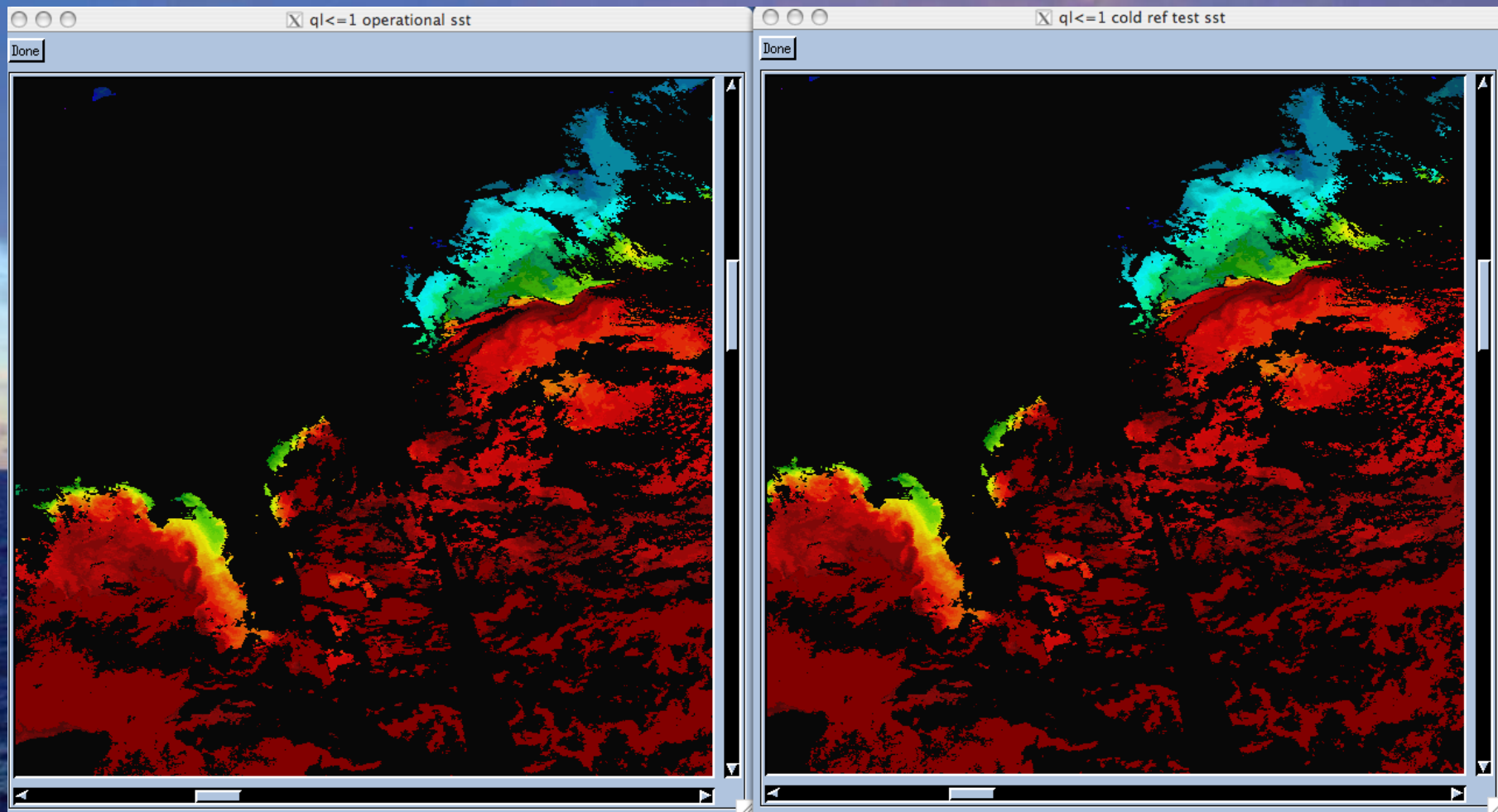
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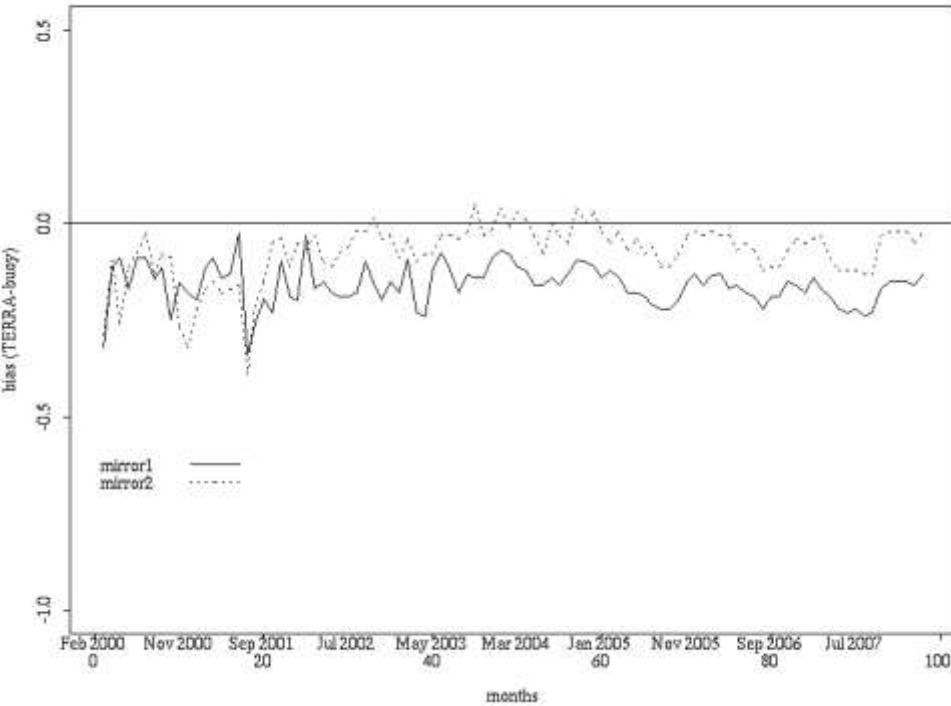
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Terra mirror side correction

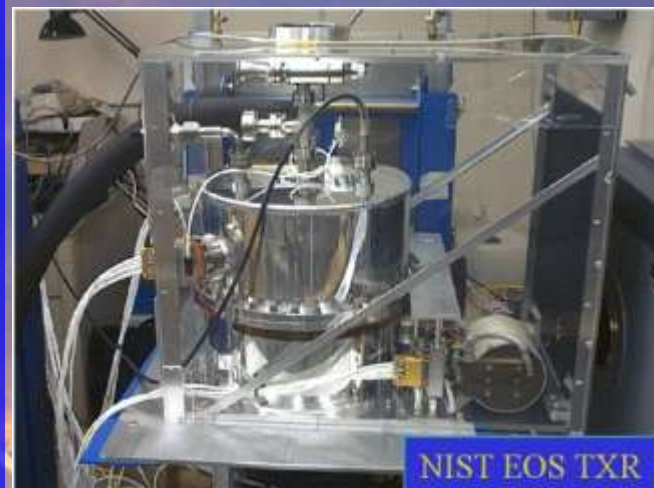median bias TERRA SST night v5.0.6.X relative to buoy
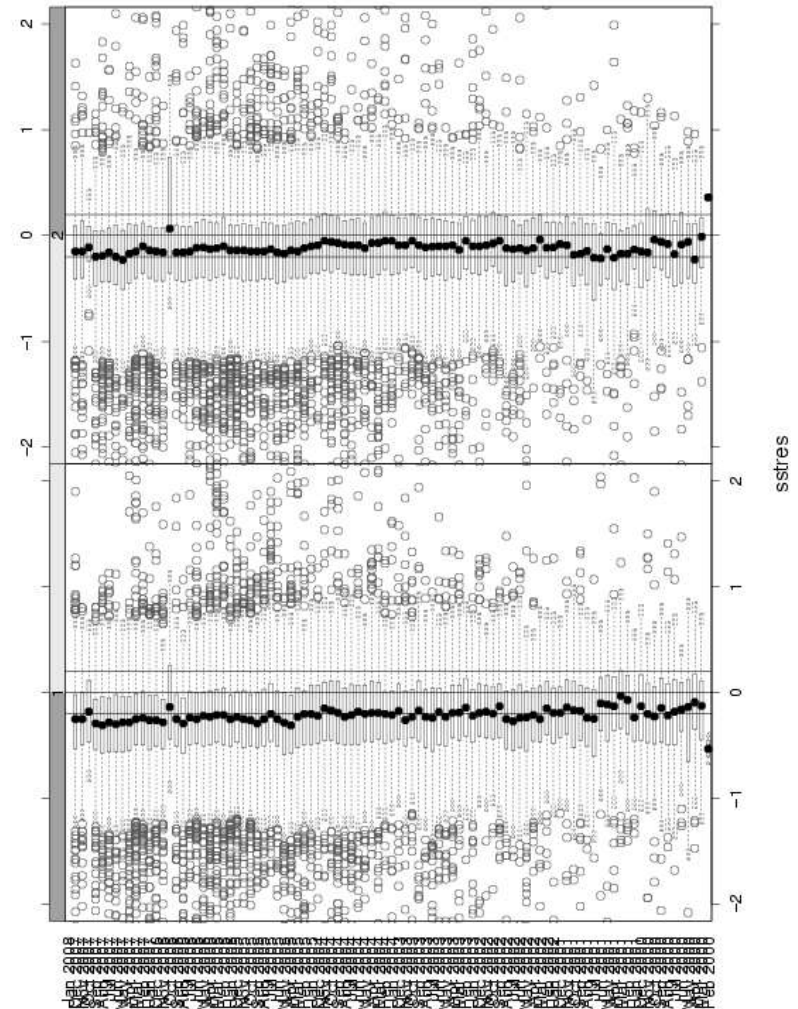
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SST CDRs – traceability to NIST standards

- **Climate Data Records require traceability to National Standards.**

- **For MODIS SSTs this is through the Infrared Radiometry Calibration Facilities at RSMAS.**

- **The RSMAS Water Bath Black-Body Calibration Target was characterized by the NIST EOS Transfer Radiometer (TXR) during a workshop in 2001, at the start of the Terra, Aqua and Envisat Missions**

- **NIST traceability to MODIS SSTs through M-AERIs and ISARs**

- **Follow-up workshop planned for late 2008.**

NIST EOS TXR

TXR characterizing the RSMAS WBBB

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M-AERI & ISAR deployments

- **M-AERI deployments on *Explorer of the Seas* halted on 1 Dec 2007; new operating framework being negotiated.**

- **M-AERIs continue to be deployed on Research Vessels, one currently on *Ronald H Brown*, another to be installed on *Oden* next month.**

- **ISAR deployed on *Jingu Maru* on a trans-Pacific route.**

Oden

ISAR

JINGU MARU

M-AERI

NOAA

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