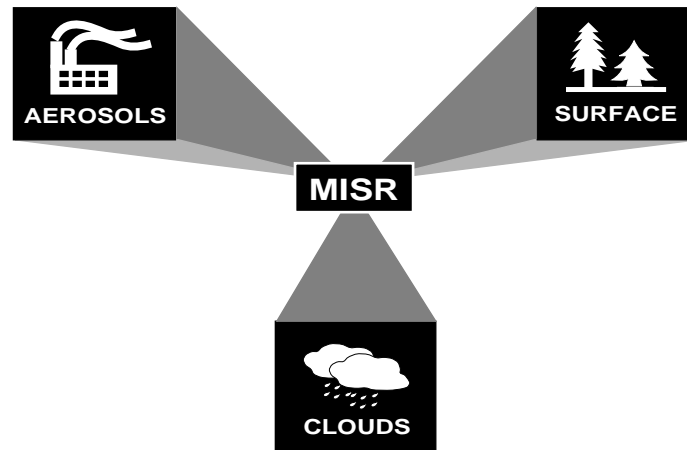


Platform: Terra (EOS-AM1)

Launch: No earlier than August 27, 1999

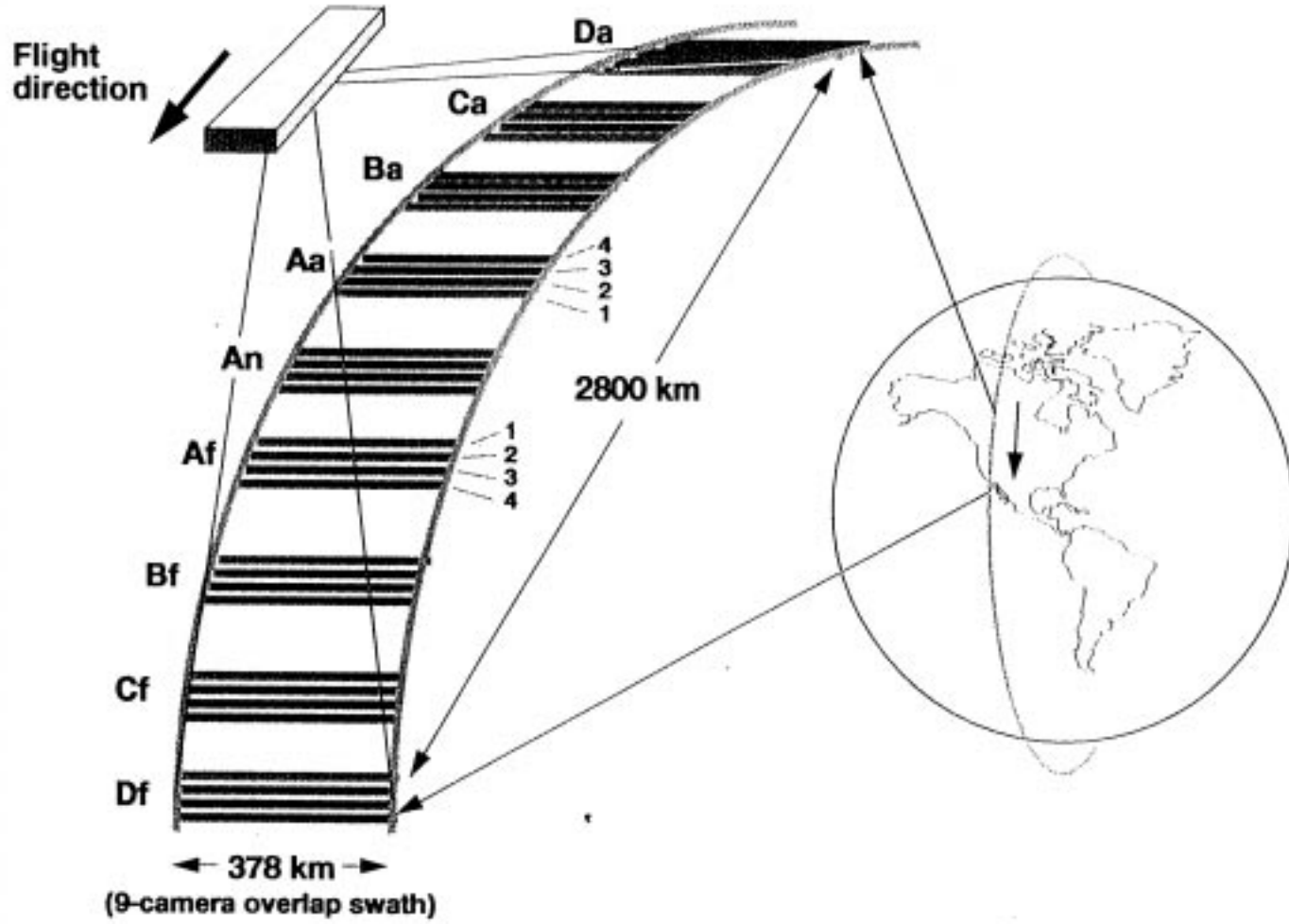
- recent TITAN IV/CENTAUR and DELTA III launch failures may cause a delay

Other EOS-AM1 instruments: MODIS, CERES, ASTER, and MOPITT



MISR capabilities: Multi-angle global view of earth

- 9 cameras pointing nadir to $\pm 70^\circ$
- 4 spectral bands 446, 558, 672, and 866 nm
- global coverage every 9 days
- on-board pixel averaging (275 m - 1.1 km)
- average data rate 3.3 Mb/sec



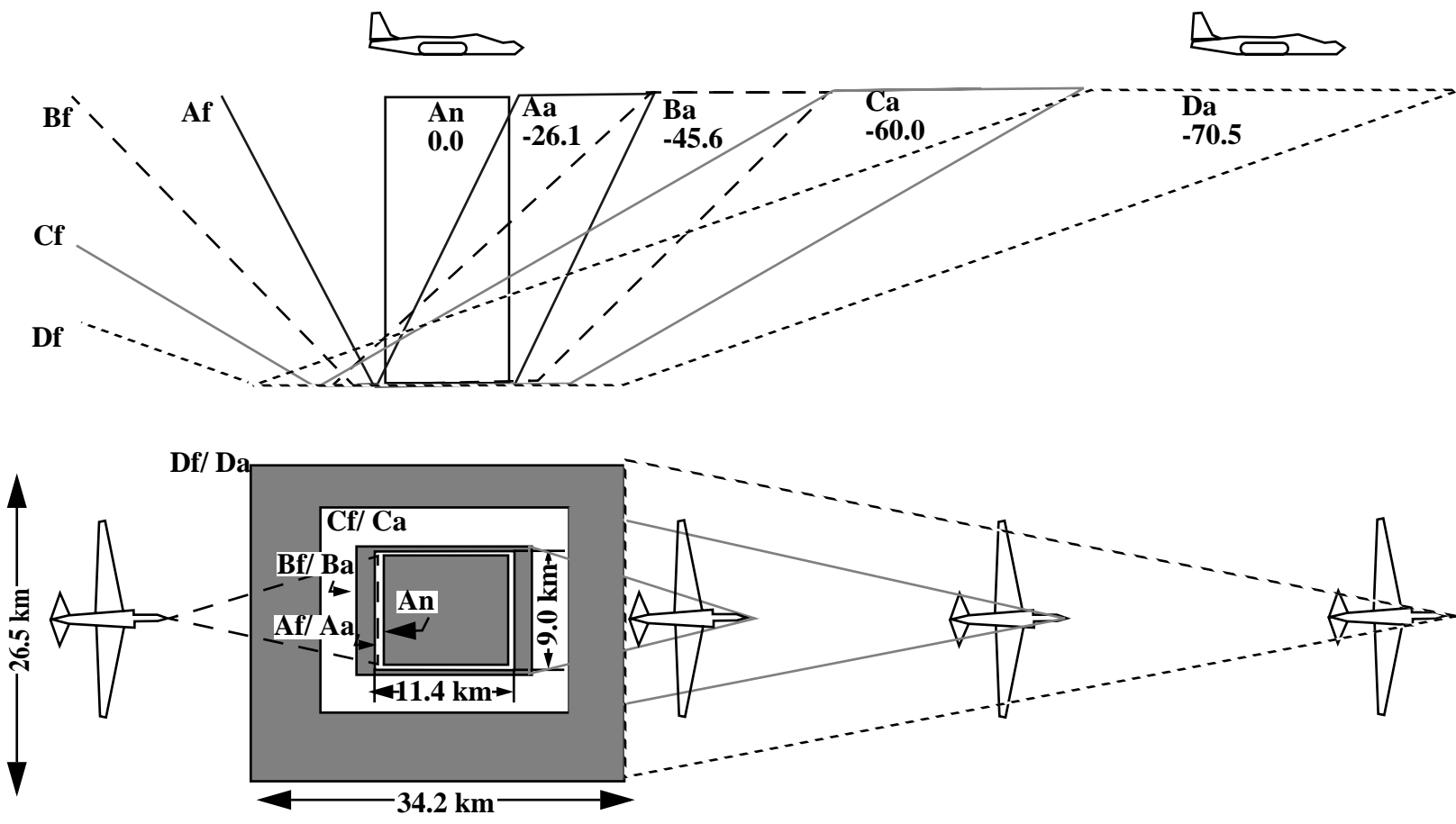


DEVELOPMENT TIMELINE



- **Proposal submitted** **July 15, 1988**
- **Preliminary design review (PDR)** **May 25, 1993**
 - Calibration peer review **May 23, 1993**
 - Preflight calibration plans **January 10, 1994**
- **Critical design review (CDR)** **December 6, 1994**
 - Calibration peer review II **March 27-28, 1995**
- **Calibrate cameras**
 - Engineering model **August 1994-August 1995**
 - Calibrate flight cameras (10) **August 1995-August 1996**
- **Instrument thermal vacuum testing** **December 1996**
- **MISR arrives at spacecraft integrator** **May 26, 1997**
- **Develop in-flight calibration processing capability** **1998**
- **Original launch date** **June 1998**

- **Original proposal “Low-cost Airborne MISR Simulator” was submitted to the EOS Project Scientist (Dr. Michael King, GSFC) on 10 Nov 1995**
- **Objectives for AirMISR**
 - collect MISR-like data sets in support of the validation of MISR products
 - underfly EOS-AM1 MISR to verify its radiometric calibration
 - enable scientific research utilizing high quality, well-calibrated multi-angle imaging data
 - enable the exploration of measurement enhancements (room reserved in instrument reserved as technology testbed for future cameras)
- **MISR inheritance**
 - implementation features a single pushbroom camera, gimballed to nine view-angle positions during a 15 minute data acquisition run
 - camera comprised of a MISR brassboard lens (“A” lens design, shortest focal length), and MISR engineering model focal plane
 - spectral bands at 446, 558, 672, and 866 nm (widths of 20 - 40 nm)
 - spectral, radiometric, and point-spread-function (PSF) response measured using MISR-developed laboratories and analysis procedures





PERFORMANCE COMPARISON



Parameter	MISR	AirMISR
Absolute uncertainty	3% (1σ)	3% (1σ)
Number of detector elements	9 camera x 4 bands x 1504 pixels (~53,000)	4 bands x 1504 pixels (~6000)
Worst detector elements	10% < response loss < 1%	40% < response loss
Number of detector anomalies	~12	~20 in blue ~ 20 in green
SNR	> 900	same, excluding anomalous pixels
Spectral out-of-band	<2%	4% in Band 3