GeoSTAR Development History

IIP-98: HAMSR → CAMEX-4 — Field campaigns, data analysis — TCSP — NAMMA — UAV-HAMSR — GRIP

1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010

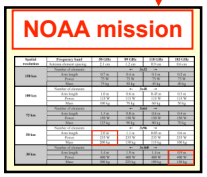
NMP/EO-3: GEO/SAMS

STAR sounder concept

IIP-03: GeoSTAR ptototype

Study

NOAA mission



Study

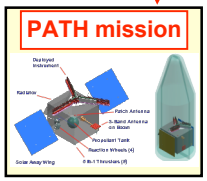
ACT: 183-GHz MMIC development

IPP: MMIC development

JPL R&TD: MMIC development

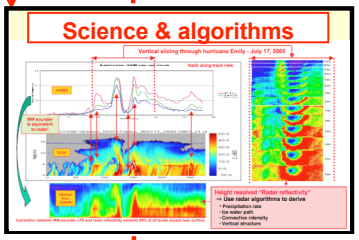
JPL R&TD: GeoSTAR calibration

PATH mission



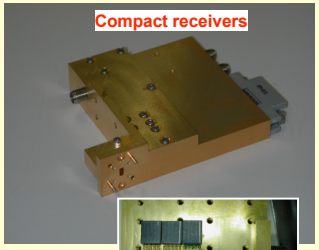
IIP-08: GeoSTAR/PATH risk reduction

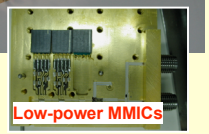
Science & algorithms



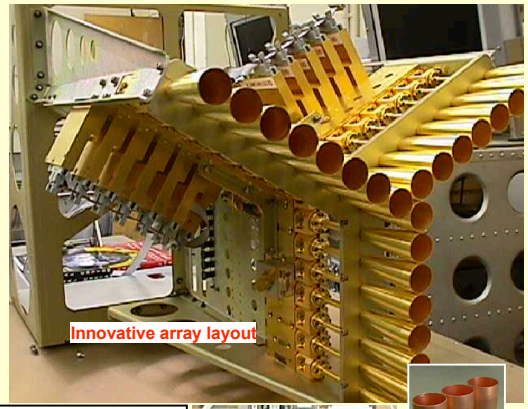
STAR concept and key technologies developed & tested

Compact receivers

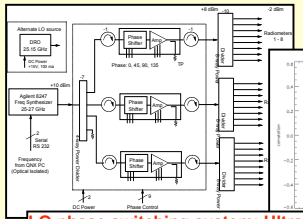


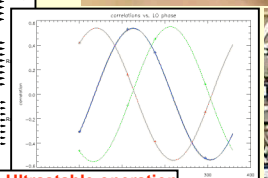


Low-power MMICs



Innovative array layout

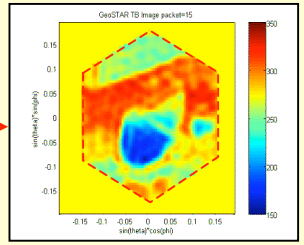




Correlator:
- Efficient
- Redundant
- OK for ASICs

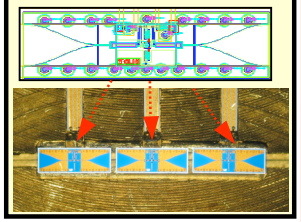
Feedhorns: Low mutual coupling

LO phase switching system: Ultrastable operation

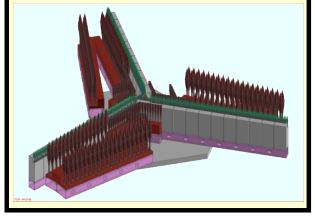


First images at 50 GHz by aperture synthesis

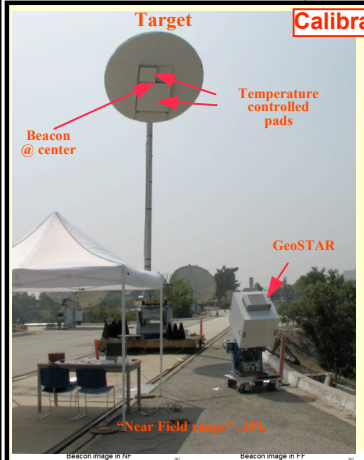
MMICs embedded in waveguides

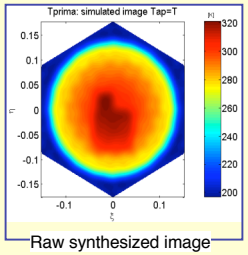


Design innovations

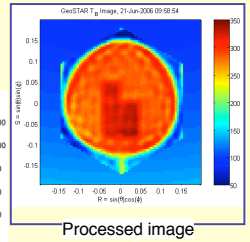


Calibration, perform-ance verific



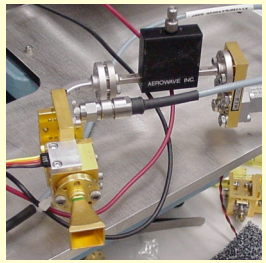


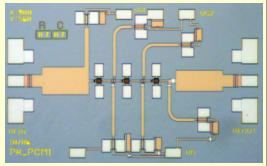
Raw synthesized image

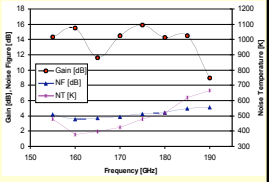


Processed image

Breakthrough MMIC performance







Funding sources:
- NASA
- NOAA
- JPL
- Other