



Global Precipitation Measurement

GPM Project Status

GPM Ground Validation Workshop

July 10, 2012



Art Azarbarzin

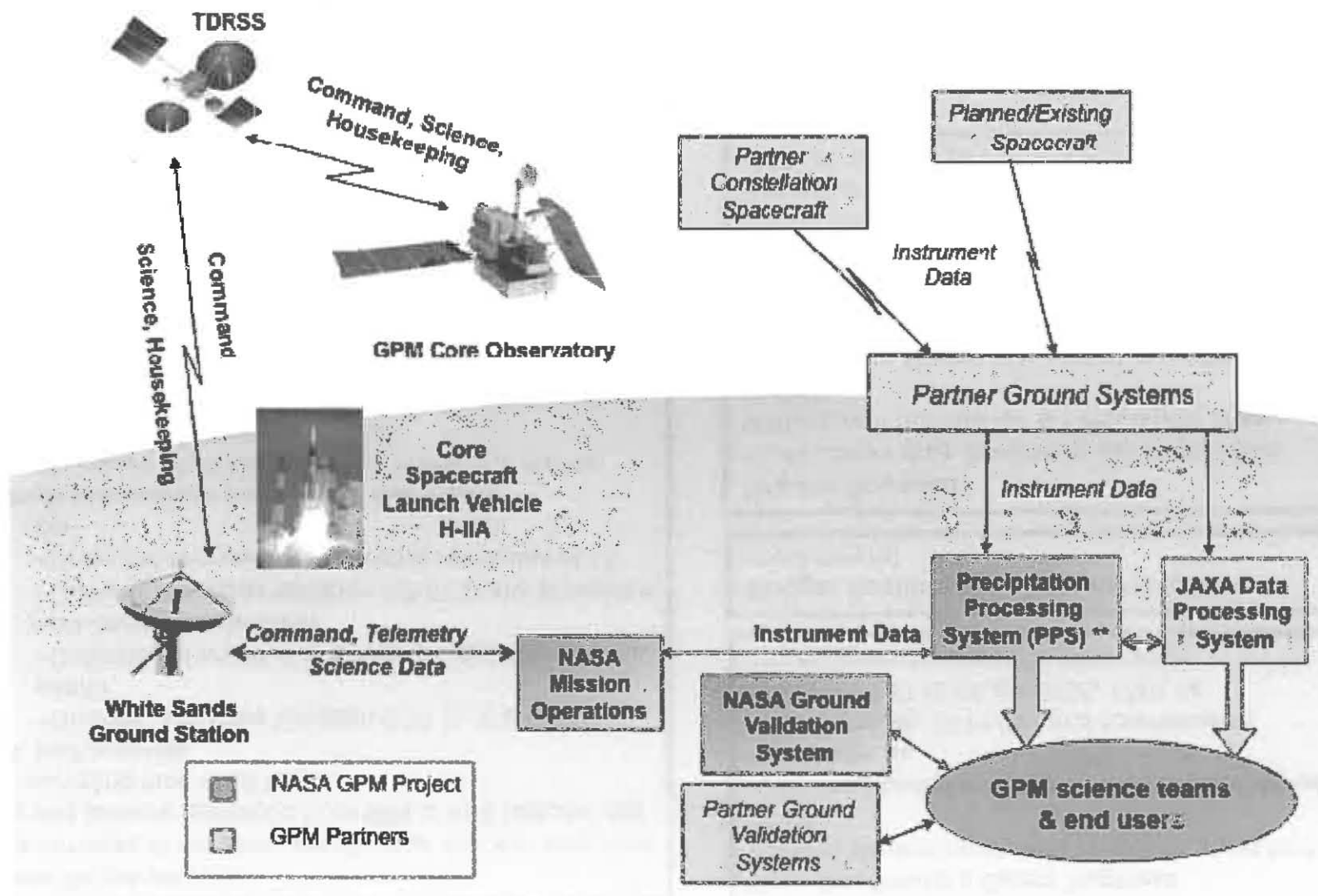
Project Manager

Candace Carlisle

Deputy Project Manager

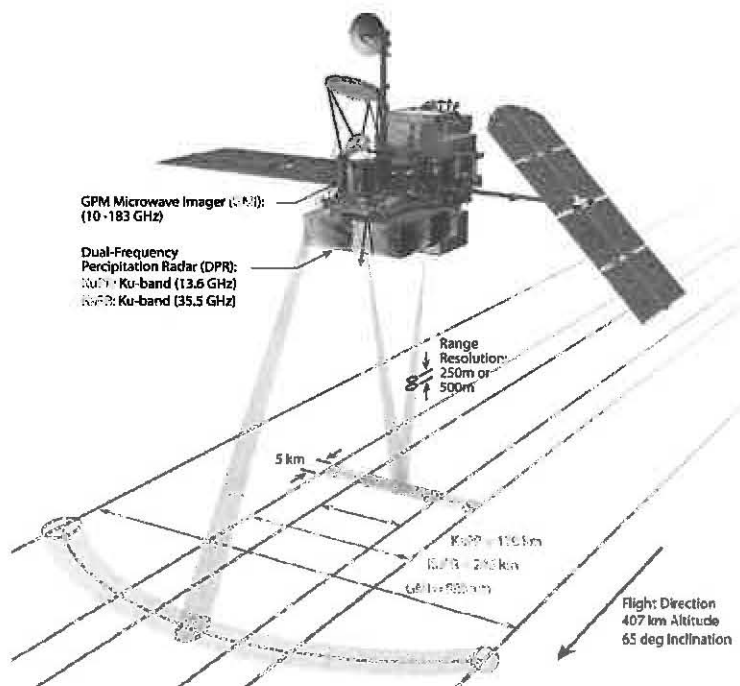
Jackie Fiora

Deputy Project Manager/Resources





- Mission PDR November 2008
- KDP-C December 2009
- Mission CDR December 2009
- GPM Replan, Oct. 2011: new internal/external LRD
- GPM Microwave Imager (GMI) PSR Jan 30-31, 2012 (Ball Aerospace - Colorado)
- Dual Precipitation Radar (DPR) PSR Feb 7-10, 2012 (JAXA – Japan)
- System Integration Review (SIR); Feb 28 - Mar 1, 2012
- KDP-D April 26, 2012



GPM Microwave Imager (GMI)

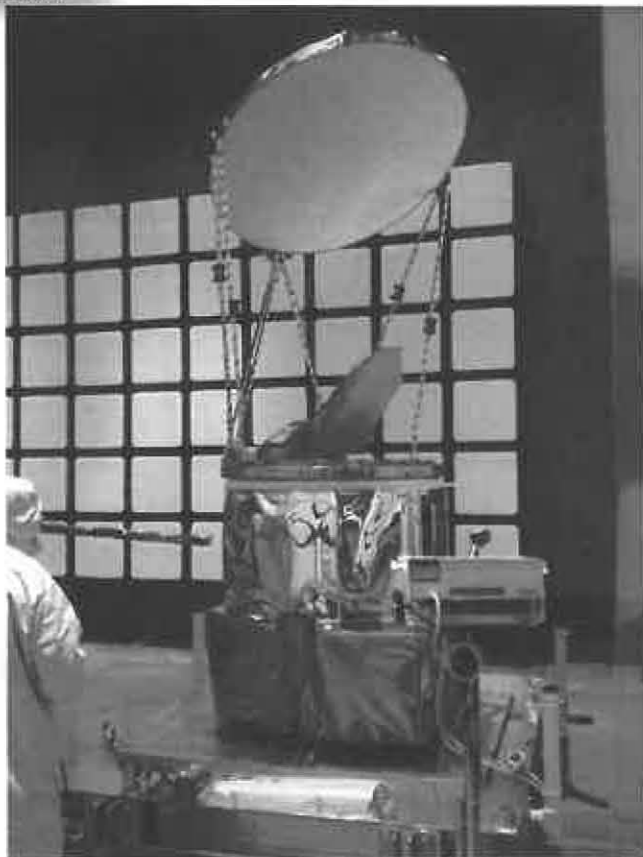
- Passive microwave radiometer with hot and cold calibration
- Provides measurements of precipitation intensity and distribution
- High spatial resolution
- 166 Kg, 162 W, 34.9 Kbs Science, 1.2 m diameter reflector

Dual-frequency (Ku-Ka band) Precipitation Radar (DPR)

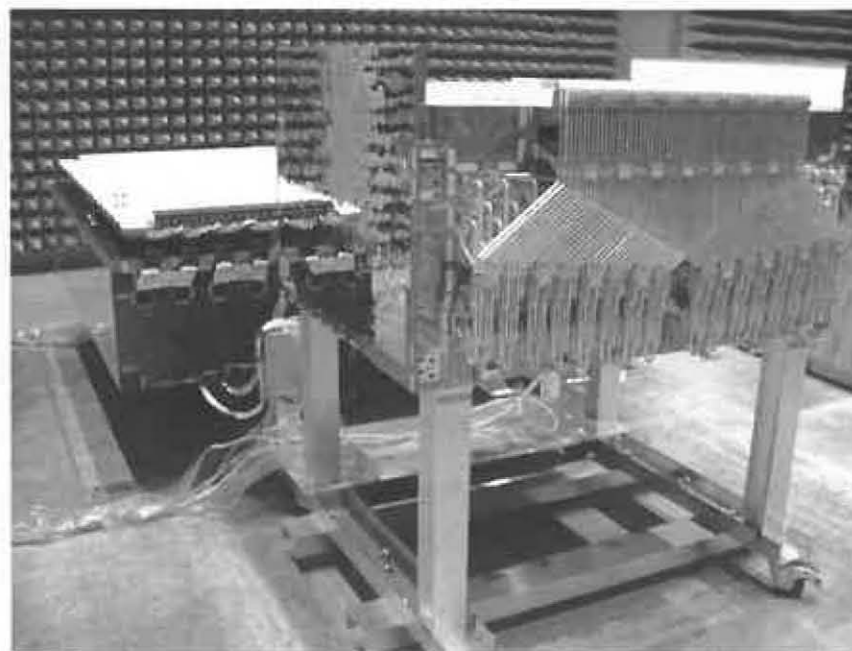
- KuPR similar to TRMM, KaPR added for GPM
- Provides three-dimensional measurements of cloud structure, precipitation particle size distribution (PSD) and precipitation intensity and distribution

	KuPR	KaPR
Frequency	13.597 , 13.603 GHz	35.547 , 35.553 GHz
Min. detectable rainfall rate	0.5 mm/hr	0.2 mm/hr
Data Rate	< 109 kbps	< 81 kbps
Mass	< 472 kg	< 336kg
Power Consumption	< 446 W	< 344 W
Size	2.5 × 2.4 × 0.6 m	1.2 × 1.4 × 0.7 m

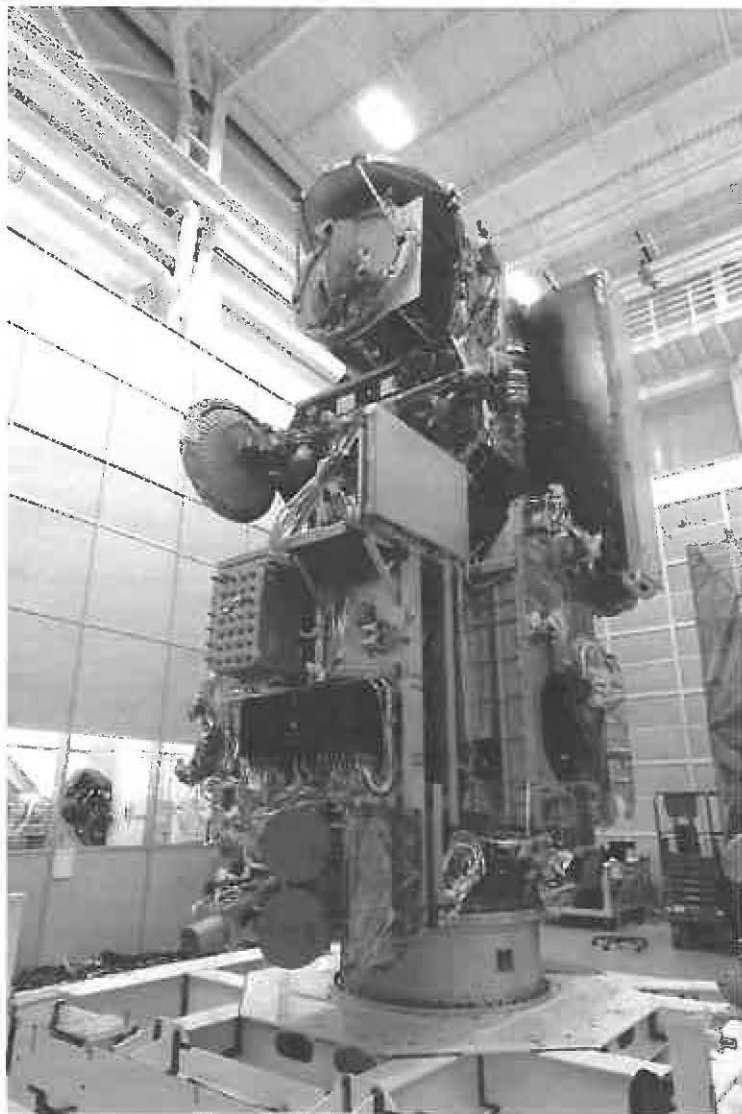
GMI Frequencies	GMI Polarizations
10.65 GHz	V/H
18.7 GHz	V/H
23.8 GHz	V
36.5 GHz	V/H
89 GHz	V/H
166 GHz	V/H
183 GHz	Va/Vb



GMI EMI/EMC Testing
(Photo provided by Ball Aerospace)



Ka/Ku Cooperation Test
(Photo provided by JAXA)





GLOBAL PRECIPITATION MEASUREMENT



**Launching
February 2014**



