

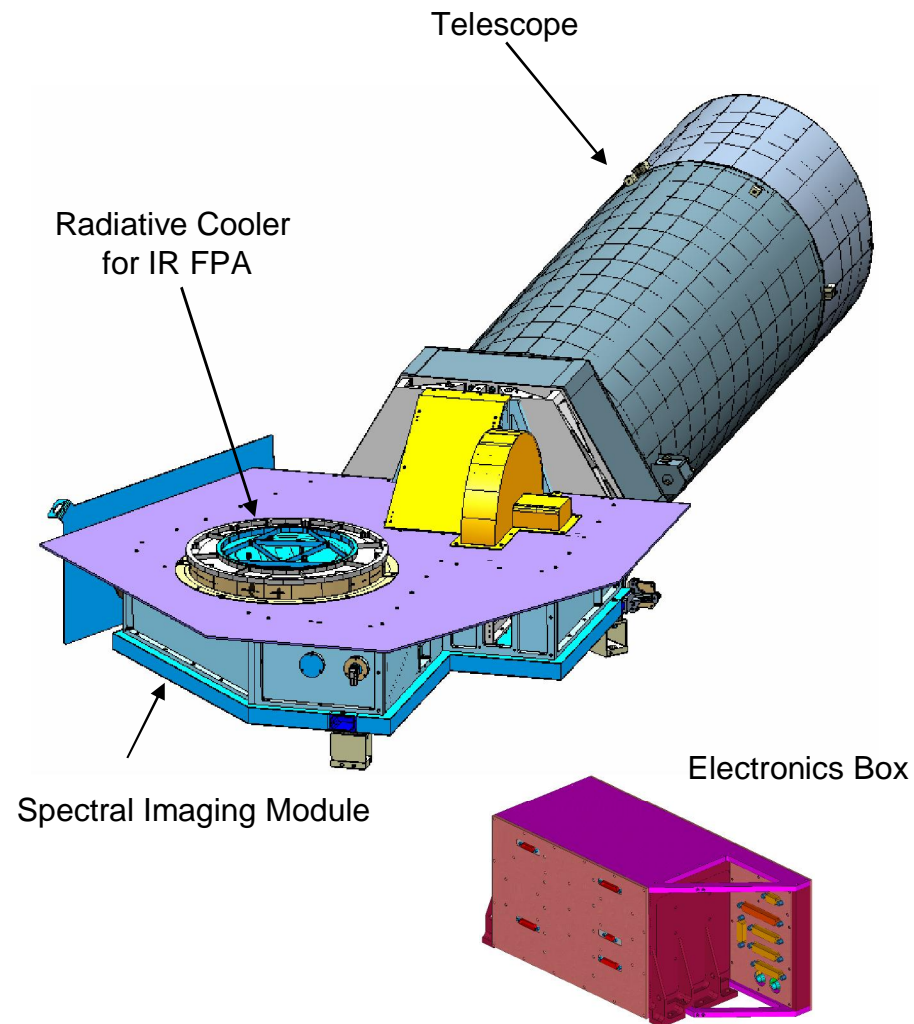
Instrument System Overview

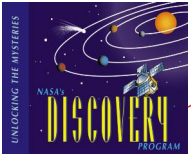


High Resolution Instrument (HRI)



- Acquires images of stars and comet for guidance and navigation
- Acquires science high resolution visible and IR images of coma, ejecta and comet
 - 1.4 meter/pixel GSD at 700 km, visible
 - 7 meter/pixel GSD at 700 km, IR
- 30 cm aperture Cassegrain telescope design
- CCD provides 0.4-0.95 μm imaging
- IR spectrometer provides 1.05-4.8 μm imaging
 - 2 prism spectrometer
 - 2-D array
 - S/C slew provides scan to produce image cube

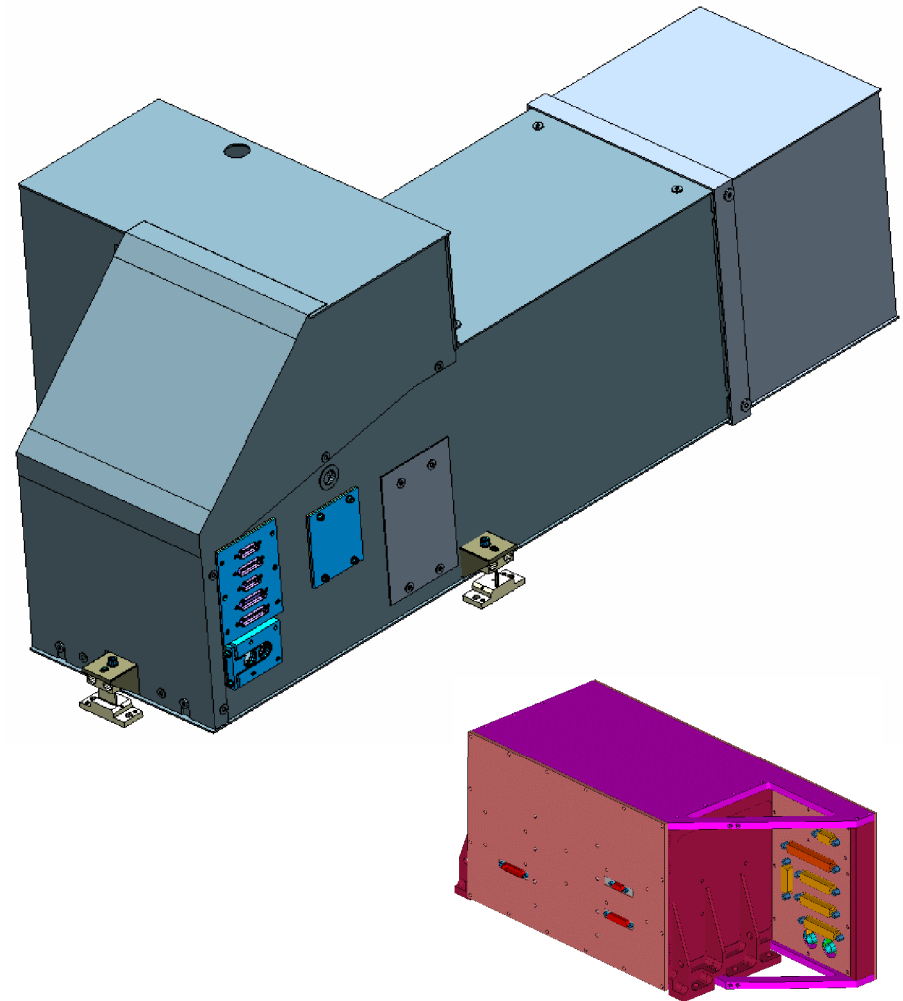


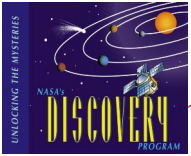


Medium Resolution Instrument (MRI)



- Acquires images of stars and comet for guidance and navigation
- Acquires science wide FOV visible images of coma, ejecta and comet
 - 7 meter/pixel GSD at 700 km
- 12 cm aperture Cassegrain telescope design
- Spectral range 0.3 to 0.95 microns
- Provides context & coma science to HRI detailed science
- Provides functional backup to HRI visible, with lower resolution

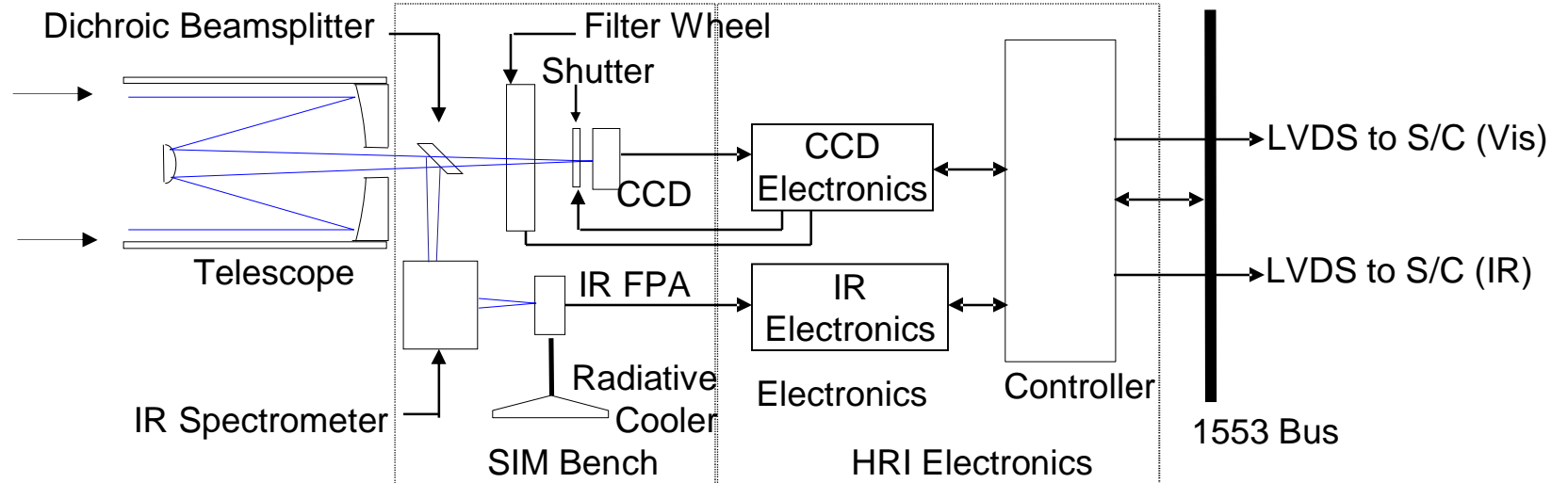




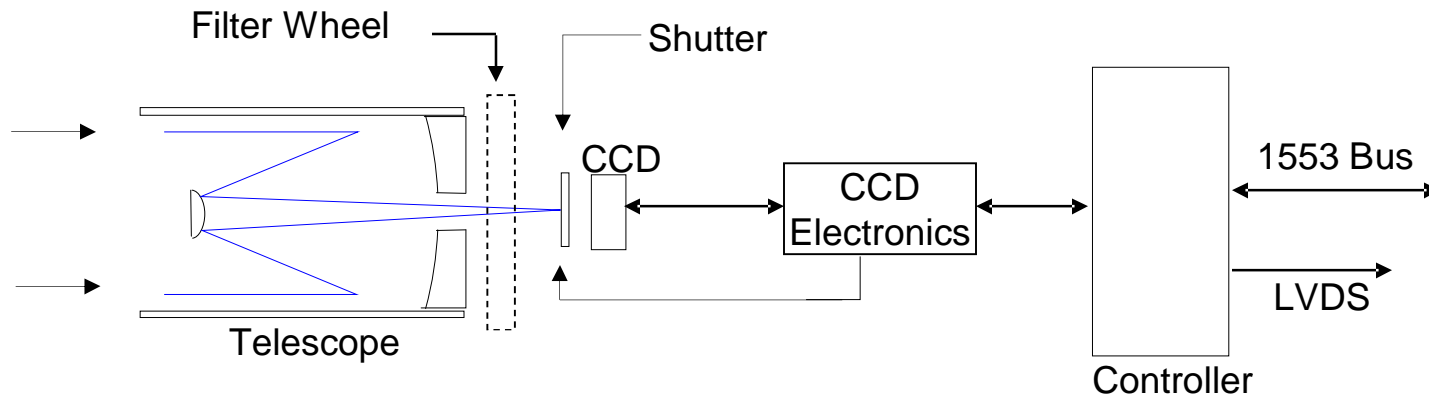
Instrument Functional Block Diagrams

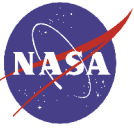
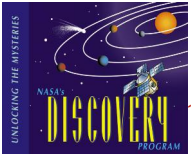


HRI

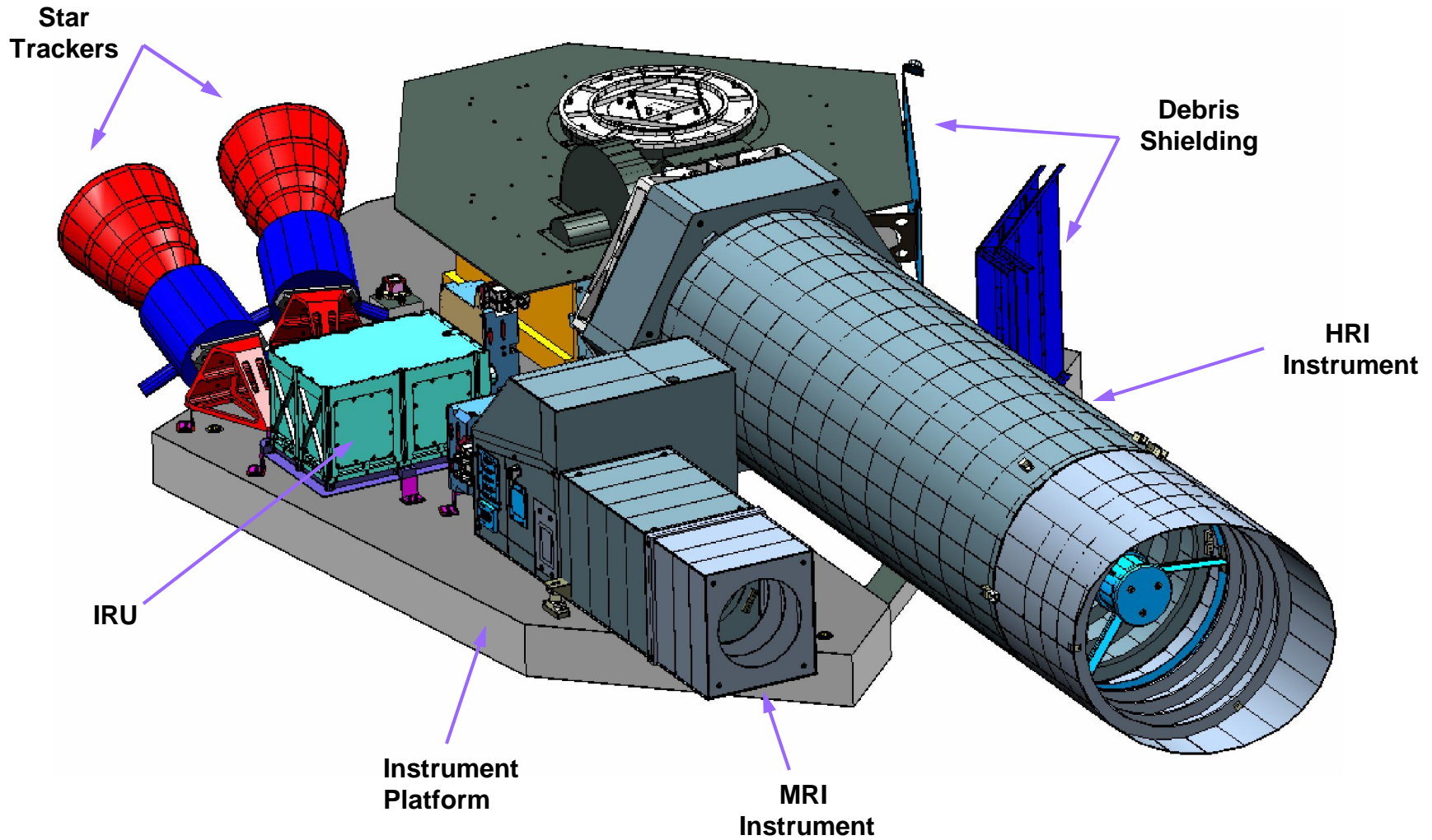


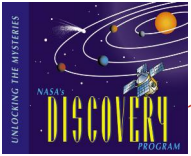
MRI



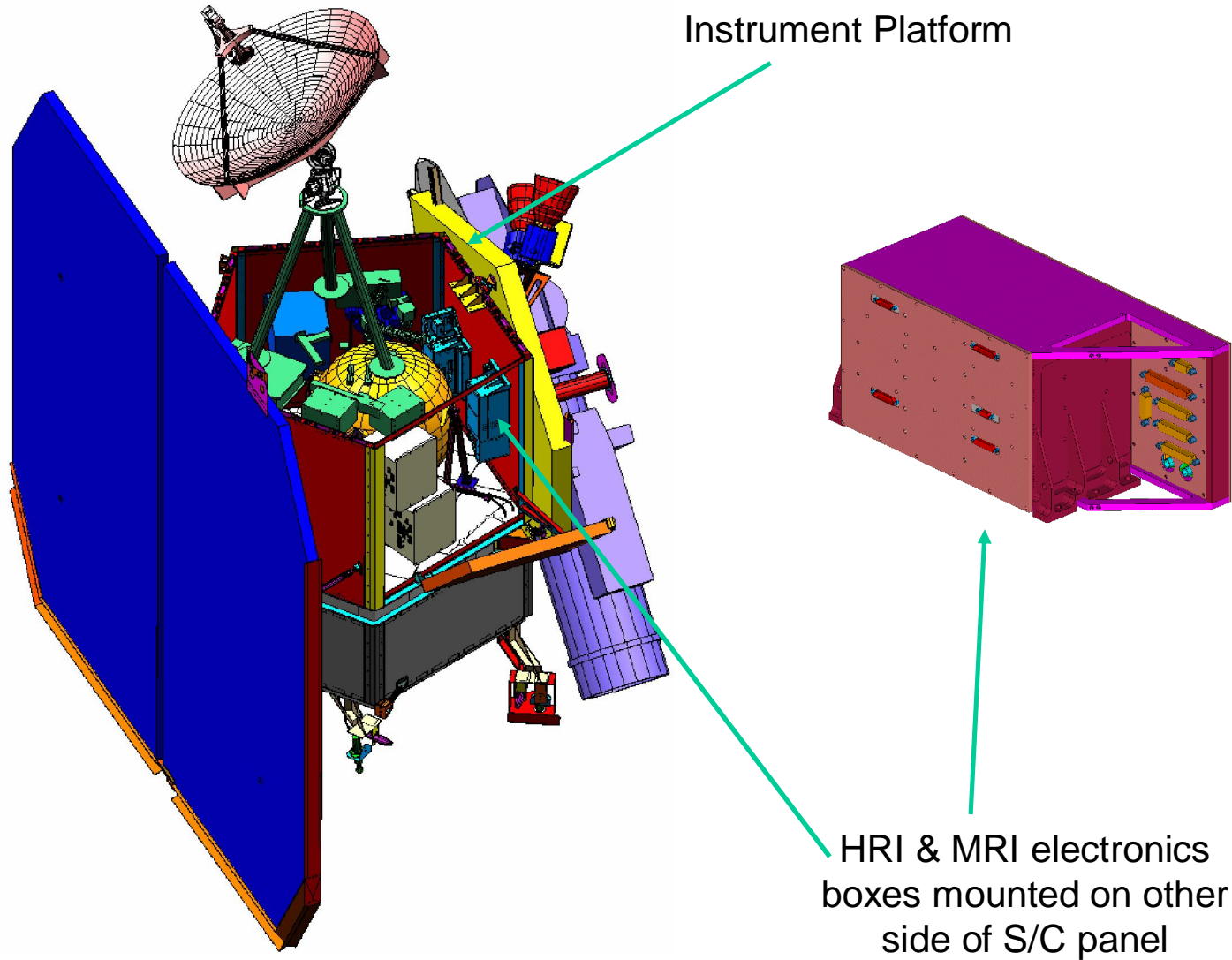


Co-Alignment / Stability of Instruments and ACS Sensors is Maintained by Instrument Platform





HRI & MRI Locations Optimize Sun Shielding and Proximity to Electronics



Instrument Platform

HRI & MRI electronics boxes mounted on other side of S/C panel