MISSION UPDATE

Jonathan McDowell
HST SERVICED:

STIS – Repaired
ACS Wide Channel – Repaired
ACS HR Channel – Still Broken
COS – Medium Res UV spectrometer
WFC3 – 16 megapixel camera replaces 2 megapixel WFPC/2
  Pixel size 0.5* WFPC2  FOV a bit larger  (no PC chip)
Kepler

Launched Mar 7 to Earth-trailing solar orbit
Completed checkout, began operational observing May 9
Observes Cyg field for 3 years for transiting planets
HERSCHEL EN ROUTE:

Launched 6 days ago to 270 km x 1.2Mkm transfer orbit to wide Lissajous orbit around L2

3.5-meter IR telescope with mass of 3.4t

PACS  70, 100, 160 microns camera 5-12” res 60-210 micron spectromter

SPIRE  250-520 micron camera 18-36” res 4 x 8' FOV Imaging FTS

HIFI  250-600 micron (heterodyne 480-1910 GHz)

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**Imaging photometry**
- two bands simultaneously (60-85 or 85-125 μm and 125-210 μm) with dichroic beam splitter
- two filled bolometer arrays (32x16 and 64x32 pixels, full beam sampling)
- point source detection limit ~4 mJy (5’, 1h)

**Integral field line spectroscopy**
- range 57 - 210 μm with 5x5 pixels, image slicer, and long-slit grating spectrograph (R ~ 1500)
- two 16x25 Ge:Ga photoconductor arrays (stressed/unstressed)
- point source detection limit 3...20 x10^{-18} W/m² (5’, 1h)
**PLANCK**

LFI works at 20K with cal sources at 4.7K  
31-125 GHz  
HFI works at 0.1 K, with 2 year life He3/He4 dilution cooler  
143-857 GHz  
LFI and HFI share the 1.5-meter reflector, of order 10 arcmin resolution  
Small halo orbit around L2

All-sky submm survey in 9 bands in 350-1000 μm range, release 2011
WISE

0.4-m IR telescope  47' FOV, 6-12” resolution in  3.3 – 23 microns
IR all sky survey in 4 bands: 3.3, 4.7, 12, 23 μm
Launch by Delta II in November
Solid hydrogen cryostat
Payload ready to ship to Ball/Colorado for spacecraft integration