SOFIA Science Highlights

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SOFIA Science Mission Operations
Recent Campaigns

• Since February SOFIA has been:
  – Commissioning FLITECAM
  – Commissioning FIFI-LS
  – Commissioning EXES
  – Carrying out Cycle 2 observations with GREAT, FORCAST, FLITECAM, & FIFI-LS

• SOFIA will be flying tonight on flight 171 with GREAT
FORCAST Observation of Galactic Center
Smoothed SOFIA Images of Comet ISON

All images taken with FORCAST; 3-pixel Gaussian smooth applied
FIFI-LS and EXES First Light

FIFI-LS on the telescope
First Light Flight 150

EXES Team after installation
First Light Flight 158
FIFI-LS Commissioning Observations
FIFI-LS Observations NGC 6543

Nordic Optical Telescope® (La Palma, Spain) in the filters [N II] λ6584 Å (red) and [O III] λ5007 Å (blue and green).
FIFI-LS Orion Nebula Observations

Orion Nebula

Becklin-Neugebauer object

Trapezium stars

Orion Bar

SOFIA / FIFI-LS
FIFI-LS Team

[OI] 145 μm

[OI] 63 μm

[CII] 157 μm

NASA/Spitzer/Harvard-Smithsonian CfA, Thomas Megeath

NASA DLR USRA
EXES Observes Molecular Hydrogen

Quick look screenshots near 28 µm S(0) Line

Quick look screenshots near 17 µm S(1) Line
Tonight’s Flight

• GREAT Commissioning of new H-channel
  – 4.7 THz mixer for [O I] line

• Coming in early 2015
  – 14-pixel upGREAT array
Without SOFIA, astronomers will lose access to the Far-Infrared for the foreseeable future.