

Program Update



Presented to: SOFIA NASA Observatory and Program Assessment Council (SNOPAC)

Presented by:

SOFIA Program Manager Eddie Zavala

February 7, 2017

First Images Demonstrate the Capabilities of SOFIA's New Instrument, HAWC+

This image shows how dust grains are aligned in the W3 star-forming region, a giant molecular cloud in the constellation Cassiopeia approximately 6,200 light years from Earth. Researchers are now comparing data from these observations with models that predict how stars form.

Credit: NASA / SOFIA / Caltech / Darren Dowell

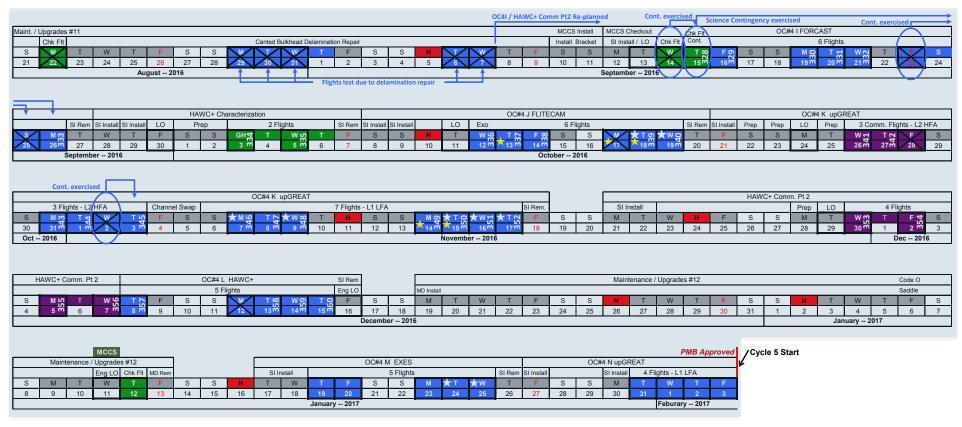
Program Operations Activities Since October 2016

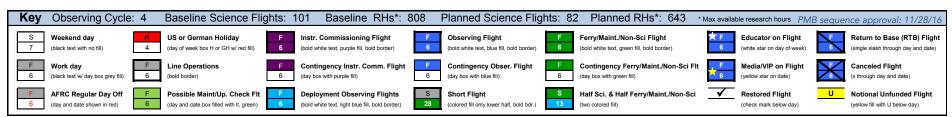


- Program Complete Science Cycle 4
 - Satisfied Level 1 Requirement to provide 80% of planned research hours
 - Completed commissioning and initiated observations with new science capability
 - upGREAT High Frequency Array (HFA); October 3, 2016
 - HAWC + science instrument December 15, 2016
 - Completed planned Observatory Maintenance/Upgrades
 - Observatory System Software updates, including Telescope Systems
 - Avionics Communication System Upgrade required for international operations
- Ready to start Science Cycle 5 on February 7, 2017
 - 758 Research Hours Schedule
 - 116 total flights: 102 science, 2 commissioning, 12 engineering/ferry, and increased contingency flight opportunities
 (22%)
 - Southern Hemisphere Deployment (June 21st August 13th, 2017) in Christchurch, New Zealand
 - NASA HQ-directed Kuiper Belt Object (MU69) Occultation during deployment on July 10th, 2017 in support of New Horizons Mission, provided path is within operational range for return-to-base to Christchurch, New Zealand
 - Science Community / Public Engagement Opportunities
 - L.A. County Airshow, March 25-26, 2017; To be confirmed
 - Tours in support of AA Education request for Great American Eclipse, August 21, 2017
 - American Astronomical Society (AAS) Meeting in Washington D.C. area, January 6-12, 2017
 - Planned Observatory Maintenance/Upgrades
 - 2 Channel Cryo-cooler upgrade is installed during March/April Maintenance/Upgrade Period #13 to support upGREAT/ 4GREAT commissioning and New Zealand operations
 - HAWC+ ADR vibration heating issue is repaired between May 19th and September 11th, 2017
 - Aircraft C-Check planned for November 18th December 30th, 2017

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Key	Observing Cycle: 5	Baseline Science Flights: 102 Baseline RHs*: 758 Planned Science Flights: 102 Planned RHs*: 758 *Max available research hours PMB sequence approva	l: 1/30/17
S 7	Weekend day (black text with no fill) 4	US or German Holiday (day of week box H or GH w/ red fill) F Instr. Commissioning Flight 6 (bold white text, purple fill, bold border) F Observing Flight 6 (bold white text, blue fill, bold border) F Ferry/Maint./Non-Sci Flight (bold white text, green fill, bold border) F Ferry/Maint./Non-Sci Flight (bold white text, green fill, bold border) F Weturn to Bas (single slash through the star on day of week)	se (RTB) Flight
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Short Flight

Deployment Observing Flights

Possible Maint/Up. Check Flt

AFRC Regular Day Off

Half Sci. & Half Ferry/Maint./Non-Sci

Restored Flight

Strategic Capacity (orange fill on day of week)