



SOFIA Observing Cycles: Progress and Plans

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SOFIA Observing Cycles



- SOFIA has been doing concurrent development of the facility
 - Commissioning of instruments
 - Upgrades to the observatory systems
 - Aircraft improvements
- SOFIA has an annual calendar for observing cycles
 - Call for Proposal Release in April
 - Proposals due in June
 - Announcements in September
 - Observations the following calendar year
- Cycle 1, the first full year of observations, will soon be completed
- Cycle 2 observations will begin next month





Types of Programs Supported



- Regular Programs
 - Targets with known positions
 - Known timing constraints (if any)
- Survey Programs
 - Like “snapshot” or “filler” programs on other observatories
- Target of Opportunity

- Directors Discretionary Time
 - Separate proposal process
 - See SOFIA web site for details





SOFIA General Investigator Science



	Basic Science	Cycle 1	Cycle 2
CfP Release	2010 April 19	2011 Nov	2013 April
CfP Due	2010 July 30	2012 Jan 27	2013 Jun 28
Instruments	FORCAST, GREAT	FORCAST, GREAT, FLITECAM, HIPO	FORCAST, GREAT, FLITECAM, HIPO EXES, FIFI-LS
Hours Offered	75	200+40	175+47
Proposals Received	59	133 US; 39 German	90 US; 22 German
Proposals Awarded	27	38 US; 10 German	Announcement October 2013
Oversubscription Rate by Hours	3.7	6.0	3.0
Cycle Start	2011 May 6	2013 April 13	2014 Feb
Flights	22	37	47
Deployment	Germany	New Zealand	None
Cycle End	2011 Nov 11	2013 Dec	2014 Dec





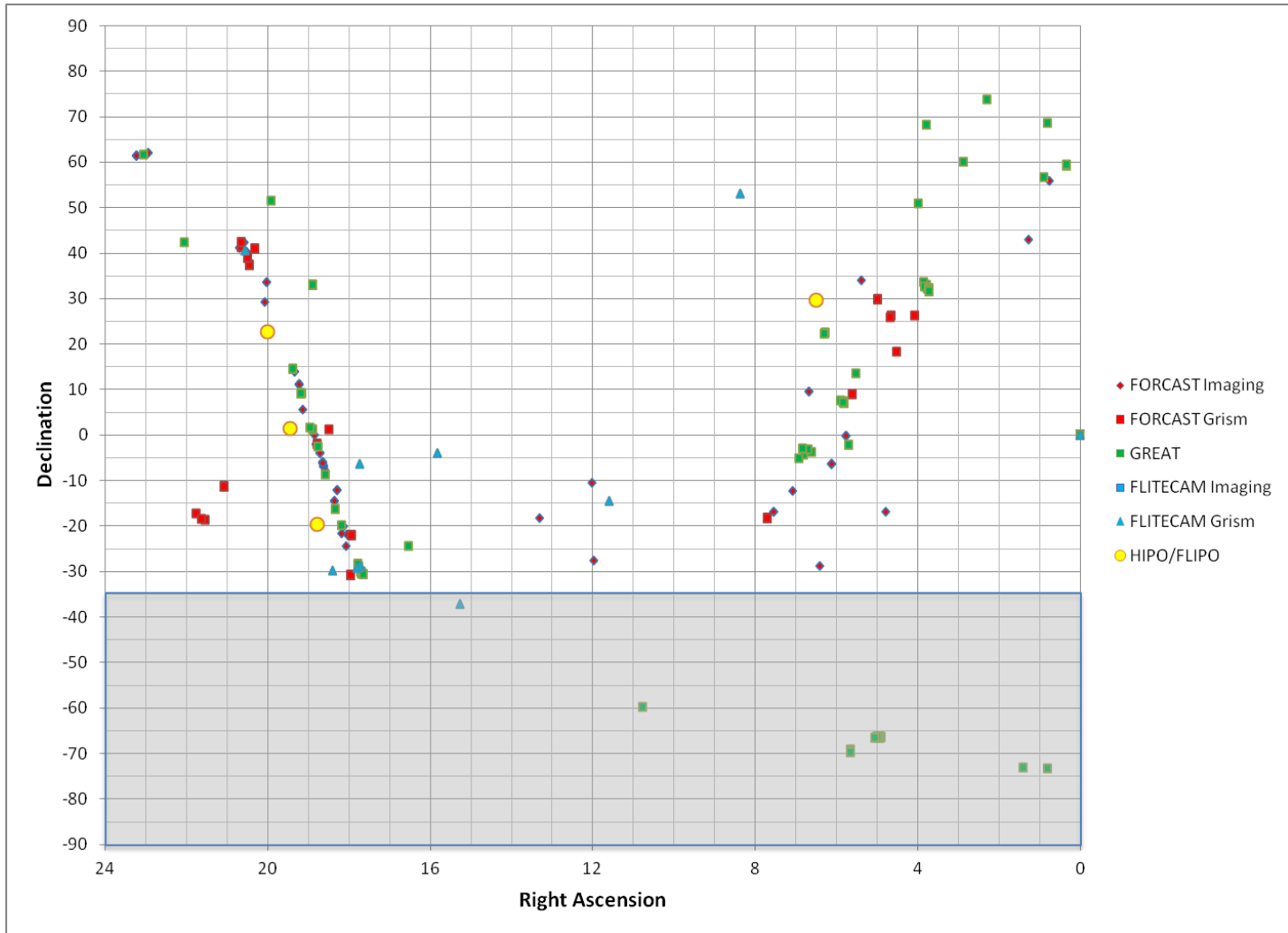
Cycle 1 Highlights



- Observatory improvements have greatly improved the pointing and tracking performance of SOFIA
 - Focal Plane Imager provides sub-arcsecond pointing and tracking for virtually all fields
- FORCAST has been commissioned as a Facility Class Instrument
- SOFIA and GREAT executed a highly successful Southern Hemisphere deployment
 - 9 out of 9 flights were successful
- Triggered three Target of Opportunity Observations
 - Comet C/2012 S1 (ISON) with FORCAST
 - Comet C/2012 S1 (ISON) with GREAT (later retracted due to faintness of comet)
 - Nova Delphini 2013 with FLITECAM and FORCAST
- Some hits to the program due to unforeseen problems
 - Government Shutdown
 - Some time lost due to issues with observatory systems
- Observatory has vigorously increased staff to meet the needs of full operations

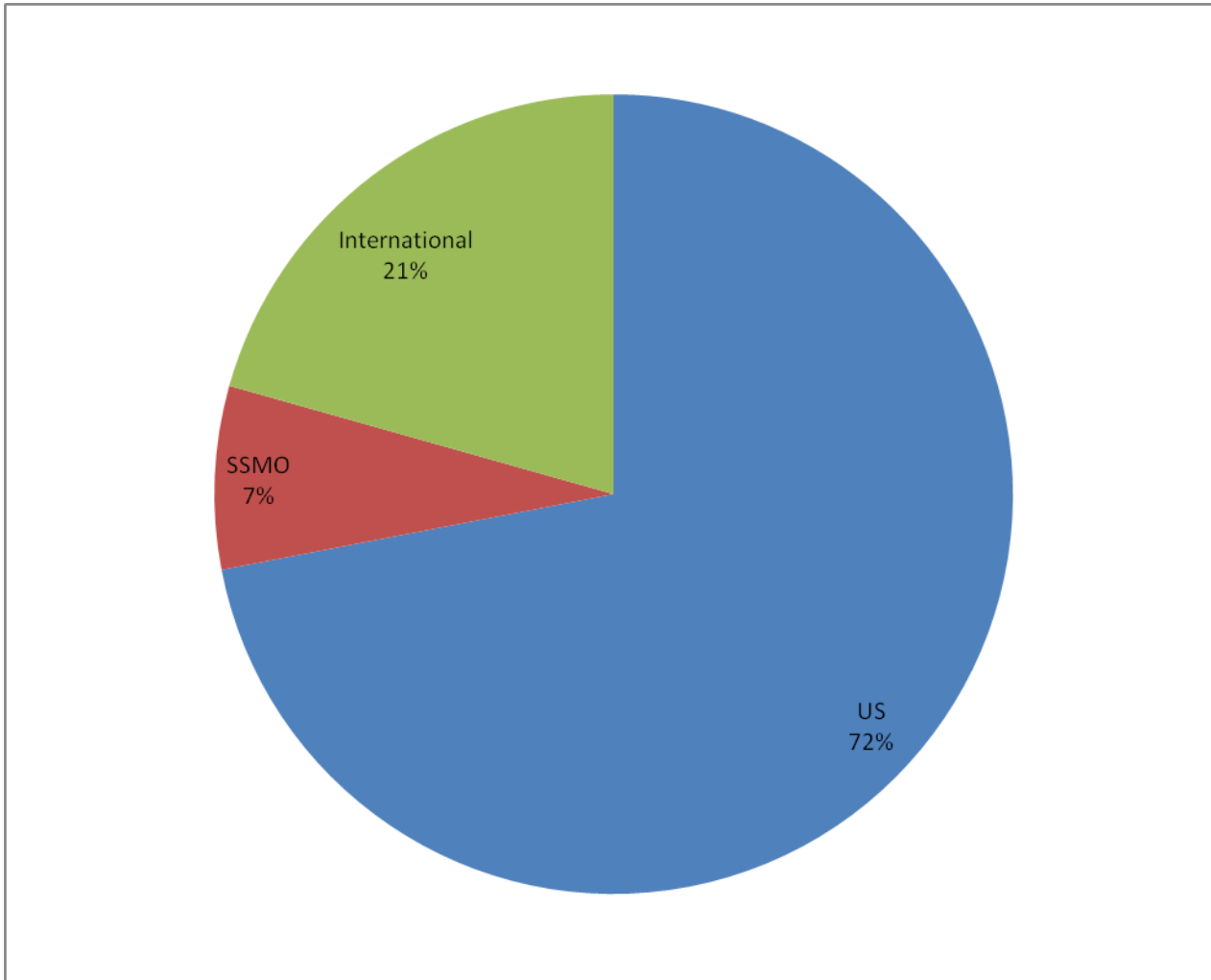


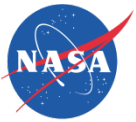
Cycle 1 Selected Targets



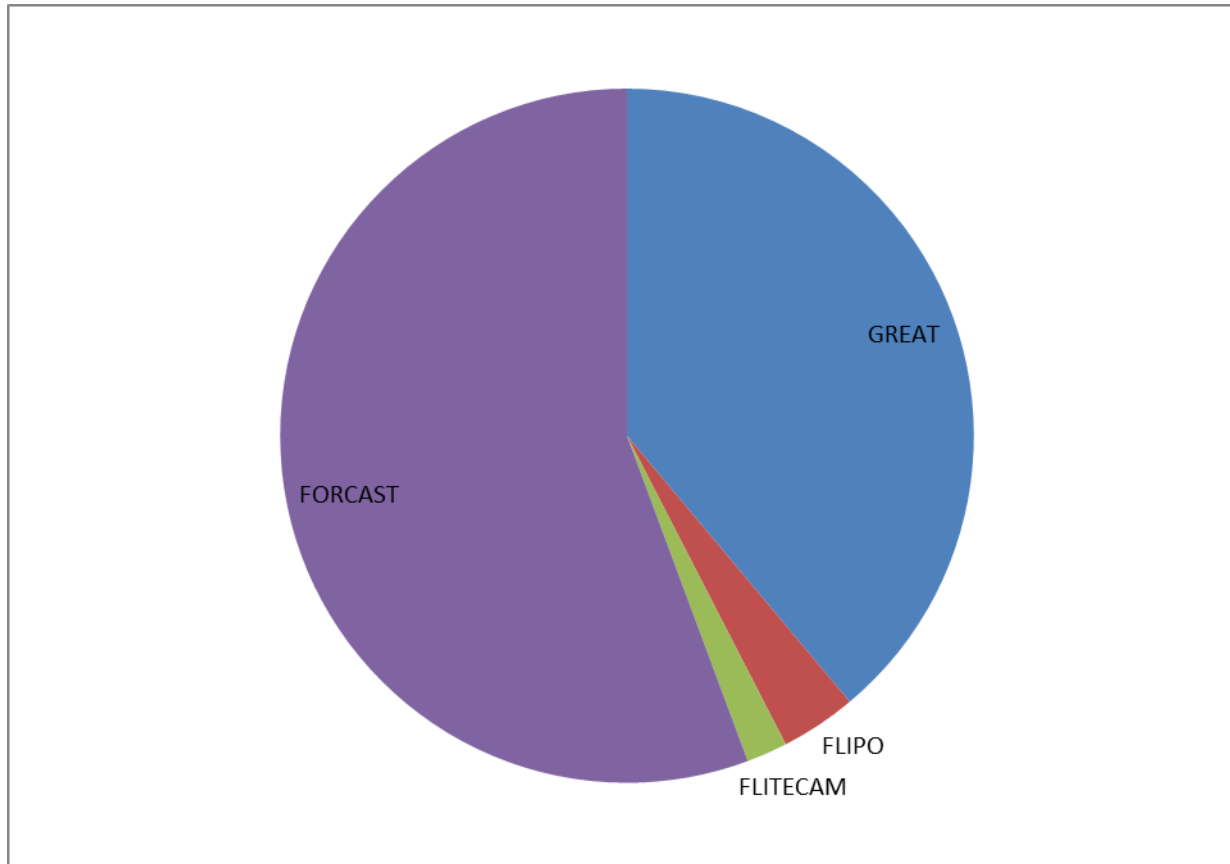


Distribution of Awarded Hours – US Queue





Instrument Distribution for Combined Program





Cycle 2 Call for Proposals



- Schedule
 - Cycle 2 covers calendar year 2014
 - Call For Proposals was released late April 2013
 - Proposals were due on June 28, 2013
- Hours
 - 175 hours of time were offered to US community
 - 47 hours were offered to the German community
 - Heavy Maintenance (5.5 months) will limit amount of science time
- Instruments
 - FORCAST, GREAT, FLITECAM, and HIPO were offered as commissioned instruments
 - Expect EXES and FIFI-LS to be commissioned during 2014, and some of these new capabilities were offered on a shared-risk basis





Cycle 2 Statistics



Instrument	US Queue	German Queue	Total
EXES	7.8	0.0	7.8
FIFI-LS	1.5	3.0	4.5
FLITECAM	10.0	2.2	12.2
FLITECAM/FORCAST	20.1	0.0	20.1
FLIPO	8.0	5.3	13.3
FORCAST	95.9	0.0	95.9
GREAT	21.8	30.3	52.1
Total	165.1 hours	40.8 hours	205.9 hours
Number of Teams Awarded Time	31 US GI + 7 International + 5 SOFIA Staff	14 German GI + 1 DSI Staff	





Cycle 2 Calendar



- Cycle 2 observations will begin in February 2014
- Commissioning of FLITECAM, FIFI-LS, and EXES
- Cycle 2 General Investigator Observations
- Heavy Maintenance will take out 5 months beginning in June
- Resumption of science flights in October 2014



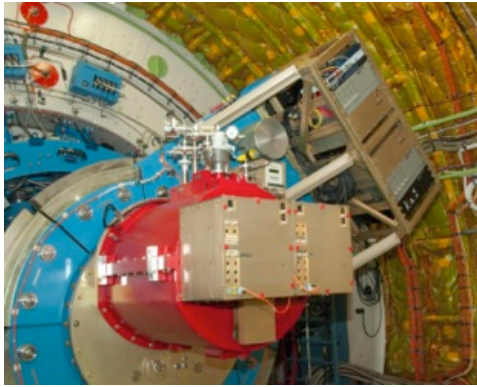


Cycle 3

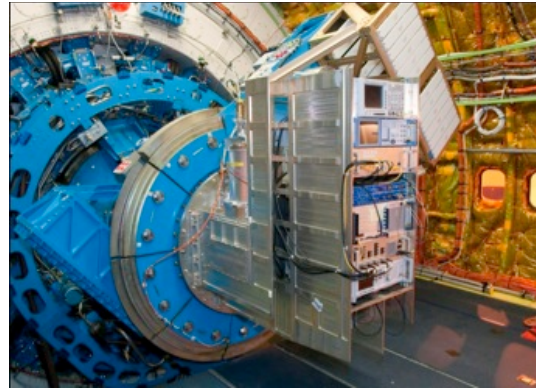


- Call for Proposals release at end of April 2014
 - Planning a SOFIA proposal workshop May 21-22, 2014
 - Proposals due end of June 2014
 - Announcements of results in September 2014
 - Observations in 2015
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- More than 700 hours available for science (General Investigator + Instrument Teams)
 - Deployment to Southern Hemisphere
 - Large suite of instruments

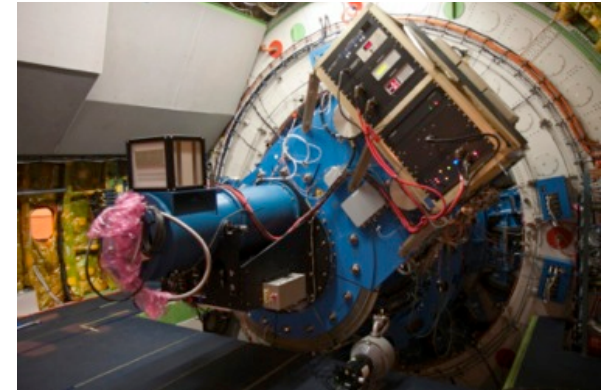




FORCAST
Mid-IR Camera



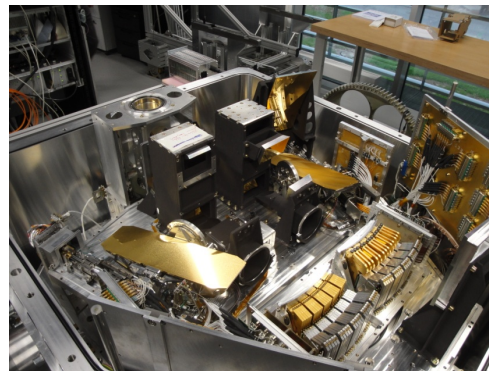
GREAT
Heterodyne
spectrometer



FLITECAM
Near IR Camera
HIPO
Occultation Photometer



EXES
High Resolution Mid- IR
Spectrometer



FIFI LS
Integral Field Far-IR
Spectrometer



www.sofia.usra.edu