New Instrumentation for SOFIA

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SOFIA Users' Group
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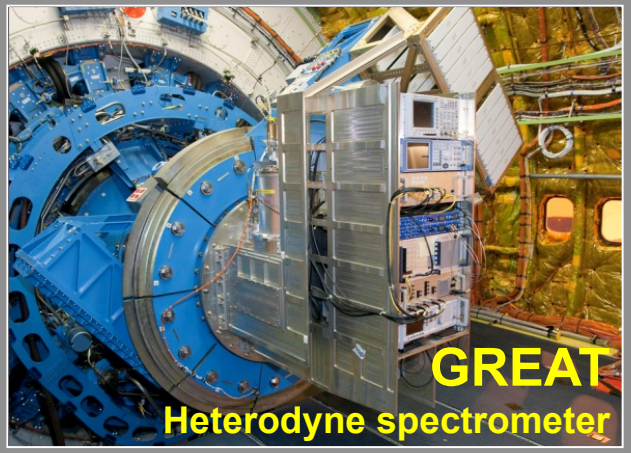
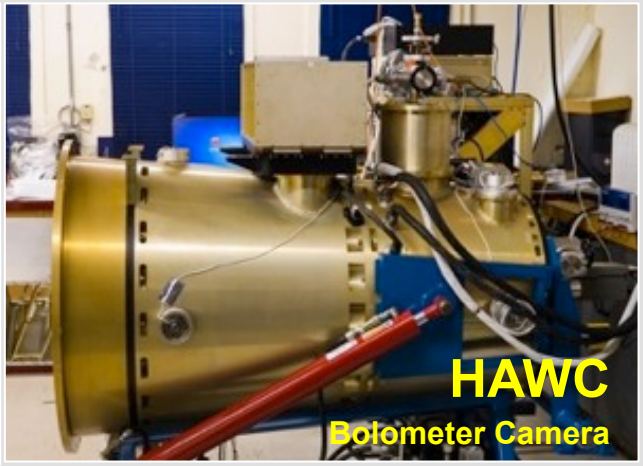
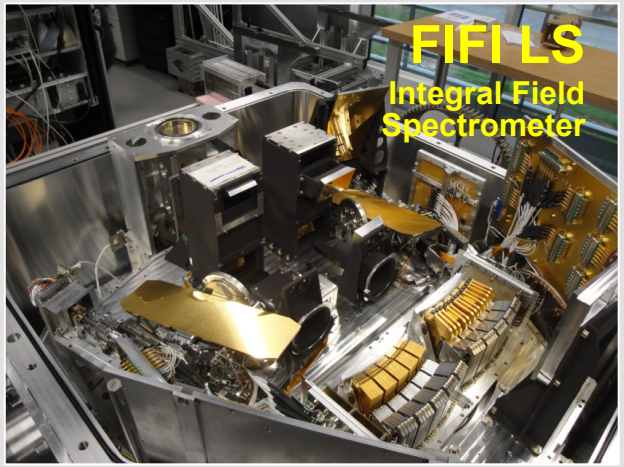
SOFIA'S 1st-GENERATION SCIENCE INSTRUMENTS

4 SCIENCE INSTRUMENTS AVAILABLE TO SUPPORT COMMUNITY OBSERVATIONS

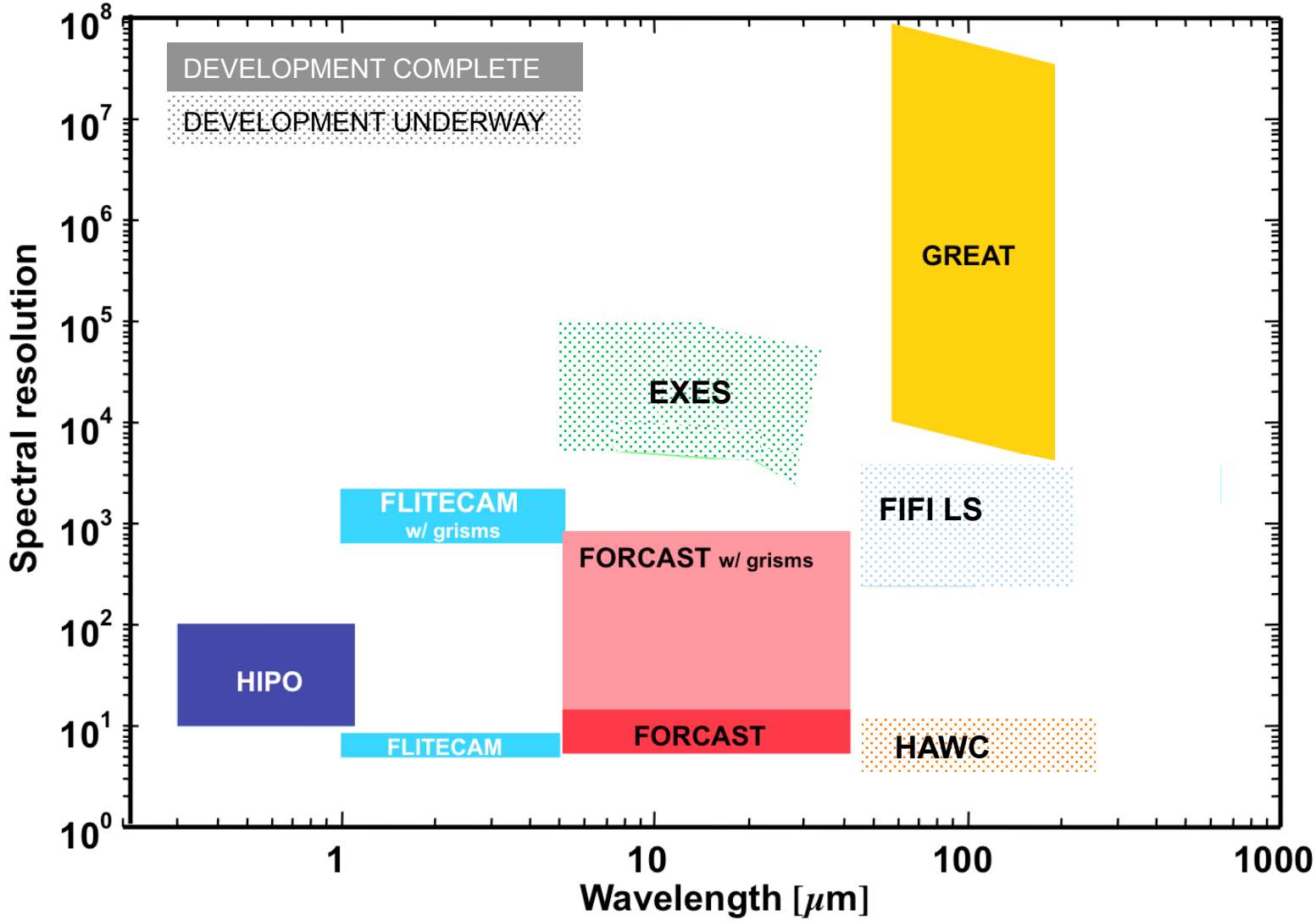


3 SCIENCE INSTRUMENTS CURRENTLY IN DEVELOPMENT





First Generation Instrument Capabilities

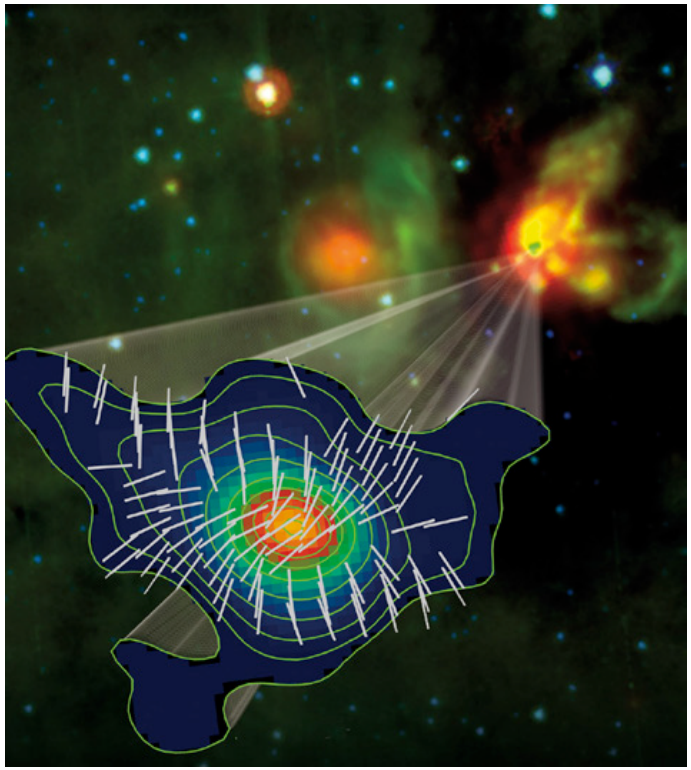


SOFIA Instrument Announcement of Opportunity

- The 2nd Generation call was released in 2011 as part of the Stand Alone Missions of Opportunity Announcement
- Classes of Instruments Solicited
  - Facility Science Instruments
  - Science Instrument Upgrades
  - Technology Demonstration Instruments
- Funding Available
  - The funding reserved for developing instruments as a result of this AO does not exceed $1M in FY12, $3M in FY13, and $5M in FY14-FY18.
- Selections were announced in April 2012

2nd Generation Instrument Selection

- Second Generation SOFIA Instrument selection announced by NASA HQ on 17 April 2012
- Both investigations are upgrades to HAWC, the Far-Infrared Camera for SOFIA and support the measurement of magnetic fields in the interstellar medium via Far IR polarimetry
  - HAWC-POL -- Darren Dowell (JPL)
  - HAWC++ -- Johannes Staguhn (JHU)
- Additional discussions between NASA HQ and the three instrument teams ongoing to scope out the work and schedule
- With these upgrades, HAWC will become the first 2nd Gen Instrument

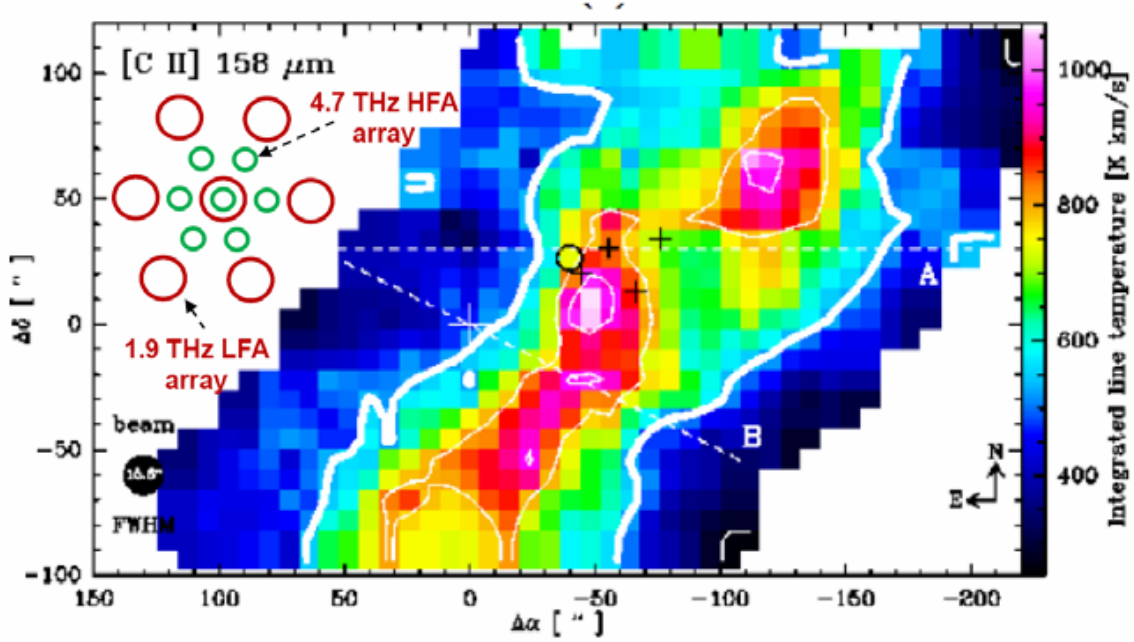


The Next Opportunity

- The upgrade of HAWC will likely make full use of the SOFIA instrument development budget that was advertised in the AO through 2015
- The funding line beyond 2015 for a new facility instrument remains a part of the SOFIA budget.
- NASA/SMD plans to issue a new AO in approximately 2014

German Instrument Developments

- upGREAT an enhancement of the GREAT heterodyne instrument is under development by Rolf Güsten and collaborators.
- Compact heterodyne arrays
  - 7 pixels x 2 polarizations @ 1.9 to 2.5 THz
  - 7 pixels @ 4.7 THz [O I]

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