

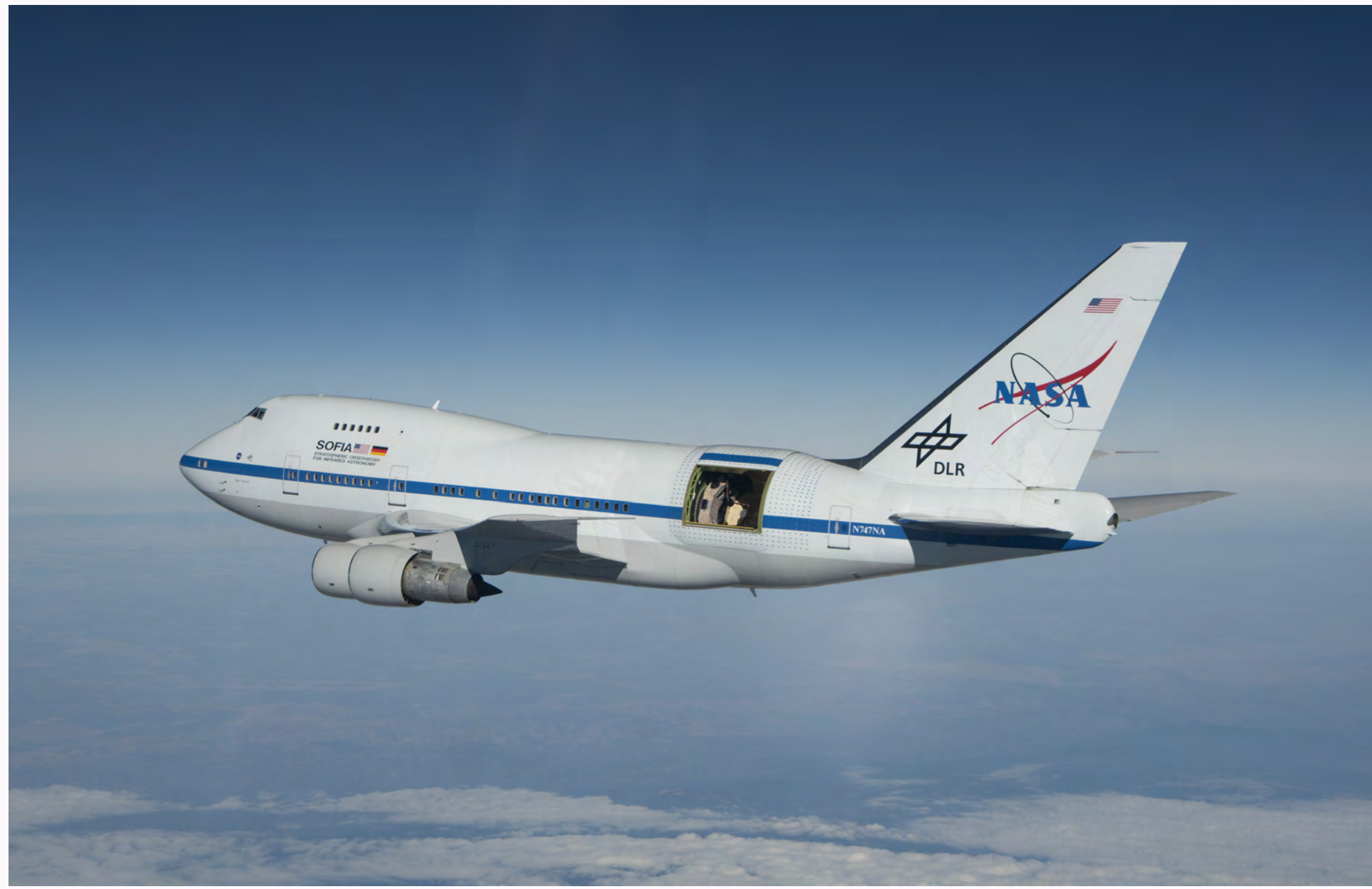
DO YOU MISS HERSCHEL? - USE SOFIA! WE ARE OPERATING NOW.



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SOFIA – Stratospheric Observatory For Infrared Astronomy



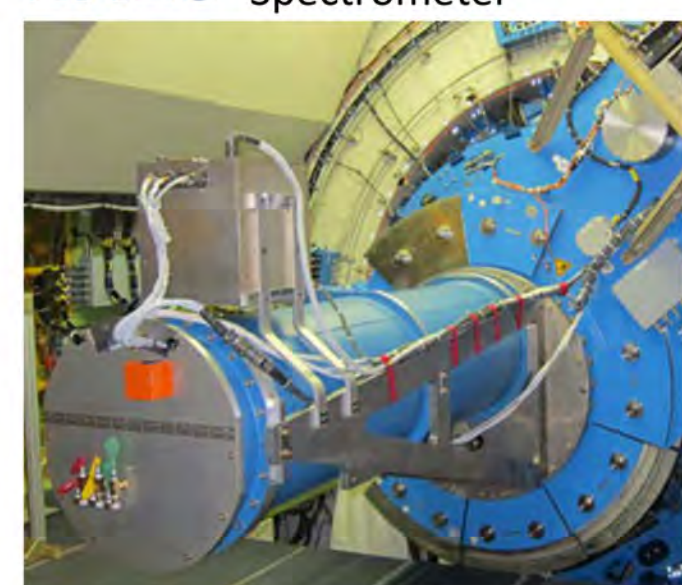
SOFIA; ©NASA/USRA

- Highly modified Boeing 747SP with a 2.7 m telescope (effective 2.5 m)
- SOFIA flies at altitudes between 11.9 km (39,000 ft.) and 13.7 km (45,000 ft.)
- SOFIA has 6 instruments that provide imaging, spectroscopic, and polarimetric capabilities for a wide range of scientific investigations
- SOFIA science is complementary to Herschel's and goes beyond
- Reached Full Operational Capability in May 2014
- Mission planned for ~20 years
- Based at NASA-Armstrong facility in southern California, USA
- ~2 months per year in southern hemisphere deployments (Christchurch, New Zealand)
- SOFIA is a joint project of NASA (80%) and DLR - German Aerospace Center (20%)



SOFIA Instruments

EXES Echelon-Cross-Echelle Spectrometer



$\lambda = 4.5\text{--}28.3 \mu\text{m}$
 $R = 1,000\text{--}10^5$

FIFI-LS Far Infrared Field-Imaging Line Spectrometer



$\lambda = 51\text{--}203 \mu\text{m}$
 $R = 600\text{--}2,000$

Grating Spectrometer

FORCAST Faint Object Infrared Camera for the SOFIA Telescope



$\lambda = 5\text{--}40 \mu\text{m}$
 $R = 100\text{--}300$

Grism Spectrometer

FPI+ Focal Plane Imager Plus



$\lambda = 0.36\text{--}1.10 \mu\text{m}$
 $R = 0.9\text{--}29.0$

Optical Camera, always running

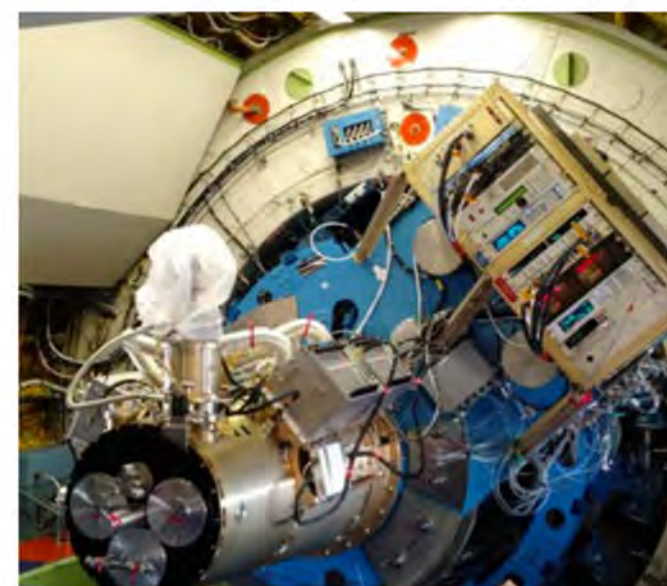
GREAT German Receiver for Astronomy at Terahertz Frequencies



$\lambda = 63\text{--}612 \mu\text{m}$
 $R = 10^6\text{--}10^8$

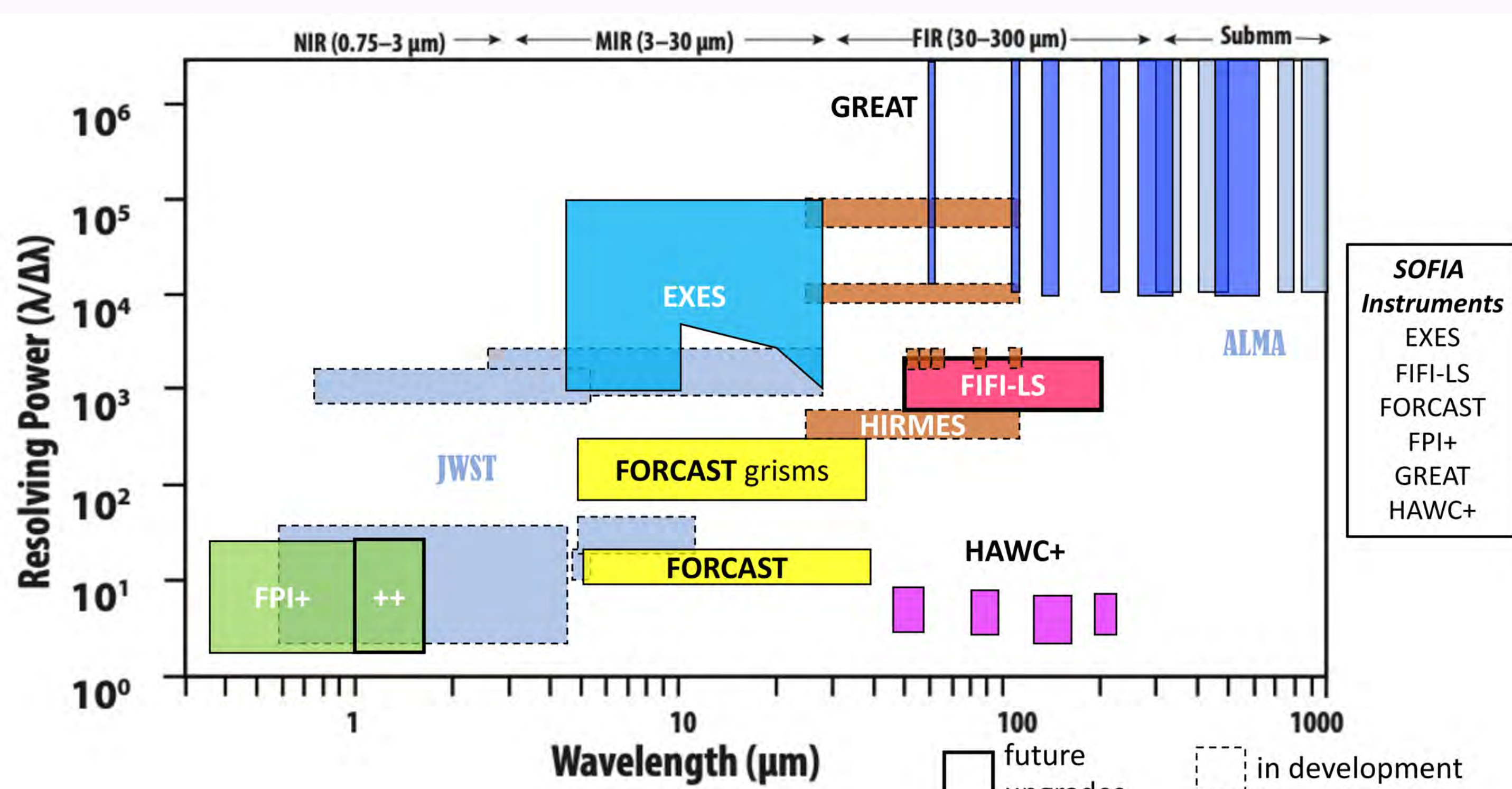
Heterodyne Spectrometer

HAWC+ High-resolution Airborne Wideband Camera Plus



$\lambda = 50\text{--}240 \mu\text{m}$
 $R = 2.3\text{--}8.8$

Bolometer Camera & Polarimeter



Call for Proposals 2019 Cycle 8

Basic INFO

- ~400 hours available (~70 h in German CfP)
- ~100 h for the SOFIA Legacy Program
- Additional 7% of the available Research Hours for the Director's Discretionary Time (DDT)
- Types of Programs: Regular, Survey, Target of Opportunity, DDT, Joint Observations with Other Observatories
- plus – SOFIA Legacy Science Program and Archival Research Program (time period – for both Cycle 8 & 9)
- Proposals are accepted in 3 priority bands: Priority 1 (will do), Priority 2 (should do) and Priority 3 (do if time)
- A southern deployment is planned with 2 instruments
- Cycle 8 is potentially the last cycle in which FORCAST will be offered
- As a PI of a successful proposal - you can fly on SOFIA!

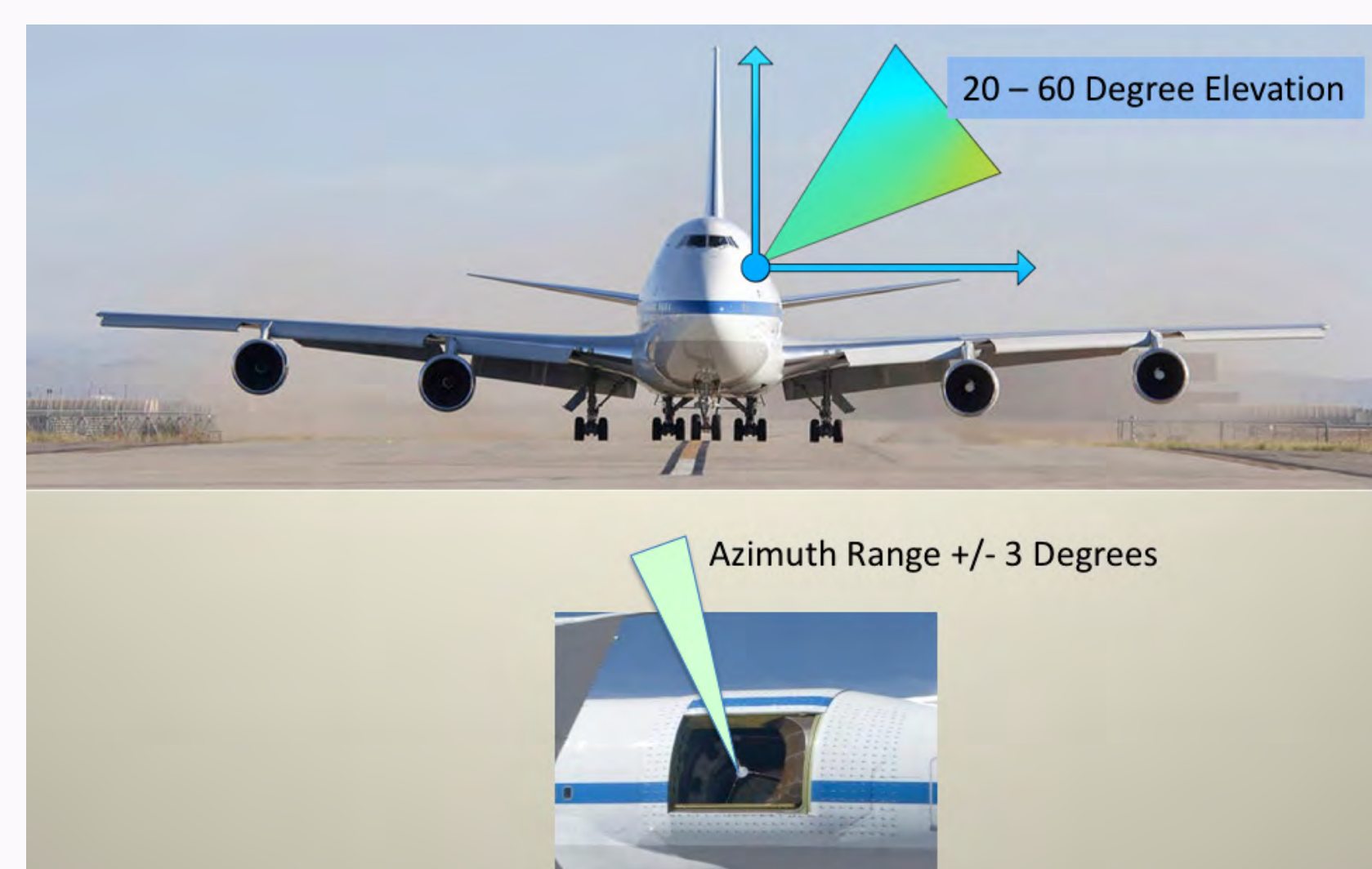
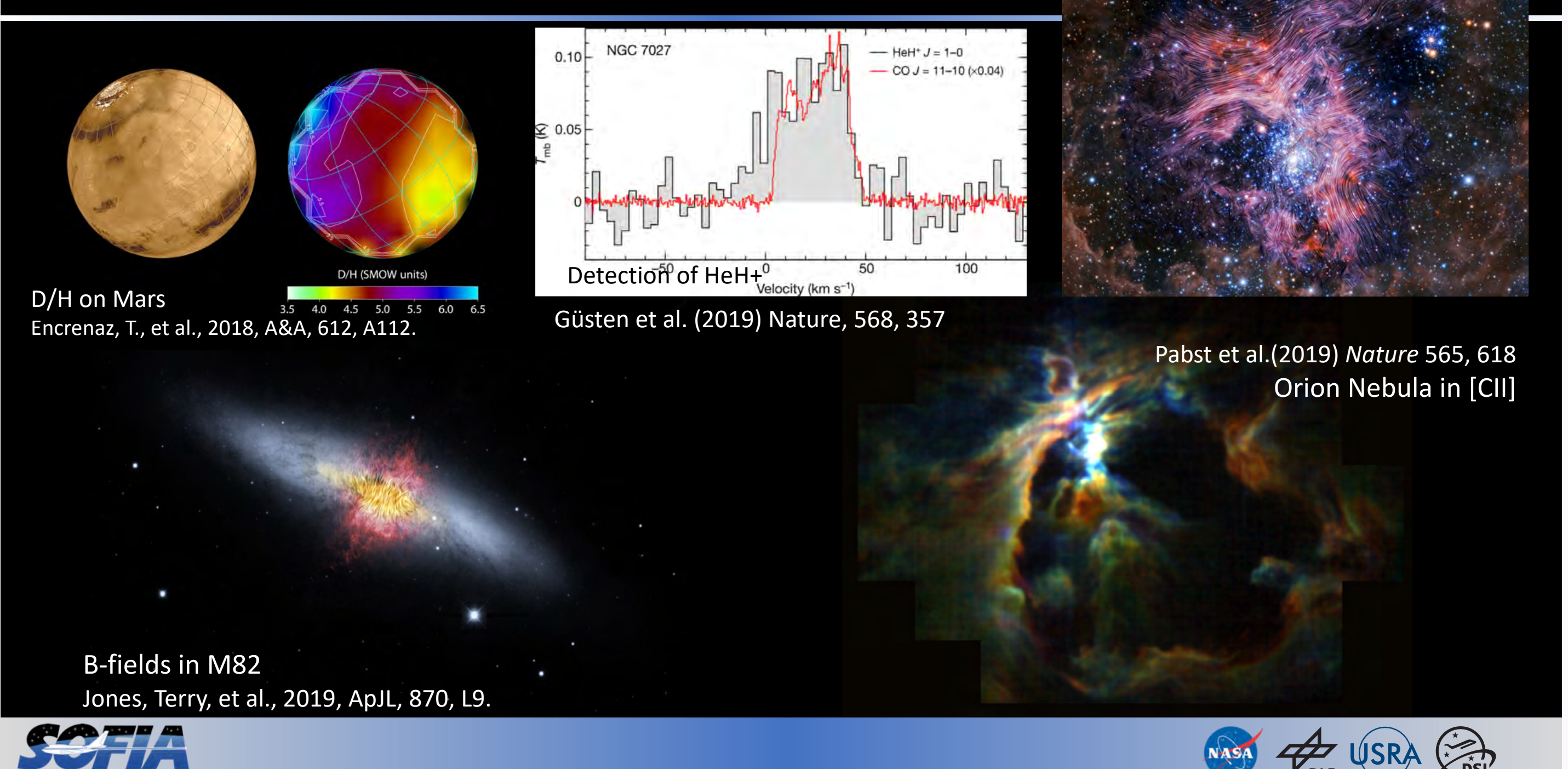
Cycle 8 Schedule

- May 31, 2019 – Release of Call for Proposals
- June 7, 2019 – Release of German Call for Proposals
- **September 6, 2019, 21:00 PDT – Proposals Submission deadline**
- **September 7, 2019, 06:00 CEST – Proposals Submission deadline**
- December 2019 – Anticipated Announcement of Selections
- April 25, 2020 – April 24, 2021 – Cycle 8 Period

Practical INFO

- <https://www.sofia.usra.edu/researchers/proposing-and-observing>
- <http://www.dsi.uni-stuttgart.de/observatorium/proposals/cycle08> (for German affiliations only)
- <https://dcs.arc.nasa.gov>
- help desk: sofia_help@sofia.usra.edu

SOFIA Science: Recent Examples



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