

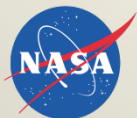


SOFIA Generation 4 Discussion

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SOFIA Instrument Complement



Instrument	Description	Coverage
EXES (Echelon-Cross- Echelle Spectrograph)	High Resolution ($R > 10^5$) Echelle Spectrometer	5 – 28 μm
FIFI-LS (Field Imaging Far-Infrared Line Spectrometer)	Dual Channel Integral Field Grating Spectrometer	42 – 110 μm 100 – 210 μm
FLITECAM (First Light Infrared Test Experiment CAMERA)	Near Infrared Imaging Grism Spectroscopy	1 – 5.5 μm
FORCAST (Faint Object infraRED CAmera for the SOFIA Telescope)	Mid-IR Dual Channel Imaging Grism Spectroscopy	5 – 25 μm 25 – 40 μm
FPI+ (Focal Plane Imager Plus)	Visible light high speed camera	360 – 1100 nm
GREAT, upGREAT (German REceiver for Astronomy at Terahertz frequencies)	High resolution ($R > 10^6$) heterodyne spectrometer; multi-pixel spectrometer	1.25 – 1.52 THz 1.81 – 1.91 THz 4.74 THz
HAWC+ (High-resolution Airborne Wideband Camera-Plus)	Far-Infrared camera and polarimeter	Five ~20% bands at 53, 63, 89, 154, & 214 μm .



And HIRMES!





SOFIA Generation 4 Instrument

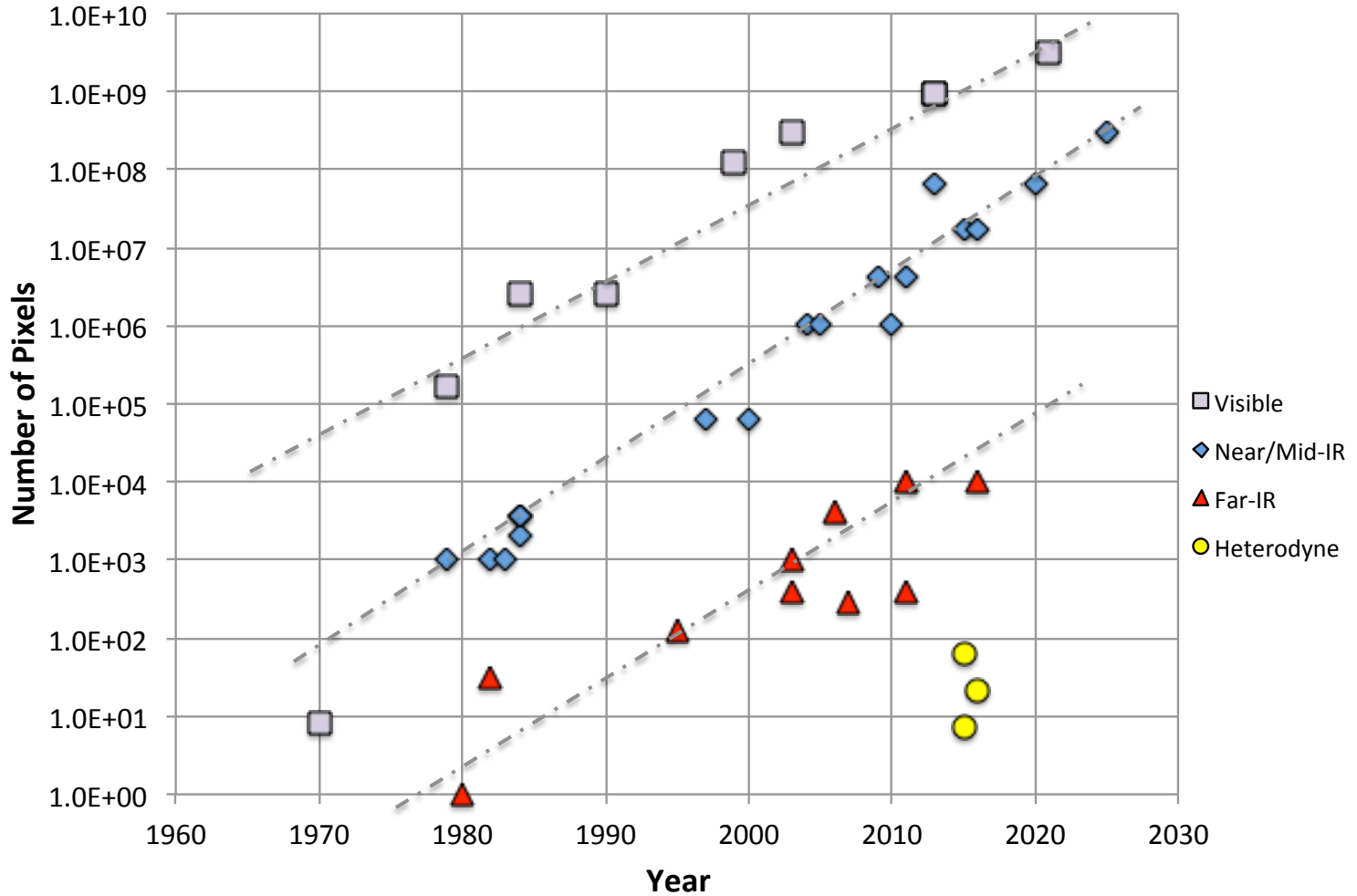


- Planning has started for a Generation 4 Instrument for SOFIA
- Possible release in summer 2017
- Four-year development period

- Some question?
 - Facility vs. PI Instruments
 - Gen 3 was a 2-step process. Was that good?
 - Ideas for simplifying process

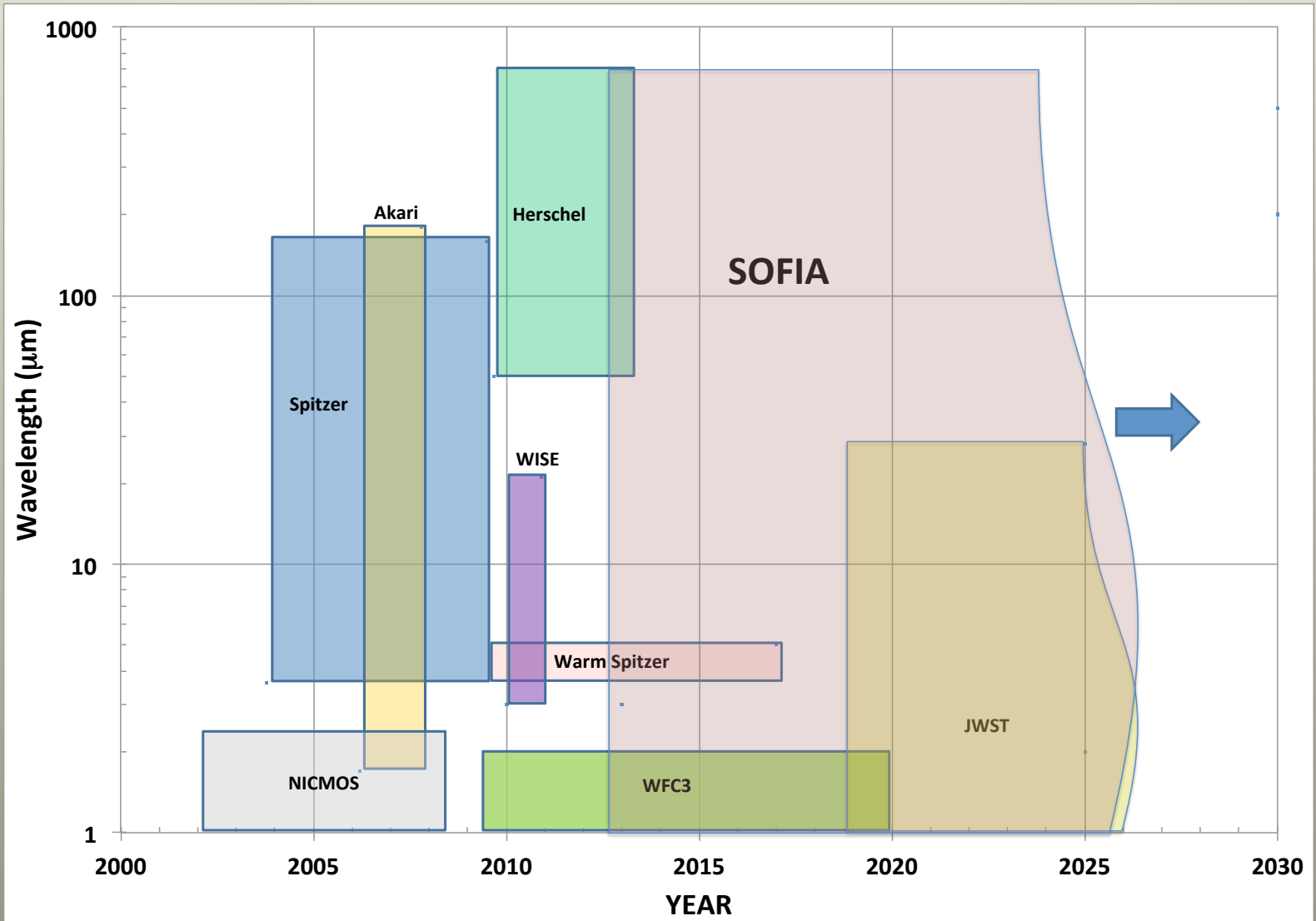


Growth in Astronomical Sensors





Infrared Mission Coverage





Summary



- This is a big opportunity to take the next step in Far IR instrumentation

<https://www.sofia.usra.edu>

