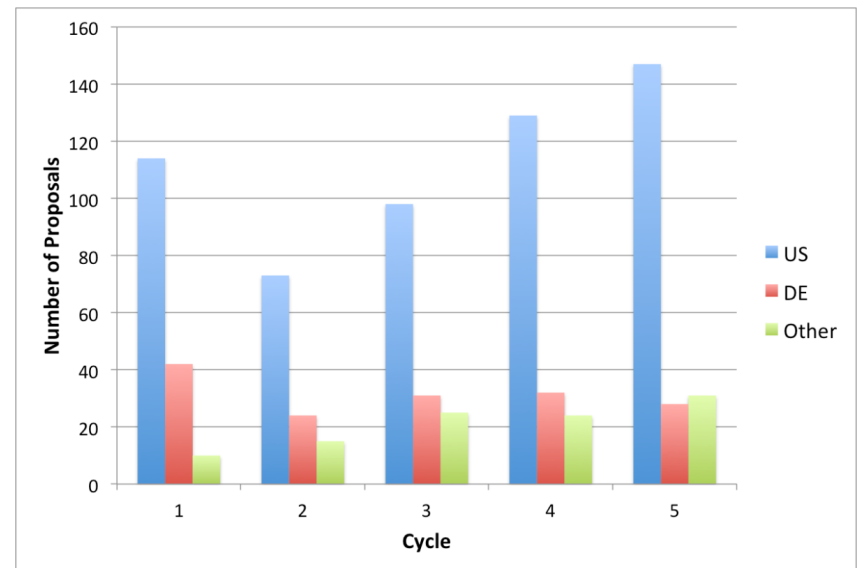


# Expanding the SOFIA users community

Matt Greenhouse

## Proposal pressure from European observer community consistently seems light

- Proposal pressure seen from DLR and the rest of Europe has stagnated:
  - No growth in DLR component over past 3 cycles
  - European component outside of DLR community:
    - Makes up ~ 60% of “other” category shown in figure
    - No growth over past 3 cycles
    - Overall engagement is very low
- What is impeding the rest of ESA’s Herschel community from using SOFIA?
- Why is the growth of the DLR component not keeping pace with that of the US community?
- Actions to improve ESA community engagement:
  - Focused professional outreach led by DLR/DSI SOFIA team
  - DLR/DSI programmatic advocacy within Europe to make data reduction funding available to SOFIA projects that are relevant to ESA mission objectives: Herschel, JWST, etc
  - Your ideas here ...



Focused professional outreach is needed to grow overall utilization and specific science applications

- Exoplanet transits and imagery
  - SOFIA should be more competitive than many ground-based facilities due to increased atmospheric stability and reduced scintillation noise
  - Effective use of SOFIA is not being realized
  - To enable transit spectroscopy, we must be willing to award long (>4 hr) flight legs
- Recommend that a small short-lived team of young external investigators be formed to plan/execute/publish a test case transit observation using DDT to characterize SOFIA capability
  - Team should begin by analyzing for root cause, [prior efforts](#) (e.g., GJ 1214b) that are said to have achieved 10X lower precision photometry than ground-based observations:
  - We are unlikely to receive exoplanet instrument proposals absent characterization of SOFIA's photometric precision and relief on operational constraints that are inconsistent with exoplanet observing requirements
- Planetary Science
  - Focused professional outreach to the DPS and equivalent international communities
- All areas:
  - Revive Project effort to systematically cover key university departments and topical meetings in the US and abroad with talks on SOFIA
  - Initiate systematic proactive effort to insert SOFIA content into keynote talks at major meetings

## Synergize SOFIA unique capability with other concurrent flight & ground-based assets

- Develop programmatic agreements with other observatories that enable one to include a SOFIA component in an observing proposal to the other asset
  - Examples: Inclusion of high resolution FIR spectroscopy or polarimetry in a JWST or ALMA proposal
- The above effort would:
  - Increase science impact of SOFIA and that of the other facility
  - Increase the overall visibility of SOFIA
  - Science examples: *Astrophysics in the Next Decade*, eds Thronson, Stiavelli, & Tielens 2009, Springer, ISBN 978-1-4020-9456-9
  - Would likely require temporal coordination of CfPs among the facilities involved