Community Engagement

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Support current users
Facilitate research / create research opportunities
Engage dialogue with a wider community
Keep in touch / inform the community
Support of current users

- Support of Help Desk (Calls for proposals, data analysis and reprocessing, funding…)
- Inform GOs about their project scheduling status before series
- Produce annual user surveys to understand needs and wants
- Maintain online information about calls for proposals, capabilities, data formats, publications, flight schedules, events…

- Fall 2021: delivered improved website
Renewed focus on data analysis documentation (cookbooks)

- Cookbooks linked from website, but hosted on GitHub (SOFIAObservatory) for easier maintenance and feedback
- General updates
  - For Jupiter notebooks - new automated monthly testing for most platforms/configs
- Conversion to mostly Jupiter notebooks
- New cookbooks in the works: EXES, data retrieval including astro.query
- FAQ instrument-specific in the works

**SOFIA Cookbook Recipes**

These documents provide simple "recipes" (i.e., descriptions and guided examples) for common data analysis objectives using SOFIA processed data. They are generally written for a graduate student audience and are intended to be used with the SOFIA Data Handbooks.

Some of the recipes are *Jupyter* notebooks designed for a researcher with a working knowledge of the *numpy/scipy/matplotlib* stack as well the *astropy* modules.

The first notebook in the series (30 Dor/HAWC+) walks the user through downloading SOFIA data through the Infrared Science Archive (IRSA) and demonstrates basic analysis techniques with *python* using a public data set on 30 Doradus.

**30 Doradus/HAWC+ Recipe**

SOFIA performed far-infrared imaging polarimetric observations of 30 Doradus using the High-resolution Airborne Wideband Camera-plus (HAWC+) at 63, 89, 164, and 214 micron. We present the status and quality of the observations, an overview of the SOFIA data products, and examples of working with HAWC+ polarimetric data that will enhance the scientific analysis of this, and future, data sets. These observations illustrate the potential influence of magnetic fields and turbulence in a star-forming region within the Tarantula Nebula.
Create research opportunities: Archival data

- Promoting high-value underused public archival data

- Total of 21 ‘archival data highlights’ (with support from SOFIA postdocs)

- Inclusion of ‘archival data highlights’ on e-newsletter, new dedicated searchable web-page
Facilitate Research : 2022 SOFIA School

- February 2, 3 and 4 - 3.5 hours in the morning each day
- 150 registrants
- Goal is to encourage and facilitate the use of SOFIA data
- Will cover the mid/far IR landscape, calibration considerations, basic data analysis techniques, modeling strategies for a variety of cases

- Format: short lectures based on papers (mostly from community members)/ lectures on understanding data quality
- Live personal support from SOFIA staff through Slack
Engage dialogue with a wider community

Goals: identify untapped scientific strengths, inform the communities about recent results and opportunities/capabilities, increase awareness and participation in SOFIA, strengthen relationships with current users

- 3d SOFIA Science series Workshop “Evolved Stars and their Circumstellar Environments”
- 200 registrants, ~ 40 talks including 8 invited
- 4 moderated discussions, 1 panel discussion, 1 intro to SOFIA Cycle 10 CfP
Engage dialogue with a wider community

- Splinter Session at Winter 2022 meeting, focusing on Synergies: (chair: T. Wiklind)
- 4th SOFIA Science Series in Summer 2022: Topic TBD (Astrochemistry / Topics addressed by SOFIA Legacy programs)

- Identification of partner for a new Talks Summer series, following the success of SOFIA/ALMA series in 2021
- Engagement with the IRSTIG activities
- Engagement with communities of interested identified from decadal survey priorities
Keep in touch / inform the community

- E-newsletter: ~ monthly communication of news, opportunities, and general information to 4000+ recipients
- Large advertisement of Call For Proposals
- Bi-monthly Tele-Talks series, weekly Virtual Colloquia
- Social media posting
- Support of ad-hoc community meetings
Keep in touch / inform the community: Winter AAS meeting

- Booth and printed materials
- FORCAST data clinic / other booth events TBD
- Special session: “Mid and Far-IR observations: leveraging science across the spectrum - 6 speakers
- SOFIA Townhall
- Developed of communication points

- 5 Theater presentations:
  - "The New SOFIA”
  - "Best SOFIA thesis: The formation and dispersal of dense gas in star forming regions"
  - "SOFIA Science: Remarkable Results”
  - 'Archival research opportunities with SOFIA’
  - “SOFIA Open Calls for Proposals: what you need to know’
SOFIA Conference: Galactic Ecosystems


- In partnership with ALMA

- Secluded venue to encourage informal discussion and build opportunities for collaboration.

- Opportunities for current users to present their data, eventually helping project to get closer to the level of maturity needed for a publication.
New: SOFIA blog on blogs.nasa.gov

- Started in June 2021
- 13 posts published to date
- Effective way to communicate about milestones, scientific results
Creation and diffusion of highlights brochure

- Developed on a short timeline to address current communication needs
- Distributed by email and hard prints to ~200 identified community leaders
- Shows the breadth and impact of science results in the past couple of years