

Community Engagement

support current users

engage dialogue with more communities

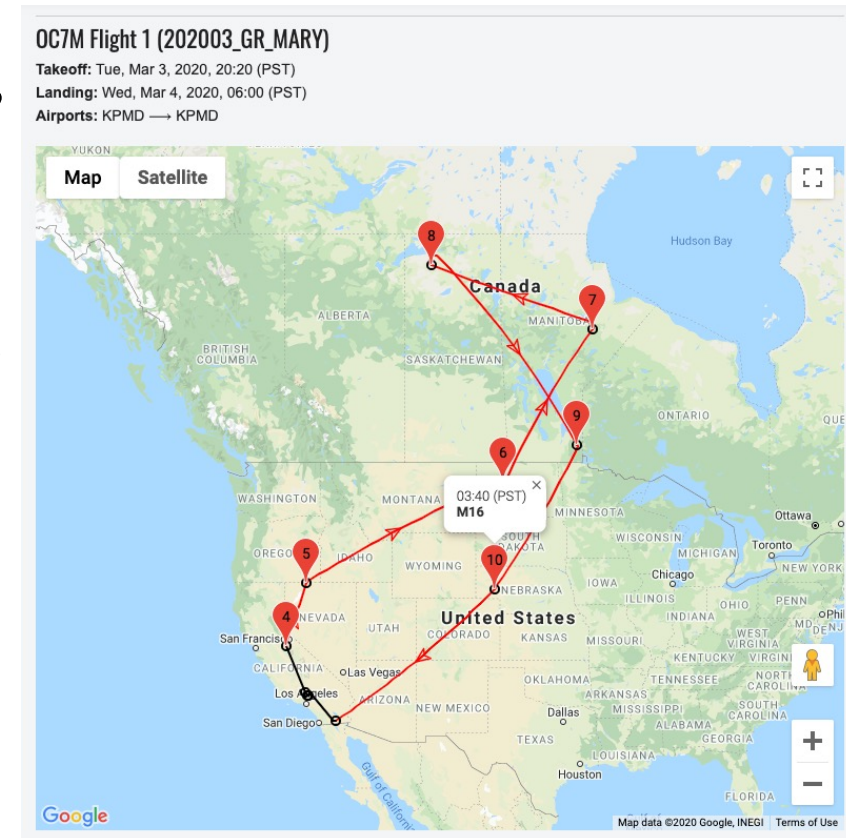
create research opportunities

highlight and advertise strengths

identify scientific needs in diverse fields

Year-round support of current users

- Support of Help Desk (questions on Phase 2, SAR proposals, data analysis, data reprocessing, grant funds...)
- Inform GOs about project scheduling plans
- Maintain and improve online information about current calls for proposals (SARP, DDT), instrument capabilities, data formats, publications, flight schedules, ...
- Creation of instrument-specific FAQs based on Help-Desk requests.



Listening to users: surveys

- Implementation (and result analysis) of user surveys: data quality, general yearly user survey, website

Spring 2021: large-scale survey of users, through the SOFIA community mailing list (4000+ emails). Largest outcome: 192 responses.

Insights on role of SOFIA for graduate students, Impact of Covid 19 on SOFIA work, reasons for delayed publication or non-publication, use of archive, effectiveness of support / information / communication

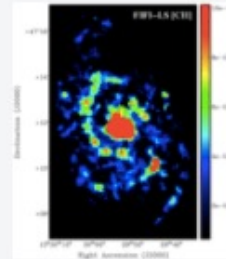
“What would help shorten the time between getting your SOFIA data and publishing it?”

ANSWER CHOICES	RESPONSES	
More timely notification for arrival of the data in the archive	15.67%	21
More information about the data in the notification: source list, data quality and data completeness	31.34%	42
More training opportunities for students and postdocs to learn how to work with SOFIA data.	38.81%	52
Additional funding, please explain below	22.39%	30
Other (please specify)	35.07%	47
Total Respondents: 134		

Facilitate archival research

Goals: promote and facilitate the use of existing archival data, including to new users with little infrared experience.

- Wide advertisement of SOFIA Archival Research CfP to professional outlets
- Identification of underused public archival data; writing of ‘archival data highlights’ on the data scientific content and value, in the context of current research topics (with support from SOFIA postdocs)
- Inclusion of ‘archival data highlights’ on e-newsletter, dedicated web-page



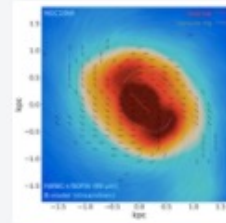
[C II] Map of the M51 Galaxy

The entirety of the M51 galaxy was imaged using both FIFI-LS and GREAT. This dataset consists of the first complete, velocity resolved [CII] 158 μm image of the M51 grand-design spiral galaxy with the upGREAT and FIFI-LS instruments on SOFIA.

Keywords:

FIFI-LS, GREAT, star formation, Spiral galaxy, interstellar and intergalactic medium, Emission lines, Spectroscopy

[Read more](#)



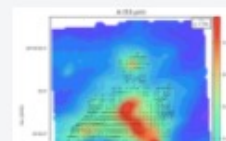
Legacy Program: Magnetic Fields in Nearby Galaxies

What is the role of magnetic fields in sculpting the ISM at kiloparsec scales? This question is the driver behind the Legacy Program: 'SOFIA heralds a new era of measuring the magnetic fields of galaxies', which consists of 50-220 microns polarimetric observations of 17 nearby galaxies including starbursts, mergers, active galaxies, and spiral galaxies. The HAWC+ data for targets M82, NGC 1097, NGC 2146, NGC 6946, Centaurus A, and Circinus are already public on IRSA.

Keywords:

HAWC+, spiral galaxies, interacting and merging galaxies, interstellar and intergalactic medium, multiwavelength study, star formation starburst galaxies, dust

[Read more](#)



A Testbed for Starburst Activity: 30 Doradus

30 Doradus is an ideal laboratory for studying massive star-forming regions. To better understand these processes, multiple SOFIA

Facilitate research: IR Winterschool

Goals: encourage and facilitate the use of SOFIA data, and mid/far infrared data in general. Open to a

- Planning in the works for 3-4 days virtual workshop, Nov or December 2021
- Content: why/how is mid/far IR useful for a variety of science cases, current observational/data landscape, observing and calibration considerations, basic data analysis techniques, modeling strategies.
- Format: short lectures based on published SOFIA examples (from SOFIA staff and community members), Q+A, live personal support from SOFIA staff

Year-round engagement with astronomy community

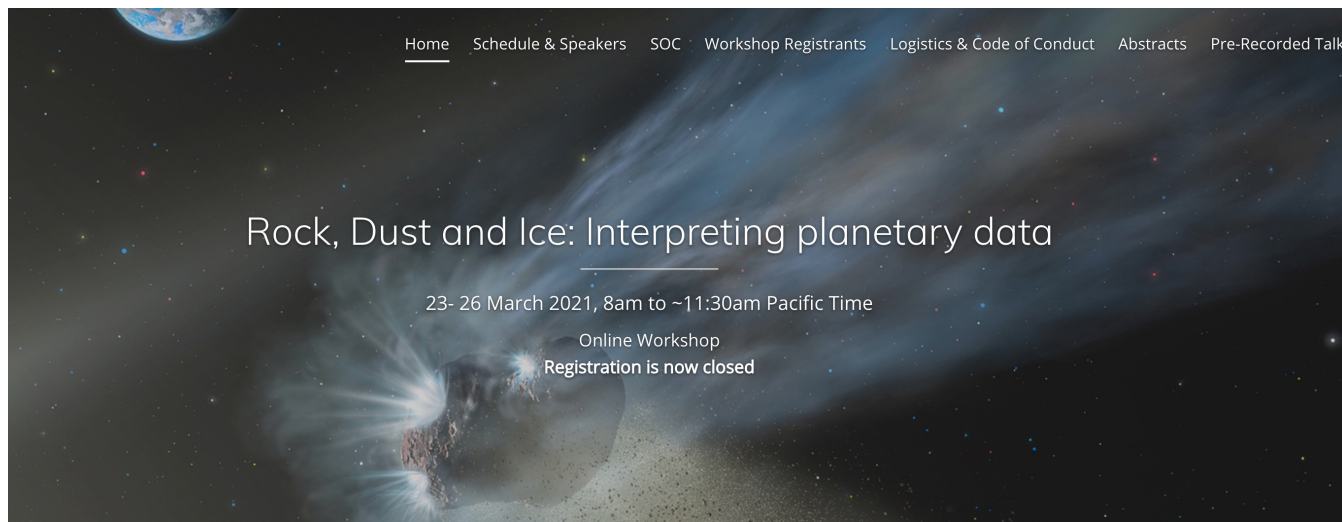
- E-newsletter: monthly communication of news, opportunities, and general information to 4000+ recipients
 - Bi-monthly Tele-Talks series, weekly Virtual Colloquia
 - Webinars at AAS
 - Support of ad-hoc community meetings
-
- Summer talks series in partnership with ALMA.
High attendance, visibility and quality!
(all talks recorded and available on youtube)



Engagement of specific communities

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

- Workshop “Rock, Dust and Ice: Interpreting Planetary Data” – March 23-26, ‘How can we leverage multi-wavelength observations, radiative transfer theory and laboratory work to characterize planetary solids’. Joint with IRTF
 - More than 300 registrants, 100-200 participants/day, ~ 40 talks



Engagement of specific communities

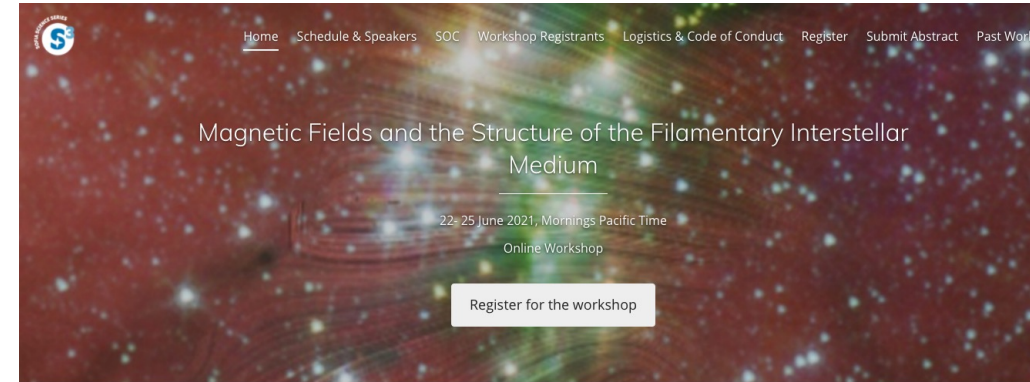
- Workshop “Magnetic Fields and the Structure of the Filamentary Interstellar Medium”, June 22-25.

“How do magnetic fields affect the evolution of the interstellar medium (ISM), and in particular star formation?”

Joint with JCMT

30 talks, 330+ registrants, engaging discussions

- Planning Workshop on late stars’ (RSG, AGB) environments/planetary nebulae, in particular drivers for winds, in late 2021



Magnetic Fields and the Structure of the Filamentary Interstellar Medium

How do magnetic fields affect the evolution of the interstellar medium (ISM), and in particular star formation? Recent observations on many scales, both in photometry and polarization, indicate that the dense ISM is filamentary in nature, from sub-structures in giant molecular clouds to the mysterious snake-like infrared dark clouds stretching for tens to hundreds of parsecs along the Galactic plane. To what extent is this filamentary structure driven by magnetic forces and where in the transition from kilo-parsecs scales to molecular cloud scales does it arise? With the availability of the HAWC+ instrument on SOFIA and the SCUBA-2/POL-2 instrument on the JCMT/EAO we are now able to resolve some of the large-scale structures seen in e.g. the Planck maps of the Galaxy, and connect them to the high-resolution, narrow field view of ALMA, and address these questions.

This online workshop will provide a forum to exchange insights and views on recent polarimetric observations, numerical simulations and advances in theoretical understanding, in an attempt to identify observable markers of the impact of magnetic fields. We are also dedicating a day to the question of turning polarimetric observations into magnetic field measurements, including the use and limitations of the Davis-Chandrasekhar-Fermi method, the role of dust grain alignment in different environments, and the combination of the effects of dust and those of the structure of the magnetic field.