

SOFIA

Science Newsletter



January 2022

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FORCAST Flash Call

FORCAST Flash Call

The SOFIA project is pleased to invite proposals for a "Flash Call", for Director's Discretionary Time (DDT) observations with the **FORCAST** instrument in two celestial regions, to be observed in the week of February 14, 2022. The two available sky areas are approximately centered on: **RA, Dec: {5h, 85°} and {17h, +5°}**, (with significant extent in the SOFIA elevation direction. For details, please see the SOFIA web site <here>). A total of up to ~3h of observing time is available in the first area with ~4h of observing time in the second sky area. For the first area all FORCAST instrument modes are available, while for the second area, only LWC observations (imaging or spectroscopy) are available.

Proposals should be submitted through the USPOT tool, using the proposal process for [Director's Discretionary Time](#) observations. The [Observer's Handbook](#) details properties of FORCAST.

Proposals are due on Jan 9, 2022, 9 pm PST. The proposals will be evaluated through an abbreviated, dual anonymous, review process. Proposers are therefore reminded to anonymize their texts accordingly. Selections are expected to be announced by the week of January 17.

More information is available on the [Science Center website](#). Questions about the call or proposals can be addressed to the SOFIA Help desk: sofia_help@sofia.usra.edu.

Science Spotlight

January 2022 SOFIA Science Newsletter

The SOFIA Science newsletter is distributed semi-annually, with the latest SOFIA science results. [The January 2022 edition is now available here.](#)



SOFIA Winter Meeting

[SOFIA Virtual Events next week](#)

Following the cancellation of the AAS Winter meeting, we encourage the community to connect next week - virtually - to our program of [SOFIA virtual events](#), which includes Informational webinars, science talks and programmatic presentations. All events are free, no registration needed.

- [AAS 239 Press Conference](#)

Monday January 10, 2022, 10:15 AM-11:15 AM (Mountain Time)

Recent extra-galactic SOFIA results will be included in this press conference hosted by AAS.

- [SOFIA Open Calls for Proposals: what you need to know](#)

Monday January 10, 2022, 10:30 AM-11:00 AM (Mountain Time)

The purpose of this event is to provide practical information to both experienced and prospective SOFIA users on how to best design a scientifically and technically strong SOFIA proposal for Cycle 10. The offered observational capabilities and their connection to science cases, the different proposal types, as well as the associated funding opportunities will be described. [Join via Webex.](#)

- [SOFIA Town Hall](#)

Monday January 10, 2022, 11:00 AM-12:00 PM (Mountain Time)

The SOFIA Director, Margaret Meixner, and the SOFIA team will report on the status of the observatory, the ongoing Cycle 9 observations including Legacy Programs, the open Cycle 10 Call for Proposals, upcoming community events, as well as the timeline for instrument upgrades and developments. This Town Hall will also be an opportunity for direct feedback from the SOFIA user community regarding current operations and future plans. [Join via Webex.](#)

- [Special Session: SOFIA Winter meeting](#)

Tuesday January 11, 2022, 10:00 AM-11:00 AM (Mountain Time)

A collection of flash talks from authors of presentations on recent SOFIA science results originally scheduled during the AAS Winter meeting. [Join via Webex.](#)

- [Special Session: The extreme ISM in the inner 200 pc of the Galaxy](#)

Wednesday January 12, 2022, 10:00 AM-11:30 AM (Mountain Time)

The central 200pc of the Milky Way shows high densities, radiation field, cosmic ray fluxes as well as strong magnetic fields, which may explain the high rate and special characteristics of galactic center star formation. Several new data sets and observatories have recently given improved insights into the gas, dust, and magnetic field, including SOFIA, ALMA, and MeerKat observations. This session will present some of this new data on the exciting characteristics of the extreme ISM in the central 200 pc. [Join via Webex.](#)

- [Best SOFIA thesis: The formation and dispersal of dense gas in star forming regions](#)

Thursday January 13, 2022, 9:00 AM-9:30 AM (Mountain Time)

by Lars Bonne (SOFIA/USRA) [Join via Webex.](#)

- [Best SOFIA Paper: The Magnetic Field Across The Molecular Warped Disk of Centaurus A](#)

Call for Proposals

Cycle 10 Calls for Proposals: Updates and Resources

SOFIA Cycle 10 Calls for Proposals are open, with a deadline of **January 28, 2022, 21:00 PST** (January 29, 2022 4:00 UTC). A total of approximately 650 hours of observing time is offered, along with ~\$7.5M of funding for eligible proposers.

Note that during Cycle 10, SOFIA plans to carry out three Southern deployments: a long deployment scheduled approximately June through September 2023 (GREAT and HAWC+), and two short deployments in November 2022 (FIFI-LS) and March 2023 (EXES).

Detailed information about the Cycle 10 calls [can be found here](#). A formal update was released on December 10, including a newly open opportunity for **joint proposals with IRTF**.

An [information session](#) on Cycle 10 Calls will be offered on Monday January 10, 9:30-10:00 am Pacific Time. More resources and guidance, including video tutorials about the typical pitfalls in observing time estimates, [are available here](#).

Observatory News

HAWC+ Update

The HAWC+ instrument is currently out of action, with a hardware issue that is being investigated. The flight series that had been scheduled for January 18 through February 11 has been canceled, with the other facility instruments filling in.

Upcoming Events

[SOFIA School: February 2-4, 2022](#)

This free virtual event is designed for anyone who uses or considers using mid- and far-IR data in their research. Through short lectures based on existing data and scientific results, attendees will be introduced to many of the scientific cases leveraged by such data. Detailed presentations on data analysis considerations specific to this wavelength range, such as atmospheric transmission correction, will be included. Practical examples on how to derive physical and chemical characterization of astronomical sources will be presented by authors of SOFIA papers. We encourage participation from astronomers at any career level: please register on the [School website](#).

[Our Galactic Ecosystem: Opportunities and Diagnostics in the Infrared and Beyond: February 28 - March 4, 2022](#)

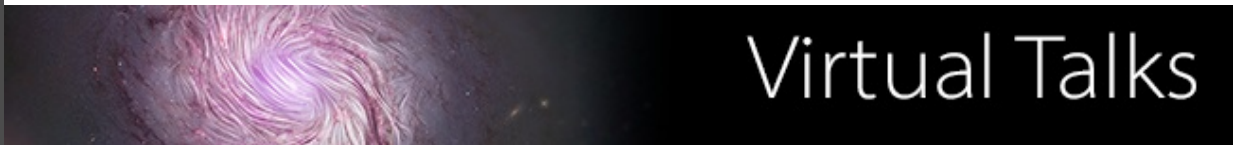
How does interstellar material cycle between atomic and molecular clouds, and how does its chemical composition (and particularly the abundance of hydride molecules) reflect the

environment in which it is found? What is the role of feedback (from young and old stars) on the interstellar medium (ISM)? What is the role of magnetic fields in the evolution of the ISM and star formation?

SOFIA is the only general access guest observatory in the far infrared (30-300 μm), providing unique access to this wavelength regime including tracers of atomic and molecular lines and FIR polarization. This conference will allow in-person discussions of the results and future opportunities in studying galactic ecosystem using FIR methods, from SOFIA and other platforms. A goal will be to explore synergy with other observatories, including JWST and ALMA, and with theory.

[Registration and abstract submissions](#) are accepted until **February 14th** on the [conference website](#). Registration fees include room and board at the UCLA Lake Arrowhead Lodge, in the majestic mountains of the San Bernardino National Forest.

Update: In response to inquiries we have changed the process for abstract selection. We will now accept abstracts without an initial associated registration. However, only in-person presentation of contributed talks or posters will be considered. Hence abstracts acceptances will be withdrawn from the conference program at the late registration deadline if unaccompanied by a registration. [Submit an abstract here.](#)



Join Science Talks Remotely

Tele-Talks are scientific presentations given via phone, with slides distributed ahead of time. The talks are held approximately twice a month on Wednesdays at 9:00 a.m. Pacific, noon Eastern. For information on how to participate, check [SOFIA Tele-Talk webpage](#).

Upcoming Tele-Talks

- January 19: Duncan Mifsud (University of Kent) & Sergio Ioppolo (Queen Mary University of London); Role of Terahertz and Far-IR for Prebiotic Molecules
- January 26: Ronan Higgins (University of Cologne); Large Scale Spectral Mapping
- February 16: Dennis Lee (Northwestern University); Magnetic Field and Cloud Structure in L1688

Please direct questions and comments to the SOFIA Science Center help desk:
sofia_help@sofia.usra.edu.

