

## Status of the US Next Gen Instrument Call for Proposals

Dr. Thomas Roellig  
NASA SOFIA Deputy Project Scientist  
November 15, 2017

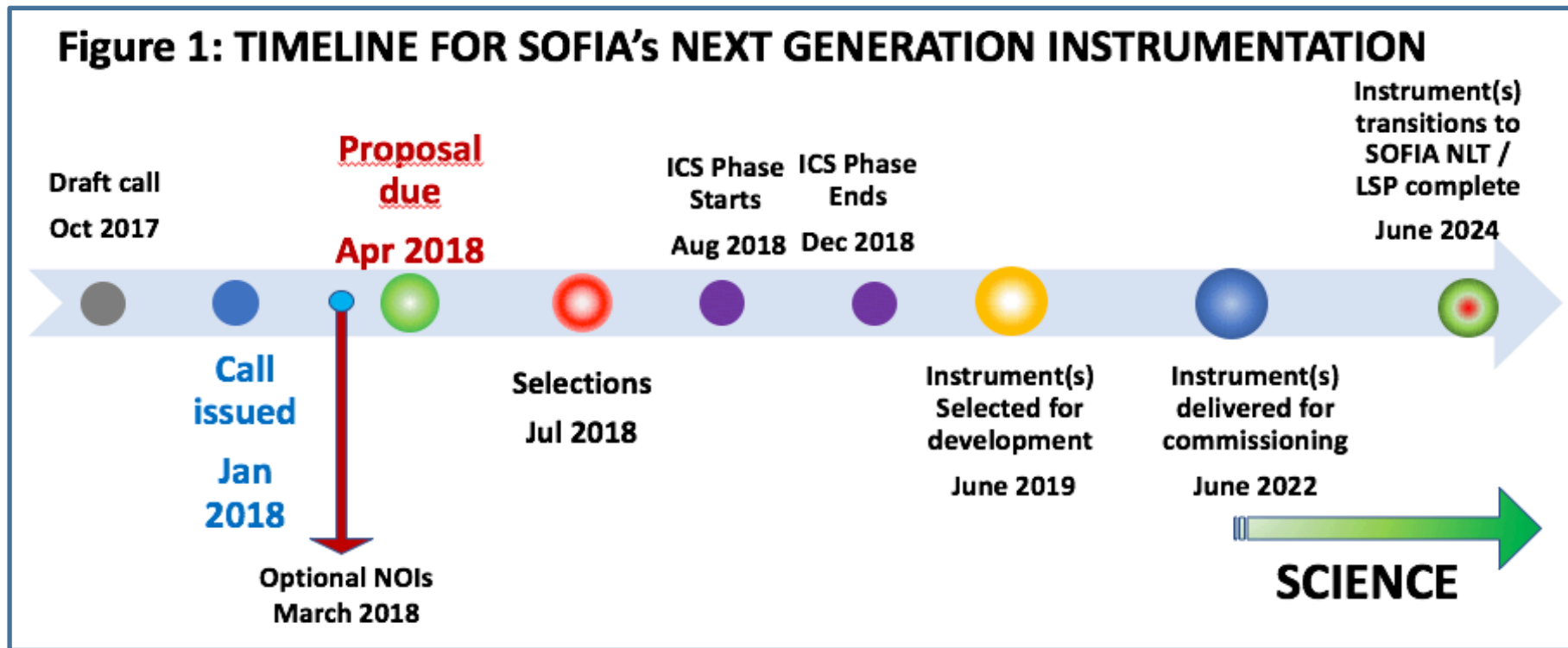
# Outline

- Timeline
- Philosophy of this Solicitation
- What has changed in this call
- Who can propose and firewalls

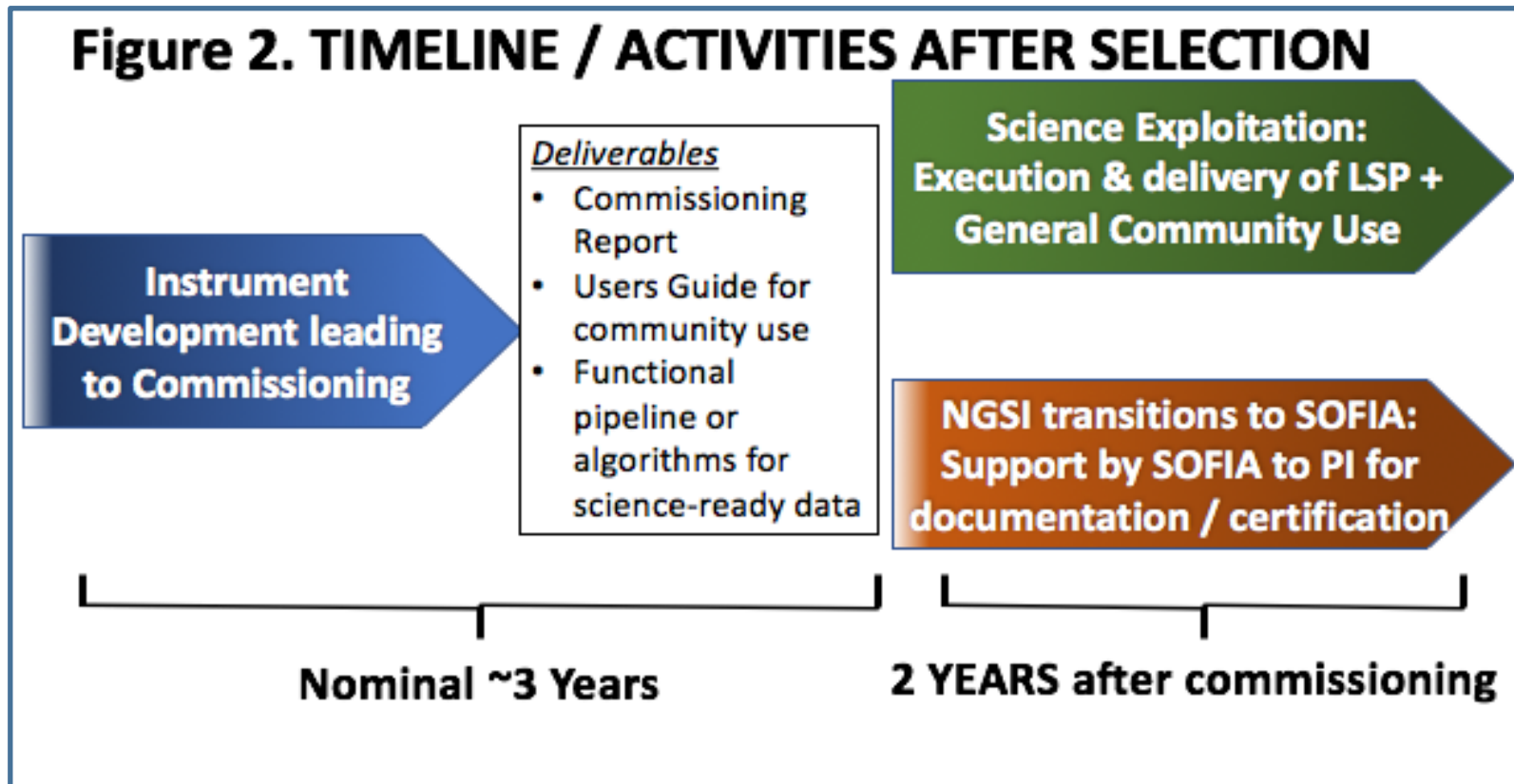
# Next Gen SI Timeline

- ☑ Released draft CfP for community comment 11/3/17
- SOFIA Town Hall Jan 2018 AAS
- Comments on draft due 1/12/18
- Planned date of CfP release 1/19/18
- Proposals due 90 days after release of CfP (4/18)
- Selections of winner(s) for Concept Study Phase ~ 7/18
- Concept Study Phase starts ~ 8/18
- Concept Studies due ~ 12/18
- *Spring 2019 Astrophysics Senior Review*
- Instrument(s) selected for development ~ 6/19
- Instrument(s) delivered for commissioning ~ 6/22

# Timeline for NGSi



# Timeline for NGSi



# Philosophy of Solicitation

- The next generation science instruments (NGSI) must be motivated by compelling science
- Selected team(s) must execute and deliver well-defined Legacy Science Program(s)
- Prioritize instruments that enable broad community usage and/or data of high archival value, but also allow for agile, “niche” instruments to solve important / outstanding science questions
- Allow for new instruments or upgrades/modifications to existing instruments; also allow for flexibility for future enhancements and modifications to NGSI
- Allow for a nominal three-year development period after funding begins but also allow for longer or shorter development timescales for optimal science return
- Allow for schedule and budget flexibility; make selections based on science return on investment
- Reduce requirements for the ICS phase compared to previous solicitations
- Make instrument development and acceptance process easier for teams (using lessons learned from past experience)

# Legacy Science Programs - Requirements

- The LSP must contain a detailed scientific justification and an observing plan which clearly describes the science targets, instrument modes and the time required to achieve the scientific goals, as well as the roles and expertise of the science team that will execute the LSP.
- It should be executable within a two year period following commissioning.
- Nominally LSP data have no period of exclusive use
- In the ICS phase and after commissioning, the proposing team(s) may refine the needed observing time (possibly based on a better understanding of the instrument) but may not change the scope of the scientific investigation.

# What Has *Not* Changed This Time

- Solicitation issued and selections made by NASA HQ
- Instrument development overseen by the NASA SOFIA Program
- Proposals are solicited from universities, industry and NASA centers
- Still a two-phase process
  - Initial down-selection followed by an Instrument Concept Study
  - Final selection of winning instrument(s)
- Instrument upgrade proposals are also encouraged



# What Has *Not* Changed This Time (2)

- USRA member institutions OK, but not USRA personnel (e.g. SOFIA SMO staff)
- Firewall put in place to isolate Program staff from potential conflicts of interest at ARC
- NASA Post-Docs (NPPs) can participate
- Foreign instrument proposals from countries other than Germany are solicited, on a no exchange of funds basis

# What *Has* Changed This Time

- Notices of Intent are requested, but not required, by 3/18
- The instrument development period is longer than the last time (nominal ~3 yrs vs. 2 yrs)
- Solicitation ***strongly*** emphasizes a Legacy Science Program (LSP) to be executed by proposing team that motivates the new instrument(s)
- Strong emphasis on:
  - Instrument for broad, compelling science and community appeal
  - Instrument that is likely to produce legacy archival data
- Intent is to make the instrument development and acceptance process easier

# What *Has* Changed This Time (2)

- Instrument Concept Study phase requirements significantly reduced compared to last time
- Funding profile not to exceed ~\$15-20M over three years starting after ICS phase, unless strongly justified
- Science Exploitation Period following commissioning for up to 2 years
  - SI team conducts their Legacy science
  - Science community will also do science with SI team support
- New SI is turned over to the Program after the SEP

# Please Read and Comment on the Draft

- Draft is available on NSPIRES at:

<https://nspires.nasaprs.com/external/solicitations/summary.do?method=init&soId=%7b89ACA478-F415-31AD-FCCA-3AEE0A2976C0%7d&path=open>

- All comments should be sent to Kartik Sheth  
[kartik.sheth@nasa.gov](mailto:kartik.sheth@nasa.gov) by 1/12/18

- Tell your friends and colleagues