



# Science Operations WG Proposal

Why IACHEC should also care about science operations

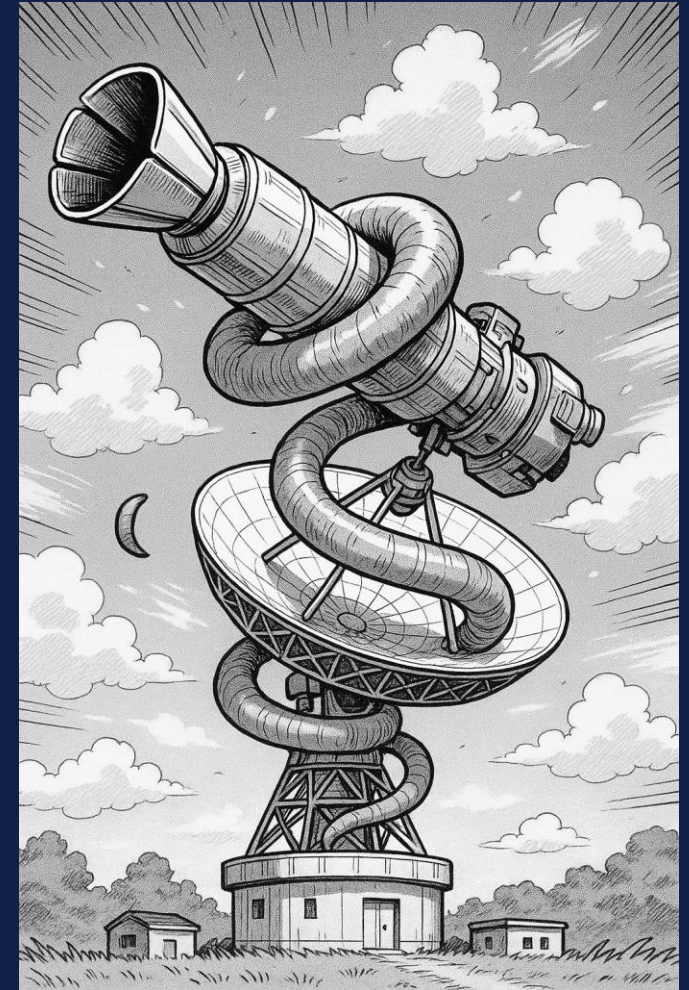
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→ THE EUROPEAN SPACE AGENCY

# Science operations and calibration are intertwined

- How to deal with decaying / evolving orbit
- Issues due failuers (reaction wheels, fuel); e.g., z-flip
- Changes in operations due to changing detector response (contamination)
- Changes of operations due to thermal issues
- Automatic / faster ToO response
- Distributed science operations and effective communication
- Extended mission phase, end of life operations
- Effects of coordinated observations / ToO on long- and short-term schedule



# IACHEC talks

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- IACHEC general session typically has “mission status” talks
  - They can focus on calibration status
  - Often include spacecraft status, but difficult to cover in limited time
- New working group would disentangle these talks
  - Focus on spacecraft status, issues, and future in the new WG
  - Discuss any changes to science operations

# Not a new idea...

esa/eso sciops workshop 2019

[Home](#) [Important dates](#) [Workshop Programme](#) [Abstract submission](#) [List of Participants](#) [Contact](#)

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SCIOPS 2019 > Previous SCIOPS Conferences

Please see below the list of previous SCIOPS Conferences

Year	Venue	Date	Topic
<a href="#">SCIOPS 2013</a>	ESAC	10-13 Sep 2013	Working T
<a href="#">SCIOPS 2015</a>	ESO	24-27 Nov 2015	Science D
<a href="#">SCIOPS 2017</a>	ESAC	17-20 Oct 2017	The Chall

In the past there were ESA – ESO science operations workshops

Focused on general operations topics and issues, like AI

Discontinued since a few years.

## ESA/ESO SCIOPS WORKSHOP 2022

### SciOps 2022: Artificial Intelligence for Science and Operations in Astronomy

16 to 20 May 2022

#### Rationale

Technologies associated with artificial intelligence (AI), machine learning, data science, deep learning, and neural networks are already embedded in our daily lives. Also astronomical research is deeply impacted by the advances of AI technologies. The large amount and complexity of data produced by modern astronomical facilities require AI based technologies to allow efficient processing, and novel, synoptical, analysis and discovery methods. They add value to both engineering, observatory operations and science, with the final goal to enhance data exploitation.

- Focus on Science Operations issues of (high-energy, astro-observatories) satellites
- Synergies with coordinated observations WG, but different focus
- Could attract operations scientists that are not directly related to calibration to IACHEC
- Provide guidance for new missions
- Brainstorm modernization for old missions
- Help solve common issues together

