

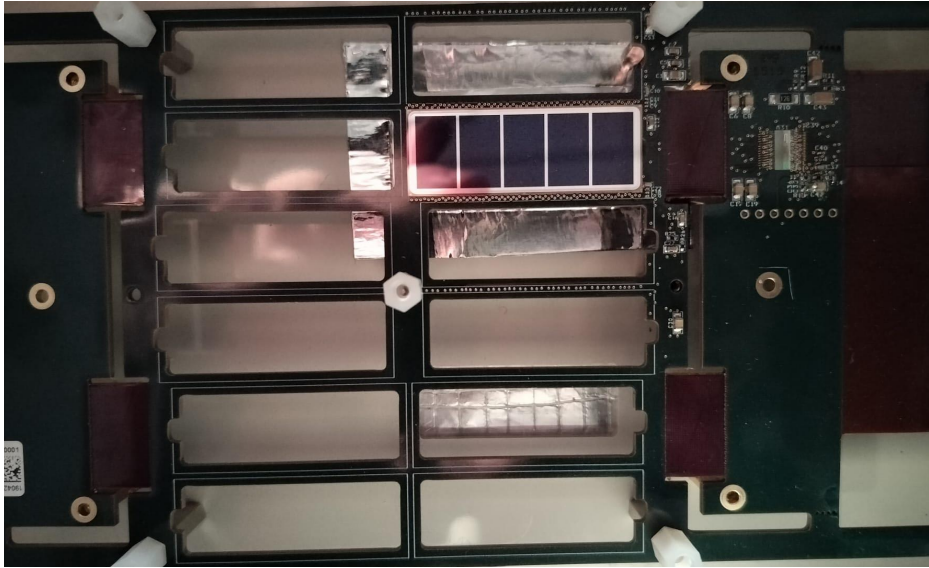
# SISCO

## Siswich Instrument Spectral Calibration Optimization

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### Deliverables and milestones set in the proposal that have been achieved so far:

- One publication (under review, minor revisions delivered on 02/11/2023) showing the results of different calibration methods (Dilillo G., Marchesini E.J. et al., Astronomy & Computing)
- A user-friendly, automated calibration software adapted for **\*one\*** Siswich detector currently available (**mescal**, <https://zenodo.org/records/10065966> )
  - First Siswich testing prototype (HERMES-like) built and connected to the test equipment.
  - Second Siswich testing prototype (THESEUS/XGIS-like) built, ready for testing.
  - New calibration sources have been bought and have arrived to OAS-Bologna.



An HERMES prototype board with 10 channels, set up for testing for the SISCO project. The scintillator crystals will be attached after the first tests are concluded.

### Ongoing work:

- Testing and acquiring data for the siswich currently set up in the laboratory
- Improving the pipeline to include widow channels & gamma calibration function
- Preparing a new instrument for testing during 2024, calibration sources have arrived
  - Preparing the laboratory equipment acquisition form for 2024

## Future developments:

We expect to be able to use data from a THESEUS/XGIS prototype, together with the instruments currently available at the laboratory.

## Criticalities:

The acquisition of needed equipment is not an easy and fast process, despite the efforts of the administration.