

SERGIO CAMPANA - INAF BRERA

INTERNAL PROPOSALS AND PUBLICATION POLICY

WHERE DO WE START FROM?

- ▶ SOXS GTO is made of 180 nights /yr for 5 years
- ▶ 1 night = 9 hr
- ▶ Observing efficiency (shutter open) ~ 70%
- ▶ We will share with ESO bad weather (~20% of the nights, 10% on SOXS)
- ▶ Classification program (~10%)
- ▶ **920 hr per year on source**

SOXS GTO TIME SHARE

- ▶ INAF 49%
- ▶ Weizmann Institute 24%
- ▶ Queen's Univ. Belfast 8%
- ▶ Finland 7%
- ▶ Chile 6% (plus part of the Chilean time?)
- ▶ Tel Aviv University 4%
- ▶ DAWN % Aarhus Un. 2%

WHAT CAN WE OBSERVE UNDER THE SOXS-GTO?

- ▶ The SOXS GTO is entirely dedicated to time-domain astronomy
- ▶ All observations are "Target of Opportunity" (TOO) observations
- ▶ For non-transient sources, we can apply for ESO-community time
- ▶ For transient sources not covered by the GTO, we can still apply for ESO-community time

WORKING GROUPS AND ESO PROPOSALS

Proposals to be submitted to ESO/OPC are grouped into 4 extensive proposals (TBC) (the proposals will not have the same share of time)

- Stellar variability, YSO and exoplanets (WG1-2)
- Compact objects in our Galaxy and beyond (X-ray binaries, novae) (WG3-4)
- Explosive extragalactic transients (all SN types, GRBs, FBOTs, etc) (WG4-5-6-7-8)
- Multi-messenger and nuclear sources (GW, neutrino, TDE, AGN) (WG9-10-11-12)

- Classification program (WG13)

Submitted every 6-12 months to keep up with new sources & unsuccessful proposals

NEEDS FOR CLEAR TRIGGERING CRITERIA

- ▶ TOO's will be accepted on the ESO-community time, too
- ▶ We need to define clear triggering criteria to limit frictions
- ▶ If an ESO-TOO target comes in within 1 hr before the daily telecon, we can decide if it collides with our GTO (and then **we** decide to observe it under the SOXS umbrella) or we leave it as is (and observe it under the ESO time)

HOW SHOULD WE USE SOXS IN THE BEST WAY?

- ▶ SOXS is similar to X-shooter, with a somewhat higher efficiency in the UV-VIS but it is mounted at the NTT Nasmyth focus (3 reflections vs. 2 reflections of XS)
- ▶ XS is better than SOXS in any single aspect

BUT

- ▶ SOXS is always mounted and we do not need to ask for permission to observe
- ▶ The observing schedule is dynamic
- ▶ We have a reaction team for urgent observations
- ▶ **PROMPT OBSERVATIONS - COMPLETE SAMPLES - EXTENSIVE OBSERVATIONS**

INTERNAL PROPOSALS

- ▶ one page long plus figures
- ▶ clear triggering criteria
- ▶ clear time request (to leave also space for an eventual ESO proposal)
- ▶ probability of triggering the proposal (many proposals will trigger on rare objects, so we **factor** the time request with this probability)
- ▶ clear country time split indications (proposals might be multi-PI but we need to have a clear indication of who is putting the needed observing time)

INTERNAL PROPOSALS

In addition to the SJ and time request, there will also be a form asking for:

- ▶ need for urgent/RRM-like observations (and how often)
- ▶ need to interrupt ULTRACAM observations
- ▶ papers expected to be submitted within 6/12 months
- ▶ maximum number of triggers

INTERNAL PROPOSALS – TIMELINE

- ▶ Submitted by the end of September 2024
- ▶ There might be competing proposals
- ▶ Sorted out by the SOXS Science Board by the end of November 2024
- ▶ Writing of the 4 “extensive” ESO proposals submitted to the OPC by April 2025
- ▶ SOXS public conference in June/July 2025 in Garching, illustrating SOXS (likely after 1-2 commissioning runs) and our GTO to the community

PUBLICATION POLICY (I)

Papers based on data coming from a single internal proposal:

- ▶ the internal proposal PI indicates a publication lead (PL), it might her/himself, too
- ▶ the PL informs the Consortium (and PI) that a new paper will come (title, subject, lead author, time to submit & put the same info on the SOXS wiki)
- ▶ when a preliminary draft of the paper is ready, the PL will distribute it within the WG, to collect comments. It is up to the PL to invite to sign the paper WG members who provided useful enough comments (i.e. it is **not** automatic that a WG member appears on all the papers of the WG)

PUBLICATION POLICY (II)

- ▶ when the draft is ready, the PL informs the SOXS consortium that the draft is prepared for submission
- ▶ Normal papers: two weeks reaction time from the Consortium
- ▶ FAST papers: five days reaction time from the Consortium (for FAST status ask the PI)
- ▶ Eligible people can sign the paper and (hopefully) provide comments.
- ▶ All SOXS Consortium members can provide comments and, again, it is up to the PL to include them in the paper

JUSTE RETOUR

- ▶ First bunch of authors: PL is responsible for the authors' list and order. The PL can also invite people outside of the Consortium if their insight is needed for the paper
- ▶ Observer list: people who carried out one observing run are entailed to choose one paper to sign
- ▶ Feeder surveys and late-time observations: in case, under the PL
- ▶ Builders list: Work Package (WP) Leaders, Archive Lead, and Operation Lead 1/4 of the papers; Project Office (Principal Investigator, Project Manager, System Engineer, Instrument Scientist) 1/2 of the papers; other contributors to the building of SOXS 1/7 of the papers.

GRAND PAPERS

For very important results (e.g. the counterpart of a GW trigger) the PI has the right to declare the “grand” paper status, allowing anyone in the Consortium to sign the paper

TNS, GCN, ATEL

- ▶ These are written, signed and issued under the supervision of the weekly operation shift leader, who decides the authors' list
- ▶ For urgent, fast-reaction observations, it will be the PI of the corresponding internal proposal who decides the publication of the fast results (or his/her delegate), e.g. GRB, GW, etc.

DATA NOT ENOUGH FOR A PAPER

- ▶ The PI of the internal proposal is in charge of the negotiations
- ▶ the SOXS Science Board should be immediately informed
- ▶ a **minimum** of 5 SOXS members should be included in the paper, 3 from the internal proposal, the SOXS PI and one member of the Science Board. The PI and/or the Science Board can ask the internal proposal PI to negotiate for more authors

CONCLUSIONS

- ▶ SOXS-GTO: large but not infinite, we will have to make cuts & ask exactly for what you need
- ▶ Proposals need clear triggering criteria & estimate of probabilities
- ▶ I would prefer different small proposals for each WG, in any case, need for clear indications of timeshares
- ▶ Publication policy based on internal proposal PI delegating the lead of each publication to a publication lead (might be her/himself)
- ▶ Juste Retour for people who built the instrument