



THE 2ND
**PIETRO
BARACCHI**
CONFERENCE

Contribution ID: 3

Type: **not specified**

Next-generation optical facilities in the multi-messenger era: the SOXS case

Tuesday, 22 October 2019 09:30 (30 minutes)

SOXS (Son Of X-Shooter) is a spectrograph for the ESO NTT telescope, capable to cover the optical and nIR bands, based on the heritage of the X-Shooter at the ESO-VLT. SOXS will be built and run by an international consortium, carrying out rapid and longer-term Target of Opportunity requests on a variety of astronomical objects. SOXS will observe all kind of transient and variable sources from different surveys and satellites. These will be a mixture of fast alerts (e.g. gamma-ray bursts, gravitational waves, neutrino events), mid-term alerts (e.g. supernovae, X-ray transients), fixed time events (e.g. close-by passage of minor bodies). The design foresees a spectrograph with a Resolution-Slit product ~ 4500 , capable of simultaneously observing over the entire band the 350-2050 nm spectral range. The limiting magnitude of $R_{AB} \sim 20.5$ (1 hr at $S/N \sim 10$) is suited to study transients identified from on-going imaging surveys. Light imaging capabilities in the optical band (grizy) are also envisaged to allow for multi-band photometry of the faintest transients.

Primary author: CAMPANA, Sergio (INAF - Brera)

Presenter: CAMPANA, Sergio (INAF - Brera)