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Special Narrow Band Interline Sky Continuum Spectra with NOT/ALFOSC

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Special narrow band spectroscopic observations with ~10nm band widths centered at wavelengths 672nm, 770nm, 870nm and 1050nm with resolution of R~4000 are presented along conclusions on how the night sky brightness affects potential future extremely large telescope (ELT) spectrograph designs . The presented observations are less prone to be contaminated by bright hydroxyl (OH) emission lines than any of the previous similar measurements, thus providing a more reliable estimate on the night sky continuum brightness than before. Despite being limited to the wavelengths detectable for a Silicon detector, the obtained measurements will indicate if more or less continuum flux should be expected at near infrared (NIR) wavelengths beyond 1um where OH lines are ubiquitous and gains from alternative, stray-light free, spectrograph design would have the highest impact on the astronomical observation.

Primary author: VIUHO, Joonas (DAWN, Niels Bohr Institute, University of Copenhagen/Nordic Optical Telescope (NOT))

Co-author: Dr ANDERSEN, Michael I. (Niels Bohr Institute, University of Copenhagen)

Presenter: VIUHO, Joonas (DAWN, Niels Bohr Institute, University of Copenhagen/Nordic Optical Telescope (NOT))