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Special Narrow Band Interline Sky Continuum Spectra with NOT/ALFOSC

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Special narrow band spectroscopic observations with $\sim 10\text{nm}$ band widths centered at wavelengths 672nm, 770nm, 870nm and 1050nm with resolution of $R\sim 4000$ 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 $1\mu\text{m}$ where OH lines are ubiquitous and gains from alternative, stray-light free, spectrograph design would have the highest impact on the astronomical observation.

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