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## Data processing of NACO data: FAQs

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### Data processing of NACO data: Frequently asked questions

- **Are there any known problems with NACO data?**

**Answer:** The quality control group keeps a list of known problems at

<http://www.eso.org/observing/dfo/quality/NACO/ServiceMode/ServiceMode.html#problems>

- **I am trying to reduce NACO data and found that my FowlerNsamp dark frames are negative. Is there any recommended procedure to subtract the dark from the flatfield frames in this mode? Is the dark current insignificant that it does not make a difference if it is not subtracted?**

**Answer:** Indeed, for small DIT values a FowlerNsamp (FNS) readout dark frame is normally negative, as is a non-illuminated flat frame in FNS read mode with the same DIT. We recommend subtracting in any case a master dark from the raw twilight flat frames in order to distinguish between the additive and the multiplicative terms, that is to get the flat field (the relative pixel-to-pixel response) not contaminated by additive terms. During QC processing a master dark and the raw flats are submitted to the NACO twilight flat recipe. In this case the dark is subtracted and the flat frames are fit by a linear function, pixel-by-pixel. Finally, please be aware that for lamp flats no dark is required, because NACO lamp flats come in a set of three off-lamp and three on-lamp frames. These can be subtracted from each other thereby removing any dark signal.