

C-OPS Dark Corrections

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Question: So there is the "launch dark correct" within the software, but there is also the option of just starting a cast with the caps on the radiometers and collecting data for a minute or so (as a "dark cast") — which one would be recommended before/after each day's session? Or would both be preferred? Thanks for your help!

Answer: The dark correction routine should be run at the start of your intense field work. It would best be done after the instrument is at or near the temperature where it will be recording data. The instrument should have been on for approximately >5 minutes to allow internal temperatures to equilibrate. It is important not to do the correction in a warm lab and then take it out and deploy it in, for example, the Arctic Ocean.

During your normal profiles, you might want to let the system "warm up" for around 5 minutes before starting to collect data. If you do not have time, then that is probably OK.

All that being said, the dark corrections drift the most over the 25–50°C range.

After you run this first dark correction, then record a short dark "profile." If you look at the dark profile, you should see data randomly varying about zero.

You should probably run a short dark profile with the instrument capped every day. If you have a chance to look at the data from these dark profiles and see that any of the channels are not randomly about zero, then you might run another dark correction. However, I am guessing that at the cold temperatures you are working at, you will not see significant variation.