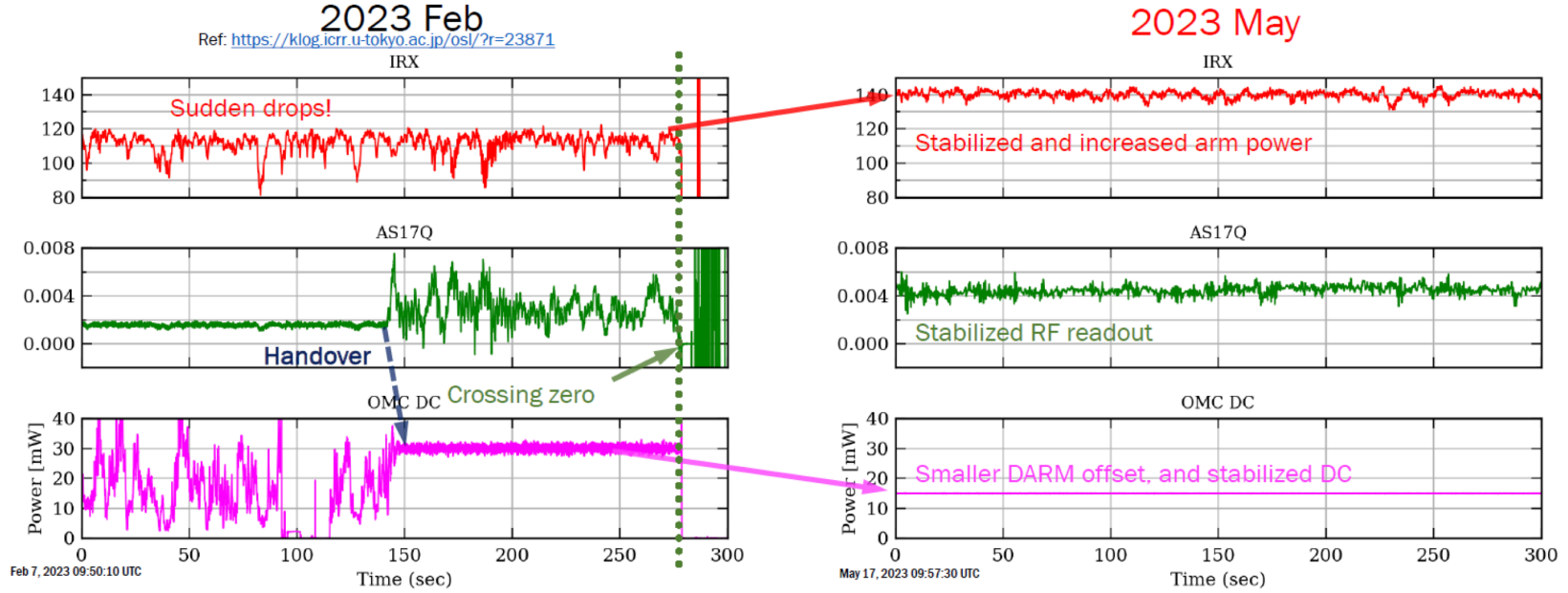


- Implementation of the Alignment Sensing and Controls (ASC)
 - I will not write the detail well, we implemented the ASC controls
 - Wave Front Sensor(WFS)
 - Beam position centering system by adding the dither to mirror and control the signal using injected frequency at DARM and so on
 - Alignment Dither system (ADS) by adding the dither to mirror and control the signal using injected frequency at certain (RF)PDs
 - Beacon controls to OMC
- Remaining part : PR3 ASC : Need the manual alignment during O4a (Rate : about once per day)

Alignment sensing and control



- Internal laser power is drastically stabilized; and increased.
- Better AS contrast allows to do handover with smaller DARM offset.
- Now ready to increase the input power from 1 W for O4b!

- Keep locking without any serious troubles (1.1 -1.4 Mpc depending on the PR3 alignment)
 - 21 hours lock at maximum
- Finish the O4a run at 21st June

Sensitivity when starting O4a

