

Checklist: <HiFI operations>

<GRE-HIFI-AIP-CL-0004>

Recommended settings for science data (Suffix: sd):

- Full FOV:.....# images: 500, Rate: 47 Hz
- FOV 1280 X 1024:
(x= 640,1919; y= 568,1591).....# images: 500, Rate: 100 Hz
(x= 640,1919; y= 566,1593).....# images: 500, Rate: 100 Hz
- HD FOV 1920 X 1080:
(x= 302, 2239; y= 539, 1620).....# images: 500, Rate: 98 Hz

Notes: Always use same exposure times in both cameras! Counts between 40000 and 60000 are optimal. Cameras saturate at 64000 counts (avoid saturation!).

Needed calibration data (necessary for the reduction pipeline “sTools”)

1. flat field (Suffix: ff)

(Taken at disk center; watch out for solar structures such as pores, sunspots, etc.)
Telescope moving speed as high as possible (100”). Big radius 100”.
Images: 2000 Loops: 1 Rate: 10 Hz

→ Defocus telescope: Move M2 up to defocus telescope (arrow up 1.0 mm).

2. flat field defocused (Suffix: df)

Images: 500 Loops: 1 Rate: 10 Hz

→ Stop flat-field movement

3. target defocused (Suffix: tg)

Images: 100 Loops: 1 Rate: 47 Hz AO locked

4. pinholes defocused (Suffix: small (ph) and large (pl))

Images: 100 Loops: 1 Rate: 47 Hz AO locked

5. pinhole grid (Suffix: pg)

Images: 100 Loops: 1 Rate: 47 Hz AO locked (might require fewer modes to lock: ~40).
Increase light level of AO to max

→ Focus telescope: Move back M2 to original value (arrow down 1.0 mm and reset step width).

6. dark (Suffix: dk)

Exposure time: same as observations and same as flat fields (repeat darks for all used exposure times). # Images: 500 Loops:1 Rate: 47 Hz

Warnings/Notes

Suffixes are mandatory since they are used in the data reduction pipeline „sTools“.

The 47 Hz framerate cannot be exceeded for the full FOV, otherwise artifacts will be present in the images.

Change Log				
Vers.	Date	Author	Description of Changes	Sect./Para.
1	12.03.18	Christoph Kuckein	New Document	
2	01.05.18	C. Kuckein	Comments about data reduction, # loops, stop f-f movement, AO status, added arrows	
3	18.07.18	L. Kleint	changed 49->47 Hz (according to handwriting in observing room). Added open2 to pinhole grid.	
4	10.06.19	C. Kuckein	Minor changes (defocus telescope 1.2mm → 0.6 mm; more explanation in points 5. and 6.)	