

Service works at DK154 in November 2023

These works were done by Kamil Hornoch, Miroslav Velen, two LSO technicians (point 4), and Projectsoft (point 5).

- 1) The recharging of the dome batteries from the contacts on the dome was repaired on 2023 November 8.
- 2) We washed the cover glass of the allsky camera on 2023 November 8.
- 3) We replaced the non-functional contactor "1K1" in the cabinet R1/1 by a spare one on 2023 November 11. The contactor is used when lifting the RA drive pre-load counterweight located in the telescope pier.
- 4) The routing of the DEC drive pre-load counterweight wire was repaired on 2023 November 13. The telescope was re-balanced then again.
- 5) With a remote assistance by Projectsoft, we installed the new computers Win1/2 to the telescope control system on 2023 November 13.
- 6) We went through the complete Projectsoft checklist during 2023 November 14, see the protocol (Attachement 1).
- 7) New pointing model was made during the first half of the night 2023 November 15/16. It has a rms residual of 6.7 arcsec when slewing to target's position from the "right" direction in declination so that to eliminate the existing backlash in the declination drive mechanics (i.e., from south in the Main position of the telescope and from north in the Reverse position). In a case of slewing from the other ("wrong") direction, the error of pointing can be as high as 2 arcmin.
- 8) We tried to inspect the worm gear of the declination drive in order to reveal a cause of the ~2-arcmin backlash in the mechanics, but it was not possible to open the cover of the declination gear because it is too strongly glued with silicon there.
- 9) We changed the two parameters "8 Proportional gain of controler" and "9 Integration time of controler" for the Declination drive control to 1.0 and 100.0/s, respectively, in the Telescope control parameters of the TCS. With the previous values of the two parameters (3.0 and 0.0), the drive worked suboptimally.
- 10) The DFOSC image data from 2023 January-October were copied to an external HDD and we will check them against data downloaded to the dk154-storage1 server. A sufficient space on the data disks of Lin1 will be then cleared for our entire 2023-2024 season.

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2024 January 6

Attachements: 1) DK154Checklist_202211.pdf