

Maintenance and upgrades of DK154 during September-October 2015

These works were done by Petr Pravec, Miroslav Velen, Peter Kušnirák, Bernardo Ahumada, Tomáš Turek, Daniel Krykorka, and colleagues.

- 1) We updated the pointing model on 2015 September 25. Parameters HS, DS and TD were adjusted (for that Michael Andersen adjusted the telescope with moving the secondary mirror in April). The pointing is precise with the rms residual 8 arcsec now again, but there remains a small systematic shift in DEC in the Main position of the telescope of -13 arcsec. A creation of a full new model is considered unnecessary for our observing programs (unless someone wished to spend several hours of his night time on getting data for creating the model).
- 2) We went through the complete Projectsoft checklist on 2015 October 8, see the protocol (Attachement 1).
- 3) The wire to the inductive sensor S23 in the dome was found torned out and the sensor damaged. We replaced the sensor with a spare one.
- 4) We heard a high-frequency noise from the DEC gearbox. We lubricated it and the noise is largely gone now. But the gearbox should be checked more.
- 5) One outside cover panel on the top of the dome was found loosened and we fastened it.
- 6) Batteries (64ks) in the UPS were replaced on 2015 October 9. The batteries are CSB, Model HRL1234WF2FR.
- 7) Following two new features were added to the TCS on 2015 October 12 and 13: a) The third wind speed limit. When it is exceeded, the slit opening and the dome rotation are locked and an on-site inspection of their mechanics is called for. We set this limit to 28 m/s. b) An indication of the state 0 of the switch of the ventilation windows was added.
- 8) The limiting pyrgeometer value was set to -55 W/m^2 . This better corresponds to usable conditions in certain circumstances.
- 9) The DFOSC image data from the 2014-2015 season were copied to an external HDD and they were checked against data downloaded to the dk154-storage server. A sufficient space on the data disks on Lin1/2 was cleared for our entire 2015-2016 season.
- 10) There occurred two “spontaneous” openings of the dome slit during daytime on 2015 October 18. Tomáš Turek and Daniel Krykorka identified a likely cause --- a spurious signal in the backup (emergency) communication system for opening/closing the dome. They have changed it on October 21 so that opening is no longer allowed in the backup system (but it may be allowed again as a provisional, temporary solution if/when the regular wi-fi communication with the dome slit fails in the future); emergency closing of the dome slit is still allowed.

Petr Pravec, 2015 October 28

Attachements: 1) DK154Checklist_201510.xls