Questions, Comments and Answers following the presentation

Monitoring of the X-shooter response function
Wolfgang Hummel

Kaufer: Are you notified about the lamp changes or do you have discovered then in the data?

Lamp changes are documented in the problem report ticket system, which we are on cc. They are not reported in the fits headers.

Deustua: You are seeing a change with time from the efficiency? Do you have a way of determining the changes in the detector over time? For the IR detectors, this is an interesting question.

Yes, we see changes in the efficiency over time. No, we cannot generally decompose the observed loss in efficiency into different contributing components like those coming from the detector, the instrument or the telescope. Only in a few cases, like the recent jump seen in the efficiency data from December 2016, which can be associated to the M1 re-coating, a partial decomposition can be retrieved from the data.

Kerber: Comment: Option of other light sources for flat fielding: laser driven light source (LDLS) tested on UVES shows 1000x more flux compared to D2 at blue end. It shows 2% stability over few thousands of hours and a lifetime ~1500 h. This option might address the source of the issue presented.

Modigliani: What is the level of accuracy at which you can clip out response curves due to non-photometric nights?

Excluding non-photometric nights the response function varies by less than 10% in intensity. The spectral slope, the first order chromatic deviation, varies by less than 2%.

Osip:
1. *I am confused about response function and efficiency over time. Can you see the effect of M1 and M3 cleaning and aluminization?*
2. *Does your response function look only at internal lamps? If so, how do you see the lamps effect on M1?*

1. Yes, the upper sharp boundary in the efficiency of the long-term data set shows a jump in December 2016, caused by the aluminization of M1 and M3. The efficiency is independent on the flat field lamps.

2. The response function is derived from the observation of flux standard stars. The spectra are flat fielded as part of the data reduction schema to eliminate the blaze function of the Echelle spectrograph. As an unwanted side effect the flat field lamp SED is introduced in the response function.