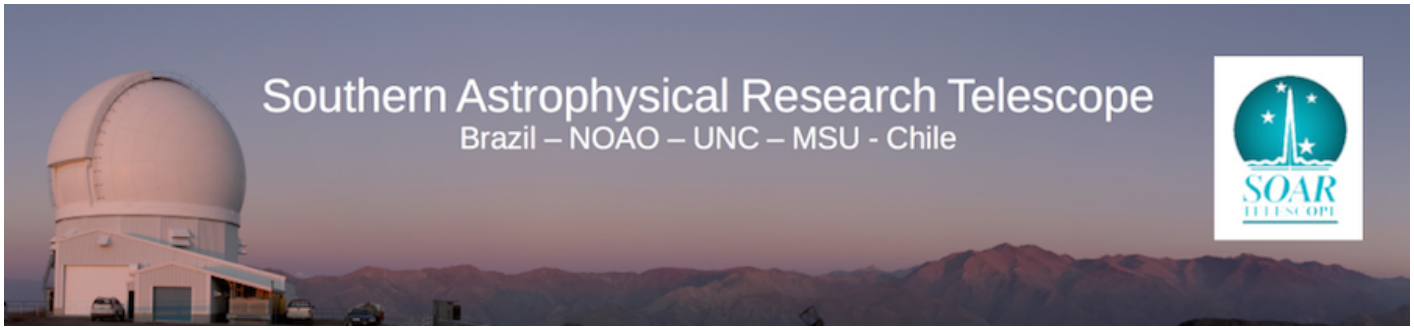

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Differences from Blanco

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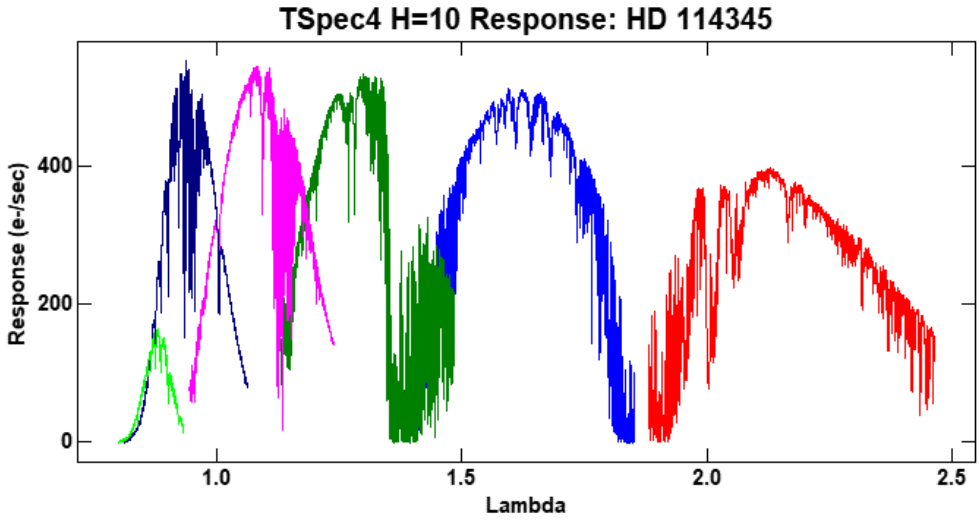
Guiding

On SOAR, the regular optical guider can be used; it is preferred as it has a faster response and allows tip-tilt correction using the tertiary mirror. It is capable of doing precise offsets, but does not currently support non-sidereal guiding (as this requires continuously moving the guide probe during the observation). Note that the guider is behind a dichroic and therefore can be used on-axis (i.e., you can guide on your target if its brightness is suitable).

Short Wavelength Cut-Off

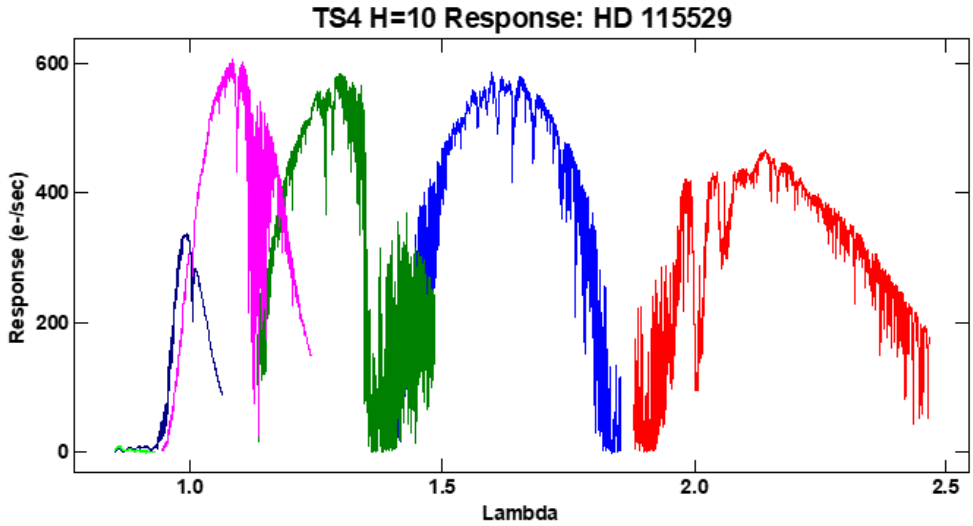
TSpec is fed by a reflection off a dichroic, which also transmits light to the guider. As a result, the response cuts off below 1.0 microns. Compare the response on Blanco (top) with the response on SOAR (bottom). The nominal point of 50% reflectivity of the dichroic is around 0.95 microns.

Blanco A-Star Response: HD 114345 A0V



- HD 114345 is A0V C star, V = 7.77, J = 7.525, H = 7.542, K = 7.498
- To get response used Gain = 1.1 e-DN, t = 10 sec and mag = 7.5 => divide total counts by 90.91 to get response. Files: sp_0039, 0040.

SOAR A-Star Response: HD 115529 A0V



- HD 119434 is A0V C star, V = 6.173, J = 6.098, H = 6.116, K = 6.091
- To get response used Gain = 1.1 e-DN, t = 10 sec and mag = 6.116 => divide total counts by 325.2 to get response. Files: SPEC_OBJ0204.

Figure 1 - Comparison of TSpec response on Blanco and SOAR telescopes. Note the reduced response on SOAR shortward of 1.0 micron. Above this wavelength, the SOAR response is comparable (possibly better).
