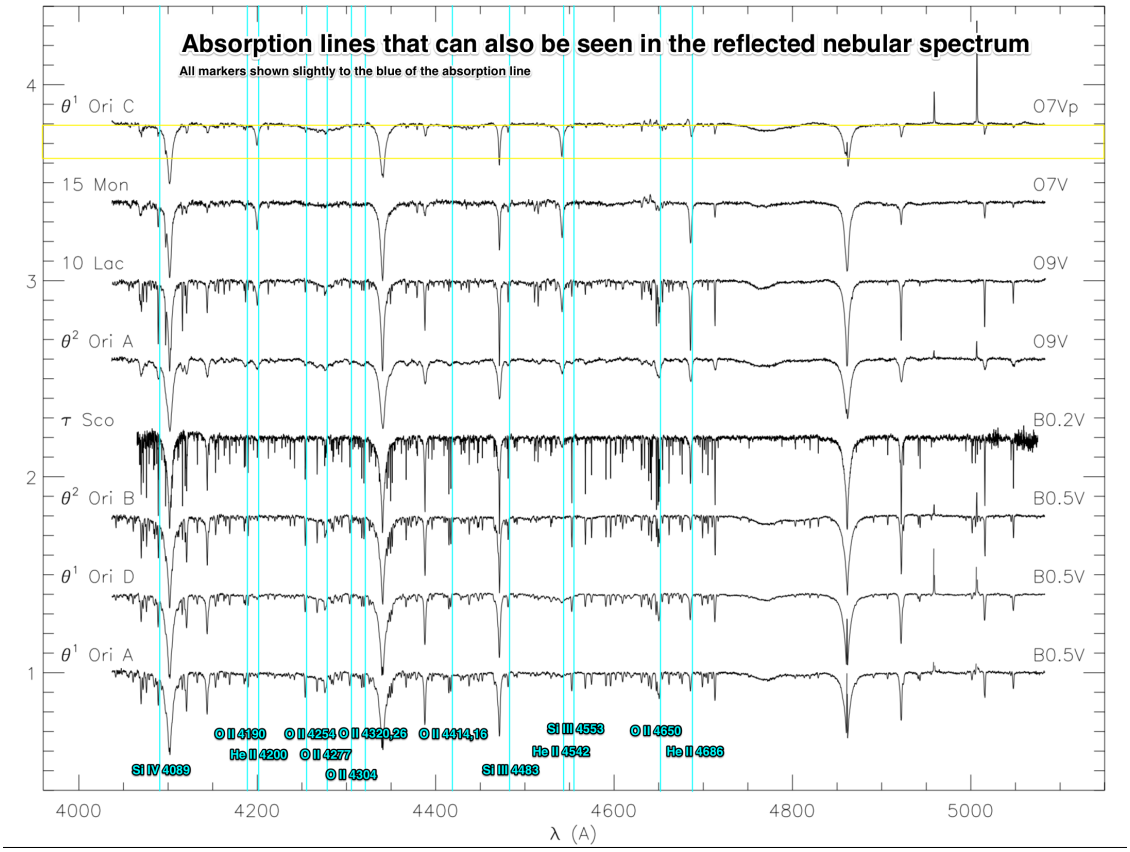
Trapezium star spectra from Simón Díaz et al (2006)



The He II 4542 line is strongest in theta 1 C, about 3x weaker in theta 2 A, and absent in the others. So it can be used to track the fraction of the continuum that is scattered th1C.

The Si III lines are seen in all th1A, th1D, but very weak in th1C, so can be used to track fraction of continuum that is scattered th1A,B,D. Although this assumes that there is no Si III emission from the nebula.

Once that is done, we can estimate the absorption EW of the O II lines in the nebular spectrum. This is needed to correct the observed O II emission line EW for absorption lines in the underlying scattered continuum.

In the region around th2A we can use the He II 4686 line to track the scattered continuum and use that to correct the O II. For instance, EW(4651) ~= 0.7 EW(4686) for th2A. However, the O II absorption is so strong that we probably won't be able to recover any emission from that region.

For the Trapezium, we cannot use 4686 because th1C has an inverse P Cyg profile, which

depends on phase, and presumably on viewing angle. And we don't know what the average profile seen by the nebula is.