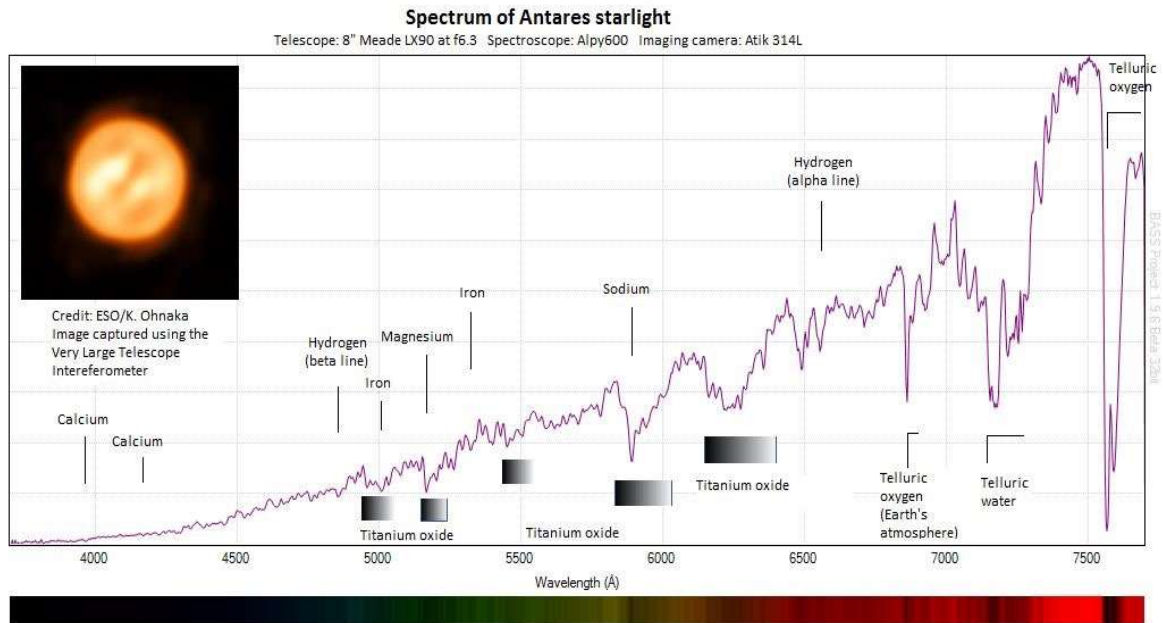


Description of Antares

Spectrum.



In summer, the supergiant star Antares is an unmistakable orange beacon low above the southern horizon; one day in the far future it will explode in a spectacular supernova. The European Southern Observatory's Very Large Telescope Interferometer has just captured detail on the star's surface, not bad for a star 550 light years away! Whilst I can't resolve Antares' disc I can analyse its light with my spectroscope. Antares' spectrum brightens towards the infrared showing it has a relatively cool surface ('only' about 3400K in fact). Titanium oxide molecules are stable at these temperatures producing characteristic absorption bands in the starlight. The cool surface temperature also generates many intense metal absorption lines some of which I have annotated. When I captured the spectrum, Antares was just 12 degrees above the horizon giving intense absorption bands from oxygen and water molecules in the Earth's atmosphere. Antares is a fascinating star in every sense

Hugh Allen: August 2017.