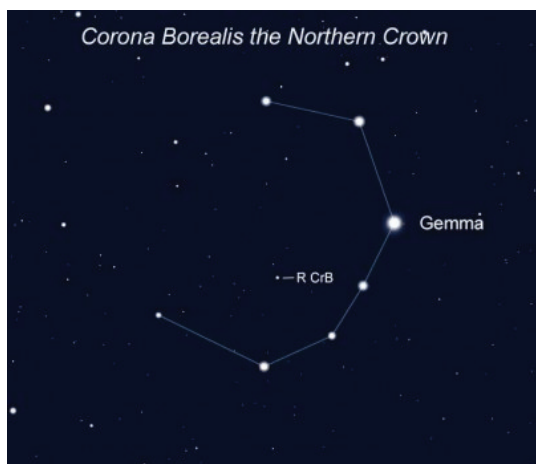


What are the R Coronae Borealis stars?

The RCB stars are interesting and important as they represent a short-lived stage of stellar evolution and reveal some detail on dust formation processes. Thus, R Coronae Borealis and other RCB stars are quite unusual and worthy of much attention. Since the Pigott's first observation, only about 100 RCB variables have been discovered, making this class a very rare kind of variable stars.



English amateur Edward Pigott was the first to notice **R Coronae Borealis'** (R CrB) peculiarity of fading down, in 1795, while most of other variables outbursts by brightening. RCB stars are yellow supergiants usually ten thousand times as bright as the sun. Their atmospheres are rich in helium and carbon.

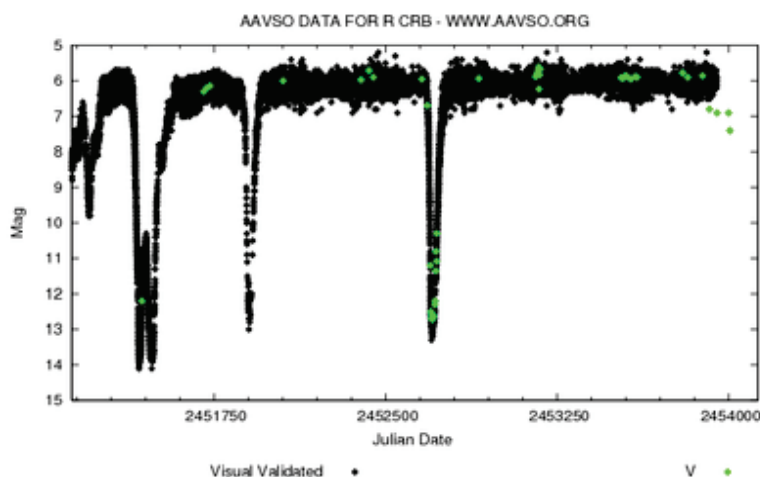
These stars spend most of their time at the brightest magnitude and then unpredictably turns faint down by up to 6-8m! The current fading is the deepest and longest on the record.

Edward Pigott (1753 – 1825) was an English astronomer who left a considerable contribution to the science. Working as an astronomer with his father, he observed Jupiter's satellites and the transit of Venus of 3 June 1769. On 23 March 1779 he discovered a nebula in the constellation of Coma Berenices, which later became known as M64. Notably, this discovery occurred just 12 days before that by Bode and almost a year before Charles Messier independently reported of the same object.

In 1784 Edward Pigott detected the variability of Eta Aquilae, the first known representative of Delta Cephei stars.

There are more questions than answers in models shedding light on carbon dust formation near the R Coronae Borealis stars. Two models have been proposed, but there is definitely much of research ahead.

Among other notable RCB stars are: DY Persei, U Aquarii, UX Antliae, W Mensae, RY Sagittarii, V854 Centauri.



T Coronae Borealis – a recurrent nova

Not far from the magnificent R CrB, there is an interesting variable star with the opposite behavior. T Coronae Borealis is a recurring nova. It spends decades at 10th magnitude, then rises its brightness to 2nd or 3rd magnitude. Its last eruptions came in 1866 and 1946. The next could happen any time, so it is important to monitor it.

Ivan Adamin