

# THE EVOLUTION OF R CORONAE BOREALIS STARS

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Among the hydrogen-deficient post-asymptotic giant branch (post-AGB) stars are the R Coronae Borealis (RCB) stars, a small group of carbon-rich supergiants. About 50 RCB stars are known in the Galaxy and the Magellanic Clouds. Their defining characteristics are hydrogen deficiency and unusual variability - RCB stars undergo massive declines of up to 8 mag due to the formation of carbon dust at irregular intervals. Apparently related to the RCB stars are the hydrogen-deficient carbon (HdC) stars. The five known HdC stars are similar to the RCB stars spectroscopically but do not show declines or IR excesses.

I will discuss the two scenarios that have been proposed for the origin of RCB stars, in the light of recent observational data. These scenarios are, the double degenerate and the final helium-shell flash models. The former involves the merger of a CO- and a He-white dwarf. In the latter, a star evolving into a planetary nebula central star is blown up to supergiant size by a final flash. I will also discuss the formation of dust around RCB stars with an emphasis on new observational data.