Plenary Talk

LBVs - leaving clues to understand massive stellar evolution

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During their life, massive stars generally are in a stable state or readjust themself to be stable on rather short timescales. One phase – the Luminous Blue Variable phase – however is dominated by the star being rather unstable and steadily reacting with changes in radius, mass loss and temperature. LBVs are massive evolved stars at the edge of stability, that induces various types of observable variabilies. In some cases only a giant eruption is the way the for the stars to stabilizes itself. This talks provides an overview about LBVs and the implications that the unstable LBV phase has on the stellar evolution of massive stars and the circumstellar environment. Discussed are: What could be possible triggers of the variabilies and eruptions? Are giant eruptions single or multiple events, that only some or all LBV will undergo? How are LBVs connected to Wolf-Rayet stars - the final stage massive stars and LBVs will turn into? Is the high mass loss of LBVs - and therefore the LBV phase - a necessity to understand the observed low masses in the final stages of stellar evolution?