Contribution ID: **71** Type: **Oral (remotely)**

The peculiar abundances of fluorine in hydrogen-deficient stars (R)

Thursday, 23 June 2022 18:20 (25 minutes)

The production of the observed cosmic fluorine (F), a highly volatile element, is still shrouded in mystery. While debates rage between the Wolf Rayet stars and the AGBs being the possible sites of F production, a small group of peculiar stars show extreme F overabundances in their atmospheres, further deepening this mystery. These peculiar stars with F overabundances are a group of hydrogen-deficient stars, which are thought to result from a merger of two low mass double-degenerate white dwarves.
In this talk, I review the status of F abundances observed in various groups of H-deficient stars and how F abundance connects or disconnects them in a common evolutionary sequence. From the spectroscopic observational evidence and available theoretical calculations in literature, we also discuss that the low mass DD-merger events are also slowly gaining ground in explaining the F production among the well-accepted F formation scenarios.

Session

Stellar observations (photometry and spectrometry)

Primary author: BHOWMICK, Anirban

Presenter: BHOWMICK, Anirban

Session Classification: Stellar Observations