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## **Nebular spectra models for type Ibc supernovae**

*Thursday 1 June 2023 15:00 (10 minutes)*

Supernovae (SNe) play an essential role in accounting for the origin of the elements observed in our universe. To translate the information on the ejected elements contained in observed SN-spectra, careful modelling of the SNe is required. In this talk, I will discuss the nebular phase spectra resulting from modelling a set of He-star explosions (progenitors of type Ibc SNe). The set spans a large range of progenitor masses and modelling epochs, allowing us to discern trends and differences in the final spectra. The main focus in this talk will be on the relation between the SN-progenitor mass and the fractional luminosity of the recently discovered [NII]  $\lambda\lambda 6548, 6583$  emission feature. This relation can be used as a diagnostic to better constrain progenitor masses of observed SNe. Some time will also be devoted to how well the model spectra compare to observations.

**Presenter:** BARMENTLOO, Stan (Stockholm Username)

**Session Classification:** Student talks