Contributed Talk

Splinter Populations

Stellar population of the superbubble N 206 in the LMC

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Clusters of early-type stars are often surrounded by a 'superbubble' of hot gas. The formation of such superbubbles and shells is thus directly linked to the stellar feedback from massive stars. Consequently, quantitative analyses of massive stars are required to understand how the feedback of these objects shapes/ creates these large scale structures of the ISM. We present the quantitative spectroscopic analysis, energy feedback, and chemical yields of young stellar populations associated with the superbubble N 206 in the LMC. The complex contains the young cluster NGC 2018 and OB associations LH 66 and LH 69. We obtained optical spectra with the muti-object spectrograph FLAMES at the ESO-VLT. When possible, the optical spectroscopy was complemented by UV spectra from the HST, IUE, and FUSE archives. Detailed spectral classifications are presented for our sample. For the quantitative spectroscopic analysis we use the Potsdam Wolf-Rayet (PoWR) model atmosphere code. The physical and wind parameters obtained from the PoWR modelling are used to calculate the ionizing and mechanical energy input from the OB stars to the ISM. The ages of these stellar populations are estimated from the HR diagram. The total energy input obtained from the spectral analyses are also compared with the properties of the diffuse X-ray emission observed in this region with *XMM-Newton*.