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Chromospheric activity and stellar winds in supergiant stars
KATHLEEN GEISE, University of Denver — Emission lines in the ultraviolet (UV), such as the doublet lines of Mg II, and in the visible part of the spectrum, such as Ca II H & K, may be good indicators of chromospheric activity in supergiant stars. Some of these lines may also be used to infer the presence of stellar winds, especially when blue-shifted absorption is present in the line profile. Stellar winds are an important mechanism for mass loss in supergiant stars. We seek to show that mass loss from slow winds may be common in F supergiant stars and that variability in spectral lines such as H alpha may be used as an indicator of stellar wind. We compared archival UV and visible spectra of type F supergiant stars in order to distinguish between chromospheric activity and stellar winds in these stars. Variable or asymmetric H alpha lines were found in spectra of supergiant stars that also exhibited wind or chromospheric signatures in UV Mg II lines.

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