

# METAL ABUNDANCES OF ACCRETION DISCS IN AM CVN BINARIES

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AM CVn systems are compact interacting binary stars with very short orbital periods. Their accretor is a white dwarf, whereas the nature of the donor star is still discussed. The accretion discs in these systems are dominated by helium, the low state systems show emission line spectra, the high state systems absorption line spectra.

We present a model grid of NLTE accretion disc spectra for different primary masses and different mass accretion rates. We varied the chemical abundances of carbon, nitrogen, oxygen and silicon to test for over- or underabundance compared to solar values. As the accretion disc represents the chemical composition of the donor star's outer layers, the spectral analysis of the disc gives the opportunity to investigate the donor's nature.

Like it is expected from observations, we find emission line spectra for low mass accretion rates and absorption line spectra for high mass accretion rates. Furthermore, we find indication for a strong underabundance of silicon.