

Time-dependent chemistry in envelopes around C-rich AGB stars

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Abstract.

We present results of hydrodynamical modeling of chemical evolution of the inner circumstellar envelope of carbon-rich AGB star. We consider the effect of pulsation-driven shocks on the molecular content of the gas starting from the stellar photosphere, where the chemical composition is assumed to be that determined at local thermal equilibrium. We include dust grains formation and its influence on chemistry of the outflowing gas. The chemical kinetic scheme is an extended version of silicon and sulphur chemistry network of Willacy and Cherchneff (1998). The presented poster is a continuation of our work on time-dependent modeling of the inner shell chemistry (Pulecka et al., 2005).

Keywords. astrochemistry, AGB stars, circumstellar shell, carbon-rich stars

References

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