SWS Spectroscopy of DR 21

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Abstract

We present SWS observations, incorporating emission lines of molecular hydrogen and atomic and ionic species, of both the eastern and western outflow lobes of DR 21, and make a detailed comparsion with theoretical models of molecular shocks. We look at the observed differences between the two lobes, which may be understood in terms of environmental differences on either side of the central engine. LWS observations of the western lobe will also be presented, in which emission from molecular species such as water, OH and CO is observed, and further comparisons to shock models will be made. If time permits we will present molecular hydrogen observations of several other sources, such as supernova remnants, PDRs and putative XDRs, and along with DR 21 we will look at the differences in their respective excitation mechanisms using molecular hydrogen excitation diagrams.