

## Chemical Abundance Profiles in a 2-D Planet-forming Disk

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Deuterium chemistry is a useful tool for tracing the influence of interstellar material on the composition of protoplanetary disks, and for tracing the formation history of planetary bodies. Several deuterium species have been measured in solar materials and their deuterium enhancements derived. In addition, a couple of deuterated molecules have been observed in protoplanetary disks (c.f. *Kessler et al.*, 2002). Here we present results of a chemical model of a protoplanetary disk which includes deuterium chemistry. We show the calculated radial and vertical chemical profiles and compare them to the available observations.

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- [a] Kessler, J.E., Qi, C., and Blake, G.A., Observations of HDO and DCN in circumstellar disks around the protostars LkCa 15, MWC 480 and HD 163296, AAS 200th Meeting, Albuquerque, NM, Session 850, #85.02, 2002.

