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SH+ in the Diffuse ISM NICHOLAS ABEL, University of Cincinnati — SH+ is a simple diatomic molecule which should be observed in many astrophysical environments by Hershel. Attempts of chemical models to form SH+ in the diffuse ISM are problematic, owing to the fact that S+ + H2 is highly endoergic. Recent work suggests SH+ can form as a result of x-ray induced chemistry in protoplanetary disks and in the molecular gas around an AGN. In this talk, I explore the effects of x-rays on the formation of SH+ in diffuse clouds, along with its trickle-down effects on our understanding of sulfur chemistry in these environments.

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