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Molecular dissociation induced by electron collisions

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A remarkably large number of molecules have been observed in molecular clouds, and the question is of course how the molecules can be formed in the cold and dilute interstellar medium. Ion-molecule reactions are believed to be on route of formation, and the final step in these reaction networks is electron-molecular ion dissociative recombination. I will describe recent experiments at the ion storage ring CRYRING in Stockholm and in particular discuss results on H_3^+ .