Contribution ID: **145** Type: **Poster**

【452】A setup for coincidence measurements of ion-molecule reactive scattering

Tuesday 31 August 2021 19:01 (1 minute)

Experimental observation of state-to-state interactions, here specifically reactive encounters of ions and molecules, requires both precise control of the initial conditions and sufficient resolution of the product states. We have designed and simulated a new crossed beam velocity map imaging spectrometer, which exploits coincidence detection of products to push the experimental possibilities towards this goal. A high power and high repetition rate Lyman-alpha source in combination with a UV ionization laser will be used to detect neutral hydrogen atoms, which are often produced as the neutral co-product in important interstellar reactions such as $H_2^+ + H_2$ forming $H_3^+ + H$.

Authors: Dr KHAN, Arnab (Universität Innsbruck); Dr MICHAELSEN, Tim (Ion Physics University of Innsbruck); Dr ZAPPA, Fabio (Institut für Ionenphysik und Angewandte Physik); Dr WILD, Robert (Universität Innsbruck); Mr SPRENGER, Christian (Universität Innsbruck); Prof. WESTER, Roland (Universität Innsbruck)

Presenter: Dr KHAN, Arnab (Universität Innsbruck)

Session Classification: Poster Session

Track Classification: Atomic Physics and Quantum Optics