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Mobility of Ar^+ in CF_4 ZELJKA NIKITOVIC, VLADIMIR STOJANOVIC, ZORAN RASPOPOVIC, Institute of Physics, University of Belgrade, Belgrade, Serbia, JASMINA JOVANOVIC, Faculty of Mechanical Engineering, University of Belgrade, Belgrade, Serbia, ZORAN LJ. PETROVIC, Institute of Physics, University of Belgrade, Belgrade, Serbia — In this work we present a complete cross section set for Ar^+ in CF_4 where existing experimentally obtained data are selected and extrapolated. Monte Carlo simulation method is applied to accurately calculate transport parameters in hydrodynamic regime. We discuss new data for Ar^+ ions in CF_4 where flux and bulk values of reduced mobility are given as a function of E/N (E -electric field, N -gas density). We find that internally resonant exothermic dissociative charge transfer cross section for CF_3^+ production significantly increases zero field ion mobility with respect to the polarization limit.

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