Transport Parameters For Positive IONS In Pure H$_2$O DC Discharge[1] ZORAN PETROVIC, VLADIMIR STOJANOVIC, Inst of Physics., University of Belgrade, P.O.Box 68, 11080, Belgrade, Serbia, JASMINA JO-VANOVIC, Faculty of Mechanical Engieneering, University of Belgrade, Kraljice Marije 16, 11000 Belgrade, Serbia, DRAGANA MARIC, Inst of Physics., University of Belgrade, P.O.Box 68, 11080, Belgrade, Serbia — Transport properties of positive ions originating from H$_2$O (H$_2$O$^+$, OH$^+$) in DC fields and at the room temperature were calculated by using Monte Carlo simulation technique. Initially, the relevant cross section sets were assessed by using Denpoh-Nanbu theory for resolving between elastic and reactive collision events and then resolving contribution of exothermic processes from available experimental data. Newest experimentally or theoretically determined cross sections were compiled and included wherever possible. We present transport coefficients for low and moderate reduced electric fields E/N (N-gas density) accounting for non-conservative processes.

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