

Abstract Submitted
for the GEC18 Meeting of
The American Physical Society

Photon-H₂ cross sections and hydrogen plasma equations of state

MARK ZAMMIT, JAMES COLGAN, Los Alamos National Laboratory, JEREMY SAVAGE, DMITRY FURSA, IGOR BRAY, Curtin University, CHRISTOPHER FONTES, DAVID KILCREASE, PETER HAKEL, JEFFERY LEIDING, EDDY TIMMERMANS, Los Alamos National Laboratory — Studies of molecular plasmas both in local thermodynamic equilibrium (LTE) and non-LTE require state-resolved (electronic, vibrational and rotationally resolved) transition cross sections or rate coefficients to calculate populations (for non-LTE plasmas), opacities and emissivities. Here we present state-resolved results of photodissociation and radiative association of H₂ and its isotopologues (D₂, T₂, HD, HT, and DT), and preliminary results of low-temperature hydrogen plasma equations of state and opacities.

Mark Zammit
Los Alamos National Laboratory

Date submitted: 18 Jun 2018

Electronic form version 1.4