

The NASA Panel for Data Evaluation Recommended Rates and Cross  
Sections: A Historical Perspective

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The set of recommended reaction rate coefficients and absorption cross sections issued approximately every other year by the NASA Panel for Data Evaluation is the glue that has tied together our understanding of stratospheric photochemistry during the past several decades. Almost without exception, every published "comparison of theory and observation" or "assessment simulation to describe the role of a certain anthropogenic activity on ozone" begins with a calculation based on the latest set of recommended rates and cross sections. I will review how our understanding of stratospheric photochemistry has evolved over the past several decades by comparing a current set of measurements of concentrations of stratospheric reactive species to calculated concentrations based on successive NASA Data Panel recommended kinetic parameters. The timeline of key advances in our understanding will be noted. Bill DeMore has provided an incredibly important service to the atmospheric sciences community through his skillful and dedicated chairmanship of the data panel since its inception in 1977.