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Kinetic Studies of Reactions of Iodine Atoms and Iodine Oxide

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Reactions of inorganic iodine species are of importance for the chemistry of the marine boundary layer. Atom and radical generation by pulsed laser photolysis and detection by resonance fluorescence, laser induced fluorescence and transient absorption spectroscopy have been employed to examine several reactions of I atoms, and the iodine oxide radical, IO. Room temperature rate coefficients are presented for the reaction of I atoms with O3 and NO2, for the reaction of O with I2, the self reaction of IO, including branching ratios to OIO and I atom formation, and the reaction of IO with CH3SCH3. This work was carried out within the framework of the THALOZ project.