## Abstract Submitted for the DAMOP07 Meeting of The American Physical Society

The structure of OCS tetramer from infrared laser spectroscopy<sup>1</sup> MEHDI DEHGHANY, MAHIN AFSHARI, ZIAD ABUSARA, Author, NASSER MOAZZEN-AHMADI, author and supervisor, A.R.W. MCKELLAR, Author and collabortaor, A.R.W. MCKELLAR COLLABORATION — The motivation for studying weakly bound complexes is building a bridge between the gas and condensed phase. There are many condensation pathways that can be taken, owing to exponentially increasing number of isomers with cluster size. The factors that determine which of these are preferred and why are not well understood. High resolution infrared laser spectroscopy has been used for the first time to determine the structure of OCS tetramer. We observe a non-planar structure in which all four monomers are approximately parallel. The spectra are best described as an asymmetric top with an accidental spherical top structure. The spectrometer and analysis of data will be presented.

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Date submitted: 03 Feb 2007 Electronic form version 1.4