

LABORATORY MEASUREMENTS OF SMALL SILICON BEARING MOLECULES OF ASTROPHYSICAL INTEREST

CARL A GOTTLIEB, *Radio and Geoastronomy Division, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, USA*; MICHAEL C McCARTHY, *Atomic and Molecular Physics, Harvard-Smithsonian Center for Astrophysics, Cambridge, MA, USA*.

We will discuss the status of millimeter-wave laboratory measurements of the rotational spectra in the ground and vibrationally excited levels of small molecules containing two or three silicon atoms that might be the building blocks of dust seeds in carbon- and oxygen-rich AGB stars. The motivation is to provide essential spectroscopic information needed to guide future interferometric observations of the inner envelope of these objects at high angular resolution and sensitivity. The focus will be on a half-dozen species for which there is either no prior high resolution spectroscopy, or only in the centimeter band at best. We will also update the status of the known silicon carbides SiCC and SiCSi.