THE FAR INFRARED EXPERIMENTAL FACILITY AT THE CANADIAN LIGHT SOURCE

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The far-infrared (far-IR) experimental facility at the Canadian Light Source Inc. (CLSI) has been dedicated primarily to high-resolution gas-phase spectroscopic studies of stable and unstable molecule. Using long wavelength optics, the Bending Magnet's infrared radiation is steered to a Bruker IFS125 HR spectrometer for ultra-high spectral resolution ($\geq 0.0009\ \mathrm{cm}^{-1}$, MOPD = 9.4 m) gas-phase studies. This report describes our efforts at the CLSI in getting the far-IR experimental facility ready for users. In particular, we will compare the brightness and noise level of the IR synchrotron radiation at the CLSI to that of a globar in the far-IR region; we will also study the lineshapes and linewidths.