The KL Cavity, C. C. Wynn-Williams, E. E. Becklin, U. Hawaii, R. Genzel, U. C. Berkeley, D. Downes, I.R.A.M., Grenoble. Using the IRTF on Mauna Kea we have mapped the central $\sim 20''$ of the Orion KL region with 2'' resolution at six wavelengths between 2.2 and 30 $\mu$m. We find:

a) that the 20–30 $\mu$m color temperature shows little variation over the face of the region,

b) that the 8–12.5 $\mu$m color temperature has prominent peaks only at the infrared sources BN and IRC2,

c) that the regions of strong scattering at 2.2 and 3.8 $\mu$m coincide with regions of strongest 20 and 30 $\mu$m thermal emission.

In a separate experiment we find that the color temperature and silicate optical depth of IRC4 do not change with diaphragm size in the way expected for a centrally-heated molecular cloud fragment.

From these observations and a variety of other radio and infrared data we conclude that the geometry of the KL nebula is that of a cavity approximately 30'' (2x10$^{17}$ cm) in diameter rather than that of a number of isolated objects. The cavity is centered on IRC2, which we estimate to be sufficiently powerful ($10^5$ $L_\odot$) to be the source of essentially all the luminosity from the KL nebula, except for $\sim 10^3$ $L_\odot$ arising from the BN object. In this model the other infrared peaks in the KL nebula (IRC3, IRC4, etc.) are manifestations of irregularities in the distribution of material surrounding the cavity rather than individual self-luminous infrared sources.