CO(9-8) in Orion

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In 2002 November and December, we made 1035 GHz, CO(9-8) observations of Orion from 5500 m altitude on Cerro Sairecabur, Chile. This is about 40 km north and 500 m above the ALMA site near Cerro Chajnantor. We used an 80 cm telescope and a hot electron bolometer mixer receiver built and installed by the SAO receiver lab. In November, we obtained the first 806 GHz and 1035 GHz spectra with the system and in December, we made a small map 1035 GHz of Orion. During the map, the DSB receiver temperaure was about 1000 K and the 1035 GHz zenith transmission varied from 14% to 10%. As far as we know, the only previous ground based observations at 1035 GHz was a single spectrum of Orion made with the same receiver at Mt. Graham a couple of years ago under much worse conditions (zenith transparency of 3%). These observations demonstrate the excellent observing conditions available near the ALMA site in the high Andes of northern Chile. Further observations are planned in 2003.