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In late 1997, we initiated a site survey campaign to ascertain the optical and infrared quality of high altitude sites in the vicinity of the Chajnantor Plateau in Northern Chile. This area has been selected by the National Radio Astronomy Observatory (NRAO), the European Southern Observatory and the Nobeyama Radio Observatory as a future site for millimeter and submillimeter initiatives (e.g. the Millimeter Array, MMA), and its meteorological properties relevant to radio applications have been increasingly investigated since 1995.

We have initiated an astronomical seeing campaign at optical wavelengths, as well as a radiosonde campaign to ascertain the vertical distribution of atmospheric variables, most notably water vapor, above the site. Seeing and radiosonde campaigns are carried out in runs of duration ten days each, spaced by two months. We have so far tested at two sites at altitudes of respectively 5050 and 5200 meters above mean sea level; the first coincides with the location of the MMA testing site, while the second is the summit of a hill some 200 meters higher than the surrounding plateau. Nearby, higher peaks, currently of very difficult access for equipment, may offer significantly better astronomical circumstances.

The first seeing measurements were taken in May 1998, followed by runs in July and October. We will present preliminary results based on these measurements and speculate on the projected conditions that may be met at the summits of higher, surrounding peaks, which reach elevations of 5800 m. Early indications suggest that the area may be of extremely high appeal not only for millimeter wave, but also for optical and infrared astronomy.

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