

University of Colorado

28 GHz Channel Sounder Measurements

Experiment Description

This experiment consists of broadband mmW channel measurements using a channel sounder of our own design. We will be making measurements in and around the buildings of the University of Colorado at relatively low heights above average terrain. Our primary goal is the characterize the clutter environment in this band. The transmitter, when outdoors, will be mounted no higher than 10 m above ground but usually, at 2 meters. The receiver will be approximately 1.5 m above the ground.

Measures to avoid interference

Prior to, and periodically during, we will monitor the band for licensed users and not conduct measurements if such users are detected.

Additionally, these experiments will be conducted using the lowest possible power needed to accurately measure the radio path. While the equipment is capable of 20 W EIRP (200 mW into a 20 dBi horn) we will only use full power when needed for extremely long path lengths. In addition to our low antenna heights and minimal power, we will keep the antenna pointed away from known licensed users of the band. We expect to be well within the clutter (shadowing) provided by the CU campus buildings.