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**Use of microphones to record windspeed and turbulence in  
planetary environments**

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A major feature of any planetary acoustic measurement is noise due to ambient winds, or to the motion of the measurement platform through the air. Venera 13 and 14 recorded sound on the surface of Venus : the amplitude of the microphone signal was interpreted (by dynamic pressure scaling) to recover a windspeed. The Huygens probe at Titan also recorded sound levels during descent and on the surface with a passive microphone and an acoustic sounder. The author has made passive microphone measurements made on a rotating aerospace vehicle (an instrumented Frisbee) which show spin modulation and a variation with flight speed and angle of attack. He has also used microphones as a crude wind sensor on an array of 20 meteorological stations used to study dust devils in Arizona. All of these observations will be reviewed. Lessons learned for future planetary measurements, and prospects and methods for microphonic anemometry (especially with limited telemetry bandwidth) will be discussed.