Abstracts

A novel signal processing approach for microwave Doppler speed sensing

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Systems for ground speed measurement usually determine a peak in the measured microwave spectrum of a reflected Doppler-shifted transmit signal. Ground speed is calculated from the frequency offset of this peak and the incident angle between the microwave antenna and ground. In this paper a Doppler measurement system is described that does not need to know the exact angle under which the antenna is radiating and receiving the signal with respect to ground if a specific condition is met. Furthermore, no Janus antenna configuration is needed for this system.

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