

# APPLICATIONS OF GPS PHASE COHERENCY

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## ABSTRACT

The capabilities inherent in the Global Positioning System carrier and code modulation waveform provide an extremely precise and coherent spaceborne signal which may be applied to a variety of applications beyond the classical function of navigation. A description of mechanizations based on both short and long baseline interferometry is given leading to applications for space vehicle attitude determination, azimuth bearing and level estimation, and precise survey location.

Utilization of carrier phase changes is examined for dynamic vehicle surveys to provide a capability for accurately measuring gravity deflections in a real-time operational data processing system.