

THREE-AXIS ATTITUDE SENSING ON ATS-F/G SPACECRAFT

A. Kampinsky

NASA Goddard Space Flight Center, Greenbelt, Maryland, 20771

Abstract

This paper describes the evolution of an R. F. microwave attitude, three axis, sensor specifically designed for the stringent angular accuracies and five-year longevity requirements of advanced Communications capabilities.

The achieved instrument, is based upon the interferometric principle, however, with high angular accuracy ($3 \sigma 3 \times 10^{-4}$ radians), stability, and with an inherent capability of uprating by one or more orders of accuracy for Earth Resources and Meteorological applications.