October 1969

Brief 69-10523

NASA TECH BRIEF

An Interferometer Tracking Radar System

The problem:

To design a short range rendezvous system providing increased position accuracy.

The solution:

A fine tuning acquisition and tracking interferometer radar system using a first antenna array of at least three receiving antennas.

How it's done:

The antenna array should include a reference antenna, a coarse tuning antenna, and a fine tuning antenna aligned on a receiving axis. The linear spacing distance between the fine tuning antenna and the reference antenna should be at least ten times the linear spacing distance between the coarse tuning antenna and reference antenna.

Switch means are provided for alternately coupling either the fine or coarse tuning antenna to the reference antenna and the phase – detector means.

The configuration may include two or more arrays of the antennas, one array detecting azimuth and the other detecting elevation.

Note:

Requests for further information may be directed to:

Technology Utilization Officer
Manned Spacecraft Center
Houston, Texas 77058
Reference: B69-10523

Patent status:

This invention is owned by NASA, and a patent application has been filed. Royalty-free non-exclusive licenses for its commercial use will be granted by NASA. Inquiries concerning license rights should be made to NASA, Code GP, Washington, D.C. 20546.

Source: Richard F. Broderick
Manned Spacecraft Center
(MSC-10956)

Category 01