AERONAUTICAL SATELLITE SYSTEM CHARACTERISTICS AND PROPAGATION FACTORS THROUGH 1971

E. J. Mueller

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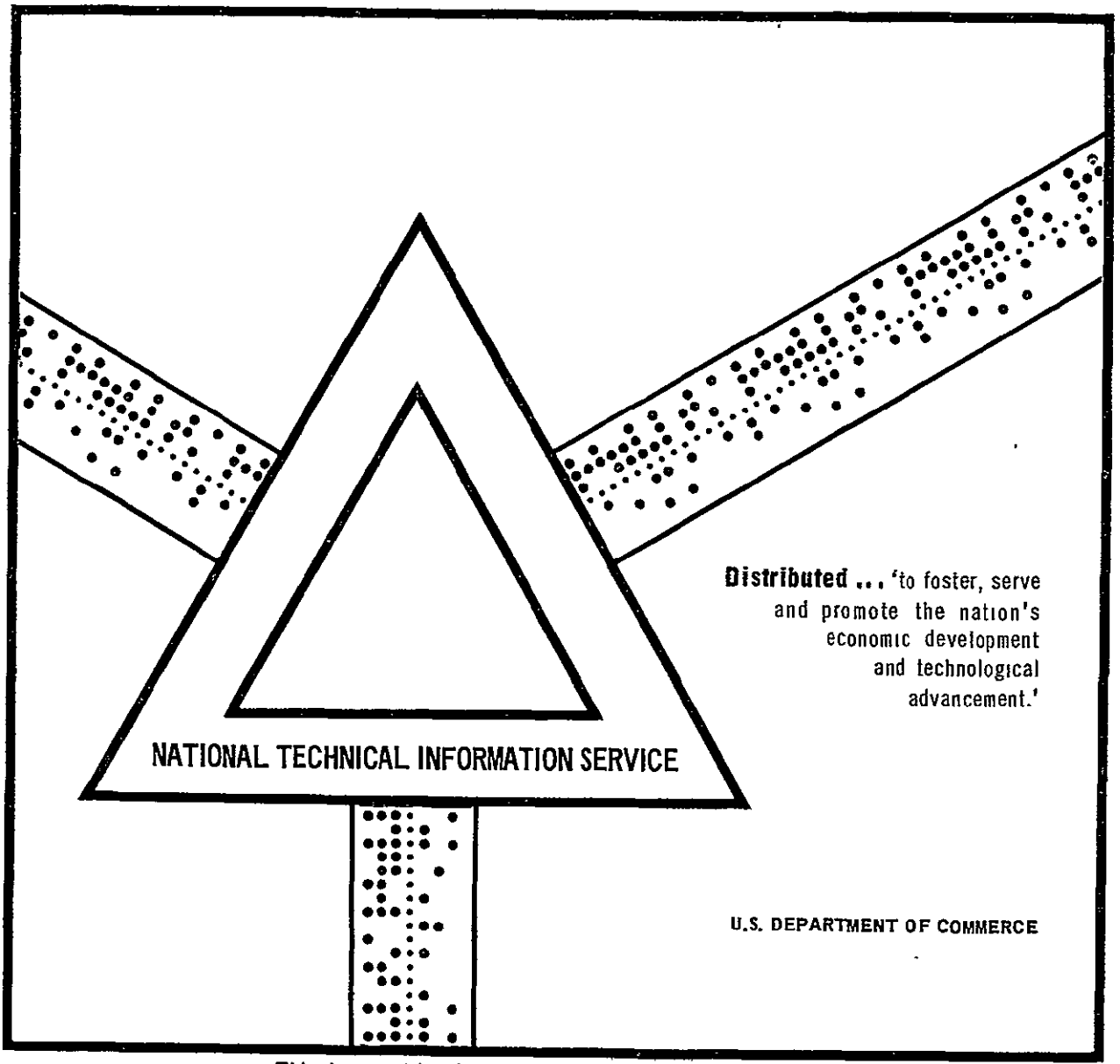
March 1971



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BIBLIOGRAPHY

AIR TRAFFIC CONTROL

The documents listed in this bibliography are sub-divided into thirteen categories according to their technical content:

Air Traffic System Requirements - That material dealing with general requirements for air traffic control systems including studies of traffic volume and distribution. This section also includes papers on message characteristics.

Communication System Requirements - That material dealing specifically with communications requirements and systems design concepts for air traffic control satellites including material dealing with multiple access techniques, modulation techniques, signal processing, frequency management, interference studies, voice intelligibility, and data error rates.

Surveillance and Navigation System Requirements - Material dealing with position location requirements and associated system design concepts including material dealing with signal processing and modulation techniques, frequency management, and position errors.

Satellite Design - Material dealing with satellite orbital positioning, stabilization techniques and satellite antenna and transponder designs.

Aircraft Equipment - Material dealing with aircraft communications/navigation equipment design including aircraft antenna for use with satellites.

Earth-Space Propagation; General - That material dealing with the general subject including a selection classical papers on the subject.

Ionospheric Phenomena - Material dealing with the general characteristics of the ionosphere and solar, geomagnetic activity as they affect earth - space propagation.

VHF Propagation (100-400 MHz) - Ionospheric Absorption - Material dealing with auroral and polar cap absorption phenomena including methods of scaling riometer measurements to estimate the effects of absorption on geostationary satellite systems.

VHF Propagation (100-400 MHz) - Ionospheric Scintillation - Material dealing with ionospheric scintillation at VHF as evaluated by F_2 layer studies, radio star and satellite scintillation measurements and methods of extrapolating available data in frequency, geographically and geometrically (elevation angle).

VHF Propagation (100-400 MHz) - Multipath and Polarization - Material dealing with the earth-reflected multipath problem both from a theoretical and empirical approach including polarization and the Faraday rotation problems.

L-band Propagation (1600 MHz) Ionospheric and Tropospheric Scintillation - Material dealing with theoretical studies and measurements of scintillation at frequencies in the vicinity of 1600 MHz, including concerning experiments at Quito and Lima and papers on extrapolating VHF scintillation to L-band.

L-band Propagation (1600 MHz) - Multipath - Material dealing with earth-reflected multipath at L-band: both theoretical and empirical.

L-band Propagation (1600 MHz) - Noise - Material dealing with both terrestrial noise such as atmospheric (thunderstorms), P-static and man-made noise, and extra-terrestrial noise: galactic and solar.

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