

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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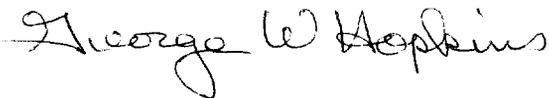
In the Matter of RM-8837

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I am a licensed amateur radio operator, holding an Extra class license, KF6GL, with over 25 years of operating experience. I have B.A. and M.S. degrees in Physics and a Ph.D. degree in Optical Sciences. I am employed as a Principal Project Engineer by a large manufacturer of computers, computer peripherals and instruments, with over 18 years of research and development experience. I am well versed in path-loss calculations and measurements. In addition to this experience, I served as a communications operations officer in the United States Air Force.

It is my considered opinion that the proposed operation in the frequencies 2400.0-2438.5 and 2401.0-2439.5 MHz is not compatible with operations of the Amateur Satellite Service. Both of these bands overlap the 2400-2402 MHz sub-band that has been used by, and will be important to the future of, amateur satellite operations. The international amateur satellite Phase 3-D, scheduled for launch in 1997, carries transponders which will operate on the frequencies 2400.1-2400.6 and 2446.2-2446.7 MHz for uplinks and 2400.225-2400.95 MHz for downlinks. The calculated signal-to-noise ratio, best case, for a well-equipped ground station, is 23 dB. I have personally verified these calculations. Signals are often weaker. I have completed two-way contacts, receiving the downlink signals from the Phase 3-C satellite now in operation, when the signal-to-noise ratio was approximately 10 dB. Clearly, this is a weak-signal operation with no significant margin for interference. The directivity of antennas typically used by ground stations is not adequate to discriminate against local signals of any significant level, as would be the case in the proposed operation, and harmful interference would result.

Respectfully submitted,



George W. Hopkins, Ph.D.
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August 5, 1996

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