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RECEIVED

DEC 17 1999

7 December 1999

Secretary of the FCC  
445 12th Street, SW  
Washington, DC 20554

FCC MAIL ROOM

Dear Sir:

I am writing to you to provide comments on the proposed rule-making, RM-9740. This proceeding deals with unwanted emissions from satellites and, if modified carelessly, could significantly damage the ability of radio astronomers and earth scientists to successfully produce useful scientific results.

As you know, unwanted emissions (spurious emissions, harmonics, intermod products) from satellites now pose the greatest threat to radio astronomy and passive remote sensing.

Radio observations represent a unique window on the universe, providing scientific data unavailable from telescopes operating at visible-light wavelengths or other parts of the electromagnetic spectrum. Of the ten astronomers who have won the Nobel Prize in Physics, six of them used radio telescopes for their work. The future advancement of astronomy and of physics is dependent upon the preservation of the radio spectrum for observation of the universe with radio telescopes. Relaxing regulations on spurious emissions from satellites will potentially harm these observations.

Radio astronomy research activities at our nation's universities and research laboratories have been instrumental in motivating and training telecommunications engineers as well as radio astronomers, and technical advances made in the name of radio astronomy, particularly in the area of system sensitivity, have readily found application in the telecommunications industry.

As a radio astronomer and teacher of undergraduate students, I use the achievements of radio astronomy research efforts to broaden the perspectives of my students, and to illustrate to them the many ways we can investigate our universe. This broadened perspective is valuable not only to the future engineers and scientists in my classes, but also to the future bankers, attorneys, and politicians.

The Radio Communication Sector of the International Telecommunications Union has provided excellent guidelines for regulating emissions in radio astronomy bands. Specifically, in bands allocated to radio astronomy, the aggregate unwanted emissions from satellite (or any other) transmitters should not exceed the detrimental interference levels listed in Recommendation ITU-R RA.769. I hope that the FCC will follow this regulation as their guideline in any modification to section 25.202(f) of the Commission's Rules.

Radio astronomy provides us with a window to the universe that can be easily destroyed. I hope the FCC will do its part to keep that window crystal clear and usable so that radio astronomers can continue to provide the exciting and important results that they have dazzled us with over the last 50 years.

Sincerely,



Ned Ladd

Assistant Professor of Physics  
Bucknell University

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