

Dear Sir/Madam:

I am writing 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 perform science observations.

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 on everything from the births and deaths of stars to the beginning of the universe. These data cannot be obtained from telescopes operating at visible-light wavelengths or other parts of the electromagnetic spectrum. The future advancement of astronomy and physics is dependent upon the preservation of the radio spectrum for observations of the universe with radio telescopes.

Relaxing regulations on spurious emissions from satellites will definitely harm these observations.

Radio astronomers are not asking that the spectrum not be used; they simply ask that it be used in a responsible manner, minimizing unwanted emissions that will, in fact, become a problem in the future for other services as well.

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 unique window on the universe that can easily be destroyed. I hope the FCC will do its part to keep that window crystal clear so that radio astronomers can continue to provide the exciting and important results which have dazzled us for over 50 years.

Sincerely,  
Sarah Gallagher