

COMMENT ON FCC PROCEEDING RM-9740

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

Subject: RM-9740

Dear Sir,

I am writing to you to provide comments on the proposed rule-making, RM-9740, which deals with unwanted emissions from satellites. Relaxing these restrictions would seriously damage our ability to detect astronomically distant objects in the presence of strong interfering signals from satellites.

Most of my own research involves observations of faint radio emissions from distant galaxies. With the current abundance of satellites having space-to-earth downlinks between 1.2 and 1.7 GHz, observations within this band routinely suffer from spurious emissions, harmonics and intermod products. Due to the recessional velocity of distant galaxies, the 1420 MHz line of atomic hydrogen, and the 1665 MHz hydroxyl line, is redshifted to lower frequencies. The presence of satellite downlinks essentially closes off large pieces of the universe from view. Even within some bands where we have some footnote protection, such as 1610-1613 MHz, the strong nearby signals from Iridium and GLONAS satellites make observations practically impossible. Relaxing the restrictions on spurious emissions would close off more of our Universe from view, and potentially eliminate many of the scientific explorations my colleagues and I are attempting.

The Radio Communication Sector of the International Telecommunications Union has provided 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.

I sincerely hope that the FCC, which has aided to keep the radio spectrum clean for so many years, will continue its vigilance, and preserve this valuable natural resource for the generations to come. I'm certain that we will all benefit from the exciting discoveries yet to come from radio observations.

Sincerely,

Gregory B. Taylor