Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

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Chair

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November 19, 2021

The Honorable Jessica Rosenworcel
Chairwoman
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Dear Chairwoman Rosenworcel:

As Chairs of the House Transportation and Infrastructure Committee and House Aviation Subcommittee, we have long had grave concerns with the telecom industry's plan to utilize the band of spectrum between 3.7 and 4.2 GHz, or the C-band, for 5G broadband service. Unfortunately, despite a year of work among the Federal Aviation Administration (FAA), the FCC, and other relevant federal stakeholders, we appear no closer to resolving the serious concerns that the use of the C-band for 5G would create harmful interference with radio altimeters in civil and military airplanes and helicopters. And with the FCC's administrative process mostly complete, we're now on the precipice of a dangerous situation in which the safety of flight hangs on the telecom industry's decision regarding when to switch on its 5G networks. Two major wireless carriers have voluntarily delayed, for one month, their initially proposed deployment on December 5.[1] But they won't wait forever.

The FCC's and the telecom industry's approach of "deploy now, fix later" is anathema to the strong safety culture we have created and nourished in aviation over the last 20 years. In aviation, we never roll the dice with safety. We never run headlong into a possible hazard to the safety of flight without a full and complete assessment and mitigation of those risks. And one need not look further than the accident of a Boeing 737-800 near Amsterdam in 2009 to understand how an erroneous radio altimeter reading could potentially result in a fatal air disaster with multiple fatalities, even on a clear day, because so many safety-critical aircraft systems depend on accurate radio altimeter readings.[2]

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[1] *See* Andrew Tangel and Drew FitzGerald, "AT&T, Verizon to Delay 5G Rollout Over FAA's Airplane Safety Concerns," WALL ST. JOURNAL (Nov. 4, 2021), *at* https://www.wsj.com/articles/at-t-verizon-to-delay-5g-rollout-over-faas-airplane-safety-concerns-11636039555.

[2] Dutch Safety Bd., *Crashed During Approach, Boeing 737-800 Near Amsterdam Schiphol Airport, 25 February 2009* (May 2010).

Technical analysis by aviation industry experts has confirmed both the likelihood of harmful 5G interference with radio altimeters and the potential that such interference will result in accidents.[3] The FAA at least implicitly acknowledged this risk in a recent safety bulletin issued to the aviation community on November 2, 2021.[4] That bulletin stated that operators should, among other things, "ensure their pilots are aware of the potential degradation of the radio altimeter capabilities and any means to compensate for in-flight radio altimeter anomalies."[5] The aviation industry analysis put it in starker terms: the proposed wireless services in the C-band could cause "catastrophic failures leading to multiple fatalities."[6]

We would expect that, if the FAA cannot conclude that 5G broadband emissions in the C-band do not cause harmful interference with radio altimeters, the agency would take emergency action to prevent 5G interference from causing an accident through draconian but necessary restrictions on many types of critical flight operations, from airline flights to helicopter air ambulance operations to road traffic accidents. But of course, those restrictions would not be sustainable and, if they include restrictions on aeromedical operations, could come at their own cost to life and limb.

Therefore, in advance of the telecom industry's January 5, 2022, deployment date, we implore the FCC to:

> (1) Provide the FAA with all technical data that the FAA, in its sole judgment, deems sufficient to conduct a robust assessment of the risks to aviation safety presented by use of the C-band for 5G broadband service; and
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> (2) Prohibit any 5G broadband transmissions in the C-band until the FAA has conducted a robust risk assessment and has concluded either that no mitigations are necessary or that all necessary mitigations are in place.

Thank you for your consideration.

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[3] The Radio Technical Commission for Aeronautics (RTCA) completed a six-month assessment of interference from 5G network emissions with radio altimeter performance, revealing a "major risk that 5G telecommunications systems in the 3.7-3.9 GHz band will cause harmful interference to [radio] altimeters on all types of civil aircraft. . . ." RTCA Paper No. 274-20/PMC-2073, *Assessment of C-Band Mobile Telecommunications Interference Impact on Low Range Radar Altimeter Operations* (Oct. 7, 2020), at 1, *available at* https://www.rtca.org/wp-content/uploads/2020/10/SC-239-5G-Interference-Assessment-Report_274-20-PMC-2073_accepted_changes.pdf; *see also* Aerospace Vehicle Sys. Inst., *Preliminary Report: Behavior of Radio Altimeters Subject to Out-of-Band Interference* (Oct. 22, 2019), https://ecfsapi.fcc.gov/file/102214765103/AVSI%20RA%20Interim%20OOB%20Interference%20Report.pdf.

[4] Fed. Aviation Admin., *Special Airworthiness Information Bulletin: Risk of Potential Adverse Effects on Radio Altimeters,* No. AIR-21-18 (Nov. 2, 2021).

[5] *Id.* at 3-4.

[6] RTCA Paper, *supra* note 3.

Sincerely,

PETER A. DeFAZIO
Chair

RICK LARSEN
Chair
Subcommittee on Aviation

cc: The Honorable Stephen M. Dickson
Administrator, Federal Aviation Administration