



ICAO

International Civil Aviation Organization

**TENTH MEETING OF SPECTRUM REVIEW
WORKING GROUP (SRWG/10)**

Bangkok, Thailand, 04 – 06 February 2026

Agenda Item 6: Frequency Interference in the Region

6.1 5G and Radio Altimeter

**FLIGHT EXPERIMENTS USING C BAND FOR ADVANCED AIR MOBILITY (AAM) AND
STUDIES ON INTERFERENCE WITH RADIO ALTIMETERS.**

(Presented by JAPAN)

SUMMARY

This paper presents write the safety measures adopted during AAM flight demonstrations carried out in Japan ahead of the 2025 Expo.

1. INTRODUCTION

- 1.1 At the Osaka Expo held in 2025, AAM (flying cars) also performed demonstration flights, captivating many visitors.
- 1.2 Meanwhile, prior to AAM flights, JCAB examined safety measures for conducting flight tests using the C-band frequencies that AAM would employ for telemetry transmission and voice communication with the ground.
- 1.3 JCAB anticipated that the C-band signals used by AAM, adjacent to local 5G, could potentially interfere with radio altimeters (RA) used by existing aircraft. To mitigate this risk, JCAB issued NOTAMs to alert aircraft operating in the airspace surrounding the flight test site, and as a result, no impact on existing aircraft was observed.

2. DISCUSSION

2.1 In November 2024, The AAM flight test was conducted at a research facility near the foot of Mt. Fuji under special approval from JCAB. The conditions included maintaining an altitude below 150 meters and using a communication frequency of 4785 MHz.

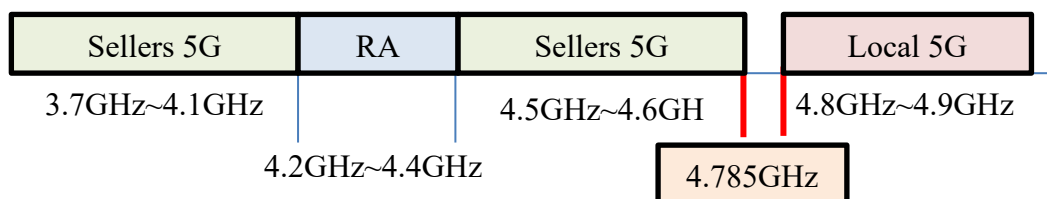


Figure.1 Frequency Allocation in Japan

2.2 Based on the specifications of the radios and antennas used at the ground station, JCAB calculated the range within which radio altimeters on nearby aircraft could be affected. Consequently, a NOTAM was issued to aircraft within a radius of 4,805 meters, stating: 'RADIO ALTIMETER UNRELIABLE AND MAY BE UNAVAILABLE WI A RADIUS OF 3NM OF 351333N1385356E'

230113 RJAAYNYX
(0296/24 NOTAMN
Q)RJJJ/QXXXX/IV/NBO/E/000/036/3514N13854E003
A)RJJJ B)2410230113 C)2411040802
D)OCT 23 0113/0802 24-NOV 03 2100/0802
E)RADIO ALTIMETER UNRELIABLE AND MAY BE UNAVAILABLE WI A RADIUS OF
3NM OF 351333N1385356E
(GOTENBA-SHI, SUSONO-SHI, SUNTO-GUN IN SHIZUOKA)
RMK/TEST WAVE ON 4785MHZ EMITTING
F)SFC G)3600FT AMSL)

Figure.2 Actual Issued NOTAM

2.3 The reason for issuing the NOTAM was that, in Japan, local 5G (4.6–4.8 GHz) is permitted only for indoor use, while outdoor and airborne use is prohibited. In particular, strict restrictions apply within 1,022 meters of airports. However, the guard band is set at 100 MHz, which is narrower than the 400 MHz specified in the United States and France, leading to the conclusion that the risk of interference is higher.

2.4 As a result, the AAM did not use the frequency for flights at the Osaka Expo; however, Japan recognizes the need to advance legal frameworks that ensure safety without hindering the future expansion of 5G use. Since there may also be cases in participating countries where the local 5G and C-band are operated without sufficient frequency separation from radio altimeters, continued monitoring is necessary.

3. ACTION BY THE MEETING

3.1 The meeting is invited to:

- a) note the information contained in this paper; and
- b) If any participating stats have experience using local 5G around airports and records of interference with radio altimeters, please share that information.
- c) Participating stats are requested to fully understand the precautions when transmitting 5G signals toward the sky and to continue considering appropriate safety measures
