



| ICAO

INTERNATIONAL CIVIL AVIATION ORGANIZATION

A UN SPECIALIZED AGENCY



ICAO WRC-27 Preparatory Workshop

Agenda item 1.19

Andrew Roy

Chair, ICAO FSMP

Agenda Item 1.19

Requirements for agenda item

- To study and consider a new primary allocation in all Regions to the Earth exploration satellite service (EESS) (passive) in the frequency bands 4200-4400 MHz and 8400-8500 MHz
 - Upgrade of existing secondary allocation used for sea surface temperature measurements
- Primary allocation would not give protection from existing services in these frequency bands and in adjacent bands.

Agenda Item 1.19

Aviation systems potentially affected

- The frequency band 4 200 – 4 400 MHz is allocated globally to both:
 - Radar altimeters aeronautical radionavigation service (ARNS) on a primary basis
 - wireless avionics intra-communication (WAIC) in the aeronautical mobile (route) service (AM(R)S)*

Agenda Item 1.19

Additional considerations

- ICAO recognizes the benefits for weather forecasting that are provided by sea surface temperature measurements.
 - Such information allows better predictions for hurricanes and other weather patterns that civil aviation uses for safe and efficient flight
 -but any benefits to aviation do not outweigh risks of existing aviation systems being affected by potential changes in this agenda item
- Aviation has previously been asked if altimeters can be turned off at altitude to mitigate interference environment
 - Major airframers have been very clear that this is not an option (see FSMP WG/19)

Agenda Item 1.19

Current Status

- Studies being conducted in WP 7C
 - [Studies](#) show EESS (passive) protection criteria would be exceeded by WAIC and Radio Altimeter Systems and affect measurements taken along air routes over the ocean
- Draft CPM Text Options (4200-4400 MHz) – Text [here](#)
 - Method 1A
 - No changes to the RR and suppression of Res 674
 - Method 1B
 - Primary allocation to EESS (passive) in 4 200 – 4 400 with condition EESS shall not claim protection from incumbent services in the same band
 - Method 1C
 - Same as method 1B with the addition that EESS (passive) cannot claim protection from the land mobile service in the 4 440 – 4 800 MHz band.
 - Method 1D
 - Same as method 1B with the addition that EESS (passive) cannot claim protection from incumbents in the adjacent band

Agenda Item 1.19

ICAO position

To ensure any changes would not impose any technical, regulatory, or operational constraints, on radio altimeters or wireless avionics intra-communications systems in the frequency band 4 200-4 400 MHz, while recognizing the benefit for civil aviation by providing sea surface temperature measurements for weather forecasting.

Thank You

