# UNITED STATES OF AMERICA

# DRAFT PROPOSALS FOR THE WORK OF THE CONFERENCE

**AGENDA ITEM 10**: *to recommend to the Council items for inclusion in the agenda for the next WRC, and to give its views on the preliminary agenda for the subsequent conference and on possible agenda items for future conferences, in accordance with Article 7 of the Convention;*

**BACKGROUND INFORMATION**:

Today satellite operators provide a wide range of broadband services to a rapidly growing customer base, with more systems to come before 2023. Advances in satellite technologies are allowing a variety of new services including innovative broadband, video and mobile services covering all corners of the globe and providing service to places and regions not covered by traditional terrestrial services and that, accordingly, are missing out on the benefits of new and innovative telecommunications services. The fixed-satellite service can support a number of important public interest initiatives including tele-health, tele-education and public protection and disaster relief. Just to name a few examples, high throughput satellites are bringing broadband connectivity to rural and remote areas, thereby advancing countries’ broadband objectives. New state of the art satellites that provide next generation satellite broadband, high quality video programming (including 3D and 4K programming), or the mobile-satellite service using Ka-band frequencies have recently been launched or will be launched shortly.

This is not by chance; the technological progress in radio communication enables the satellite industry to offer much more capacity today with much less spectrum. This applies to the fixed-satellite service whether operating in the geostationary or non-geostationary orbits. The satellite industry takes this development into account by using the most spectrum efficient technologies, including advances in spot-beam technologies and frequency re-use. In addition, for some satellite applications, such as gateways, sharing with Radiocommunication services could be more easily accomplished. However, even with this efficiency, demand for fixed-satellite service outpaces the spectrum available for this service today.

Nonetheless, there is growing demand for fixed-satellite service, including broadband and data services which in many rural and remote locations are the only ways of receiving these important communication services,. Today, with C, Ku and Ka bands reaching capacity, satellite frequencies are heavily used and are nearing saturation for many applications. Therefore, Satellite operators are seeking access to additional fixed-satellite service spectrum to satisfy existing and anticipated requirements for existing and new services, including broadband services. In the North America, for instance, over one million and a half customers currently rely on satellite broadband services and that number is growing each day.

The United States proposes the 37.5-39.5 GHz frequency band for reverse direction operations for gateway earth stations. Other services shall be taken into account and this analysis shall include the possibility of sharing with existing uses of the bands.

**Proposals:**

**MOD USA/10/[38 GHZ FSS-1]**

RESOLUTION 810 (WRC‑19)

**Agenda for the 2023 World Radiocommunication Conference**

The World Radiocommunication Conference (Sharm-el-Sheikh, 2019),

\* \* \*

*resolves to give the view*

that the following items should be included in the agenda for WRC-23:

\* \* \*

2 on the basis of proposals from administrations and the Report of the Conference Preparatory Meeting, and taking account of the results of WRC-19, to consider and take appropriate action in respect of the following items:

\* \* \*

* 1. study of spectrum needs and possible new allocations to the fixed-satellite service in the frequency band 37.5-39.5 GHz (Earth-to-space), in accordance with Resolution **161 (WRC-15)**;

\* \* \*

**NOC USA/10/[38 GHZ FSS-2]**

RESOLUTION 161 (WRC-15)

# Studies relating to spectrum needs and possible allocation of the

# frequency band 37.5-39.5 GHz to the fixed-satellite service

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**ATTACHMENT**

**PROPOSAL FOR FOR FUTURE AGENDA ITEM FOR WRC-23**

***Subject:*** Proposes the adoption of an Agenda item for WRC-19 aiming at the consideration of spectrum requirements for the development of the fixed-satellite service, and possible regulatory actions, including additional allocations to the fixed-satellite service for reverse direction operations for gateway earth stations in the 37.5-39.5 GHz frequency band.

***Origin:*** Member States of the Inter-American Telecommunication Commission (CITEL); WRC-19 Preliminary Agenda item 2.4

***Proposal:***To develop an Agenda item aiming at the consideration of spectrum requirements for the development of the fixed-satellite service and possible regulatory actions, including additional allocations for reverse direction operations for gateway earth stations in the 37.5-39.5 GHz frequency band.

***Background/reason:*** Today satellite operators provide a wide range of broadband services to a rapidly growing customer base, with more systems to come before 2023. Advances in satellite technologies are allowing a variety of new services including innovative broadband, video and mobile services covering all corners of the globe and providing service to places and regions not covered by traditional terrestrial services and that, accordingly, are missing out on the benefits of new and innovative telecommunications services. The fixed-satellite service can support a number of important public interest initiatives including tele-health, tele-education and public protection and disaster relief. Just to name a few examples, high throughput satellites are bringing broadband connectivity to rural and remote areas, thereby advancing countries’ broadband objectives.

This is not by chance; the technological progress in radio communication enables the satellite industry to offer much more capacity today with much less spectrum. This applies to the fixed-satellite service whether operating in the geostationary or non-geostationary orbits. The satellite industry takes this development into account by using the most spectrum efficient technologies, including advances in spot-beam technologies and frequency re-use. In addition, for some satellite applications, such as gateways, sharing with Radiocommunication services could be more easily accomplished. However, even with this efficiency, demand for fixed-satellite service outpaces the spectrum available for this service today.

Nonetheless, there is growing demand for fixed-satellite service, including broadband and data services which in many rural and remote locations are the only ways of receiving these important communication services,. Today, with C, Ku and Ka bands reaching capacity, satellite frequencies are heavily used and are nearing saturation for many applications. Therefore, Satellite operators are seeking access to additional fixed-satellite service spectrum to satisfy existing and anticipated requirements for existing and new services, including broadband services. In the North America, for instance, over one million and a half customers currently rely on satellite broadband services and that number is growing each day.

***Radiocommunication services concerned:*** FSS

***Indication of possible difficulties:*** None foreseen

***Previous/ongoing studies on the issue:*** Previous WRCs addressed similar issues in the 11/12/13/14 and 20/30 GHz bands.

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| ***Studies to be carried out by:*** SG4 | ***with the participation of: SG7*** |

***ITU-R Study Groups concerned:*** SG4, SG7

***ITU resource implications, including financial implications (refer to CV126):***Minimal

***Common regional proposal:*** Yes/No ***Multicountry proposal:*** Yes/No

***Number of countries:***

***Remarks***