|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. **Agenda item** | | | | | | | | | | | | | |
| **Agenda Item**  1.6 | | | *To consider, in accordance with Resolution* ***772 (WRC 19)****, regulatory provisions to facilitate radiocommunications for sub-orbital vehicles.* | | | | | | | | | | |
| **Working Group** | | | | WG2 | | **Sub-Working Group** | | | SWG2A | |
| **Coordinator** | | Tan Wei | | | | | | **Email** | | tanwei@bittt.cn | | | |
| **WP Chair** | | Bui Ha Long | | | | | | **Email** | | Longbh@rfd.gov.vn | | | |
| **Report Date** | | **01/04/2023** | | | | | | | | | | | |
|  | | | | | | | | | | | | | |
| 1. **APT** | | | | | | | | | | | | | |
| **APT Preliminary Views**  CPM23-2/AI1.6 | | | | APT Members prefer Method B to address this agenda item, but are still considering approaches in Method B of draft CPM Report.  APT Members are of the view that a new WRC Resolution should be developed, which contains the regulatory provisions to operate radiocommunications for sub-orbital vehicles:   * The definition or description of sub-orbital flight and sub-orbital vehicle should be provided; * It is not clear at this stage whether stations associated with onboard sub-orbital vehicles should be considered as an earth station or a terrestrial station or an aircraft station which could operate in the AM(R)S, MSS and RNSS under the same conditions as those for conventional stations; * The sub-orbital vehicles shall ensure that it does not affect the existing civil aviation and space launch systems, and not impose any additional constraint on other services or applications operated in the same services. | | | | | | | | | |
| **APT Views for modification of CPM Report**  CPM23-2/ AI1.6 | | | | No. | | | | | | | | | |
| **Outcome from earlier**  **APT Coord meeting** | | | | No. | | | | | | | | | |
|  | | | | | | | | | | | | | |
| 1. **Other regional groups** | | | | | | | | | | | | | |
|  | **ATU** | | | | | **ASMG** | | **CEPT** | | | **CITEL** | | **RCC** |
| **Input(s)** | CPM23-2/ xxx | | | | | CPM23-2/ xxx | | CPM23-2/ [129](https://www.itu.int/md/R19-CPM23.2-C-0129/en), [148](https://www.itu.int/md/R19-CPM23.2-C-0148/en) | | | CPM23-2/ [21](https://www.itu.int/md/R19-CPM23.2-C-0021/en), [154](https://www.itu.int/md/R19-CPM23.2-C-0154/en) | | CPM23-2/ [89](https://www.itu.int/md/R19-CPM23.2-C-0089/en) |
| **Summary of views/proposals** | 1) Support to develop regulatory provisions to facilitate the operation of sub-orbital vehicles, while ensuring the protection of current civil aviation, space launch systems and radio astronomy.  2) Note and recall that the scope of this agenda item excludes any new allocations or changes to the existing allocations in Article 5. | | | | | 1) Development of a new WRC-23 Resolution containing regulatory provisions to facilitate the operation of sub-orbital vehicles, and ensure that it does not affect the existing civil aviation and space launch systems, and doesn’t impose any new restrictions on other co-primary services and applications.  2) Specific definition for sub-orbital vehicles.  3) No change in Article 5 of the Radio Regulations | | 1) Provides the conditions for the operation of terrestrial stations and earth stations fitted on board suborbital vehicles.  2) Decides which of the terrestrial stations and earth stations on board a sub-orbital vehicle is required to ensure the safe integration in aviation airspace under the following conditions. | | | 1) Proposed new Resolution is in accordance with Approach B of Method B contained in the draft CPM text;  2) Proposed new provision to Article 43 of the RR provides the necessary reference within the Radio Regulations to the above proposed new Resolution.  3) The proposed approach clarifies that stations on-board sub-orbital vehicles may be terrestrial station or earth station or both, and can be used in all phases of flight maintaining the same class of station within their respective service allocation. | | The RCC Administrations consider the need to proceed with the studies under possible agenda item of WRC-27 based on modified Resolution 772 (WRC-19) |
|  | | | | | | | | | | | | | |
| 1. **Summary of discussions during CPM23-2** | | | | | | | | | | | | | |
| **Working documents/TEMPs etc** | | | | | [21 (CAN)](https://www.itu.int/md/R19-CPM23.2-C-0021/en), [76 (CHN)](https://www.itu.int/md/R19-CPM23.2-C-0076/en), [89 (RUS)](https://www.itu.int/md/R19-CPM23.2-C-0089/en), [112 (IRN)](https://www.itu.int/md/R19-CPM23.2-C-0112/en), [129 (F)](https://www.itu.int/md/R19-CPM23.2-C-0129/en), [148 (Inmarsat)](https://www.itu.int/md/R19-CPM23.2-C-0148/en), [154 (USA)](https://www.itu.int/md/R19-CPM23.2-C-0154/en)  [TD12](https://www.itu.int/md/meetingdoc.asp?lang=en&parent=R19-CPM23.2-230327-TD-0012) | | | | | | | | |
| [identify key developments during discussions] | | | | | | | | | | | | | |
| 1. A new Method (Method C) was proposed by Russian Federation. This Method provides for the revision of Resolution 772 (WRC-19) in order to clarify the list of possible interference scenarios, including scenarios for the use of ground/earth stations on board a sub-orbital vehicle in a section of its flight path passing in outer space, as well as the completion of compatibility studies provided for in “resolves 2” of this Resolution. 2. A new Approach in method B ( Approach D) was proposed by China. This Approach provides description of sub-orbital flight and sub-orbital vehicle and identifies the specific services in which sub-orbital vehicles may operate (AM(R)S, MSS, RNSS and potentially others) and to clarify that stations onboard sub-orbital vehicles may operate as terrestrial/aircraft stations or earth stations in those services. The RR No. 4.4 shall be applied when the some above services are used by stations onboard sub-orbital vehicles beyond the major portion of the atmosphere. 3. Approach B in Method B states that the stations onboard sub-orbital vehicles referred to in resolves 1 shall not cause additional interference to nor claim additional protection from the existing applications of the same service and on other radiocommunication services in the same and adjacent frequency bands. | | | | | | | | | | | | | |
| 1. **Issue(s) which require discussion and further guidance at APG Coordination meeting** | | | | | | | | | | | | | |
| 1. Due to the studies provided for in Resolution 772 (WRC-19) have not been fully completed during WRC-23 study cycle, whether further research is needed for this agenda item in WRC-27. 2. Whether the RR No. 4.4 shall be applied when the corresponding services are used by stations onboard sub-orbital vehicles beyond the major portion of the atmosphere. | | | | | | | | | | | | | |