

UNION INTERNATIONALE DES TELECOMMUNICATIONS
BUREAU DES RADIOCOMMUNICATIONS

INTERNATIONAL TELECOMMUNICATION UNION
RADIOCOMMUNICATION BUREAU

UNIÓN INTERNACIONAL DE TELECOMUNICACIONES
OFICINA DE RADIOCOMUNICACIONES

BR IFIC / DATE	BR IFIC / DATE	BR IFIC / FECHA
3041 / 04.03.2025		
RES 609 (Rév.CMR-07)	RES 609 (Rev.WRC-07)	RES 609 (Rev.CMR-07)
Vingt-et-unième réunion de consultation sur la Résolution 609 (Rév.CMR-07), Réunion hybride, Séoul (Corée (Rép. de)), 20-22 novembre 2024	Twenty-first Resolution 609 (Rev.WRC-07) Consultation Meeting, Hybrid meeting, Seoul, Korea (Rep. of), 20-22 November 2024	Vigésima primera reunión de consulta sobre la Resolución 609 (Rev.CMR-07), Reunión híbrida, Seúl, Corea (Rep. de), 20-22 de noviembre de 2024
Les présents renseignements sont publiés par le Bureau conformément <i>au point 3 du charge le Bureau</i>, de la Résolution 609 (Rév.CMR-07) : La Partie A contient la Liste des systèmes du SRNS et le Rapport sur les constatations établi par le Bureau à l'intention des participants à la réunion de consultation chargée de déterminer si le niveau de puissance surfacique visé au <i>point 1 du recommande</i> de la Recommandation 608 (Rév.CMR-07) est dépassé par une station spatiale considérée. La Partie B contient les renseignements publiés au <i>point 8 du décide</i> de la Résolution 609 (Rév.CMR-07), à savoir les résultats concernant la répartition du brouillage cumulatif en application du <i>point 2 du décide</i> de ladite Résolution, que ces résultats correspondent ou non à des modifications éventuelles des caractéristiques publiées de leurs systèmes ou réseaux respectifs.	This information is published by the Bureau in accordance with <i>instructs the Bureau 3 of Resolution 609</i> (Rev.WRC-07): Part A includes the List of RNSS systems and the Report of the findings by the Bureau to the participants of the Consultation meeting on the determination of whether the power flux-density level in <i>recommends 1</i> of Recommendation 608 (Rev.WRC-07) is exceeded by any subject space station. Part B includes the information referred to in <i>resolves 8</i> of the Resolution 609 (Rev.WRC-07), as results of any aggregate sharing determinations made in application of <i>resolves 2</i> of the Resolution 609 (Rev.WRC-07), without regard to whether such determinations result in any modifications to the published characteristics of their respective systems or networks.	Esta información se publica por la Oficina con arreglo al <i>encarga a la Oficina 3</i> de la Resolución 609 (Rev.CMR-07): La Parte A incluye la lista de sistemas del SRNS y el Informe de las conclusiones de la Oficina dirigido a los participantes de la reunión de consulta para determinar si el nivel de densidad de flujo de potencia indicado en el <i>recomienda 1</i> de la Recomendación 608 (Rev.CMR-07) es rebasado por alguna estación espacial en cuestión. La Parte B incluye la información a la que se refiere el <i>resuelve 8</i> de la Resolución 609 (Rev.CMR-07), como resultado de cualquier decisión sobre compartición combinada tomada en aplicación del <i>resuelve 2</i> de la Resolución 609 (Rev.CMR-07), sin tener en cuenta si dichas decisiones tienen como resultado cualquier modificación en las características publicadas de sus respectivos sistemas o redes.



国际电信联盟
无线电通信局

МЕЖДУНАРОДНЫЙ СОЮЗ ЭЛЕКТРОСВЯЗИ
БЮРО РАДИОСВЯЗИ

الاتحاد الدولي للاتصالات
مكتب الاتصالات الراديوية

无线电通信局国际频率信息通报 / 日期	ИФИК БР / ДАТА	النشرة الإعلامية الدولية للترددات / رقمها وتاريخها
3041 / 04.03.2025		
第 609 号决议 (WRC-07 修订版)	РЕЗ 609 (Пересм. ВКР-07)	القرار 609 (Rev.WRC-07)
第 609 号决议 (WRC-07, 修订版) 第二十一一次磋商会议 虚拟实体混合会议, 2024 年 11 月 20-22 日	Двадцать первое консультативное собрание по Резолюции 609 (Пересм. ВКР-07), смешанный формат, Сеул, Корея (Респ.), 20–22 ноября 2024 года	الاجتماع التشاوري الحادي والعشرون بشأن القرار 609 (Rev.WRC-07) اجتماع هجين، سيول، جمهورية كوريا، 22-20 نوفمبر 2024
无线电通信局根据第 609 号决议 (WRC-07 修订版) 责成无线电通信局 3 公布本信息: A 部分 包括卫星无线电导航业务 (RNSS) 系统列表和无线电通信局向参加磋商会议的与会者提供的该局的审查结果报告。磋商会议旨在确定第 608 号建议 (WRC-07 修订版) 建议 1 中的功率通量密度限值是否被某个特定空间台站所超过。 B 部分 包括第 609 号决议 (WRC-07 修订版) 做出决议 8 所列的信息, 即有关执行第 609 号决议 (WRC-07 修订版) 作出决议 2 中的集总干扰分摊的确定结果, 不论这一确定结果是否修改其各自系统或网络的已公布特性。	Настоящая информация публикуется Бюро в соответствии с п.3 раздела "поручает Бюро" Резолюции 609 (Пересм.ВКР-07): Часть А содержит список систем РНСС, а также Отчет участникам консультативного собрания о заключениях Бюро относительно определения, превышает ли уровень потока мощности, определенный в п.1 раздела "рекомендует" Рекомендации 608 (Пересм.ВКР-07), какой-либо из рассматриваемых космических станций или нет. Часть В содержит информацию, о которой идет речь в п.8 раздела "решает" Резолюции 609 (Пересм.ВКР-07) и которая является результатом любого определения условий совместного использования суммарного допустимого уровня согласно пункту 2 раздела "решает" Резолюции 609 (Пересм.ВКР-07), независимо от того, достигнуты ли эти результаты путем изменения объявленных характеристик их соответствующих систем или сетей или нет.	ينشر المكتب هذه المعلومات وفقاً للبند 3 من "يكلف مكتب الاتصالات الراديوية" في القرار 609 (Rev.WRC-07): يتضمن الجزء A قائمة بأنظمة خدمة الملاحة الراديوية الساتلية وتقريباً أعدده المكتب يتضمن النتائج التي توصل إليها موجهاً للمشاركين في هذا الاجتماع التشاوري المكلف بتحديد ما إذا كانت حدود كثافة تدفق القدرة المنصوص عليها في البند 1 من "يوصي" في التوصية 608 (Rev.WRC-07) قد تجاوزتها أي محطة من المحطات الفضائية المعنية. ويتضمن الجزء B المعلومات المشار إليها في البند 8 من منطوق القرار 609 (Rev.WRC-07)، أي نتائج ترتيبات التقاسم التراكمي التي يتم التوصل إليها تنفيذاً للبند 2 من منطوق القرار 609 (Rev.WRC-07)، بغض النظر عما إذا كانت هذه الترتيبات سيسفر عنها أي تعديلات في الخصائص المنشورة لأنظمة الإدارات المعنية وشبكاتها.

PARTIE A Liste des systèmes du SRNS et Rapport sur les conclusions établi par le Bureau à l'intention des participants à la réunion de consultation chargée de déterminer si le niveau de puissance surfacique visé au point 1 du <i>recommande</i> de la Recommandation 608 (Rév.CMR-07) est dépassé par une station spatiale considérée.	PART A List of the RNSS systems and Report of the findings by the Bureau to the participants of the Consultation meeting on the determination of whether the power flux-density level in <i>recommends 1</i> of Recommendation 608 (Rev.WRC-07) is exceeded by any subject space station.	PARTE A Lista de sistemas del SRNS e Informe de las conclusiones de la Oficina dirigido a los participantes de la reunión de consulta para determinar si el nivel de densidad de flujo de potencia del <i>recomienda 1</i> de la Recomendación 608 (Rev.CMR-07) es rebasado por alguna de las estaciones espaciales en cuestión.
Aux termes du <i>point 1 du recommande</i> de la Recommandation 608 (Rév.CMR-07), lors de l'application des dispositions du <i>point 5 du décide</i> de la Résolution 609 (Rév.CMR-07), dans la bande 1 164 – 1 215 MHz, la puissance surfacique maximale rayonnée à la surface de la Terre par les émissions d'une station spatiale du SRNS, pour tous les angles d'arrivée, ne dépasse pas -129 dB(W/m²) dans une bande quelconque de 1 MHz dans des conditions de propagation en espace libre.	Recommendation 608 (Rev.WRC-07) <i>recommends 1</i>, indicates that in the implementation of <i>resolves 5</i> of Resolution 609 (Rev.WRC-07), in the frequency band 1 164 – 1 215 MHz, the maximum power flux-density produced at the surface of the Earth by emissions from a space station in the radionavigation-satellite service, for all angles of arrival, should not exceed -129 dB(W/m²) in any 1 MHz band under free space propagation conditions.	La Recomendación 608 (Rev.CMR-07) en su <i>recomienda 1</i> señala que en la aplicación del <i>resuelve 5</i> de la Resolución 609 (Rev.CMR-07), en la banda de frecuencias 1 164 – 1 215 MHz, la máxima densidad de flujo de potencia producida en la superficie de la Tierra por las emisiones de una estación espacial del servicio de radionavegación por satélite, para todos los ángulos de llegada, no deberá superar -129 dB(W/m²) en cualquier banda de 1 MHz en condiciones de propagación en espacio libre.
A 部分 卫星无线电导航业务（RNSS）系统列表和无线电通信局向参加磋商会议的与会者提供的该局的审查结果报告。磋商会议旨在确定第 608 号建议（WRC-07，修订版）做出建议 1 中的功率通量密度限值是否被某个所述空间电台所超出。 第 608 号建议（WRC-07 修订版）建议 1 指出，在执行第 609 号决议（WRC-07 修订版）做出决议第 5 段时，在 1 164-1 215MHz 频带内和在所有到达角上，卫星无线电导航业务空间台站的发射在地球表面产生的最大功率通量密度，在自由空间传播条件下，在任何 1MHz 频带内，不得超过 -129 dB (W/m²)。	ЧАСТЬ А Список систем РНСС, а также Отчет участникам консультативного собрания о заключениях Бюро относительно определения, превышает ли уровень плотности потока мощности, определенный в п. 1 раздела <i>рекомендует</i> Рекомендации 608 (Пересм. ВКР-07), какой-либо из рассматриваемых космических станций или нет. В п. 1 раздела "<i>рекомендует</i>" Рекомендации 608 (Пересм.ВКР-07) указывается, что при применении пункта 5 раздела "<i>решает</i>" Резолюции 609 (Пересм.ВКР-07) в полосе частот 1 164–1 215 МГц максимальная плотность потока мощности, создаваемая у поверхности Земли излучениями космической станции радионавигационной спутниковой службы, для всех углов прихода не должна превышать -129 дБ(Вт/м²) в любой полосе шириной 1 МГц при условиях распространения в свободном пространстве.	الجزء أ قائمة بأنظمة خدمة الملاحة الراديوية الساتلية وتقرير أعدته المكتب يتضمن النتائج التي توصل إليها موجه للمشاركين في هذا الاجتماع التشاوري المكلف بتحديد ما إذا كانت حدود كثافة تدفق القدرة المنصوص عليها في البند 1 من "يوصي" في التوصية (Rev.WRC-07) 608 قد تجاوزتها أي محطة من المحطات الفضائية المعنية. ينص البند 1 من "يوصي" في التوصية (Rev.WRC-07) 608 على أنه، في تطبيق البند 5 من منطوق القرار (Rev.WRC-07) 609، ينبغي ألا تتجاوز كثافة تدفق القدرة القصوى الناتجة عند سطح الأرض عن إرسالات محطة فضائية في خدمة الملاحة الراديوية الساتلية في نطاق الترددات 1 164 – 1 215 MHz، القيمة -129 dB(W/m²)، في أي نطاق يبلغ 1 MHz، لجميع زوايا الوصول، وفي ظروف الانتشار في الفضاء الحر.

**Liste des systèmes du SRNS – Description des colonnes / List of the RNSS systems - Description of the columns /
Listas de los sistemas del SRNS - Descripción de las columnas**

Item	Description	Description	Descripción
ntc_id	Numéro d'identification du réseau à satellite	Identification number of the network	BR Número de identificación de la red
adm	Administration notificatrice (voir le Tableau 1 de la Préface)	Notifying administration (Refer to Table 1 of the Preface)	Administración notificante (véase el cuadro 1 del Prefacio)
ntw_org	Organisation Intergouvernementale de Satellite	Intergovernmental Satellite Organization	Organización Intergubernamental de Satélite
sat_name	Identité du réseau à satellite	Identity of the satellite network	Identidad de la red de satélite
long_nom	Longitude nominale d'une station spatiale géostationnaire (degré)	Nominal longitude of a geostationary space station (degree)	Longitud nominal de una estación espacial geoestacionaria (grado)
ntf_rsn	A = Réseau au stade API C = Réseau au stade de la coordination N = Réseau au stade de la notification	A = Network in API stage C = Network in coordination stage N = Network in notification stage	B = Red en etapa de API C = Red en etapa de coordinación N = Red en etapa de notificación
d_rcv	Date de réception	Date of receipt	Fecha de recepción
sns_ref+ssn_no	Référence aux Sections Spéciales	Reference to Special Sections	Referencia a las Secciones Especiales
ific_no	Numéro de la BR IFIC	BR IFIC number	Número de la BR IFIC
d_ific	Date de la BR IFIC	BR IFIC date	Fecha de la BR IFIC
dBiu	Date de mise en service	Date of bringing into use	Fecha de puesta en servicio
Annex to RES-609	Systèmes du SRNS ayant des assignations de fréquence dans la bande 1 164 – 1 215 MHz pour lesquels les informations demandées dans l'Annexe de la Résolution 609 ont été fournies à la réunion de consultation.	RNSS systems with frequency assignments in the band 1 164-1 215 MHz for which Annex to Resolution 609 information has been provided to the Consultation meeting.	Sistemas del SRNS con asignaciones de frecuencias en la banda 1 164 – 1 215 MHz para los cuales se ha proporcionado la información de la Resolución 609 a la reunión de consulta.
BR Report (RES 609 instructs the Bureau 2)	Rapport du Bureau contenant des conclusions relatives à la détermination des valeurs de puissance surfacique indiquées sous <i>recommande 1</i> de la Recommandation 608 (Rév.CMR-07) en utilisant les informations demandées au titre de l'Annexe 1 de ladite Recommandation.	Bureau's Report with findings relating to determination of the PFD values indicated in <i>recommends 1</i> of Recommendation 608 (rev.WRC-07) using Annex 1 information of this Recommendation.	Informe de la Oficina con las conclusiones relativas a la determinación de los valores de DFP indicados en el <i>recomienda 1</i> de la Recomendación 608 (Rev.CMR-07) utilizando la información del Anexo 1 de esta Recomendación.

RNSS 系统列表 –栏目描述 / Список систем РНСС – Описание столбцов /

قائمة بأنظمة خدمة الملاحة الراديوية الساتلية – وصف الأعمدة

Item	描述	Описание	الوصف
ntc_id	卫星网络标识号码	Идентификационный номер спутниковой сети	رقم هوية الشبكة الساتلية
adm	通知主管部门（参阅前言表 1）	Заявляющая администрация (см. таблицу 1 Предисловия)	الإدارة المبلغة (انظر الجدول 1 في المقدمة)
ntw_org	政府间卫星组织	Межправительственная спутниковая организация	منظمة ساتلية دولية حكومية
sat_name	卫星网络的标识	Название спутниковой сети	هوية الشبكة الساتلية
long_nom	静止空间台站标称经度（度）	Номинальная долгота геостационарной космической станции (градусы)	خط الطول الاسمي لمحطة فضائية مستقرة بالنسبة إلى الأرض (بالدرجات)
ntf_rsn	A= 处于 API 阶段的网络 C= 处于协调阶段的网络 N= 处于通知阶段的网络	A = Сеть на этапе API C = Сеть на этапе координации N = Сеть на этапе заявления	A = شبكة في مرحلة "معلومات النشر المسبق" C = شبكة في مرحلة التنسيق N = شبكة في مرحلة التبليغ
d_rcv	收到日期	Дата получения	تاريخ الاستلام
sns_ref+ssn_no	引证特节	Ссылка на Специальные секции	إحالة إلى الأقسام الخاصة
ific_no	无线电通信局国际频率信息通报编号	Номер ИФИК БР	رقم النشرة الإعلامية الدولية للترددات الصادرة عن مكتب الاتصالات الراديوية (BR IFIC)
d_ific	无线电通信局国际频率信息通报日期	Дата ИФИК БР	تاريخ النشرة الإعلامية الدولية للترددات الصادرة عن مكتب الاتصالات الراديوية
dBiU	启用日期	Дата ввода в действие	تاريخ الدخول في الخدمة
Annex to RES-609	在 1164-1215MHz 频带内有频率指配的、第 609 号决议（WRC-03）附件中所要求的信息已提供给磋商会议的 RNSS 系统	Системы РНСС с присвоениями в полосе частот 1164–1215 МГц, по которым информация в соответствии с Дополнением к Резолюции 609 представлена консультативному собранию.	أنظمة خدمة الملاحة الراديوية الساتلية التي لها تخصيصات تردد في النطاق 1164 - 1215 MHz تم بشأنها تقديم المعلومات المطلوبة في الملحق بالقرار 609 إلى الاجتماع التشاوري.
BR Report (RES 609 instructs the Bureau 2)	无线电通信局的报告，包括该局通过使用第 608 号建议（WRC-07 修订版）附件 1 建议 1 的信息做出的有关功率通量密度值的确定结果	Отчет Бюро с заключениями относительно определения значений ППМ, обозначенных в п. 1 раздела "рекомендует" Рекомендации 608 (rev.BKP-07) с использованием информации Дополнения 1 к данной Рекомендации.	تقرير المكتب الذي يتضمن النتائج المحددة بشأن قيم كثافة تدفق القدرة المبيّنة في البند 1 من "يوصي" في التوصية (rev.WRC-07) 608، باستعمال المعلومات المطلوبة في الملحق 1 بالتوصية المذكورة.

ANNEX 1

List of the RNSS systems (as of 09.04.2024) with frequency assignments in the band 1 164-1 215 MHz that meet the criteria listed in Annex to RES 609 (Rev.WRC-07) and Bureau's Report with findings relating to determination of the PFD values

ntc_id	adm	ntwk_org	sat_name	long_no_m	ntf_rs_n	d_rcv	pub_ref	pub_no	ific_no	d_ific	dBiu	Annex to RES-609 *	BR Report **
120500103	ALG		ALCOMSAT-24.8W	-24.8	N	13.05.2020	PART	II-S	2930	29.09.2020	18.12.2017	11 th meeting	N
122520232	ALG		ALCOMSAT-33.5W	-33.5	C	26.12.2022	CR/C	5939	3001	25.07.2023		—	N
120520200	ARS	ARB	ARABSAT-10F-44.5E	44.5	C	29.10.2020	CR/C	5417	2943	06.04.2021		—	Y
120520202	ARS	ARB	ARABSAT-10G-1E	1	C	29.10.2020	CR/C	5422	2943	06.04.2021		—	Y
120520201	ARS	ARB	ARABSAT-10N-14.7E	14.7	C	29.10.2020	CR/C	5420	2943	06.04.2021		—	Y
120520199	ARS	ARB	ARABSAT-10P-67.5E	67.5	C	29.10.2020	CR/C	5419	2943	06.04.2021		—	Y
120520198	ARS	ARB	ARABSAT-10Q-58.5E	58.5	C	29.10.2020	CR/C	5418	2943	06.04.2021		—	Y
120520203	ARS	ARB	ARABSAT-10Y-9W	-9	C	29.10.2020	CR/C	5421	2943	06.04.2021		—	Y
122520033	ARS	ARB	ARABSAT-11A-30.5E	30.5	C	28.03.2022	CR/C	5721	2979	06.09.2022		—	Y
122520101	ARS	ARB	ARABSAT-11AS-81.5E	81.5	C	16.08.2022	CR/C	5788	2987	10.01.2023		—	Y
122520032	ARS	ARB	ARABSAT-11B-26E	26	C	28.03.2022	CR/C	5722	2979	06.09.2022		—	Y
122520099	ARS	ARB	ARABSAT-11C-20E	20	C	16.08.2022	CR/C	5786	2987	10.01.2023		—	Y
122520100	ARS	ARB	ARABSAT-11E-34.5E	34.5	C	16.08.2022	CR/C	5787	2987	10.01.2023		—	Y
122520098	ARS	ARB	ARABSAT-11G-11E	11	C	16.08.2022	CR/C	5785	2987	10.01.2023		—	Y
119520141	ARS	ARB	ARABSAT-9A-30.5E	30.5	C	09.06.2019	CR/C	5045	2905	01.10.2019		—	Y
117520218	ARS	ARB	ARABSAT-9AS-81.5E	81.5	C	26.06.2017	CR/C	4515	2863	06.02.2018		—	Y
119520142	ARS	ARB	ARABSAT-9B-26E	26	C	10.06.2019	CR/C	5046	2905	01.10.2019		—	Y
119520143	ARS	ARB	ARABSAT-9C-20E	20	C	10.06.2019	CR/C	5047	2905	01.10.2019		—	Y
119520144	ARS	ARB	ARABSAT-9E-34.5E	34.5	C	10.06.2019	CR/C	5048	2905	01.10.2019		—	Y
117520216	ARS	ARB	ARABSAT-9F-44.5E	44.5	C	26.06.2017	CR/C	4513	2863	06.02.2018		—	Y
119520145	ARS	ARB	ARABSAT-9G-11E	11	C	10.06.2019	CR/C	5049	2905	01.10.2019		—	Y
117520215	ARS	ARB	ARABSAT-9L-1E	1	C	26.06.2017	CR/C	4514	2863	06.02.2018		—	Y
117520217	ARS	ARB	ARABSAT-9M-67.5E	67.5	C	26.06.2017	CR/C	4516	2863	06.02.2018		—	Y
119520094	AUS		ADF 104E IOR	104	C	28.03.2019	CR/C	5012	2902	20.08.2019		—	Y
119520095	AUS		ADF 140E POR	140	C	28.03.2019	CR/C	5011	2902	20.08.2019		—	Y
119520096	AUS		ADF 156E POR	156	C	28.03.2019	CR/C	5013	2902	20.08.2019		—	Y
119520093	AUS		ADF 88E IOR	88	C	28.03.2019	CR/C	5009	2902	20.08.2019		—	Y
119520092	AUS		ADF 95E IOR	95	C	28.03.2019	CR/C	5010	2902	20.08.2019		—	Y
120520144	AUS		ADF POR-1	153	C	11.08.2020	CR/C	5360	2936	22.12.2020		—	Y
120520145	AUS		ADF POR-2	168	C	11.08.2020	CR/C	5359	2936	22.12.2020		—	Y
121520030	AUS		AUSSAT-H-152E	152	C	17.02.2021	CR/C	5493	2951	27.07.2021		—	N
120520090	AUS		AUSSAT-H-156E	156	C	27.05.2020	CR/C	5321	2933	10.11.2020		—	N
120520091	AUS		AUSSAT-H-160E	160	C	27.05.2020	CR/C	5322	2933	10.11.2020		—	N

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121520031	AUS		AUSSAT-H-164E	164	C	17.02.2021	CR/C	5494	2951	27.07.2021		—	N
118520162	CHN		CENTISPACE-1	N-GSO	C	06.07.2018	CR/C	4801	2882	30.10.2018		17 th meeting	N
118520283	CHN		CENTISPACE-2	N-GSO	C	11.09.2018	CR/C	4847	2886	08.01.2019		20 th meeting	N
120520264	CHN		CENTISPACE-3	N-GSO	C	29.12.2020	CR/C	5516	2953	24.08.2021		20 th meeting	N
122520176	CHN		CENTISPACE-4	N-GSO	C	24.11.2022	CR/C	5920	3001	25.07.2023		—	N
103500418	CHN		COMPASS-110.5E	110.5	N	11.11.2009	PART	II-S	2681	02.11.2010	17.08.2006	11 th meeting	N
103500419	CHN		COMPASS-140E	140	N	17.10.2007	PART	II-S	2658	01.12.2009	17.10.2006	11 th meeting	N
109500803	CHN		COMPASS-160E	160	N	16.12.2010	PART	II-S	2701	23.08.2011	24.01.2010	11 th meeting	N
103500416	CHN		COMPASS-58.75E	58.75	N	22.12.2010	PART	II-S	2687	08.02.2011	08.12.2006	11 th meeting	N
119500051	CHN		COMPASS-80.3E	80.3	N	02.11.2020	PART	II-S	2942	23.03.2021	15.12.2018	11 th meeting	N
103500417	CHN		COMPASS-80E	80	N	19.09.2019	PART	II-S	2940	23.02.2021	17.06.2006	11 th meeting	N
116500154	CHN		COMPASS-B-144.5E	144.5	N	16.08.2019	PART	II-S	2909	26.11.2019	16.06.2016	11 th meeting	Y
116500153	CHN		COMPASS-B-84E	84	N	16.10.2019	PART	II-S	2915	03.03.2020	27.06.2016	11 th meeting	Y
103500420	CHN		COMPASS-H	N-GSO	N	16.04.2007	PART	II-S	2596	12.06.2007	26.03.2007	11 th meeting	N
118500146	CHN		COMPASS-IGSO	N-GSO	N	02.11.2020	PART	II-S	2946	18.05.2021	18.12.2017	11 th meeting	N
103500421	CHN		COMPASS-M	N-GSO	N	16.04.2007	PART	II-S	2596	12.06.2007	16.04.2007	11 th meeting	N
117500038	CHN		COMPASS-MEO	N-GSO	N	12.06.2020	PART	II-S	2962	11.01.2022	25.07.2015	11 th meeting	Y
122520161	CHN		CSN-L1	N-GSO	C	03.11.2022	CR/C	5888	2999	27.06.2023		—	N
122520162	CHN		CSN-L2	N-GSO	C	03.11.2022	CR/C	5889	2999	27.06.2023		—	N
122520163	CHN		CSN-L3	N-GSO	C	03.11.2022	CR/C	5890	2999	27.06.2023		—	Y
121520236	CHN		CSN-V1-1	N-GSO	C	20.12.2021	CR/C	5705	2977	09.08.2022		—	Y
121520237	CHN		CSN-V1-2	N-GSO	C	20.12.2021	CR/C	5706	2977	09.08.2022		—	Y
121520238	CHN		CSN-V1-3	N-GSO	C	20.12.2021	CR/C	5707	2977	09.08.2022		—	Y
121520239	CHN		CSN-V2-1	N-GSO	C	20.12.2021	CR/C	5708	2977	09.08.2022		—	Y
121520240	CHN		CSN-V2-2	N-GSO	C	20.12.2021	CR/C	5709	2977	09.08.2022		—	Y
121520241	CHN		CSN-V3-1	N-GSO	C	20.12.2021	CR/C	5710	2977	09.08.2022		—	Y
121520242	CHN		CSN-V3-2	N-GSO	C	20.12.2021	CR/C	5711	2977	09.08.2022		—	Y
123520045	CHN		CSN-V4	N-GSO	C	07.04.2023	CR/C	5989	3006	03.10.2023		—	N
123520046	CHN		CSN-V5	N-GSO	C	07.04.2023	CR/C	5990	3006	03.10.2023		—	N
123520047	CHN		CSN-V6	N-GSO	C	07.04.2023	CR/C	5993	3006	03.10.2023		—	N
123520048	CHN		CSN-V7	N-GSO	C	07.04.2023	CR/C	5992	3007	17.10.2023		—	N
119520266	CHN		GEESAT-1	N-GSO	C	13.11.2019	CR/C	5162	2922	09.06.2020		—	N
119520032	CHN		GW	N-GSO	C	08.04.2022	CR/C	4969	2984	15.11.2022		20 th meeting	Y
120520172	CHN		GW-2	N-GSO	C	11.09.2020	CR/C	5486	2951	27.07.2021		20 th meeting	N
120520170	CHN		GW-A59	N-GSO	C	11.09.2020	CR/C	5448	2948	15.06.2021		—	Y
120520119	CHN		MCNT-02	N-GSO	C	14.07.2020	CR/C	5438	2946	18.05.2021		20 th meeting	Y
120520248	CHN		MCNT-03	N-GSO	C	21.12.2020	CR/C	5512	2953	24.08.2021		20 th meeting	Y
120520014	CHN		QXSI-D1	N-GSO	C	19.01.2020	CR/C	5262	2925	21.07.2020		—	N

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101500300	D	GLS	GALILEO-NAV-2004	N-GSO	N	10.10.2006	PART	II-S	2582	14.11.2006	03.03.2006	2 nd meeting	N
122520037	D		PAX-1	N-GSO	C	07.04.2022	CR/C	5745	2982	18.10.2022		—	Y
123520020	EGY		TIBASAT-2.5E	2.5	C	23.02.2023	CR/C	5956	3002	08.08.2023		—	Y
123520022	EGY		TIBASAT-22.5E	22.5	C	23.02.2023	CR/C	5955	3002	08.08.2023		—	Y
123520021	EGY		TIBASAT-8.5W	-8.5	C	23.02.2023	CR/C	5957	3002	08.08.2023		—	Y
117520117	F		F-SAT-RN-113W	-113	C	17.02.2017	CR/C	4451	2854	19.09.2017		—	Y
121520165	F		F-SAT-RN-13E	13	C	01.10.2021	CR/C	5632	2965	22.02.2022		19 th meeting	N
117520381	F		F-SAT-RN-5W	-5	C	17.10.2017	CR/C	4593	2868	17.04.2018		16 th meeting	N
124520040	F		FUTUR-NAV-DEMO-A-B***	N-GSO	C	29.03.2024	N	—	—	—		21 st meeting	Y
124520083	F	GLS	EU-LNAV***	N-GSO	C	05.04.2024	N	—	—	—		21 st meeting	Y
119500116	F	GLS	GALILEO-2	N-GSO	N	10.05.2019	PART	II-S	2901	06.08.2019	27.03.2015	10 th meeting	N
124520082	F	GLS	GALILEO-2G***	N-GSO	C	05.04.2024	N	—	—	—		21 st meeting	N
120520164	F	GLS	GALILEO-L3	N-GSO	C	28.08.2020	CR/C	5446	2947	01.06.2021		19 th meeting	N
100500321	F	GLS	MSATNAV-2	N-GSO	N	08.01.2007	PART	II-S	2588	20.02.2007	03.03.2006	2 nd meeting	N
101500014	F	GLS	MSATNAV-3	N-GSO	N	08.03.2006	PART	II-S	2588	20.02.2007	03.03.2006	2 nd meeting	N
103500093	F	GLS	MSATNAV-4	N-GSO	N	08.01.2007	PART	II-S	2588	20.02.2007	03.03.2006	2 nd meeting	N
122520080	F		SYNCHROCUBE	N-GSO	C	07.07.2022	CR/C	5777	2985	29.11.2022		20 th meeting	Y
109500230	G		INMARSAT GSO-2N	64	N	02.08.2010	PART	II-S	3018	02.04.2024	28.05.2005	11 th meeting	N
112500010	G		INMARSAT-4 143.5E	143.5	N	12.01.2012	PART	II-S	2725	07.08.2012	24.02.2009	11 th meeting	N
110500194	G		INMARSAT-4 98W	-98	N	30.06.2011	PART	II-S	2710	10.01.2012	07.01.2009	11 th meeting	N
115500221	G		INMARSAT-4A 143.5E	143.5	N	19.05.2017	PART	II-S	2885	11.12.2018	19.02.2014	11 th meeting	N
114500078	G		INMARSAT-4A 98W	-98	N	02.10.2015	PART	II-S	2822	21.06.2016	17.02.2014	11 th meeting	N
120500169	G		INMARSAT-4B 64E	64	N	30.06.2020	PART	II-S	3018	02.04.2024	06.12.2015	11 th meeting	Y
118520061	G		INMARSAT-6-117E5	117.5	C	07.03.2018	CR/C	4705	2875	24.07.2018		—	N
118520063	G		INMARSAT-6-148W	-148	C	07.03.2018	CR/C	4704	2875	24.07.2018		—	N
118520138	G		INMARSAT-6-159W	-159	C	17.05.2018	CR/C	4772	2880	02.10.2018		—	N
121520033	G		INMARSAT-6-178E-R	178	C	19.02.2021	CR/C	5495	2951	27.07.2021		19 th meeting	N
118520062	G		INMARSAT-6-28W	-28	C	07.03.2018	CR/C	4703	2875	24.07.2018		—	N
120520167	G		INMARSAT-6-54W-R	-54	C	02.09.2020	CR/C	5384	2940	23.02.2021		21 st meeting	N
120520168	G		INMARSAT-6-64E-R	64	C	20.09.2023	CR/C	5383	3015	20.02.2024		—	N
122520065	G		INMARSAT-6-73E	73	C	01.06.2022	CR/C	5759	2983	01.11.2022		—	N
118520080	G		INMARSAT-6-83E5	83.5	C	13.03.2018	CR/C	4714	2877	21.08.2018		—	N
122520066	G		INMARSAT-6-98W-R	-98	C	01.06.2022	CR/C	5758	2983	01.11.2022		—	N
123520143	G		INMARSAT-8-143.5E-R	143.5	C	13.10.2023	CR/C	6064	3016	05.03.2024		—	Y
123520145	G		INMARSAT-8-148W	-148	C	13.10.2023	CR/C	6066	3016	05.03.2024		—	Y
123520144	G		INMARSAT-8-178E	178	C	13.10.2023	CR/C	6065	3016	05.03.2024		21 st meeting	Y

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123520163	G		INMARSAT-8-25E	25	C	06.11.2023	CR/C	6084	3017	19.03.2024		—	Y
123520142	G		INMARSAT-8-54W	-54	C	13.10.2023	CR/C	6063	3016	05.03.2024		21 st meeting	Y
119520135	G		JUKEBOX	N-GSO	C	16.04.2021	CR/C	5052	2957	19.10.2021		—	Y
121520182	G		TARD-1S	N-GSO	C	09.06.2023	CR/C	5676	3013	23.01.2024		—	Y
120520074	HOL		NSS-G10-74W	-74	C	06.05.2020	CR/C	5310	2931	13.10.2020		—	Y
117520079	HOL		NSS-G7 135W	-135	C	01.01.2017	CR/C	4398	2851	08.08.2017		—	Y
117520080	HOL		NSS-G7 137W	-137	C	01.01.2017	CR/C	4399	2851	08.08.2017		—	Y
117520082	HOL		NSS-G7 77W	-77	C	01.01.2017	CR/C	4397	2851	08.08.2017		—	Y
118520294	HOL		NSS-G8 139W	-139	C	01.10.2018	CR/C	4858	2889	19.02.2019		—	Y
118520295	HOL		NSS-G8 157W	-157	C	01.10.2018	CR/C	4859	2889	19.02.2019		—	Y
117520471	HOL		NSS-G8-137W	-137	C	12.12.2017	CR/C	4638	2872	12.06.2018		—	Y
119520368	HOL		NSS-G8-3	-148	C	11.12.2019	CR/C	5219	2922	09.06.2020		—	Y
103500082	I	GLS	GALILEO-M-NAVSTAR	N-GSO	N	08.03.2006	PART	II-S	2639	10.03.2009	03.03.2006	2 nd meeting	N
119520077	I		ITASAT-1A	27	C	19.03.2019	CR/C	5004	2902	20.08.2019		—	N
117520475	I		ITASAT-1B	10	C	18.12.2017	CR/C	4646	2872	12.06.2018		—	N
116500029	IND		INSAT-NAV(55)	55	N	24.02.2016	PART	II-S	2834	06.12.2016	09.07.2013	10 th meeting	N
119500107	IND		INSAT-NAV(93.5)	93.5	N	03.05.2019	PART	II-S	2901	06.08.2019	04.08.2016	10 th meeting	N
112500274	IND		INSAT-NAV-A-GS	N-GSO	N	23.11.2012	PART	II-S	2744	14.05.2013	30.04.2012	10 th meeting	N
117520274	IND		INSAT-NAV-GS17	N-GSO	C	17.07.2017	CR/C	4544	2866	20.03.2018		15 th meeting	N
123520092	IND		INSAT-NAV-GSO4(129.5E)	129.5	C	22.06.2023	CR/C	6029	3011	12.12.2023		—	N
123520094	IND		INSAT-NAV-GSO4(32.5E)	32.5	C	22.06.2023	CR/C	6031	3011	12.12.2023		—	N
123520093	IND		INSAT-NAV-GSO4(83E)	83	C	22.06.2023	CR/C	6030	3011	12.12.2023		—	N
119500343	IND		INSAT-NAVR(129.5)	129.5	N	24.10.2019	PART	II-S	2962	11.01.2022	08.05.2016	10 th meeting	N
119500068	IND		INSAT-NAVR(32.5)	32.5	N	07.03.2019	PART	II-S	2909	26.11.2019	20.03.2016	10 th meeting	N
117500127	IND		INSAT-NAVR(83)	83	N	02.06.2017	PART	II-S	2872	12.06.2018	26.07.2015	10 th meeting	N
121500275	IND		INSAT-NAVR-GS	N-GSO	N	11.10.2021	PART	I-S	3008	31.10.2023	21.08.2016	10 th meeting	N
121520244	INS		KOMINFO-2	123	C	21.12.2021	CR/C	5670	2973	14.06.2022		—	N
122520022	INS		KOMINFO-3	113	C	03.02.2022	CR/C	5704	2976	26.07.2022		—	N
121520167	IRN		IRANSAT-B-70.5E	70.5	C	12.10.2021	CR/C	5637	2965	22.02.2022		—	N
121520168	IRN		IRANSAT-C-43.5E	43.5	C	12.10.2021	CR/C	5639	2965	22.02.2022		—	N
121520169	IRN		IRANSAT-C-61.8E	61.8	C	12.10.2021	CR/C	5634	2965	22.02.2022		—	N
104500548	J		N-SAT-HEO2	N-GSO	N	28.12.2004	PART	II-S	2603	18.09.2007	28.12.2007	10 th meeting	Y
116500181	J		QZSS	N-GSO	N	18.01.2019	PART	II-S	2914	18.02.2020	01.06.2017	21 st meeting	Y
110500199	J		QZSS-1	N-GSO	N	27.01.2012	PART	II-S	2724	24.07.2012	11.09.2010	21 st meeting	Y
123500091	J		QZSS-A	N-GSO	N	16.06.2023	PART	I-S	3000	11.07.2023		21 st meeting	Y

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118520073	J		QZSS-A	N-GSO	C	31.08.2018	CR/C	4720	2901	06.08.2019		21 st meeting	Y
123520130	J		QZSS-AA	N-GSO	C	01.09.2023	CR/C	6076	3017	19.03.2024		21 st meeting	Y
123520258	J		QZSS-B-L5***	N-GSO	C	26.12.2023	N	—	—	—		21 st meeting	Y
122500117	J		QZSS-GS-A1	90.5	N	12.05.2023	PART	II-S	3003	22.08.2023		16 th meeting	Y
118520075	J		QZSS-GS-A1	90.5	C	13.03.2018	CR/C	4715	2877	21.08.2018		16 th meeting	Y
118520076	J		QZSS-GS-A3	123	C	13.03.2018	CR/C	4716	2877	21.08.2018		16 th meeting	Y
122500116	J		QZSS-GS-A4	127	N	12.05.2023	PART	II-S	3003	22.08.2023		16 th meeting	Y
118520077	J		QZSS-GS-A4	127	C	13.03.2018	CR/C	4717	2877	21.08.2018		16 th meeting	Y
118520078	J		QZSS-GS-A5	137	C	13.03.2018	CR/C	4718	2877	21.08.2018		16 th meeting	Y
118520079	J		QZSS-GS-A8	168	C	13.03.2018	CR/C	4719	2877	21.08.2018		16 th meeting	Y
123520131	J		QZSS-GS-AA1	90.5	C	01.09.2023	CR/C	6060	3015	20.02.2024		16 th meeting	Y
117500337	J		QZSS-GS4	127	N	18.01.2019	PART	II-S	2916	17.03.2020	29.08.2017	10 th meeting	Y
120520194	KOR		KOREASAT-116N	116	C	30.09.2022	CR/C	5409	2991	07.03.2023		20 th meeting	Y
121520198	KOR		KOREASAT-128.2A	128.2	C	24.11.2021	CR/C	5653	2968	05.04.2022		20 th meeting	N
118520087	KOR		KOREASAT-128.2E	128.2	C	28.03.2018	CR/C	4726	2878	04.09.2018		—	Y
122520061	KOR		KPS-G1	124.5	C	30.05.2022	CR/C	5743	2981	04.10.2022		21 st meeting	Y
122520062	KOR		KPS-NGSO	N-GSO	C	30.05.2022	CR/C	5770	2984	15.11.2022		21 st meeting	Y
123520016	LUX		LUX-G15-7-E	23.5	C	13.02.2023	CR/C	5946	3001	25.07.2023		20 th meeting	N
117500155	LUX		LUX-G6-2-E	5	N	19.12.2018	PART	II-S	2897	11.06.2019	05.11.2015	7 th meeting	N
117520034	LUX		LUX-G7 105W	-105	C	01.01.2017	CR/C	4370	2851	08.08.2017		—	Y
120500077	LUX		LUX-G7-9-E2	31.5	N	25.03.2020	PART	II-S	3014	06.02.2024	15.09.2017	9 th meeting	N
120500041	LUX		LUX-G9-38-A	-129	N	22.01.2020	PART	II-S	2967	22.03.2022	23.12.2017	15 th meeting	Y
119520255	MCO		MONASAT-52EC	52	C	16.10.2019	CR/C	5130	2917	31.03.2020		—	Y
120520267	MLA		MEASAT-119.5E-20	119.5	C	31.12.2020	CR/C	5472	2949	29.06.2021		—	Y
123520159	MLA		MEASAT-119.5E-23	119.5	C	01.11.2023	CR/C	6081	3017	19.03.2024		—	Y
123520160	MLA		MEASAT-148E-23	148	C	01.11.2023	CR/C	6082	3017	19.03.2024		—	Y
119520055	MLA		MEASAT-1C	91.5	C	07.03.2019	CR/C	4974	2900	23.07.2019		18 th meeting	Y
121500205	MLA		MEASAT-1C	91.5	N	06.10.2021	PART	II-S	3001	25.07.2023	03.07.2022	18 th meeting	Y
123520097	MLA		MEASAT-22.4W-23	-22.4	C	05.07.2023	CR/C	6036	3012	09.01.2024		—	Y
119520056	MLA		MEASAT-2D	148	C	07.03.2019	CR/C	4975	2900	23.07.2019		—	Y
123520100	MLA		MEASAT-97E-23	97	C	05.07.2023	CR/C	6039	3012	09.01.2024		—	Y
117520015	NCG		NICASAT-1L	-84.4	C	01.01.2017	CR/C	4367	2851	08.08.2017		—	Y
117500295	NIG		NIGCOMSAT-1R	42.5	N	23.06.2017	PART	II-S	2875	24.07.2018	19.04.2015	4 th meeting	N
117520468	NIG		NIGCOMSAT-2B	-16	C	06.12.2017	CR/C	4635	2872	12.06.2018		—	N
117520469	NIG		NIGCOMSAT-2D	-9.5	C	06.12.2017	CR/C	4636	2872	12.06.2018		—	N
118520292	NOR		SLEIPNER-1	N-GSO	C	28.09.2018	CR/C	5051	2906	15.10.2019		—	Y
122520179	OMA		OMANSAT-1.1E	1.1	C	27.11.2022	CR/C	5887	2999	27.06.2023		—	Y
122520180	OMA		OMANSAT-104.5E	104.5	C	27.11.2022	CR/C	5886	2999	27.06.2023		—	Y

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121520034	OMA		OMANSAT-22E	22	C	24.02.2021	CR/C	5496	2951	27.07.2021		—	Y
120520149	OMA		OMANSAT-33.5E	33.5	C	19.08.2020	CR/C	5372	2937	12.01.2021		—	Y
120520150	OMA		OMANSAT-54.5E	54.5	C	19.08.2020	CR/C	5371	2937	12.01.2021		—	Y
121520155	OMA		OMANSAT-61E	61	C	26.08.2021	CR/C	5624	2964	08.02.2022		—	Y
120520151	OMA		OMANSAT-72.5E	72.5	C	19.08.2020	CR/C	5373	2937	12.01.2021		—	Y
121520154	OMA		OMANSAT-72E	72	C	26.08.2021	CR/C	5623	2964	08.02.2022		—	Y
121520153	OMA		OMANSAT-78E	78	C	26.08.2021	CR/C	5625	2964	08.02.2022		—	Y
120520152	OMA		OMANSAT-87.25E	87.25	C	19.08.2020	CR/C	5374	2937	12.01.2021		—	Y
124500002	PAK		PAKSAT-MM1-38.2E-KA	38.2	N	12.01.2024	PART	I-S	3018	02.04.2024		18 th meeting	N
117520098	PAK		PAKSAT-MM1-38.2E-KA	38.2	C	29.05.2019	CR/C	4441	2908	12.11.2019		18 th meeting	Y
121520162	PAK		PAKSAT-MM1-38.2E-KA1	38.2	C	20.09.2021	CR/C	5628	2964	08.02.2022		18 th meeting	Y
120520076	PAK		PAKSAT-MM1-56.5E	56.5	C	08.05.2020	CR/C	5312	2933	10.11.2020		—	Y
120500063	PNG		RAGGIANA-18	-117	N	02.03.2020	PART	II-S	2931	13.10.2020	13.01.2017	11 th meeting	Y
123520043	RUS		CSDRN-5M	95	C	07.04.2023	CR/C	5970	3002	08.08.2023		20 th meeting	N
97500304	RUS		GLONASS-M	N-GSO	N	13.09.2018	PART	II-S	2893	16.04.2019	01.12.2014	11 th meeting	N
97500304	RUS		GLONASS-M	N-GSO	N	08.04.2009	PART	II-S	2645	02.06.2009	17.01.2009	11 th meeting	N
97500304	RUS		GLONASS-M	N-GSO	N	13.03.2007	PART	II-S	2594	15.05.2007	22.01.2006	11 th meeting	N
123520042	RUS		VSSRD-5M	167	C	07.04.2023	CR/C	5971	3002	08.08.2023		20 th meeting	N
123520041	RUS		WSDRN-5M	-16	C	07.04.2023	CR/C	5972	3002	08.08.2023		20 th meeting	N
116520165	S		SMMSAT-11	123	C	09.06.2016	CR/C	4143	2836	10.01.2017		—	Y
119520187	UAE		NSAT01	N-GSO	C	07.08.2019	CR/C	5121	2914	18.02.2020		21 st meeting	Y
119520188	UAE		NSAT01.001	N-GSO	C	07.08.2019	CR/C	5122	2914	18.02.2020		18 th meeting	Y
123500023	USA		COSMIC-2	N-GSO	N	08.02.2023	PART	I-S	2997	30.05.2023	25.06.2019	—	N
101500582	USA		INTNL SPACE STATION	N-GSO	N	18.12.2006	PART	II-S	2592	17.04.2007	01.04.2002	—	N
121500021	USA		JPSS	N-GSO	N	02.09.2022	PART	II-S	2991	07.03.2023	18.11.2017	—	N
109500412	USA		LM-RPS-107.3W	-107.3	N	15.07.2009	PART	II-S	2665	23.03.2010	20.01.2006	2 nd meeting	Y
103500110	USA		NAVSTAR GPS-IIRF	N-GSO	N	01.08.2006	PART	II-S	2645	02.06.2009	10.04.2009	7 th meeting	N
118520107	USA		USASAT-80C-1	-125	C	27.04.2018	CR/C	4743	2879	18.09.2018		17 th meeting	Y
123520028	USA		USASAT-NGSO-12	N-GSO	C	03.04.2023	CR/C	5981	3005	19.09.2023		21 st meeting	Y
122520201	USA		USOBO-10C	130.6	C	05.12.2022	CR/C	5903	3000	11.07.2023		—	N
122520200	USA		USOBO-11C	139	C	05.12.2022	CR/C	5910	3000	11.07.2023		—	N
122520199	USA		USOBO-12C	51.5	C	05.12.2022	CR/C	5911	3000	11.07.2023		—	N
122520198	USA		USOBO-13C	-165	C	05.12.2022	CR/C	5912	3000	11.07.2023		—	N
122520197	USA		USOBO-14C	-145	C	05.12.2022	CR/C	5905	3000	11.07.2023		—	N
122520196	USA		USOBO-15C	-38	C	05.12.2022	CR/C	5913	3000	11.07.2023		—	N

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122520195	USA		USOBO-16C	8.5	C	05.12.2022	CR/C	5906	3000	11.07.2023		—	N
122520194	USA		USOBO-17C	103	C	05.12.2022	CR/C	5914	3000	11.07.2023		—	N
122520193	USA		USOBO-18C	145	C	05.12.2022	CR/C	5904	3000	11.07.2023		—	N
122520192	USA		USOBO-19C	70	C	05.12.2022	CR/C	5907	3000	11.07.2023		—	N
122520191	USA		USOBO-1C	-159.4	C	05.12.2022	CR/C	5902	3000	11.07.2023		—	N
122520209	USA		USOBO-2C	-96.8	C	05.12.2022	CR/C	5919	3000	11.07.2023		—	N
122520208	USA		USOBO-3C	-49.4	C	05.12.2022	CR/C	5915	3000	11.07.2023		—	N
122520207	USA		USOBO-4C	-21.2	C	05.12.2022	CR/C	5918	3000	11.07.2023		—	N
122520206	USA		USOBO-5C	20.6	C	05.12.2022	CR/C	5901	3000	11.07.2023		—	N
122520205	USA		USOBO-6C	66	C	05.12.2022	CR/C	5917	3000	11.07.2023		—	N
122520204	USA		USOBO-7C	73	C	05.12.2022	CR/C	5916	3000	11.07.2023		—	N
122520203	USA		USOBO-8C	87.5	C	05.12.2022	CR/C	5908	3000	11.07.2023		—	N
122520202	USA		USOBO-9C	94	C	05.12.2022	CR/C	5909	3000	11.07.2023		—	N
116500105	USA		USRSR	N-GSO	N	10.04.2017	PART	II-S	2867	03.04.2018	09.12.2015	7 th meeting	N
120520206	USA		USWSF-M	N-GSO	C	04.11.2020	CR/C	5498	2952	10.08.2021		—	N
116500105	USA		USRSR	N-GSO	N	10.04.2017	PART	II-S	2867	03.04.2018	09.12.2015	7 th meeting	N
120520206	USA		USWSF-M	N-GSO	C	04.11.2020	CR/C	5498	2952	10.08.2021		—	N

* Administrations that have submitted materials pursuant to §§ 11 b) and/or c) of the *RES-609 Terms of Reference* to one Consultation Meeting, and have had the subject RNSS system or network reflected in the aggregate sharing determination agreed by a Consultation Meeting, need not resubmit the same information to a subsequent Consultation Meeting under the timetable established in §§ 11 b) and/or c), provided that:

- The subject network or system remains on the list to be provided for the subsequent Consultation Meeting by the BR under § 11 a) above; and
- The administration that submitted the information provides to all administrations on the list provided by the BR in § 11 a) above, with a copy to the BR for information, on or before the deadline established under §§ 11 b) and c) for the subsequent Consultation Meeting, a statement that there have been no material changes in the information previously provided under §§ 11 b) and/or c) for the subject system or network.

Systems for which no input documents have been submitted to the consultation meeting, pursuant to §§ 11 b) and/or c) of the *RES-609 Terms of Reference* to any Consultation Meeting, are identified with the label ‘—’.

** Characteristics of the satellite networks used by administrations were representative of intended or actual operating characteristics, and thus may be different from those characteristics that may be included in the corresponding Article 9 and/or Article 11 filings. These former characteristics were not made available to the Bureau as Appendix 4 data in the electronic format necessary to perform PFD calculations. The Bureau therefore calculated PFD values based on information available to the BR in Article 9 or 11 submissions. “Y” in this column indicates PFD excess, “N” in this column indicates no PFD excess.

PFD values calculated by administrations and submitted under § 1.4 and 1.5 of the Annex to REC 608 (Rev.WRC-07), that are separately available to the participating administrations on the RES-609 web page at: <https://www.itu.int/en/ITU-R/space/Pages/res609.aspx> show no PFD excess over the limit of REC 608 (Rev.WRC-07).

*** Although coordination requests for these networks were received by the Bureau but not published as on five months in advance of the first day of the tentatively scheduled Consultation Meeting, it was agreed by the 21st Consultation Meeting to accept these satellite networks for inclusion in the calculations.

PARTIE B Renseignements publiés conformément au <i>point 8 du décide</i> de la Résolution 609 (Rév.CMR-07), en tant que résultats concernant la répartition du brouillage cumulatif en application du <i>point 2 du décide</i> de la Résolution 609 (Rév.CMR-07), que ces résultats correspondent ou non à des modifications éventuelles des caractéristiques publiées de leurs systèmes ou réseaux respectifs.	PART B Information referred to in <i>resolves 8</i> of the Resolution 609 (Rev.WRC-07), as results of any aggregate sharing determinations made in application of <i>resolves 2</i> of the Resolution 609 (Rev.WRC-07), without regard to whether such determinations result in any modifications to the published characteristics of their respective systems or networks.	PARTE B Información publicada con arreglo al <i>resuelve 8</i> de la Resolución 609 (Rev.CMR-07), como resultado de cualquier decisión sobre compartición combinada tomada en aplicación del <i>resuelve 2</i> de la Resolución 609 (Rev.CMR-07), sin tener en cuenta si dichas decisiones tienen como resultado cualquier modificación en las características publicadas de sus respectivos sistemas o redes.
Ces renseignements ont été communiqués au Bureau par l'Administration de l'Inde le 27.12.2024, en application des Sections 2 et 14 du mandat de la réunion de consultation organisée conformément à la Résolution 609 (Rév.CMR-07).	This information was communicated to the Bureau by the administration of India on 27.12.2024, pursuant to Section 2 and Section 14 of the Resolution 609 (Rev.WRC-07) Consultation Meeting Terms of Reference.	La Administración de la India comunicó esta información a la Oficina el 27.12.2024, conforme a lo dispuesto en las secciones 2 y 14 del mandato de la reunión de consulta sobre la Resolución 609 (Rev.CMR-07).

B 部分 第 609 号决议（WRC-07 修订版）做出决议第 8 段所列的信息，即有关执行第 609 号决议（WRC-07 修订版）作出决议第 2 段的集总干扰分摊的确定结果，不论这一确定结果是否修改其各自系统或网络的已公布特性。	ЧАСТЬ В Информация, о которой идет речь в п. 8 раздела "<i>решает</i>" Резолюции 609 (Пересм.ВКР-07) и которая является результатом любого определения условий совместного использования суммарного допустимого уровня согласно пункту 2 раздела "<i>решает</i>" Резолюции 609 (Пересм.ВКР-07), независимо от того, достигнуты ли эти результаты путем изменения объявленных характеристик их соответствующих систем или сетей или нет.	الجزء B المعلومات المشار إليها في البند 8 من منطوق القرار 609 (Rev.WRC-07)، أي نتائج ترتيبات التقاسم التراكمي التي يتم التوصل إليها تنفيذاً للبند 2 من منطوق القرار 609 (Rev.WRC-07)، بغض النظر عما إذا كانت هذه الترتيبات سيسفر عنها أي تعديلات في الخصائص المنشورة لأنظمة الإدارات المعنية وشبكاتهما.
此信息由印度主管部门根据有关磋商会议职责范围的第 609 号决议（WRC-07，修订版）第 2 节和第 14 节，于 2024 年 12 月 27 日 通报无线电通信局。	Настоящая информация направлена в Бюро администрацией Индии 27.12.2024 года в соответствии с разделом 2 и разделом 14 круга ведения консультативного собрания по Резолюции 609 (Пересм. ВКР-07).	أبلغت إدارة الهند المكتب بهذه المعلومات في 2024.12.27، تطبيقاً للقسمين 2 و 14 من اختصاصات الاجتماع التشاوري المنظم وفقاً للقرار 609 (Rev.WRC-07).

**Report of the Twenty-first Resolution 609 (Rev WRC-07) Consultation Meeting to the
ITU Radiocommunication Bureau**

1 INTRODUCTION

Resolution 609 (Rev WRC-07) is titled “Protection of aeronautical radionavigation service systems from the equivalent power flux-density (epfd) produced by radionavigation satellite service networks and systems in the 1 164-1 215 MHz frequency band.”

The resolves: establish the aggregate protection criterion of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$, (resolves 1), establish the basis for Consultation Meetings to achieve this objective (resolves 6); and identify the ITU-R Recommendation M.1642-2 to use to conduct the aggregate calculations (resolves 10).

This report reflects the results of the Twentieth Resolution 609 Consultation Meeting (CM) and is provided in accordance with the provisions of resolves 8 of Resolution 609.

2 PRIOR CONSULTATION MEETINGS (CM)

2.1 First Consultation Meeting (Geneva, 2003)

The first CM, held in Geneva, Switzerland, December 8-9, 2003, agreed on Terms of Reference for the operation of future CMs. Among other things the Terms of Reference establish specific timelines for the submission of information in satisfaction of the Criteria in the Annex to Resolution 609, for the submission of technical information on individual systems and networks in an agreed format, and for the exchange of aggregate interference calculations among the participants. No aggregate sharing determination was made at the first CM.

2.2 Second Consultation Meeting (Ottawa, 2004)

At the second CM a determination of the epfd level produced by all space stations of 15 RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the assessed RNSS systems and networks was $-125.7 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 4.2 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It was noted that the results were based on the use of worst-case assumptions in terms of interference from these RNSS systems and networks into the ARNS.

2.3 Third Consultation Meeting (Munich, 2005)

At the Third CM a determination of the epfd level produced by all space stations of 19 RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the assessed RNSS systems and networks was $-125.7 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 4.2 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It was noted that the results were based on the use of worst-case assumptions in terms of interference from these RNSS systems and networks into the ARNS.

2.4 Fourth Consultation Meeting (Bangalore, 2006)

At the Fourth CM a determination of the epfd level produced by all space stations of 22 RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the assessed RNSS systems and networks was $-125.7 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 4.2 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It was noted that the results were based on the use of worst-case assumptions in terms of interference from these RNSS systems and networks into the ARNS.

2.5 Fifth Consultation Meeting (Xi'an, May 2008)

At the Fifth CM a determination of the epfd level produced by all space stations of 26 RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the assessed RNSS systems and networks was $-122.33 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 0.83 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

2.6 Sixth Consultation Meeting (By correspondence, June 2009)

At the Sixth CM a determination of the epfd level produced by all space stations of 25 RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the assessed RNSS systems and networks was $-122.82 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 1.32 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

2.7 Seventh Consultation Meeting (Toulouse, June 2010)

At the Seventh CM a determination of the epfd level produced by all space stations of 25 RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the assessed RNSS systems and networks was $-122.58 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 1.08 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

2.8 Eighth Consultation Meeting (Geneva, September 2011)

At the Eighth CM a determination of the epfd level produced by all space stations of 23 RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the referenced RNSS networks and systems was $-122.64 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 1.14 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

2.9 Ninth Consultation Meeting (Tokyo, October 2012)

At the Ninth CM a determination of the epfd level produced by all space stations of 23 RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the referenced RNSS networks and systems was $-121.93 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 0.43 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

2.10 Tenth Consultation Meeting (Los Angeles, September 2013)

At the Tenth CM a determination of the epfd level produced by all space stations of 23 RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the referenced RNSS networks and systems was $-121.93 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 0.43 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

2.11 Eleventh Consultation Meeting (Shenzhen, China, October 2014)

At the Eleventh CM a determination of the epfd level produced by all space stations of RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the referenced RNSS networks and systems was $-122.01 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 0.51 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

2.12 Twelfth Consultation Meeting (By correspondence, September 2015)

At the Twelfth CM a determination of the epfd level produced by all space stations of RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the referenced RNSS networks and systems was $-122.00 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 0.50 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

2.13 Thirteenth Consultation Meeting (Auckland, New Zealand, September 2016)

At the Thirteenth CM a determination of the epfd level produced by all space stations of RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the referenced RNSS networks and systems was $-121.98 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 0.48 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

2.14 Fourteenth Consultation Meeting (By correspondence, September 2017)

At the Fourteenth CM a determination of the epfd level produced by all space stations of RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the referenced RNSS networks and systems was $-121.98 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 0.48 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

2.15 Fifteenth Consultation Meeting (Abuja, October 2018)

At the Fifteenth CM a determination of the epfd level produced by all space stations of RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the referenced RNSS networks and systems was $-121.89 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 0.39 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

2.16 Sixteenth Consultation Meeting (Cyberjaya, Malaysia, September 2019)

At the Sixteenth CM a determination of the epfd level produced by all space stations of RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the referenced RNSS networks and systems was $-121.84 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 0.34 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

2.17 Seventeenth Consultation Meeting (Virtual meeting, October 2020)

At the Seventeenth CM a determination of the epfd level produced by all space stations of RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the referenced RNSS networks and systems was $-121.82 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 0.32 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

2.18 Eighteenth Consultation Meeting (Virtual meeting, November 2021)

At the Eighteenth CM a determination of the epfd level produced by all space stations of RNSS systems and networks was made and agreed. The maximum epfd of all satellites associated with the referenced RNSS networks and systems was $-121.71 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 0.21 dB below the Resolution 609 limit of $-121.5 \text{ dB(W/(m}^2\cdot\text{MHz))}$. It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

2.19 Nineteenth Consultation Meeting (Virtual meeting, December 2022)

At the nineteenth consultation meeting a determination of the epfd level produced by all space stations of RNSS systems and networks was made and agreed. The maximum aggregate epfd of satellites associated with the referenced RNSS networks and systems was determined to be no greater than:

- for case 1 (carrier frequency of SATNET LEO signal is 1174.404 MHz): $-121.52 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 0.02 dB below the Resolution 609 limit of $-121.50 \text{ dB(W/(m}^2\cdot\text{MHz))}$;
- for case 2 (carrier frequency of SATNET LEO signal is 1178.496 MHz): $-121.57 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 0.07 dB below the Resolution 609 limit of $-121.50 \text{ dB(W/(m}^2\cdot\text{MHz))}$.

It should be noted that finally SATNET LEO will use only one carrier frequency, but at the stage of planning in order to have more flexibility in compatibility issue with other RNSS for the purpose of aggregate epfd calculation the case 1 and case 2 should be considered.

It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

2.20 Twentieth Consultation Meeting (Virtual meeting, October 2023)

At the twentieth consultation meeting a determination of the epfd level produced by all space stations of RNSS systems and networks was made and agreed. The maximum aggregate epfd of satellites associated with the referenced RNSS networks and systems was determined to be no greater than:

- for case 1 (SATNET LEO satellites in near polar orbits transmit at 1178.496 MHz): $-121.51 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 0.01 dB below the Resolution 609 limit of $-121.50 \text{ dB(W/(m}^2\cdot\text{MHz))}$;
- for case 2 (SATNET LEO satellites in near polar orbits transmit at 1202.025 MHz): $-121.52 \text{ dB(W/(m}^2\cdot\text{MHz))}$, i.e. 0.02 dB below the Resolution 609 limit of $-121.50 \text{ dB(W/(m}^2\cdot\text{MHz))}$.

It should be noted that finally SATNET LEO will use only one carrier frequency, but at the stage of planning in order to have more flexibility in compatibility issue with other RNSS for the purpose of aggregate epfd calculation the case 1 and case 2 should be considered.

It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

3. THE TWENTY-FIRST CONSULTATION MEETING (HYBRID MEETING, Seoul, Korea (Rep. of), November 2024)

Calculations of the equivalent PFD (epfd) level produced by all space stations of the referenced RNSS systems and networks from Table 1 were compared and agreed at the Twenty-first Consultation Meeting for 6 cases. The agreed calculations by the participants for cases 1 and 4 (maximum aggregate epfd) can be found in Table 2 and 3 in the attachment to this Report, along with the aggregate spectral emissions profile in Figure 1 and 2.

4 CONCLUSION

The maximum aggregate epfd of satellites associated with the referenced RNSS networks and systems in Table 1 is determined to be no greater than:

- for case 1 (SATNET LEO satellites in near polar orbits, transmit signal centered at 1178.496 MHz): -121.50 dB(W/(m²·MHz)), i.e. 0.00 dB below the Resolution 609 limit of -121.50 dB(W/(m²·MHz));
- for case 4 (SATNET LEO satellites in near polar orbits, transmit signal centered at 1202.025 MHz): -121.50 dB(W/(m²·MHz)), i.e. 0.00 dB below the Resolution 609 limit of -121.50 dB(W/(m²·MHz)).

It is noted that the result is based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

Attachment

1 Results of the Calculation of the Maximum RNSS Aggregate epfd per Megahertz

Within this Attachment is the description of results of calculating the maximum RNSS aggregate epfd for every one megahertz within the band 1 164 – 1 215 MHz. The methodology for the calculation of the aggregate epfd of an RNSS system, which was used, is described in ITU-R Recommendation M.1642-2, “Methodology for assessing the maximum aggregate epfd at an aeronautical radionavigation service station from all radionavigation satellite service systems operating in the 1 164 -1 215 MHz band”.

2 Results of the Calculation

For the purpose of the calculation, data given by the following RNSS system providers was used:

Table 1: RNSS systems having confirmed characteristics to the Twenty-first Consultation Meeting before the 9 May 2024 submission deadline

	ntc_id	Adm	ntwk_org	sat_name	long_no m	ntf_rsn	d_rcv	pub_ref	pub_no	ific_no	ntc_type
1	120500103	ALG		ALCOMSAT-24.8W	-24.8	N	13.05.2020	PART	2	2930	G
2	103500418	CHN		COMPASS-110.5E1	110.5	N	11.11.2009	PART	2	2681	G
3	103500419	CHN		COMPASS-140E ¹	140	N	17.10.2007	PART	2	2658	G
4	109500803	CHN		COMPASS-160E ¹	160	N	16.12.2010	PART	2	2701	G
5	103500416	CHN		COMPASS-58.75E ¹	58.75	N	22.12.2010	PART	2	2687	G
6	103500417	CHN		COMPASS-80E ¹	80	N	19.09.2019	PART	2	2940	G
7	119500051	CHN		COMPASS-80.3E	80.3	N	02.11.2020	PART	2	2942	G
8	116500153	CHN		COMPASS-B-84E ¹	84	N	16.10.2019	PART	2	2915	G
9	116500154	CHN		COMPASS-B-144.5E ¹	144.5	N	16.08.2019	PART	2	2909	G
10	103500420	CHN		COMPASS-H ¹	N-GSO	N	16.04.2007	PART	2	2596	N
11	118500146	CHN		COMPASS-IGSO ¹	N-GSO	N	02.11.2020	PART	2	2946	N
12	103500421	CHN		COMPASS-M ¹	N-GSO	N	16.04.2007	PART	2	2596	N
13	117500038	CHN		COMPASS-MEO ¹	N-GSO	N	12.06.2020	PART	2	2962	N
14	118520162	CHN		CENTISPACE-1	N-GSO	C	06.07.2018	CR/C	4801	2882	N
15	118520283	CHN		CENTISPACE-2 ⁷	N-GSO	C	11.09.2018	CR/C	4847	2886	N
16	120520264	CHN		CENTISPACE-3 ⁷	N-GSO	C	29.12.2020	CR/C	5516	2953	N
17	119520032	CHN		GW ⁷	N-GSO	C	08.04.2022	CR/C	4969	2984	N
18	120520172	CHN		GW-2 ⁷	N-GSO	C	11.09.2020	CR/C	5486	2951	N
19	120520119	CHN		MCNT-02 ⁷	N-GSO	C	14.07.2020	CR/C	5438	2946	N
20	120520248	CHN		MCNT-03 ⁷	N-GSO	C	21.12.2020	CR/C	5512	2953	N
21	100500321	F	GLS	MSATNAV-2 ²	N-GSO	N	08.01.2007	PART	2	2588	N
22	120520164	F	GLS	GALILEO-L3	N-GSO	N	28.08.2020	CR/C	5446	2947	N
23	117520381	F		F-SAT-RN-5W	-5	C	17.10.2017	CR/C	4593	2868	G
24	121520165	F		F-SAT-RN-13E	13	C	01.10.2021	CR/C	5632	2965	G
25	122520080	F		SYNCHROCUBE	N-GSO	C	07.07.2022	CR/C	5777	2985	

	ntc_id	Adm	ntwk_org	sat_name	long_no m	ntf_rsn	d_rcv	pub_ref	pub_no	ific_no	ntc_type
26	124520040	F		FUTUR-NAV-DEMO-A-B	N-GSO	C	29.03.2024	-	-	-	N
27	124520082	F	GLS	GALILEO-2G	N-GSO	C	05.04.2024	-	-	-	N
28	124520083	F	GLS	EU-LNAV	N-GSO	C	05.04.2024	-	-	-	N
29	112500010	G		INMARSAT-4 143.5E ³	143.5	N	12.01.2012	PART	2	2725	G
30	115500221	G		INMARSAT-4A 143.5E ³	143.5	N	19.05.2017	PART	2	2885	G
31	110500194	G		INMARSAT-4 98W ³	-98	N	30.06.2011	PART	2	2710	G
32	114500078	G		INMARSAT-4A 98W ³	-98	N	02.10.2015	PART	2	2822	G
33	121520033	G		INMARSAT-6-178E-R ⁸	178	C	19.02.2021	CR/C	5495	2951	G
34	120520167	G		INMARSAT-6-54W-R	-54	C	02.09.2020	CR/C	5384	2940	G
35	120520168	G		INMARSAT-6-64E-R	64	C	20.09.2023	CR/C	5383	3015	G
36	123520142	G		INMARSAT-8-54W	-54	C	13.10.2023	CR/C	6063	3016	G
37	123520144	G		INMARSAT-8-178E	178	C	13.10.2023	CR/C	6065	3016	G
38	119500068	IND		INSAT-NAVR(32.5)	32.5	N	07.03.2019	PART	2	2909	G
39	116500029	IND		INSAT-NAV(55)	55	N	24.02.2016	PART	2	2834	G
40	117500127	IND		INSAT-NAVR(83)	83	N	02.06.2017	PART	2	2872	G
41	119500343	IND		INSAT-NAVR(129.5)	129.5	N	24.10.2019	PART	2	2962	G
42	116500272	IND		INSAT-NAVR-GS ⁴	N-GSO	N	20.12.2016	PART	1	2871	N
43	117520274	IND		INSAT-NAV-GS17 ⁴	N-GSO	C	17.07.2017	CR/C	4544	2866	N
44	119500107	IND		INSAT-NAV(93.5)	93.5	N	03.05.2019	PART	2	2901	G
45	104500548	J		N-SAT-HEO2 ⁵	N-GSO	N	28.12.2004	PART	2	2603	N
46	110500199	J		QZSS-1 ⁵	N-GSO	N	27.01.2012	PART	2	2724	N
47	116500181	J		QZSS ⁵	N-GSO	N	18.01.2019	PART	2	2914	N
48	122500117	J		QZSS-GS-A1 ⁵	90.5	N	12.05.2023	PART	2	3003	G
49	117500337	J		QZSS-GS4 ⁵	127	N	18.01.2019	PART	2	2916	G
50	123520258	J		QZSS-B-L5 ⁵	N-GSO	C	26.12.2023	-	-	-	N
51	121520198	KOR		KOREASAT-128.2A	128.2	C	24.11.2021	CR/C	5653	2968	G
52	124500125	KOR		KOREASAT-116N	116.0	N	01.08.2024	PART	1	3032	G
53	122520061	KOR		KPS-G1	124.5	C	30.05.2022	CR/C	5743	2981	G
54	122520062	KOR		KPS-NGSO ¹⁰	N-GSO	C	30.05.2022	CR/C	5770	2984	N
55	97500304	RUS		GLONASS-M	N-GSO	N	13.03.2007	PART	2	2594	N
56	97500304	RUS		GLONASS-M	N-GSO	N	13.09.2018	PART	2	2893	N
57	123520043	RUS		CSDRN-5M	95	C	07.04.2023	CR/C	5970	3002	G
58	123520041	RUS		WSDRN-5M	-16	C	07.04.2023	CR/C	5972	3002	G
59	1235200421	RUS		VSSRD-5M	167	C	07.04.2023	CR/C	5971	3002	G
60	109500412	USA		LM-RPS-107.3W	-107.3	N	15.07.2009	PART	2	2665	G
61	123520028	USA		USASAT-NGSO-12	N-GSO	C	03.04.2023	CR/C	5981	3005	N
62	118520107	USA		USASAT-80C-1	-125	C	27.04. 2018	CR/C	4743	2879	G
63	103500110	USA		NAVSTAR GPS-IIRF ⁶	N-GSO	N	01.08.2006	PART	2	2645	N
64	116500105	USA		USRSR ⁶	N-GSO	N	10.04.2017	PART	2	2867	N
65	117500155	LUX		LUX-G6-2-E	5	N	19.12.2018	PART	2	2897	G
66	120500077	LUX		LUX-G7-9-E2 ⁹	31.5	N	25.03.2020	PART	2	2928	G
67	119500101	LUX		LUX-G9-38-A	-129	N	22.01.2020	PART	2	2967	G
68	123520016	LUX		LUX-G15-7-E ⁹	23.5E	C	13.02.2023	CR/C	5946	3001	G

	ntc_id	Adm	ntwk_org	sat_name	long_no m	ntf_rsn	d_rev	pub_ref	pub_no	ific_no	ntc_type
69	113520165	PNG		RAGGIANA-18	-117	C	01.07.2013	CR/C	3415	2757	G
70	119520055	MLA		MEASAT-1C	91.5	C	07.03.2019	CR/C	4974	2900	G
71	121500205	MLA		MEASAT-1C	91.5	N	06.10.2021	PART	2	2971	G
72	117500295	NIG		NIGCOMSAT-1R	42.5	N	23.06.2017	PART	2	2875	G
73	124500002	PAK		PAKSAT-MM1-38.2E-KA ⁸	38.2	N	12.01.2024	PART	1	3018	G
74	121520162	PAK		PAKSAT-MM1-38.2E-KA1 ⁸	38.2	C	20.09.2021	CR/C	5628	2964	G
75	119520188	UAE		NSAT01.001	N-GSO	C	07.08.2019	CR/C	5122	2914	N
76	119520187	UAE		NSAT01	N-GSO	C	07.08.2019	CR/C	5121	2914	N

¹ In accordance with item 5 of the Resolution 609 (Rev.WRC-07) Consultation Meeting Terms of Reference (MOD, Geneva, September 2011), all the listed filings remain available for the COMPASS system and shall be treated as a single RNSS system for purposes of performing the epfd calculations having the characteristics presented in this document.

² In accordance with § 5 of Terms of Reference for the Resolution 609 (Rev. WRC-07) Consultation Meetings, the following filings remain available for Galileo and shall be treated with MSATNAV-2 filing as a single planned RNSS system for purposes of performing the epfd calculations having the characteristics presented in this document: MSATNAV-3 and 4, GALILEO-NAV-2004, GALILEO-M-NAVSTAR and GALILEO-2.

³ Where multiple INMARSAT filings are shown for the same orbital location, these represent a single network for the purposes of the Resolution 609 (Rev. WRC-07) consultation process.

⁴ INSAT-NAVR-GS and INSAT-NAV-GS17 shall be treated as a single planned RNSS system for purposes of performing the epfd calculations having the characteristics presented in this document.

⁵ In accordance with item 5 of the Resolution 609 (Rev. WRC-07) Consultation Meeting Terms of Reference (MOD September 2006, Bangalore), the following filings remain available for the Quasi-Zenith Satellite System (QZSS) and shall be treated with the N-SAT-HEO2 filing as a single planned RNSS system for purposes of performing the epfd calculations having the characteristics presented in this document: QZSS-1 (ITU Publication Reference: Part II-S, IFIC: 2724), QZSS (ITU Publication Reference: Part II-S, IFIC: 2914), QZSS-A (ITU Publication Reference: CR/C/4720, IFIC: 2877), QZSS-GS-A1 (ITU Publication Reference:Part II-S, IFIC:3003), QZSS-GS-A3 (ITU Publication Reference: CR/C/4716, IFIC: 2877), QZSS-GS4 (ITU Publication Reference: Part II-S, IFIC: 2916), QZSS-GS-A4 (ITU Publication Reference:Part II-S, IFIC: 3003), QZSS-GS-A5 (ITU Publication Reference: CR/C/4718, IFIC: 2877), QZSS-GS-A8 (ITU Publication Reference: CR/C/4719, IFIC: 2877).

⁶In accordance with item 5 of the Resolution 609 (Rev. WRC-07) Consultation Meeting Terms of Reference, these filings should be treated together as the NAVSTAR GPS system.

⁷In accordance with item 5 of the Resolution 609 (Rev. WRC-07) Consultation Meeting Terms of Reference, these filings should be treated together as the SATNET LEO system.

⁸ During the period after the 19th Res 609 meeting, Inmarsat plans to relocate one of the existing satellites from 64E to 178E. Once the relocation has been completed, it is anticipated that the satellite data for 64E may be removed from the subsequent aggregate epfd calculation.

⁹ These multiple PAKSAT filings for the same orbital location represent a single satellite for the purpose of the Resolution 609 (Rev. WRC-07) consultation process and the two networks will not be used simultaneously.

¹⁰Luxembourg is in the process of completing the relocation of one of the existing satellites from 31.5E to 23.5E. Once this process has been successfully completed, it is anticipated that the satellite data for 31.5E may be removed from a subsequent aggregate epfd calculation

Detailed characteristics of these systems, which were used for the aggregate computation, are available on the Resolution 609 page within the ITU web site (<https://www.itu.int/ITU-R/go/space-resolution609/en>): see attachment 3 to the Record of Decisions from the Twentieth Consultation Meeting.

Table 2 and Figure 1 give the results for case 1 (SATNET LEO satellites in near polar orbits transmit at 1178.496 MHz) of the maximum aggregate epfd values per MHz, calculated using 1-degree steps in latitude/longitude based on the RNSS systems in Table 1.

Table 3 and Figure 2 give the results for case 2 (SATNET LEO satellites in near polar orbits transmit at 1202.025 MHz) of the maximum aggregate epfd values per MHz, calculated using 1-degree steps in latitude/longitude based on the RNSS systems in Table 1.

Table 2: Maximum RNSS aggregate epfd values per MHz for case 1

All systems except Xona-IOV, IOD-A, IOD-B, NSAT01.001, Synchrocube-Demo, GALILEO-L3.

SATNET LEO satellites in near polar orbits transmit signal at 1178.496 MHz.

Updated level for IRNSS, KPS (- 0.3 dB), EU-LNAV (updated SAF), Xona Option 1 (-1.67 dB).

Center Frequency (MHz)	Max RNSS Agg epfd (dB(W/m ² /MHz))	Center Frequency (MHz)	Max RNSS Agg epfd (dB(W/m ² /MHz))	Center Frequency (MHz)	Max RNSS Agg epfd (dB(W/m ² /MHz))	Center Frequency (MHz)	Max RNSS Agg epfd (dB(W/m ² /MHz))
1164	-136.05	1177	-122.07	1190	-121.54	1203	-123.81
1165	-136.76	1178	-122.22	1191	-121.50	1204	-124.36
1166	-137.87	1179	-122.88	1192	-121.85	1205	-124.12
1167	-136.63	1180	-123.23	1193	-122.12	1206	-123.45
1168	-133.95	1181	-124.08	1194	-122.75	1207	-122.35
1169	-130.87	1182	-122.91	1195	-123.48	1208	-123.40
1170	-128.34	1183	-121.68	1196	-124.62	1209	-125.12
1171	-125.72	1184	-122.76	1197	-125.61	1210	-125.68
1172	-124.50	1185	-125.75	1198	-126.47	1211	-126.75
1173	-123.34	1186	-124.69	1199	-126.87	1212	-127.89
1174	-122.62	1187	-123.44	1200	-126.86	1213	-129.19
1175	-122.12	1188	-122.59	1201	-124.99	1214	-130.58
1176	-121.53	1189	-121.90	1202	-123.08	1215	-132.12

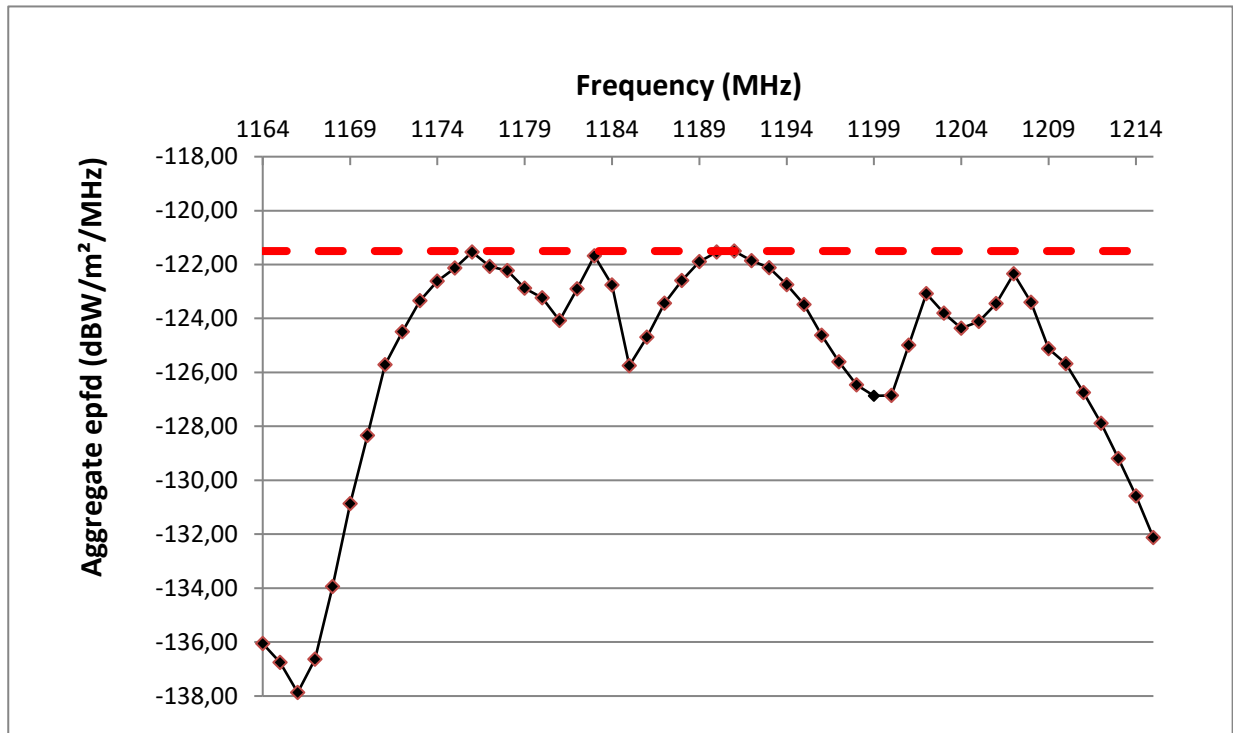


Figure 1: Plot of Table 2 (Maximum RNSS Aggregate epfd per MHz) for case 1

Table 3: Maximum RNSS aggregate epfd values per MHz for case 4

All systems except Xona-IOV, IOD-A, IOD-B, NSAT01.001, Synchrocube-Demo, GALILEO-L3.

SATNET LEO satellites in near polar orbits transmit signal at 1202.025 MHz.

Updated level for IRNSS, KPS (- 0.3 dB), EU-LNAV (updated SAF), Xona Option 1 (-1.67 dB).

Center Frequency (MHz)	Max RNSS Agg epfd (dB(W/m ² /MHz))	Center Frequency (MHz)	Max RNSS Agg epfd (dB(W/m ² /MHz))	Center Frequency (MHz)	Max RNSS Agg epfd (dB(W/m ² /MHz))	Center Frequency (MHz)	Max RNSS Agg epfd (dB(W/m ² /MHz))
1164	-136.05	1177	-122.11	1190	-121.54	1203	-123.52
1165	-136.77	1178	-122.43	1191	-121.50	1204	-124.34
1166	-137.87	1179	-123.07	1192	-121.85	1205	-124.09
1167	-136.65	1180	-123.26	1193	-122.12	1206	-123.45
1168	-133.95	1181	-124.08	1194	-122.75	1207	-122.34
1169	-130.87	1182	-122.91	1195	-123.47	1208	-123.40
1170	-128.34	1183	-121.68	1196	-124.62	1209	-125.12
1171	-125.72	1184	-122.76	1197	-125.58	1210	-125.68
1172	-124.50	1185	-125.75	1198	-126.45	1211	-126.75
1173	-123.34	1186	-124.69	1199	-126.78	1212	-127.88
1174	-122.62	1187	-123.43	1200	-126.81	1213	-129.19
1175	-122.13	1188	-122.59	1201	-124.58	1214	-130.58
1176	-121.54	1189	-121.90	1202	-122.57	1215	-132.11

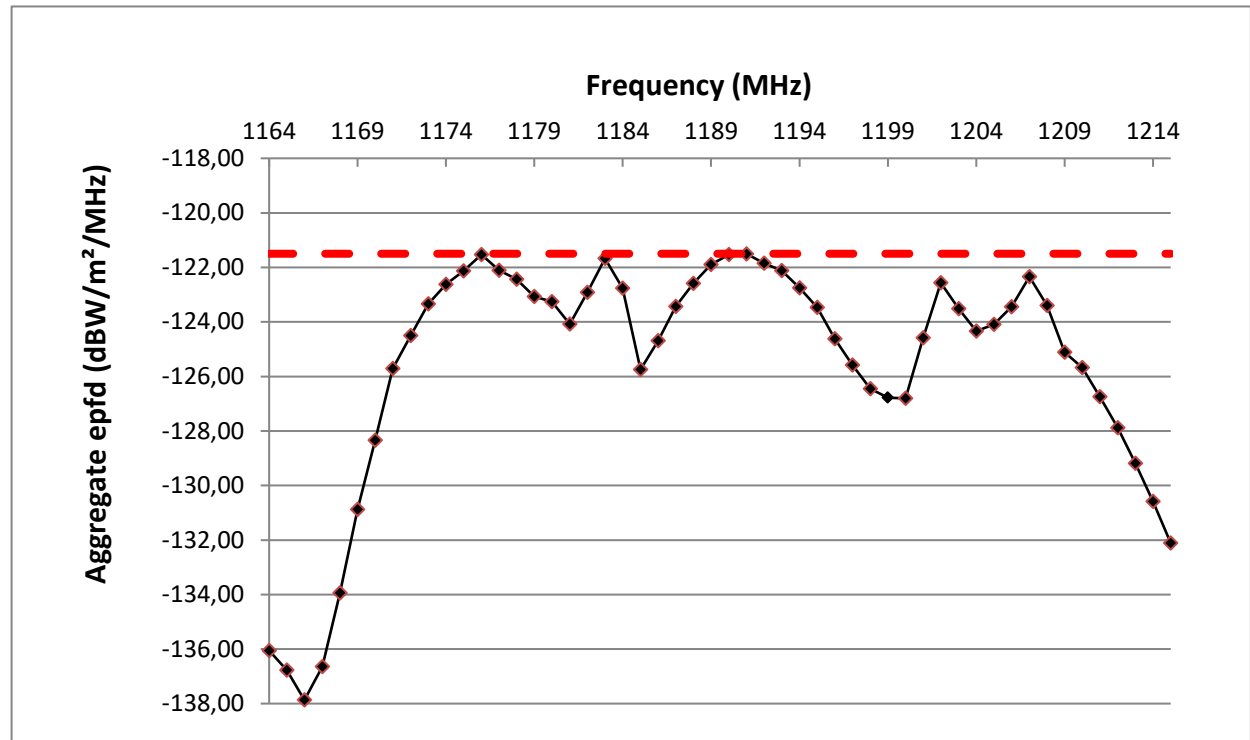


Figure 2: Plot of Table 3 (Maximum RNSS Aggregate epfd per MHz) for case 4