INTERNATIONAL TELECOMMUNICATION UNION

Radiocommunication Bureau

ITU BR RNSS Progress Report
Results of the 4th RES-609 Consultation Meeting (Bangalore, India)

1.0 Introduction

1.1 Resolution **609 (WRC-03)** is entitled "Protection of aeronautical radionavigation service systems from the equivalent power flux-density produced by radionavigation satellite service networks and systems in the 1164-1215 MHz frequency band."

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

1.2 This report reflects the results of the 4th Resolution 609 (WRC-03) Consultation Meeting (CM) and is presented for information to the participants of First Meting of the ICG.

2.0 BR action before the Consultation Meetings

2.1 In *instructs the Bureau* 2, WRC-03 charged the Bureau (BR) to determine whether the PFD level in *recommends* 1 of Recommendation **608** is exceeded by any space station that is subject to Resolution **609 (WRC-03)**, and to report the findings of this determination to the participants of the CM.

2.2. In *instructs the Bureau* 1, WRC-03 charged the BR to participate in CM mentioned under *resolves* 6 and to observe carefully results of the epfd calculation mentioned in *resolves* 1.

2.3 The BR completed the required determinations, participated on all CM and the BR report was presented to the participants of the CM.

2.4. The BR is maintaining an up-to-date List of Article **9/11** filings for RNSS frequency assignments in the 1164-1215 MHz band. This List contains (as of 31.10.2006) **148** satellite filings (API/A, CR/C or Part-I/II) representing **96** satellite networks – **72** GSO / **24** Non-GSO) and RES-609 (WRC-03) web page and Forum at: **http://www.itu.int/ITU-R/space/res609/** for submission and exchange of information between the participants of the CM as well as for any administration interested in this CM.

3.0. Consultation Meetings

3.1 First Consultation Meeting (Geneva, 2003)

The first CM, held in Geneva, Switzerland, December 8-9, 2003, agreed on Terms of Reference (ToR) for the operation of future CMs. Among other things the ToR 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.

3.2 **Second Consultation Meeting (Ottawa, 2004)**

At the second CM a determination of the equivalent PFD (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 dB ($W/m^2/MHz$), i.e. 4.2 dB below the Resolution 609 limit of –121.5 $dBW/m^2/MHz$. 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.

3.3 **Third Consultation Meeting (Munich, 2005)**

At the Third CM a determination of the equivalent PFD (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 dB ($W/m^2/MHz$), i.e. 4.2 dB below the Resolution 609 limit of –121.5 $dBW/m^2/MHz$. 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.

3.4 **Fourth Consultation Meeting (Bangalore, 2006)**

In conformity with the February 15, 2006 deadline established at the third CM, some administrations submitted updated technical characteristics for some RNSS networks - "calculation 1". One administration informed the CM of the deletion of its API filing.

After the 15 February 2006 deadline, the meeting received a submission from Nigeria containing technical characteristics and statements regarding compliance with the Criteria in the Annex to Resolution 609 (WRC-03) for one GSO network. The meeting received also submissions from Russian Federation and India to update their systems characteristics. While this late information was not included in "calculation 1", it was included, along with the timely submissions, in "calculation 2" of the CM.

Calculations of the equivalent PFD (epfd) level produced by all space stations of the referenced RNSS systems and networks from both "calculations" (1 and 2) were compared and agreed at this CM. The maximum epfd of all satellites associated with the referenced RNSS systems in "calculation 1" was –125.7 dB ($W/m^2/MHz$), i.e. 4.2 dB below the Resolution 609 limit of –121.5 $dBW/m^2/MHz$. Identical results were reached with respect to the maximum epfd of all satellites associated with the referenced RNSS systems in "calculation 2". In both cases, it is noted that the results are based on the use of worst-case assumptions in terms of interference from RNSS into ARNS.

4. Fourth Consultation Meeting Conclusions:

The maximum epfd of all satellites associated with the referenced RNSS systems was –125.7 $dB(W/m^2/MHz)$, i.e. 4.2 dB below the Resolution 609 limit of –121.5 $dB(W/m^2/MHz)$.

5. BR action after the RES-609 Consultation Meetings

5.1 In *instructs the Bureau* 2, WRC-03 charged the BR to publish in the International Frequency Information Circular (BR IFIC), the information referred to in *resolves* 8 and *instructs the Radiocommunication Bureau* 2, of Resolution **609 (WRC-03).**

5.2 The BR completed the required action and published in the BR IFIC 2523/13.07.2004 the Results of the Second CM and in the BR IFIC 2548/12.07.2005 the Results of the Third CM. The Results of the Fourth CM was published in the BR IFIC 2581/31.10.2006 – see attachment.

UNION INTERNATIONALE DES TELECOMMUNICATIONS
BUREAU DES RADIOCOMMUNICATIONS

INTERNATIONAL TELECOMMUNICATION UNION
RADIOCOMMUNICATION BUREAU

UNIÓN INTERNACIONAL DE TELECOMUNICACIONES
OFICINA DE RADIOCOMUNICACIONES

RES 609 (CMR-03)	RES 609 (WRC-03)	RES 609 (CMR-03)
Quatrième réunion de consultation sur la Résolution 609 (CMR-03) Bangalore, Inde, 26-28 septembre 2006	Fourth Resolution 609 (WRC-03) Consultation Meeting Bangalore, India, 26-28 September 2006	Cuarta Reunión de consulta sobre la Resolución 609 (CMR-03) Bangalore, India, 26-28 de septiembre de 2006

Les présents renseignements sont publiés par le Bureau conformément *au point 3 du charge le Bureau,* de la Résolution **609** (CMR-03) : 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 *point 1 du recommande* de la Recommandation **608** (CMR-03) est dépassé par une station spatiale considérée. La **Partie B** contient les renseignements publiés au *point 8 du décide* de la Résolution **609** (CMR-03), à savoir les résultats concernant la répartition du brouillage cumulatif en application du *point 2 du décide* 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 Resolution **609** (WRC-03) *instructs the Bureau 3*: **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 *recommends 1* of Recommendation **608** (WRC-03) is exceeded by any subject space station. **Part B** includes the information referred to in *resolves 8* of the Resolution **609** (WRC-03), as results of any aggregate sharing determinations made in application of *resolves 2* of the Resolution **609** (WRC-03), 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 *encarga a la Oficina 3* de la Resolución **609** (CMR-03): 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 *recomienda 1* de la Recomendación **608** (CMR-03) es rebasado por alguna estación espacial en cuestión. La **Parte B** incluye la información a la que se refiere el *resuelve 8* de la Resolución **609** (CMR-03), como resultado de cualquier decisión sobre compartición combinada tomada en aplicación del *resuelve 2* de la Resolución **609** (CMR-03), 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

第 609 号决议（WRC-03）	РЕЗ 609 (ВКР-03)	القرار 609 (WRC-03)
关于第 609 号决议（WRC-03）的 第四次磋商会议 2006 年 9 月 26-28 日，印度，班加罗尔	Четвертое консультативное собрание по Резолюции 609 (ВКР-03) Бангалор, Индия, 26-28 сентября 2006 г.	الاجتماع التشاوري الرابع حول القرار 609 (WRC-03)، بنغالور، الهند، 26-28 سبتمبر 2006

无线电通信局根据第 **609** 号决议（WRC-03）责成*无线电通信局* 3 公布本信息：	Настоящая информация публикуется Бюро в соответствии с п. 3 раздела "*поручает Бюро*" Резолюции **609** (ВКР-03):	ينشر المكتب هذه المعلومات وفقاً *للبند 3 من* "*يكلف مكتب الاتصالات الراديوية*" في القرار **(WRC-03)** 609:
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-03）*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。	**Часть A** содержит список систем РНСС, а также Отчет участникам консультативного собрания о заключениях Бюро относительно определения, превышается ли уровень потока мощности, определенный в п. 1 раздела "*рекомендует*" Рекомендации **608** (ВКР-03), какой-либо из рассматриваемых космических станций или нет.	يتضمن **الجزء A** قائمة بأنظمة خدمة الملاحة الراديوية الساتلية وتقريراً أعده 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 (WRC-03) **608** قد تجاوزتا أي محطة من المحطات الفضائية المعنية.
B 部分 包括第 **609** 号决议（WRC-03）做出决议 8 所列的信息，即有关执行第 **609** 号决议（WRC-03）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。	**Часть B** содержит информацию, о которой идет речь в п. 8 раздела "*решает*" Резолюции **609** (ВКР-03) и которая является результатом любого определения условий совместного использования суммарного допустимого уровня согласно пункту 2 раздела "*решает*" Резолюции **609** (ВКР-03), независимо от того, достигнуты ли эти результаты путем изменения объявленных характеристик их соответствующих систем или сетей или нет.	ويتضمن **الجزء B** المعلومات المشار إليها في *البند 8* من منطوق القرار (WRC-03) **609**، أي نتائج ترتيبات التقاسم التراكمي التي يتم التوصل إليها تنفيذاً *للبند 2* من منطوق القرار (WRC-03) **609**، 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 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 *point 1 du recommande* de la Recommandation **608** (CMR-03) 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 *recommends 1* of Recommendation **608** (WRC-03) 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 *recomienda 1* de la Recomendación **608** (CMR-03) es rebasado por alguna estación espacial en cuestión.

Aux termes du *point 1 du recommande* de la Recommandation **608** (CMR-03), lors de l'application des dispositions du *point 5 du décide* de la Résolution **609** (CMR-03), 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/m^2) dans une bande quelconque de 1 MHz dans des conditions de propagation en espace libre.

Recommendation **608** (WRC-03) *recommends 1*, indicates that in the implementation of *resolves 5* of Resolution **609** (WRC-03), 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/m^2) in any 1 MHz band under free space propagation conditions.

La Recomendación **608** (CMR-03) en su *recomienda 1* señala que en la aplicación del *resuelve 5* de la Resolución **609** (CMR-03), 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/m^2) en cualquier banda de 1 MHz en condiciones de propagación en espacio libre.

A 部分

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-03）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。

ЧАСТЬ A

Список систем РНСС и Отчет участникам консультативного собрания о заключениях Бюро относительно определения, превышается ли уровень потока мощности, определенный в п. 1 раздела *"рекомендует"* Рекомендации **608** (ВКР-03), какой-либо из рассматриваемых космических станций или нет.

الجـزء A

قائمة بأنظمة خدمة الملاحة الراديوية الساتلية وتقرير أعده 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 **(WRC-03)** 608 قد تجاوزتا أي محطة من المحطات الفضائية المعنية.

第 **608** 号建议（WRC-03）建议 1 指出，在执行第 **609** 号决议（WRC-03）做出决议第 5 段时，在 1164-1215MHz 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)。

В п. 1 раздела *"рекомендует"* Рекомендации **608** (ВКР-03) указывается, что при применении пункта 5 раздела "*решает*" Резолюции **609** (ВКР-03) в полосе частот 1164–1215 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/м^2) в любой полосе шириной 1 МГц при условиях распространения в свободном пространстве.

ينص *البند 1* من "*يوصي*" في التوصية (WRC-03) **608** على أنه، في تطبيق *البند 5* من منطوق القرار (WRC-03) **609**، ينبغي ألا تتجاوز كثافة تدفق القدرة القصوى الناتجة عند سطح الأرض عن إرسالات محطة فضائية في خدمة الملاحة الراديوية الساتلية في نطاق الترددات 1164 – 1215 MHz، القيمة –129 dB(W/m^2)، 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 colums /
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
ntc_type	Type de station spatiale associée: géostationnaire [G] ou non géostationnaire [N]	Type of associated space station: geostationary [G] or non-geostationary [N]	Tipo de la estación espacial asociada: geoestacionaria [G] o no geoestacionaria [N]
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 *recommande 1* de la Recommandation 608 (CMR-03) en utilisant les informations demandées au titre de l'Annexe 1 de la dite Recommandation.	Bureau's Report with findings relating to determination of the PFD values indicated in *recommends 1* of Recommendation 608 (WRC-03) 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 *recomienda 1* de la Recomendación 608 (CMR-03) 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
ntc_type	相关空间台站类型：静止[G] 或 非静止[N]	Тип взаимодействующей космической станции: геостационарная [G] или негеостационарная [N]	نمط المحطة الفضائية المصاحبة: مستقرة بالنسبة إلى الأرض [G] أو غير مستقرة بالنسبة إلى الأرض [N]
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 MHz 1215 - 1164 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-03）附件 1 的信息做出的有关第 608 号建议（WRC-03）建议 1 中的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 (ВКР-03) с использованием информации Дополнения 1 к данной Рекомендации.	تقرير المكتب الذي يتضمن النتائج المحددة بشأن قيم كثافة تدفق القدرة المبينة في *البند 1* من "*يوصي*" في التوصية (WRC-03) 608، باستعمال المعلومات المطلوبة في الملحق 1 بالتوصية المذكورة.

List of the RNSS systems (as of 26.04.2006) with frequency assignments in the band 1164-1215 MHz that meet the criteria listed in Annex to RES 609 (WRC-2003) and Bureau's Report with findings relating to determination of the PFD values

ntc_id	adm	ntwk_org	sat_name	long_nom	ntf_rsn	d_rcv	ssn_ref	ssn_no	ific_no	ntc_type	Annex to RES-609	BR Report ** (*instructs the Bureau* 2 of RES 609)
105540005	ARS	ARB	ARABSAT 5A-30.5E	30.5	A	17.05.2005	API/A	3398	2549	G	NO Input DOC	--
105540006	ARS	ARB	ARABSAT 5B-26E	26	A	17.05.2005	API/A	3399	2549	G	NO Input DOC	--
105540007	ARS	ARB	ARABSAT 5C-20E	20	A	17.05.2005	API/A	3400	2549	G	NO Input DOC	--
105540008	ARS	ARB	ARABSAT 6D-7.5E	7.5	A	17.05.2005	API/A	3401	2549	G	NO Input DOC	--
105540009	ARS	ARB	ARABSAT 6E-34.5E	34.5	A	17.05.2005	API/A	3402	2549	G	NO Input DOC	--
105540010	ARS	ARB	ARABSAT 6F-44.5E	44.5	A	17.05.2005	API/A	3403	2549	G	NO Input DOC	--
101540217	CAN		ANIK-F3 NAV	-118.7	A	14.11.2001	API/A	2175	2460	G	NO Input DOC	--
100543887	CHN		COMPASS-110.5E	110.5	A	05.01.2004	API/A	1302	2512	G	2nd meeting DOC *	A
101520012	CHN		COMPASS-110.5E	110.5	C	10.01.2001	CR/C	800	2489	G	2nd meeting DOC *	No PFD excess
103500418	CHN		COMPASS-110.5E	110.5	N	31.12.2003	PART	1	2517	G	2nd meeting DOC *	No PFD excess
100543886	CHN		COMPASS-140E	140	A	05.01.2004	API/A	1303	2512	G	2nd meeting DOC *	A
101520013	CHN		COMPASS-140E	140	C	10.01.2001	CR/C	801	2489	G	2nd meeting DOC *	No PFD excess
103500419	CHN		COMPASS-140E	140	N	31.12.2003	PART	1	2517	G	2nd meeting DOC *	No PFD excess
103540921	CHN		COMPASS-160E	160	A	31.12.2003	API/A	2996	2512	G	3rd meeting DOC *	A

* Administrations that have submitted materials pursuant to §§ 11 b) and/or c) of the *RES-609 ToR* 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:

a. 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

b. 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.

** 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 in the standard electronic AP4 form necessary to perform PFD calculations. The Bureau therefore calculated PFD values based on information available to the BR in Article 9 or 11 submissions. "A" in this column indicates a short form API filing (Article 9, Sub-Section IB) for which the BR could not calculate PFD values.

PFD values calculated by administrations and submitted under § 1.4 and 1.5 of the Annex to REC 608 (WRC-03), that are separately available to the participating administrations on the RES-609 web page at: http://www.itu.int/jive/index.jspa?categoryID=114 show no PFD excess over the limit of REC 608 (WRC-03).

ntc_id	adm	ntwk_org	sat_name	long_nom	ntf_rsn	d_rcv	ssn_ref	ssn_no	ific_no	ntc_type	Annex to RES-609	BR Report ** (*instructs the Bureau* 2 of RES 609)
105520009	CHN		COMPASS-160E	160	C	07.01.2005	CR/C/	1526	2552	G	3rd meeting DOC *	No PFD excess
100543884	CHN		COMPASS-58.75E	58.75	A	05.01.2004	API/A	1300	2512	G	2nd meeting DOC *	A
101520010	CHN		COMPASS-58.75E	58.75	C	10.01.2001	CR/C	798	2489	G	2nd meeting DOC *	No PFD excess
103500416	CHN		COMPASS-58.75E	58.75	N	31.12.2003	PART	1	2517	G	2nd meeting DOC *	No PFD excess
100543885	CHN		COMPASS-80E	80	A	05.01.2004	API/A	1301	2512	G	2nd meeting DOC *	A
101520011	CHN		COMPASS-80E	80	C	10.01.2001	CR/C	799	2489	G	2nd meeting DOC *	No PFD excess
103500417	CHN		COMPASS-80E	80	N	31.12.2003	PART	1	2517	G	2nd meeting DOC *	No PFD excess
100543888	CHN		COMPASS-H	N-GSO	A	05.01.2004	API/A	1305	2513	N	4th meeting DOC *	No PFD excess
103500420	CHN		COMPASS-H	N-GSO	N	31.12.2003	PART	2	2563	N	4th meeting DOC *	No PFD excess
100543882	CHN		COMPASS-M	N-GSO	A	05.01.2004	API/A	1304	2513	N	4th meeting DOC *	No PFD excess
103500421	CHN		COMPASS-M	N-GSO	N	31.12.2003	PART	2	2563	N	4th meeting DOC *	No PFD excess
103540922	CHN		COMPASS-MG	N-GSO	A	05.01.2004	API/A	2997	2512	N	4th meeting DOC *	A
100544017	D		GALILEO-NAV-2004	N-GSO	A	03.06.2000	API/A	1397	2424	N	2nd meeting DOC *	No PFD excess
101500300	D		GALILEO-NAV-2004	N-GSO	N	02.08.2001	PART	2	2532	N	2nd meeting DOC *	No PFD excess
98543012	F	ESA	E-NSS-1	N-GSO	A	05.06.2000	API/A	102	2424	N	2nd meeting DOC *	No PFD excess
100543863	F	GLS	GSATNAV1	-162.5	A	11.04.2000	API/A	1292	2420	G	NO Input DOC	--
100520333	F	GLS	GSATNAV1	-162.5	C	12.10.2000	CR/C	686	2487	G	NO Input DOC	--
100500379	F	GLS	GSATNAV1	-162.5	N	06.12.2000	PART	2	2509	G	NO Input DOC	--
100543866	F	GLS	GSATNAV4	-27.5	A	11.04.2000	API/A	1295	2420	G	NO Input DOC	--
100520336	F	GLS	GSATNAV4	-27.5	C	12.10.2000	CR/C	689	2487	G	NO Input DOC	--
100500382	F	GLS	GSATNAV4	-27.5	N	06.12.2000	PART	2	2540	G	NO Input DOC	--
100543988	F	GLS	LSATNAV-2	N-GSO	A	30.05.2000	API/A	1365	2423	N	NO Input DOC	--
101500007	F	GLS	LSATNAV-2	N-GSO	N	11.01.2001	PART	2	2508	N	NO Input DOC	--
100543990	F	GLS	LSATNAV-3	N-GSO	A	03.06.2000	API/A	1388	2430	N	NO Input DOC	--
101500013	F	GLS	LSATNAV-3	N-GSO	N	30.01.2001	PART	2	2508	N	NO Input DOC	--
99543862	F	GLS	MSATNAV-2	N-GSO	A	03.12.1999	API/A	1182	2415	N	2nd meeting DOC *	No PFD excess
100500321	F	GLS	MSATNAV-2	N-GSO	N	04.10.2000	PART	2	2536	N	2nd meeting DOC *	No PFD excess
100543989	F	GLS	MSATNAV-3	N-GSO	A	03.06.2000	API/A	1387	2430	N	2nd meeting DOC *	No PFD excess
101500014	F	GLS	MSATNAV-3	N-GSO	N	30.01.2001	PART	2	2519	N	2nd meeting DOC *	No PFD excess
102540351	F	GLS	MSATNAV-4	N-GSO	A	24.09.2002	API/A	2434	2481	N	2nd meeting DOC *	No PFD excess
103500093	F	GLS	MSATNAV-4	N-GSO	N	28.04.2003	PART	2	2535	N	2nd meeting DOC *	No PFD excess
104540272	F		MSATNAV-5	N-GSO	A	29.03.2004	API/A	3184	2520	N	NO Input DOC	--
96540057	G		INMARSAT GSO-2H	65	A	12.01.2001	API/A	1211	2441	G	NO Input DOC	--

ntc_id	adm	ntwk_org	sat_name	long_nom	ntf_rsn	d_rcv	ssn_ref	ssn_no	ific_no	ntc_type	Annex to RES-609	BR Report ** (*instructs the Bureau* 2 of RES 609)
97520331	G		INMARSAT GSO-2H	65	C	07.08.2001	CR/C	412	2493	G	NO Input DOC	--
96540056	G		INMARSAT GSO-2J	-54	A	12.01.2001	API/A	1213	2441	G	NO Input DOC	--
97520322	G		INMARSAT GSO-2J	-54	C	07.08.2001	CR/C	413	2493	G	NO Input DOC	--
101544432	G		INMARSAT GSO-2K	-51	A	12.01.2001	API/A	1762	2441	G	NO Input DOC	--
101520306	G		INMARSAT GSO-2K	-50	C	07.08.2001	CR/C	931	2493	G	NO Input DOC	--
101540210	G		INMARSAT GSO-2L	-53	A	07.08.2001	API/A	2030	2453	G	3rd meeting DOC *	**A**
102520001	G		INMARSAT GSO-2L	-53	C	07.02.2002	CR/C	1024	2497	G	3rd meeting DOC *	No PFD excess
102540147	G		INMARSAT GSO-2M	178	A	16.04.2002	API/A	2309	2471	G	3rd meeting DOC *	**A**
102520076	G		INMARSAT GSO-2M	178	C	16.10.2002	CR/C	1138	2505	G	3rd meeting DOC *	No PFD excess
102540249	G		INMARSAT GSO-2N	64	A	11.06.2002	API/A	2379	2476	G	3rd meeting DOC *	**A**
102520123	G		INMARSAT GSO-2N	64	C	11.12.2002	CR/C	1150	2507	G	3rd meeting DOC *	No PFD excess
103540557	G		INMARSAT-4 104W	-104	A	11.07.2003	API/A	2868	2504	G	NO Input DOC	--
104520037	G		INMARSAT-4 104W	-104	C	11.01.2004	CR/C	1359	2537	G	NO Input DOC	--
103540558	G		INMARSAT-4 109E	109	A	11.07.2003	API/A	2869	2504	G	NO Input DOC	--
104520035	G		INMARSAT-4 109E	109	C	11.01.2004	CR/C	1357	2537	G	NO Input DOC	--
103540559	G		INMARSAT-4 143.5E	143.5	A	11.07.2003	API/A	2870	2504	G	NO Input DOC	--
104520036	G		INMARSAT-4 143.5E	143.5	C	11.01.2004	CR/C	1358	2537	G	NO Input DOC	--
103540561	G		INMARSAT-4 25E	25	A	11.07.2003	API/A	2872	2504	G	NO Input DOC	--
104520033	G		INMARSAT-4 25E	25	C	11.01.2004	CR/C	1355	2537	G	NO Input DOC	--
103540560	G		INMARSAT-4 64E	64	A	11.07.2003	API/A	2871	2504	G	NO Input DOC	--
104520034	G		INMARSAT-4 64E	64	C	11.01.2004	CR/C	1356	2537	G	NO Input DOC	--
104540442	G		INMARSAT-4 98W	-98	A	20.07.2004	API/A	3269	2527	G	NO Input DOC	--
105520012	G		INMARSAT-4 98W	-98	C	20.01.2005	CR/C/	1530	2553	G	NO Input DOC	--
104540563	G		SNS	N-GSO	A	03.11.2004	API/A	3342	2534	N	2nd meeting DOC *	No PFD excess
102540042	I		GALILEO-G-NAVSTAR-1A	-171.5	A	21.02.2002	API/A	2251	2465	G	NO Input DOC	--
102540043	I		GALILEO-G-NAVSTAR-2A	-126.5	A	21.02.2002	API/A	2252	2465	G	NO Input DOC	--
102540044	I		GALILEO-G-NAVSTAR-3A	-75.5	A	21.02.2002	API/A	2253	2465	G	NO Input DOC	--
102540045	I		GALILEO-G-NAVSTAR-4A	-40	A	21.02.2002	API/A	2254	2465	G	NO Input DOC	--
102540046	I		GALILEO-G-NAVSTAR-5A	11	A	21.02.2002	API/A	2255	2465	G	NO Input DOC	--
102540047	I		GALILEO-G-NAVSTAR-6A	53.5	A	21.02.2002	API/A	2256	2465	G	NO Input DOC	--
102540048	I		GALILEO-G-NAVSTAR-7A	98.5	A	21.02.2002	API/A	2257	2465	G	NO Input DOC	--
102540049	I		GALILEO-G-NAVSTAR-8A	143.5	A	21.02.2002	API/A	2258	2465	G	NO Input DOC	--
102540050	I		GALILEO-M-NAVSTAR	N-GSO	A	21.02.2002	API/A	2259	2465	N	2nd meeting DOC *	No PFD excess

ntc_id	adm	ntwk_org	sat_name	long_nom	ntf_rsn	d_rcv	ssn_ref	ssn_no	ific_no	ntc_type	Annex to RES-609	BR Report ** (*instructs the Bureau* 2 of RES 609)
103500082	I		GALILEO-M-NAVSTAR	N-GSO	N	31.03.2003	PART	2	2519	N	2nd meeting DOC *	No PFD excess
104540636	IND		INSAT-NAV(34)	34	A	30.12.2004	API/A	3393	2538	G	4th meeting DOC *	A
103540878	IND		INSAT-NAV(82)	82	A	25.11.2003	API/A	2975	2510	G	4th meeting DOC *	A
104520332	IND		INSAT-NAV(82)	82	C	30.12.2004	CR/C/	1520	2552	G	4th meeting DOC *	No PFD excess
101540240	IND		INSAT-NAV(83)	83	A	30.12.2004	API/A	2059	2538	G	4th meeting DOC *	A
104540638	IND		INSAT-NAV(132)	132	A	30.12.2004	API/A	3394	2538	G	4th meeting DOC *	A
104540639	IND		INSAT-NAV-GS	N-GSO	A	30.12.2004	API/A	3395	2538	N	4th meeting DOC *	A
102540482	J		N-SAT-HEO2	N-GSO	A	27.12.2002	API/A	2471	2490	N	2nd meeting DOC *	No PFD excess
105540184	NIG		NIGCOMSAT-1A	-19.2	A	03.03.2005	API/A	3561	2543	G	NO Input DOC	--
105540185	NIG		NIGCOMSAT-1B	16	A	03.03.2005	API/A	3562	2543	G	NO Input DOC	--
105540186	NIG		NIGCOMSAT-1C	19	A	03.03.2005	API/A	3563	2543	G	NO Input DOC	--
105540187	NIG		NIGCOMSAT-1D	22	A	03.03.2005	API/A	3564	2543	G	NO Input DOC	--
105540188	NIG		NIGCOMSAT-1E	36	A	03.03.2005	API/A	3565	2543	G	NO Input DOC	--
105540189	NIG		NIGCOMSAT-1F	39	A	03.03.2005	API/A	3566	2543	G	NO Input DOC	--
105540190	NIG		NIGCOMSAT-1G	42.5	A	03.03.2005	API/A	3567	2543	G	4th meeting DOC *	A
106520040	NIG		NIGCOMSAT-1G	42.5	C	01.03.2006	CR/C	1796	2576	G	4th meeting DOC *	No PFD excess
105540191	NIG		NIGCOMSAT-1H	45	A	03.03.2005	API/A	3568	2543	G	NO Input DOC	--
105540192	NIG		NIGCOMSAT-1I	48	A	03.03.2005	API/A	3569	2543	G	NO Input DOC	--
92540003	RUS		GLONASS-M	N-GSO	A	12.03.2002	API/A	2264	2476	N	4th meeting DOC *	A
97500304	RUS		GLONASS-M	N-GSO	N	21.05.2003	PART	2	2578	N	4th meeting DOC *	No PFD excess
105540215	TUR		TURKSAT-103E-A	103	A	11.11.2005	API/A	3593	2559	G	NO Input DOC	--
105540216	TUR		TURKSAT-112E-A	112	A	11.11.2005	API/A	3594	2559	G	NO Input DOC	--
105540217	TUR		TURKSAT-17.6E-A	17.6	A	11.11.2005	API/A	3595	2559	G	NO Input DOC	--
105540218	TUR		TURKSAT-17E-A	17	A	11.11.2005	API/A	3596	2559	G	NO Input DOC	--
105540219	TUR		TURKSAT-2.1E-A	2.1	A	11.11.2005	API/A	3597	2559	G	NO Input DOC	--
105540220	TUR		TURKSAT-25E-A	25	A	11.11.2005	API/A	3598	2559	G	NO Input DOC	--
105540221	TUR		TURKSAT-31E-A	31	A	11.11.2005	API/A	3599	2559	G	NO Input DOC	--
105540222	TUR		TURKSAT-37E-A	37	A	11.11.2005	API/A	3600	2559	G	NO Input DOC	--
105540223	TUR		TURKSAT-42E-A	42	A	11.11.2005	API/A	3601	2559	G	NO Input DOC	--
105540224	TUR		TURKSAT-50E-A	50	A	11.11.2005	API/A	3602	2559	G	NO Input DOC	--
105540225	TUR		TURKSAT-56E-A	56	A	11.11.2005	API/A	3603	2559	G	NO Input DOC	--
105540226	TUR		TURKSAT-73.5E-A	73.5	A	11.11.2005	API/A	3604	2559	G	NO Input DOC	--
105540227	TUR		TURKSAT-8.5E-A	8.5	A	11.11.2005	API/A	3605	2559	G	NO Input DOC	--

ntc_id	adm	ntwk_org	sat_name	long_nom	ntf_rsn	d_rcv	ssn_ref	ssn_no	ific_no	ntc_type	Annex to RES-609	BR Report ** (*instructs the Bureau* 2 of RES 609)
105540228	TUR		TURKSAT-9.4E-A	9.4	A	11.11.2005	API/A	3606	2559	G	NO Input DOC	--
105540229	TUR		TURKSAT-98E-A	98	A	11.11.2005	API/A	3607	2559	G	NO Input DOC	--
105540826	TUR		TURKSAT-AHU25	25	A	14.11.2005	API/A	3927	2562	G	NO Input DOC	--
105540827	TUR		TURKSAT-AHU31	31	A	14.11.2005	API/A	3928	2562	G	NO Input DOC	--
105540828	TUR		TURKSAT-AHU37	37	A	14.11.2005	API/A	3929	2562	G	NO Input DOC	--
105540829	TUR		TURKSAT-AHU42	42	A	14.11.2005	API/A	3930	2562	G	NO Input DOC	--
105540830	TUR		TURKSAT-AHU50	50	A	14.11.2005	API/A	3931	2562	G	NO Input DOC	--
105540831	TUR		TURKSAT-AHU56	56	A	14.11.2005	API/A	3932	2562	G	NO Input DOC	--
105540832	TUR		TURKSAT-AHU61	61	A	14.11.2005	API/A	3933	2562	G	NO Input DOC	--
105540833	TUR		TURKSAT-AHU72	72	A	14.11.2005	API/A	3934	2562	G	NO Input DOC	--
101540300	USA		INTNL SPACE STATION	N-GSO	A	19.02.2001	API/A	1804	2442	N	NO Input DOC	--
302500291	USA		INTNL SPACE STATION	N-GSO	N	24.09.2002	PART	2	2507	N	NO Input DOC	--
100544007	USA		LM-RPS-107.3W	-107.3	A	02.06.2000	API/A	1385	2424	G	2nd meeting DOC *	A
100520444	USA		LM-RPS-107.3W	-107.3	C	30.01.2004	CR/C	770	2540	G	2nd meeting DOC *	No PFD excess
100544005	USA		LM-RPS-131.8E	131.8	A	02.06.2000	API/A	1383	2424	G	NO Input DOC	--
100520448	USA		LM-RPS-131.8E	131.8	C	02.12.2000	CR/C	768	2514	G	NO Input DOC	--
100544008	USA		LM-RPS-133W	-133	A	02.06.2000	API/A	1386	2515	G	2nd meeting DOC *	A
100520445	USA		LM-RPS-133W	-133	C	30.01.2004	CR/C	771	2540	G	2nd meeting DOC *	No PFD excess
100544004	USA		LM-RPS-71E	71	A	02.06.2000	API/A	1382	2424	G	NO Input DOC	--
100520447	USA		LM-RPS-71E	71	C	02.12.2000	CR/C	767	2514	G	NO Input DOC	--
100544006	USA		LM-RPS-79W	-79	A	02.06.2000	API/A	1384	2424	G	NO Input DOC	--
100520443	USA		LM-RPS-79W	-79	C	02.12.2000	CR/C	769	2514	G	NO Input DOC	--
97542942	USA		MSSLEO-5	N-GSO	A	02.06.2000	API/A	1334	2424	N	NO Input DOC	--
100543934	USA		NAVSTAR GPS L5	N-GSO	A	23.05.2000	API/A	1353	2422	N	2nd meeting DOC *	No PFD excess
102500244	USA		NAVSTAR GPS L5	N-GSO	N	26.08.2002	PART	2	2511	N	2nd meeting DOC *	No PFD excess
102540320	USA		NAVSTAR GPS-IIRF	N-GSO	A	26.08.2002	API/A	2429	2479	N	NO Input DOC	--
103500110	USA		NAVSTAR GPS-IIRF	N-GSO	N	02.05.2003	PART	2	2538	N	NO Input DOC	--
102540090	USA		NPP	N-GSO	A	14.03.2002	API/A	2271	2468	N	NO Input DOC	--
101544545	USA		SPACE SHUTTLE	N-GSO	A	19.02.2001	API/A	1805	2442	N	NO Input DOC	--
90504637	USA		SPACE SHUTTLE	N-GSO	N	24.09.2002	PART	2	2510	N	NO Input DOC	--

PARTIE B	PART B	PARTE B
Renseignements publiés conformément au *point 8 du décide* de la Résolution **609** (CMR-03), en tant que résultats concernant la répartition du brouillage cumulatif en application du *point 2 du décide* de la Résolution **609** (CMR-03), que ces résultats correspondent ou non à des modifications éventuelles des caractéristiques publiées de leurs systèmes ou réseaux respectifs.	Information referred to in *resolves 8* of the Resolution **609** (WRC-03), as results of any aggregate sharing determinations made in application of *resolves 2* of the Resolution **609** (WRC-03), without regard to whether such determinations result in any modifications to the published characteristics of their respective systems or networks.	Información publicada con arreglo al *resuelve 8* de la Resolución **609** (CMR-03), como resultado de cualquier decisión sobre compartición combinada tomada en aplicación del *resuelve 2* de la Resolución **609** (CMR-03), 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 Française le **24.10.2006**, en application des Sections 2 et 14 du mandat de la réunion de consultation organisée conformément à la Résolution **609** (CMR-03).	This information was communicated to the Bureau by the administration of France on **24.10.2006,** pursuant to Section 2 and Section 14 of the Resolution **609** (WRC-03) Consultation Meeting Terms of Reference.	Esta información fue comunicada a la Oficina por la Administración de Francia el **24.10.2006** con arreglo al punto 2 y al punto 14 del mandato de la reunión de consulta de la Resolución **609** (CMR-03).

B 部分	ЧАСТЬ B	الجـزء B
第 **609** 号决议（WRC-03）做出决议第 8 段所列的信息，即有关执行第 **609** 号决议（WRC-03）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。	Информация, о которой идет речь в п. 8 раздела "*решает*" Резолюции **609** (ВКР-03) и которая является результатом любого определения условий совместного использования суммарного допустимого уровня согласно пункту 2 раздела "*решает*" Резолюции **609** (ВКР-03), независимо от того, достигнуты ли эти результаты путем изменения объявленных характеристик их соответствующих систем или сетей или нет.	المعلومات المشار إليها في *البند 8* من منطوق القرار (WRC-03) **609**، أي نتائج ترتيبات التقاسم التراكمي التي يتم التوصل إليها تنفيذاً *للبند 2* من منطوق القرار (WRC-03) **609**، بغض النظر عما إذا كانت هذه الترتيبات سيسفر عنها أي تعديلات في الخصائص المنشورة لأنظمة الإدارات المعنية وشبكاتها.

本信息由法国主管部门根据第 **609** 号决议（WRC-03）磋商会议职责范围第 2 节和第 14 节，于 **2006** 年 **10** 月 **24** 日提交无线电通信局。	Настоящая информация направлена в Бюро администрацией Франции **24.10.2006** года в соответствии с разделом 2 и разделом 14 круга ведения консультативного собрания по Резолюции **609** (ВКР-03).	أبلغت إدارة فرنسا المكتب بذه المعلومات في **2006.10.24**، تطبيقاً للقسمين 2 و14 من اختصاصات الاجتماع التشاوري المنظم وفقاً للقرار **609** (WRC-03).

Report of the Fourth Resolution 609 (WRC-03) Consultation Meeting

to the ITU Radiocommunication Bureau

1.0 Introduction

Resolution 609 (WRC-03) is entitled "Protection of aeronautical radionavigation service systems from the equivalent power flux-density produced by radionavigation satellite service networks and systems in the 1164-1215 MHz frequency band."

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

This report reflects the results of the first four Resolution 609 (WRC-03) Consultation Meetings (CM) and is provided in accordance with the provisions of resolves 8 of Resolution 609.

2.0 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 equivalent PFD (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 dB(W/m^2/MHz), i.e. 4.2 dB below the Resolution 609 limit of –121.5 dB(W/m^2/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 equivalent PFD (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 dB(W/m^2/MHz), i.e. 4.2 dB below the Resolution 609 limit of –121.5 dB(W/m^2/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.

3.0 Fourth Consultation Meeting (Bangalore, 2006)

In conformity with the February 15, 2006 deadline established at the third CM, some administrations submitted updated technical characteristics for some RNSS networks. One administration informed the CM of the deletion of its API filing. The RNSS systems and networks for which information was provided on or before the February 15, 2006 deadline are listed in Table 1 of the attachment.

After the February 15, 2006 deadline, the meeting received a submission from Nigeria containing technical characteristics and statements regarding compliance with the Criteria in the Annex to Resolution 609 (WRC-03) for one GSO network. The meeting received also submissions from Russian Federation and India to update their systems characteristics. While this late information was not included in Table 1 of the attachment, it is included, along with the timely submissions, in Table 2 of the Attachment.

Calculations of the equivalent PFD (epfd) level produced by all space stations of the referenced RNSS systems and networks from both Table 1 and Table 2 were compared and agreed at the Fourth Consultation Meeting, held in Bangalore, India, September 26-28, 2006. The agreed calculations by the participants may be found in Tables 3 and 4, respectively, in the attachment to this Report. The aggregate calculations in Table 4 of the attachment should be substituted for Table 3 if, four months before the tentatively-scheduled date of the fifth Consultation Meeting, information regarding additional RNSS systems has not been received. If, four months before the tentatively-scheduled date of the fifth Consultation Meeting, new submissions (either for new systems or for material updates of previously-submitted characteristics) are made pursuant to §§ 11 b) and c) of the Terms of Reference, then these new submissions, along with the submissions from Table 2, and any systems from Table 1 for which information satisfying § 12 of the Terms of

Reference is provided, will be the subject of the aggregate sharing determination to be performed at the fifth Consultation Meeting.

4.0 Conclusion

The maximum epfd of all satellites associated with the referenced RNSS systems in Table 1 was –125.7 dB(W/m^2/MHz), i.e. 4.2 dB below the Resolution 609 limit of –121.5 dB(W/m^2/MHz). Identical results were reached with respect to the maximum epfd of all satellites associated with the referenced RNSS systems in Table 2. In both cases, it is noted that the results are 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, "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 provided characteristics before the 15 February 2006 submission deadline

ntc_id	adm	ntwk_org	sat_name	long_nom	ntf_rsn	d_rcv	ssn_ref	ssn_no	ific_no	ntc_type
103500418	CHN		COMPASS-110.5E	110.5	N	31.12.2003	PART	1	2517	G
103500419	CHN		COMPASS-140E	140	N	31.12.2003	PART	1	2517	G
105520009	CHN		COMPASS-160E	160	C	07.01.2005	CR/C/	1526	2552	G
103500416	CHN		COMPASS-58.75E	58.75	N	31.12.2003	PART	1	2517	G
103500417	CHN		COMPASS-80E	80	N	31.12.2003	PART	1	2517	G
103500420	CHN		COMPASS-H**	N-GSO	N	31.12.2003	PART	2	2563	N
103500421	CHN		COMPASS-M**	N-GSO	N	31.12.2003	PART	2	2563	N
103540922	CHN		COMPASS-MG**	N-GSO	A	05.01.2004	API/A	2997	2512	N
100500321	F	GLS	MSATNAV-2*	N-GSO	N	04.10.2000	PART	2	2536	N
102520001	G		INMARSAT GSO-2L	-53	C	07.02.2002	CR/C	1024	2497	G
102520076	G		INMARSAT GSO-2M	178	C	16.10.2002	CR/C	1138	2505	G
102520123	G		INMARSAT GSO-2N	64	C	11.12.2002	CR/C	1150	2507	G
104540636	IND		INSAT-NAV(34)	34	A	30.12.2004	API/A	3393	2538	G
104520332	IND		INSAT-NAV(82)	82	C	30.12.2004	CR/C/	1520	2552	G
101540240	IND		INSAT-NAV(83)	83	A	30.12.2004	API/A	2059	2538	G
104540638	IND		INSAT-NAV(132)	132	A	30.12.2004	API/A	3394	2538	G
104540639	IND		INSAT-NAV-GS	N-GSO	A	30.12.2004	API/A	3395	2538	N
102540482	J		N-SAT-HEO2	N-GSO	A	27.12.2002	API/A	2471	2490	N
97500304	RUS		GLONASS-M	N-GSO	N	21.05.2003	PART	2	2578	N
100520444	USA		LM-RPS-107.3W	-107.3	C	30.01.2004	CR/C	770	2540	G
100520445	USA		LM-RPS-133W	-133	C	30.01.2004	CR/C	771	2540	G
102500244	USA		NAVSTAR GPS L5	N-GSO	N	26.08.2002	PART	2	2511	N

* In accordance with § 5 of Terms of Reference for the Resolution 609 (WRC-03) 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, E-NSS-1, and SNS.

** Compass-M, Compass-MG, and Compass-H represent a single system for purposes of the Resolution 609 (WRC-03) consultation process.

Detailed characteristics of these systems, which were used for the aggregate computation, are available on the Resolution 609 Forum page within the ITU web site (http://www.itu.int/ITU-R/space/res609/): see attachment 3 to the Record of Decisions from the fourth Consultation Meeting.

Table 3 and Figure 1 give the results of the maximum aggregate epfd values per MHz, based on the RNSS systems in Table 1.

Table 2: RNSS systems having provided characteristics before the Consultation Meeting, irrespective of the 15 February 2006 submission deadline

ntc_id	adm	ntwk_org	sat_name	long_nom	ntf_rsn	d_rcv	ssn_ref	ssn_no	ific_no	ntc_type
103500418	CHN		COMPASS-110.5E	110.5	N	31.12.2003	PART	1	2517	G
103500419	CHN		COMPASS-140E	140	N	31.12.2003	PART	1	2517	G
105520009	CHN		COMPASS-160E	160	C	07.01.2005	CR/C/	1526	2552	G
103500416	CHN		COMPASS-58.75E	58.75	N	31.12.2003	PART	1	2517	G
103500417	CHN		COMPASS-80E	80	N	31.12.2003	PART	1	2517	G
103500420	CHN		COMPASS-H**	N-GSO	N	31.12.2003	PART	2	2563	N
103500421	CHN		COMPASS-M**	N-GSO	N	31.12.2003	PART	2	2563	N
103540922	CHN		COMPASS-MG**	N-GSO	A	05.01.2004	API/A	2997	2512	N
100500321	F	GLS	MSATNAV-2*	N-GSO	N	04.10.2000	PART	2	2536	N
102520001	G		INMARSAT GSO-2L	-53	C	07.02.2002	CR/C	1024	2497	G
102520076	G		INMARSAT GSO-2M	178	C	16.10.2002	CR/C	1138	2505	G
102520123	G		INMARSAT GSO-2N	64	C	11.12.2002	CR/C	1150	2507	G
104540636	IND		INSAT-NAV(34)	34	A	30.12.2004	API/A	3393	2538	G
104520332	IND		INSAT-NAV(82)	82	C	30.12.2004	CR/C/	1520	2552	G
101540240	IND		INSAT-NAV(83)	83	A	30.12.2004	API/A	2059	2538	G
104540638	IND		INSAT-NAV(132)	132	A	30.12.2004	API/A	3394	2538	G
104540639	IND		INSAT-NAV-GS	N-GSO	A	30.12.2004	API/A	3395	2538	N
102540482	J		N-SAT-HEO2	N-GSO	A	27.12.2002	API/A	2471	2490	N
106520040	NIG		NIGCOMSAT-1G	42.5	C	01.03.2006	CR/C	1796	2576	G
97500304	RUS		GLONASS-M	N-GSO	N	21.05.2003	PART	2	2578	N
100520444	USA		LM-RPS-107.3W	-107.3	C	30.01.2004	CR/C	770	2540	G
100520445	USA		LM-RPS-133W	-133	C	30.01.2004	CR/C	771	2540	G
102500244	USA		NAVSTAR GPS L5	N-GSO	N	26.08.2002	PART	2	2511	N

* In accordance with § 5 of Terms of Reference for the Resolution 609 (WRC-03) 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, E-NSS-1, and SNS.

** Compass-M, Compass-MG, and Compass-H represent a single system for purposes of the Resolution 609 (WRC-03) consultation process.

Detailed characteristics of these systems, which were used for the aggregate computation, are available on the Resolution 609 Forum page within the ITU web site (http://www.itu.int/ITU-R/space/res609/): see attachment 3 to the Record of Decisions from the fourth Consultation Meeting.

Table 4 and Figure 2 give the results of the maximum aggregate epfd values per MHz, based on the RNSS systems in Table 2.

Table 3: Maximum RNSS aggregate epfd values per 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))	Center Frequency (MHz)	Max RNSS Agg epfd (dB(W/m^2/MHz))
1164	-142.17	1177	-125.77	1190	-136.33	1203	-128.18
1165	-145.78	1178	-126.18	1191	-135.88	1204	-127.26
1166	-155.82	1179	-127.07	1192	-135.94	1205	-126.76
1167	-147.04	1180	-127.69	1193	-136.51	1206	-126.56
1168	-140.08	1181	-129.35	1194	-137.89	1207	-126.61
1169	-135.65	1182	-130.8	1195	-139.46	1208	-126.9
1170	-132.82	1183	-132.95	1196	-141.75	1209	-127.39
1171	-130.66	1184	-135.79	1197	-143.26	1210	-128.08
1172	-129.3	1185	-139.74	1198	-141.98	1211	-129.09
1173	-127.5	1186	-143.16	1199	-137.82	1212	-130.43
1174	-126.96	1187	-141.69	1200	-134.19	1213	-132.25
1175	-126.16	1188	-139.7	1201	-131.5	1214	-134.67
1176	-125.68	1189	-137.68	1202	-129.55	1215	-138.12

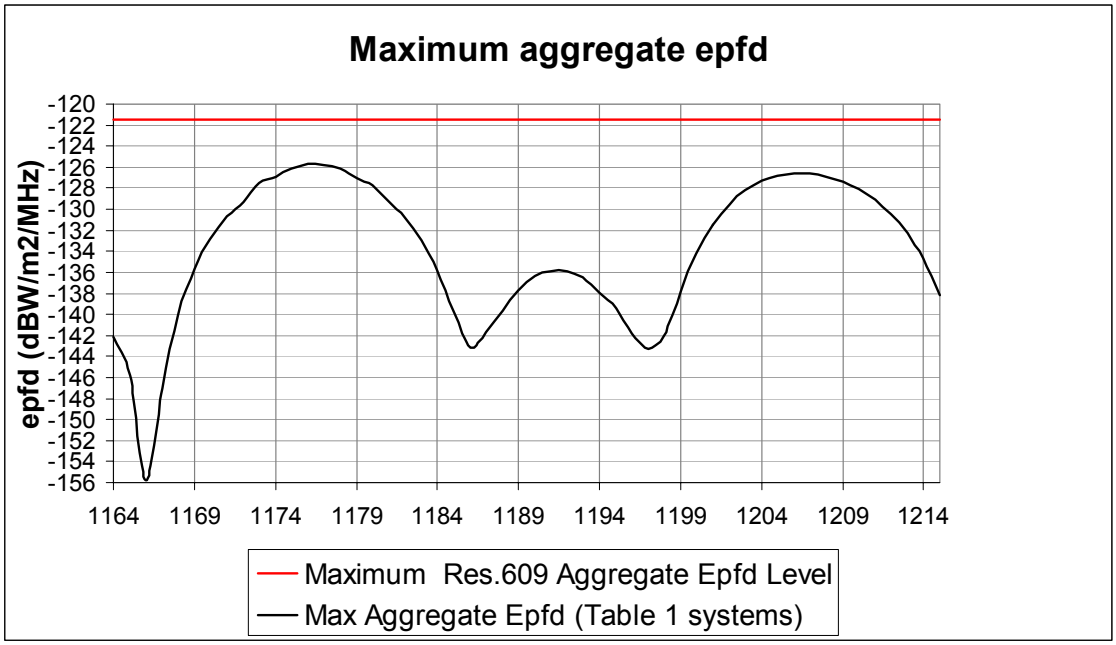

Figure 1: Plot of Table 3 (Maximum RNSS Aggregate epfd per MHz).

Table 4: Maximum RNSS aggregate epfd values per MHz (including updated characteristics for GLONASS-M, INSAT-NAV (34, 82, 83, 132), and INSAT-NAV-GS networks, and new characteristics for NIGCOMSAT-1G)

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	-141.13	1177	-125.75	1190	-132.99	1203	-127.86
1165	-142.08	1178	-126.14	1191	-132.54	1204	-126.98
1166	-141.4	1179	-127.02	1192	-132.8	1205	-126.55
1167	-140.63	1180	-127.45	1193	-133.37	1206	-126.42
1168	-138.22	1181	-128.62	1194	-133.93	1207	-126.53
1169	-135.2	1182	-130.29	1195	-135.43	1208	-126.86
1170	-132.76	1183	-132.65	1196	-136.7	1209	-127.37
1171	-130.62	1184	-134.67	1197	-138.98	1210	-128.08
1172	-129.27	1185	-136.14	1198	-139.28	1211	-129.08
1173	-127.49	1186	-135.83	1199	-136.98	1212	-130.41
1174	-126.94	1187	-135.62	1200	-132.9	1213	-132.24
1175	-126.14	1188	-134.27	1201	-130.03	1214	-134.66
1176	-125.67	1189	-133.65	1202	-128.95	1215	-138.1

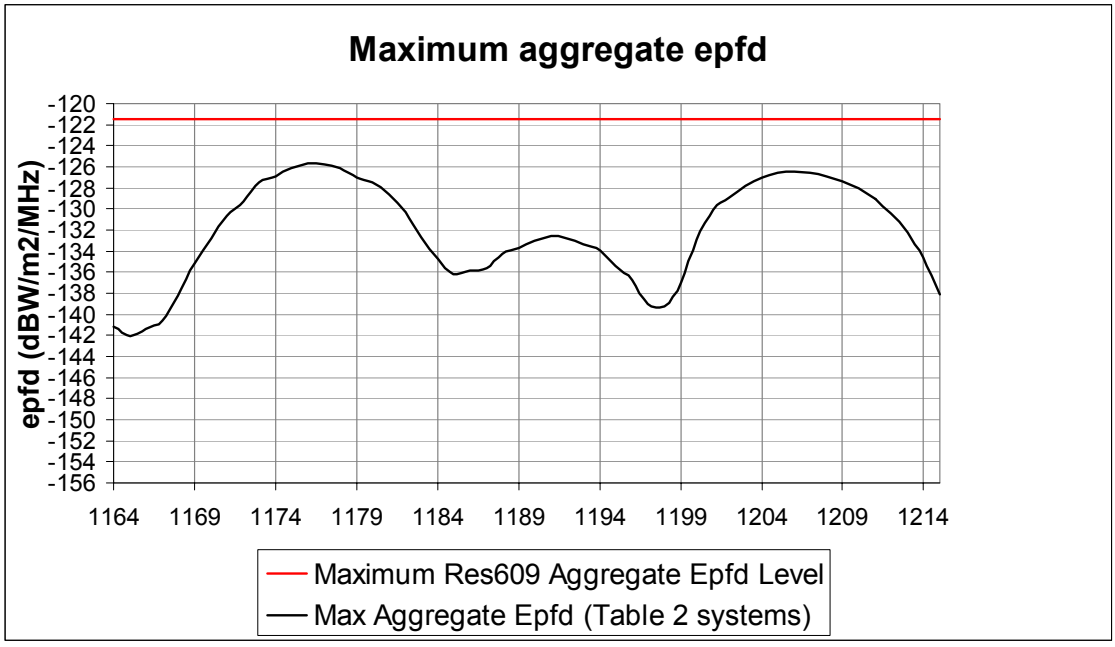

Figure 2: Plot of Table 4 (Maximum RNSS Aggregate epfd per MHz, including updated characteristics for GLONASS-M, INSAT-NAV (34, 82, 83, 132), and INSAT-NAV-GS networks, and new characteristics for NIGCOMSAT-1G).