

ICG-17 WG-B Meetings (Hybrid)

Enhancement of GNSS Performance, New Services and Capabilities

Agenda

Date: October 17-19th, 2023

Venue: Hotel Meliá Avenida América, Madrid, Spain

Co-chairs: Daniel BLONSKI(ESA), Xingqun ZHAN(China), Nilesh M. DESAI(INDIA)

Date: 17 October, 2023, Tuesday, 09:00-18:00 hrs. UTC+2		
Date: 18 October, 2023, Wednesday, 09:00-13:00 hrs. UTC+2		
Date: 19 October, 2023, Thursday, 09:00-11:00 hrs. UTC+2		
Day 1: Tuesday, 17th October 2023		Conference room (Hybrid)
Opening Remarks of WG-B for ICG-17		09:00
➤ Introduction to WG-B Meeting	Co-Chairs	09:00
➤ Approval of the agenda	All	09:05
➤ Progress on ICG-16 WG-B Recommendations Review of the implementation of WG-B Recommendations and identification of required additional actions	Co-Chairs	09:15
Session 1: Status of Space Use Subgroup		09:20
(1) Status update of SUSG activities	Co-Chairs of WG-B SUSG	09:20
(2) Space Use Subgroup (SUSG) Work Package-4 (WP-4)	Frank Bauer (FB- ACS)	09:35
(3) NASA GNSS Activities Update	Joel Parker NASA	10:00
(4) Lunar Navigation Satellite System (LNSS): Overview, Accuracy, and Demonstration Mission	Masaya Murata JAXA, Japan	10:15
(5) Status on ESA's Lunar Navigation activities	Javier Ventura ESA	10:30
(6) Envision of Earth-Moon and Deep Space Communication-Navigation-Remote Sensing Integrated Constellation System	Xiongwen HE CAST, China	10:40
Coffee Break	10:55 – 11:10	
(7) BDS SSV Performance and Applications	Xinuo Chang CAST, China	11:10
(8) GNSS receiver to the Moon (LuGRE)	Oscar Pozzobon Qascom, Italy	11:25
(9) Relative Onboard Orbit Determination and Propagation for LEO Missions	S. Kavitha Dr. Prasanta Mula URSC/ISRO, India	11:40
(10) Pseudolite-based Rover Navigation for future Interplanetary Missions: An AI-based Approach	Dr. Ashish Shukla SAC/ISRO, India	11:50

(11)Integrated Positioning using NavIC, GPS and Pseudolite Systems for future RLV Mission	Dr. Ashish Shukla SAC/ISRO, India	12:00 Virtual
Session 2: Status of Application Subgroup		12:10
(12)Status update of AppSG activities	Co-Chairs of WG-B AppSG	12:10
(13)Development of NavIC-based Env. Monitoring (NEMO) Drifter	Dr. Arunkumar S SAC/ISRO, India	12:25 Virtual
(14)The potential of NavIC data for deriving field scale soil moisture for precision agriculture	Dharmendra Pandey SAC/ISRO, India	12:35 Virtual
(15)Advancements in NavCom Applications	Dr Chandra Prakash SAC/ISRO, India	12:45 Virtual
(16)NavIC Applications in e-governance	Kalpesh Borsadiya SAC/ISRO, India	12:55 Virtual
(17)Water body Induced Large Multipath Error in onboard NavIC Receiver in Low Altitude Flying Vehicles: A Case Study	Vinoj V S IISU/ISRO, India	13:05 Virtual
Lunch Break		13:15 – 14:00
Session 3: Status of Interactions with other ICG WG		14:00
Session 4: Support to SAR & EWS		14:15
(18)NASA MEOSAR and LunaSAR	Lisa Mazzuca NASA	14:15
(19)Galileo SAR Status	X. Maufroid EC/ESA	14:30
(20)Galileo's Emergency Warning Service	E. Guyader/E. Bouton EC/ESA	14:45
(21)Developments of BDS Applications in Communication and Search and Rescue	Liu Falong, CHINA (CTTIC)	15:00
Session 5: Support to GNSS Science		15:15
(22)Cooperative monitoring and warning of ionospheric impacts on GNSS during the 25th high solar activity period	Zishen Li AISI/CAS, China Qi Liu Henan University, China	15:15
(23)Data and Applications of Space Weather Payloads onboard of BDS Satellites	Kai LIU USTC, China	15:30
Session 6: Enhancements of GNSS Performance		15:45
(24)Galileo's contribution to Safety of Life applications	S. Perea EC/ESA	15:45
Coffee Break		16:00-16:20
WG's Joint Session : Lunar PNT		16:20- 18:40
16:20	Lunar PNT: Overview of Current Plans and Interoperability Relationships with GNSS, <i>Joel PARKER, Working Group B SUSG WP4</i>	

16:40	Lunar Spectrum Considerations, <i>Cathy SHAM, United States</i>		
17:05	LunaNet Interoperability Specification, Reference Frames, and Timing, <i>Cheryl GRAMLING, United States</i>		
17:30	Recommendation for Multilateral Cislunar PNT Workshop and International Organization Activities, <i>Masaya MURATA, Japan</i>		
17:50	Conclusions and discussion		
18:20	Space Service Volume (SSV) - Galileo Reference Antenna Pattern, <i>F. MENZIONE, European Commission/JRC</i>		
End of Day 1			18:40

Day 2: Wednesday, 18th October 2023		Conference room (Hybrid)
Continuation of WG-B Sessions from Day 1		08:30
(25) Standalone LEO Doppler Positioning using Proposed Broadband Communication Constellation	Dr. Ashish Shukla SAC/ISRO, India	8:30 Virtual
(26) NavIC Multipath Classification using Deep Learning	Dr. Ashish Shukla SAC/ISRO, India	08:40 Virtual
(27) NavIC Signal Monitoring Receiver and Advantage of NavIC L1-SPS	S. Saumi & Rohan Urdhwaresh SAC/ISRO, India	08:50 In-Person
Continuation of WG-B Sessions from Day 1		09:00
WG's Joint Session : Disaster Risk Reduction Timing Issues IGMA Precise Point Positioning Space Service Volume - Separate Agenda		09:00- 11:00
Coffee Break		11:00-11:20
Continuation of WG-B Sessions from Day 1		11:20
(28) Modified CEMIC Scheme for New Service Signals	Vijay Bhadouria SAC/ISRO, India	11:20 Virtual
(29) CSK for High Data Rate Navigation Signal	Pravin Patidar SAC/ISRO, India	11:30 Virtual
(30) GNSS Signal Interference Analyzer	Deepak Mishra	11:40

	SAC/ISRO, India	Virtual
(31)Signatures of Doppler Collision in NavIC	Dr. Vimal Bhandari, Pravin Patidar SAC/ISRO, India	11:50 Virtual
(32)Doppler Positioning with LEO Satellites and Combination with NavIC	Dr. Vimal Bhandari, SAC/ISRO, India	12:00 Virtual
(33)NeQuick Performance in NVS-01	Megha Maheshwari Gurpreet Singh URSC/ISRO, India	12:10 Virtual
(34)System configuration considerations for NavIC PPP	Ramesh Gudivada, Anand Dwivedi, Ramarao G, URSC/ISRO, India	12:20 Virtual
Discussion on WG-B objectives and new work areas		12:30
End of Day 2		13:00

Day 3: Thursday, 19th October 2023	Conference room (Hybrid)	
Consolidation of ICG-17 WG-B Recommendations & Presentation of WG-B to the Plenary	All	09:00
Candidate Recommendations Identified as part of Interim Meeting#1: <ul style="list-style-type: none"> - <i>Support the generation of Joint workshop between ICG and IOAG on Lunar PNT Interoperability</i> - <i>Cooperative Ionospheric Monitoring and Warning of the 25th solar activity cycle</i> - <i>Consideration on Communication and Navigation Integration</i> To be amended		
Coffee Break		11:00-11:30
Presentation of WG-B to the Plenary	All	11:30
Lunch Break		13:00 – 14:00
ICG-17 WG-B Recommendations & Presentation of WG-B to the Second meeting of the Providers’ Forum	All	16:00
End of WG-B Day 3		18:00