

		Tuesday 24th		Wednesday 25th		Thursday 26th		Friday 27th					
		H-I	H-IV	H-I	H-IV	H-I	H-IV	H-I	H-IV				
8:30	Registration												
8:40													
8:50													
9:00													
9:10													
9:20													
9:30			Ground Systems Technology	On Board Systems Technology	High Rate Telemetry	Technical demonstration NEXTCODE (H101)	Novel Architectures	Technical demonstration					
9:40	Welcome from the Director D/OPS		Ground Systems Technology	On Board Systems Technology	High Rate Telemetry	Optical Space Links	Novel Architectures	CORTEX HDR 4G+ (H-IV)					
9:50			Ground Systems Technology	On Board Systems Technology	High Rate Telemetry	Optical Space Links	Novel Architectures						
10:00	Chairman Opening (K.J. Schulz)		Ground Systems Technology	On Board Systems Technology	High Rate Telemetry	Optical Space Links	Coffee Break						
10:10	ESA Missions: What's next? (Paolo Ferri)		Ground Systems Technology	On Board Systems Technology	High Rate Telemetry	Optical Space Links							
10:20	Workshop Development (S.Marti)		Ground Systems Technology	On Board Systems Technology	High Rate Telemetry	Optical Space Links	Coffee Break						
10:30			Round Table	Round Table	Round Table	Optical Space Links							
10:40			Coffee Break		Coffee Break		Novel Architectures						
10:50	Coffee Break		Coffee Break		Coffee Break		Novel Architectures						
11:00	ESA Avionics technology (J.L. Terraillon)		Coffee Break		Coffee Break		Round Table	Workshop Closing: Conclusions					
11:10			High Rate Telemetry	Microsatellites-Cubesats	Spacecraft Radiometric Techniques	Optical Space Links							
11:20	An ESA perspective on TT&C Systems and evolutions (R. Morgan-Owen)		High Rate Telemetry	Microsatellites-Cubesats	Spacecraft Radiometric Techniques	Optical Space Links	Workshop Closing: Conclusions						
11:30			High Rate Telemetry	Microsatellites-Cubesats	Spacecraft Radiometric Techniques	Optical Space Links							
11:40	Future Directions in Deep Space Communications and Navigation at NASA (L. Deutsch)		High Rate Telemetry	Microsatellites-Cubesats	Spacecraft Radiometric Techniques	Optical Space Links	Workshop Closing: Conclusions						
11:50			High Rate Telemetry	Microsatellites-Cubesats	Spacecraft Radiometric Techniques	Optical Space Links							
12:00	The Challenges to ESA Space Science Missions Telecommunications from ITU WRC-19 (E. Vassallo)		High Rate Telemetry	Microsatellites-Cubesats	Spacecraft Radiometric Techniques	Optical Space Links	Workshop Closing: Conclusions						
12:10			High Rate Telemetry	Microsatellites-Cubesats	Round Table	Round Table							
12:20	The evolution of ESA Tracking Network (M.Lanucara)		High Rate Telemetry	Microsatellites-Cubesats	Round Table	Round Table	Workshop Closing: Conclusions						
12:30													
12:40							Workshop Closing: Conclusions						
12:50													
13:00	Lunch Break		Lunch Break		Lunch Break		Workshop Closing: Conclusions						
13:10													
13:20							Workshop Closing: Conclusions						
13:30													
13:40							Workshop Closing: Conclusions						
13:50													
14:00	Ground Systems Technology	On Board Systems Technology	Poster Session Visit to Exhibition ESOC Tour		Modulation, Coding and DSP	Radioscience and Propagation	Workshop Closing: Conclusions						
14:10	Ground Systems Technology	On Board Systems Technology			Modulation, Coding and DSP	Radioscience and Propagation							
14:20	Ground Systems Technology	On Board Systems Technology			Modulation, Coding and DSP	Radioscience and Propagation							
14:30	Ground Systems Technology	On Board Systems Technology			Modulation, Coding and DSP	Radioscience and Propagation							
14:40	Ground Systems Technology	On Board Systems Technology			Modulation, Coding and DSP	Radioscience and Propagation							
14:50	Ground Systems Technology	On Board Systems Technology			Modulation, Coding and DSP	Radioscience and Propagation							
15:00	Ground Systems Technology	On Board Systems Technology	Poster Session Visit to Exhibition ESOC Tour		Coffee Break	Round Table	Workshop Closing: Conclusions						
15:10	Ground Systems Technology	On Board Systems Technology			Coffee Break	Round Table							
15:20	Ground Systems Technology	On Board Systems Technology			Poster Session Visit to Exhibition ESOC Tour		Coffee Break	Round Table	Workshop Closing: Conclusions				
15:30	Ground Systems Technology	On Board Systems Technology					Coffee Break	Round Table					
15:40	Coffee Break						Poster Session Visit to Exhibition ESOC Tour		Modulation, Coding and DSP	Technical demonstration STCAD Pro 2019 (H-IV)	Workshop Closing: Conclusions		
15:50									Modulation, Coding and DSP	Technical demonstration STCAD Pro 2019 (H-IV)			
16:00			Poster Session Visit to Exhibition ESOC Tour						Modulation, Coding and DSP	Technical demonstration STCAD Pro 2019 (H-IV)	Workshop Closing: Conclusions		
16:10	Ground Systems Technology	On Board Systems Technology							High Rate Telemetry	Microsatellites-Cubesats			
16:20	Ground Systems Technology	On Board Systems Technology			High Rate Telemetry	Microsatellites-Cubesats			Social Event Dinner (18h00)				
16:30	Ground Systems Technology	On Board Systems Technology			High Rate Telemetry	Microsatellites-Cubesats							
16:40	Ground Systems Technology	On Board Systems Technology			High Rate Telemetry	Microsatellites-Cubesats	Social Event Dinner (18h00)						
16:50	Ground Systems Technology	On Board Systems Technology			High Rate Telemetry	Microsatellites-Cubesats							
17:00	Ground Systems Technology	On Board Systems Technology	High Rate Telemetry	Microsatellites-Cubesats	Social Event Dinner (18h00)								
17:10	Ground Systems Technology	On Board Systems Technology	High Rate Telemetry	Microsatellites-Cubesats									
17:20	Ground Systems Technology	On Board Systems Technology	High Rate Telemetry	Microsatellites-Cubesats	Social Event Dinner (18h00)								
17:30	Welcome Drink		High Rate Telemetry	Round Table									
17:40							Social Event Dinner (18h00)						
17:50													
18:00							Social Event Dinner (18h00)						
18:10													
18:20							Social Event Dinner (18h00)						
18:30													
18:40							Social Event Dinner (18h00)						
18:50													
19:00							Social Event Dinner (18h00)						

Room	Day	Time	Session	First Name	Last Name	Organization	Paper Title	Session
Plenary	24-Sep	09:40	Opening	Rolf	Densing	ESA	Welcome from ESA Director of Operations	Opening
Plenary	24-Sep	10:00	Opening	Klaus-Jürgen	Schulz	ESA	Chairman Opening	Opening
Plenary	24-Sep	10:20	Opening	Paolo	Ferri	ESA	ESA Missions: What's next?	Opening
Plenary	24-Sep	10:40	Opening	Salvador	Marti	ESA	Workshop Development	Opening
Plenary	24-Sep	11:20	Plenary	Jean-Loup	Terraillon	ESA	ESA Avionics technology	Plenary Session
Plenary	24-Sep	11:40	Plenary	Richard	Morgan-Owen	ESA	An ESA perspective on TT&C Systems and evolutions	Plenary Session
Plenary	24-Sep	12:00	Plenary	Deutsch	Leslie J.	JPL/NASA	Future Directions in Deep Space Communications and Navigation at NASA	Plenary Session
Plenary	24-Sep	12:20	Plenary	Enrico	Vassallo	ESA	The Challenges to ESA Space Science Missions Telecommunications from ITU WRC-19	Plenary Session
Plenary	24-Sep	12:40	Plenary	Marco	Lanucara	ESA	The evolution of ESA Tracking Network	Plenary Session
<b>Ground Systems Technology</b>								
H-I	24-Sep	14:00	1A	Matthew	Wessel	SED Systems	ADDING K-BAND RECEIVE CAPABILITY TO ESA'S CEBREROS AND MALARGUE DEEP SPACE ANTENNAS	A-Ground Systems Technology
H-I	24-Sep	14:20	1A	Matthew	Cosby	Goonhilly Earth Station Ltd	Upgrading Goonhilly's 32m C/Ku band system to operate as an ESTRACK S/X Deep Space Antenna	A-Ground Systems Technology
H-I	24-Sep	14:40	1A	Timothy	Pham	Jet Propulsion Laboratory	Using Low-Cost, Portable, Commercial SDR in Mission Ground System Testing and Operations	A-Ground Systems Technology
H-I	24-Sep	15:00	1A	Alessandro	Ardito	Arpssoft Srl	OFF-LINE CORRELATOR FOR ANTENNA ARRAY OVER LONG BASELINES	A-Ground Systems Technology
H-I	24-Sep	15:20	1A	Mohamed Ami	Jhaidri	Zodiac Data Systems	Signal combining techniques at very low SNR for Deep Space communications	A-Ground Systems Technology
H-I	24-Sep	16:10	2A	Joan Manuel	Cebrian	Indra Sistemas	Next generation of TT&C Ground Segment validation tool: Integrated Modem and Baseband Unit MK4	A-Ground Systems Technology
H-I	24-Sep	16:30	2A	Cedric	Chambon	Callisto	Cryo cooled feed receivers in X Band: upgrade for operations	A-Ground Systems Technology
H-I	24-Sep	16:50	2A	Francesco	Serrano	Rheinmetall Italia	80 kWcw X band High Power Amplifier for ESA Deep Space Ground Stations	A-Ground Systems Technology
H-I	24-Sep	17:10	2A	Cedric	Chambon	Callisto France Sas	X-Band Sampling Technology Demonstration	A-Ground Systems Technology
H-I	25-Sep	09:30	3A	Lin	Chai	Southwest China Institute	Research and Implement of Space TT&C Signals Transfer Technology Based on Ethernet	A-Ground Systems Technology
H-I	25-Sep	09:50	3A	Thorsten	Feldmann	Timetech GmbH	Time calibration for Deep Space Station with transportable GNSS calibrator	A-Ground Systems Technology
H-I	25-Sep	10:10	3A	Sarah	Saint-Jalm	Menlo Systems GmbH	Novel optical architecture for Time and Frequency distribution in ESA's Deep Space Stations	A-Ground Systems Technology
H-I	25-Sep	10:30	3A	Xavier	Vernez	T4science	All European Maser (AEM) project status	A-Ground Systems Technology
H-I	25-Sep	10:50	3A				Round Table	
<b>On Board Systems Technology</b>								
H-IV	24-Sep	14:00	1B	Marco	Mascarello	Esa-Estec	The Solar Orbiter X-Band TT&C New Features: GMSK with PN Regenerative Ranging and DDOR Semaphores Implement	B-On Board Systems Technology
H-IV	24-Sep	14:20	1B	Dario	Gelfusa	Thales Alenia Space	JUICE Deep Space Transponder	B-On Board Systems Technology
H-IV	24-Sep	14:40	1B	Richard	Samuelson	Kongsberg Defence & Aer	A New Generation of Telemetry Transmitters with Flexible Frequency Setting	B-On Board Systems Technology
H-IV	24-Sep	15:00	1B	Rodrigo	Bravo	Thales Alenia Space España	Multimode Transponder with FEC techniques and TMTC frame management	B-On Board Systems Technology
H-IV	24-Sep	15:20	1B	Dario	Gelfusa	Thales Alenia Space	X-Band Transponder for Euclid Mission	B-On Board Systems Technology
H-IV	24-Sep	16:10	2B	Dario	Gelfusa	Thales Alenia Space	Integrated Deep Space & Radio-Science TT&C Transponder (IDST)	B-On Board Systems Technology
H-IV	24-Sep	16:30	2B	Dave	Geardyn	Antwerp Space	Flexible and reconfigurable TT&C Transponder Family with Payload Data Transmission	B-On Board Systems Technology
H-IV	24-Sep	16:50	2B	José Ignacio	Mayor Varea	Thales Alenia Space In Spa	Miniaturized Transponder (MSBT): Off the shelf multimode solution for TTC	B-On Board Systems Technology
H-IV	24-Sep	17:10	2B	Paul	Maguire	Zelinda Ireland Limited	FLEXIBLE AND AUTONOMOUS TT&C TRANSPONDER FOR MULTI MISSION APPLICATIONS	B-On Board Systems Technology
H-IV	25-Sep	09:30	3B	Lorenzo	Simone	Thales Alenia Space	K-Band Beacon on PCB	B-On Board Systems Technology
H-IV	25-Sep	09:50	3B	Céline	Loisel	Cnes	Orbiter, lander, rover : a new family plan for communication and localization services.	B-On Board Systems Technology
H-IV	25-Sep	10:10	3B	Jan	Zackrisson	Ruag Space AB	X-Band TT&C and K-Band Downlink Antennas for Future LEO Missions	B-On Board Systems Technology
H-IV	25-Sep	10:30	3B	Domenico	Giancristofaro	Thales Alenia Space Italia	X-band Integrated Unit with Transponder and High Data Rate Payload Data Transmitter	B-On Board Systems Technology
H-IV	25-Sep	10:50	3B				Round Table	
<b>High Rate Telemetry</b>								
H-I	25-Sep	11:40	4A	Matteo	Marchetti	Università Degli Studi Di P	Preliminary analysis of the performance metrics for the 26 GHz band receiving channel of the SNOWBEAR project	C-High Rate Telemetry
H-I	25-Sep	12:00	4A	Diego	Rodríguez	Indra Sistemas	Dual K-band/S-Band Tracking Ground Station Antenna for Future Earth Observation Applications	C-High Rate Telemetry
H-I	25-Sep	12:20	4A	Vidar	Ringset	Sintef	A Multi-standard Dual Ground Station High Speed Modem	C-High Rate Telemetry
H-I	25-Sep	12:40	4A	Arnaud	Robert	Zodiac Aerospace	TTC2019 – Lessons learned on Qualification of EO Ka-band Ground Stations	C-High Rate Telemetry
H-I	25-Sep	16:40	5A	Philipp	Wertz	Tesat Spacecom	End-to-End Approach for an X-Band Direct-to-Earth High Rate Transmitter Employing a Compact and Flexible Design to	C-High Rate Telemetry
H-I	25-Sep	17:00	5A	Jean Rene	Rigot	Zodiac Data Systems	Fully automated downlink system	C-High Rate Telemetry
H-I	25-Sep	17:20	5A	Johta	Awano	Japan Aerospace Explorati	A study of high-speed mission telecommand and telemetry link for next generation digital payload.	C-High Rate Telemetry
H-I	26-Sep	09:30	6A	Franz	Thaller	STT-Systemtechnik GmbH	Modern High-Rate DVB-S2 Payload Data Downlink Transmitter	C-High Rate Telemetry
H-I	26-Sep	09:50	6A	Clement	Dudal	Cnes	In-lab tests results of DVB-S2 payload data downlink for Earth observation missions	C-High Rate Telemetry
H-I	26-Sep	10:10	6A	Gianluca	Giuffrida	University Of Pisa	SCCC SW EGSE: A software simulator of a satellite downlink communication compliant with the CCSDS 131.2-B-1 stand	C-High Rate Telemetry
H-I	26-Sep	10:30	6A	Javier	Cabo Freixedas	Thales Alenia Space	New PDT Architectures for Earth Observation Missions	C-High Rate Telemetry
H-I	26-Sep	10:50	6A				Round Table	
<b>Microsatellites-Cubesats</b>								
H-IV	25-Sep	11:40	4B	Mazen	Shihabi	NASA	The Evolution of the Jet Propulsion Laboratory/NASA Iris Deep-Space Transponder	D-Microsatellites-Cubesats
H-IV	25-Sep	12:00	4B	Alberto	Busso	Serco Nederland Bv for ES	A procedure to recover data of a cubesat mission at very low S/N ratio	D-Microsatellites-Cubesats
H-IV	25-Sep	12:20	4B	Hervé	Guillon	Cnes	Myriade Evolutions S-Band Transponder, the development story of a new equipment family	D-Microsatellites-Cubesats
H-IV	25-Sep	12:40	4B	Andre	Lofaldli	ESA	ESOC Ground Station Architecture for OPS-SAT	D-Microsatellites-Cubesats
H-IV	25-Sep	16:40	4B	Stefano	Speretta	Delft University Of Techno	Software-defined testbed for next generation navigation transponders	D-Microsatellites-Cubesats
H-IV	25-Sep	17:00	5B	Vialard	Marie	Cnes	A disruptive method for link budget and availability computation, for TT&C and HDRT links	D-Microsatellites-Cubesats
H-IV	25-Sep	17:20	5B				Round Table	
<b>Posters</b>								
Foyer	25-Sep	14:00	Poster	Hong	Wang	BITTT	Design of Orbit Measurement and Determination System for the Chinese Mars mission	Poster
Foyer	25-Sep	14:00	Poster	Peter	Forkman	Chalmers University Of Tex	Retrieval Algorithms for Atmospheric Attenuation in the Frequency Band 15 – 52 GHz from Two-Channel Microwave Re	Poster
Foyer	25-Sep	14:00	Poster	Athanasios	Panagopoulos	National Technical Univers	Deep Space Optical Communication Links Design: Link Budget Tool for Data Rate Estimations	Poster
Foyer	25-Sep	14:00	Poster	Pedro	Rodrigues	Tekever	Evolution of an Inter-Satellite Link system in support of deep space science missions	Poster
Foyer	25-Sep	14:00	Poster	Ramon	Nogueron	OHB Luxspace	STCAD Pro 2019. An Advanced and Intuitive Tool for Analysis and Design of Satellite Communication Subsystems	Poster
H-IV	25-Sep	16:10	Poster	Ramon	Nogueron	OHB Luxspace	STCAD Pro 2019. An Advanced and Intuitive Tool for Analysis and Design of Satellite Communication Subsystems	Presentation of poster
H-101	26-Sep	09:30	6B				Technical Demonstration: NEXTCODE	
<b>Spacecraft Radiometric Techniques</b>								
H-I	26-Sep	11:40	7A	Dario	Gelfusa	Thales Alenia Space	JUICE Ka-band Transponder	F-Spacecraft Radiometric Techniques
H-I	26-Sep	12:00	7A	Francesco	Fiori	Università di Bologna	Delta-DOR measurements using VLBI antennas	F-Spacecraft Radiometric Techniques
H-I	26-Sep	12:20	7A	Luciano	Iess	Università La Sapienza	Results of the initial tests of the Mercury Orbiter Radioscience Experiment (MORE) on BepiColombo	F-Spacecraft Radiometric Techniques
H-I	26-Sep	12:40	7A				Round Table	
<b>Optical Space Links</b>								
H-IV	26-Sep	10:10	7B	Matias	Lantschner	DLR	An Optical Ground Station for the German Space Operations Center - Status and Outlook	E-Optical Space Links
H-IV	26-Sep	10:30	7B	Philipp	Billier	Tesat-Spacecom GmbH & C	End-to-End approach for optical Direct-To-Earth communication on Small- and CubeSats	E-Optical Space Links
H-IV	26-Sep	10:50	7B	Thomas	Dreischer	Synopta GmbH	On the game changing potential of adaptive optics ground stations for optical transmission of payload data from LEO	E-Optical Space Links
H-IV	26-Sep	11:40	7B	Christian	Bastin	Amos	Deep Space Optical Communication: System Engineering and Design of a 4/6 m Class Antenna	E-Optical Space Links
H-IV	26-Sep	12:00	7B	Harald	Schlemmer	Joanneum Research	Results from a CCSDS-compliant High Photon Efficiency Downlink SDR Platform	E-Optical Space Links
H-IV	26-Sep	12:20	7B	Dirk	Giggenbach	Dir	Optical Data Delivery from OSIRIS-Terminal on Flying Laptop Satellite	E-Optical Space Links
H-IV	26-Sep	12:40	7B				Round Table	
<b>Modulation, Coding and DSP</b>								
H-I	26-Sep	14:00	8A	Nick	James	Bae Systems Applied Intell	Implementation of uplink Doppler presteering for TTCP ranging	G-Modulation, Coding and DSP
H-I	26-Sep	14:20	8A	Andrea	Modenini	European Space Agency	A fast method for optimizing the amplifier output back-off by means of the total degradation	G-Modulation, Coding and DSP
H-I	26-Sep	14:40	8A	Ricardo	Prata	Deimos Engenharia	NEXTRACK - Next Generation ESTRACK Uplink Services	G-Modulation, Coding and DSP
H-I	26-Sep	15:00	8A	Houssein	Haji	Emtronix	Architecture Definition, DSP Algorithms Design and FPGA Implementation of an Orbiter SDR Autonomous UHF Transcei	G-Modulation, Coding and DSP
H-I	26-Sep	15:50	8A	Ricardo	Prata	Deimos Engenharia	Theoretical Analysis and Implementation of Effective Receivers for Telecommand Space Links	G-Modulation, Coding and DSP
H-I	26-Sep	16:10	8A	William	Halimi	Thales Alenia Space	Secure Satellite Keys Injection Schemes Relying on PKI Technology	G-Modulation, Coding and DSP
H-I	26-Sep	16:30	8A				Round Table	
<b>Radioscience and Propagation</b>								
H-IV	26-Sep	14:00	8B	De Vicente	Javier	ESA/ESOC	The implementation of a Radio-Science capability in the ESA tracking Network of Antennae	H-Radioscience and Propagation
H-IV	26-Sep	14:20	8B	Gerrit	Maschwitz	RPG Radiometer Physics G	Accuracy and performance of atmospheric delay assessed by a RPG microwave radiometer with respect to ground calib	H-Radioscience and Propagation
H-IV	26-Sep	14:40	8B	Riccardo	Lasagni Manghi	University Of Bologna	Tropospheric Delay Calibration System (TDCS): design and performances of a new generation of micro-wave radiomete	H-Radioscience and Propagation
H-IV	26-Sep	15:00	8B	Luca	Milani	LSE Space GmbH for ESA -	Evaluating the radio frequency interference potential of 5G mobile networks on space links at millimeter waves	H-Radioscience and Propagation
H-IV	26-Sep	15:20	8B				Round Table	
H-101	27-Sep	9:30	9B				Technical Demonstration: hiGH Rate VCM TM Receivers	
<b>Novel Architectures</b>								
H-I	27-Sep	09:30	9A	Athanasios	Panagopoulos	National Technical Univers	Performance of Site Diversity Reception Schemes in Next Generation Data Relay Systems	I-Novel Architectures
H-I	27-Sep	09:50	9A	Nicola	Maturo	University of Luxembourg	Demonstrator of Precoding Technique for a Multi-Beams Satellite System	I-Novel Architectures
H-I	27-Sep	10:10	9A	Gabriele	Donà	Thales Alenia Space	Entry Descent and Landing Communications Technology (ECOMTEC) Assessment Study	I-Novel Architectures
H-I	27-Sep	11:00	9A	Luca	Milani	LSE Space GmbH for ESA -	Weather-forecast-based Ka-band telemetry optimization with Hayabusa-2 cross-support data	I-Novel Architectures
H-I	27-Sep	11:20	9A	Philipp	Wertz	Tesat Spacecom	A Novel Architecture for a High-Speed-Integrated Satellite Data Chain Including an Onboard Routing Network, Data Pro	I-Novel Architectures
H-I	27-Sep	11:40	9A				Round Table	
H-I	27-Sep	12:00	Closing				Workshop Closing: Conclusions	