

**Sunday, April 6th, 2025**

**5:00 PM      8:00 PM      Registration desk & conference office (Hotel Lobby)**

**6:00 PM      8:00 PM      Welcome Reception (Maritim Pro Arte Conference Hotel, Saal II)**

**Poster Setup: Sunday, April 6th - Monday, April 7th (Saal II)**

## Monday, April 7th, 2025

7:30 AM	10:00 AM	Hotel Lobby	Registration	after 10am till 5.00pm the registration will be in the conference area at the 1st floor, right in front of room "Saal C".
8:30 AM	8:45 AM	Saal C	Welcome and Opening Remarks	Heinz-Wilhelm Hübers <i>German Aerospace Center (DLR)</i>
		<b>Saal C</b>	<b>Astronomy</b>	Chair: Heinz-Wilhelm Hübers
8:45 AM	9:30 AM		<b>Invited talk: The Role of FIR/Submm Space Observations in Astronomy: Past and Future</b>	<b>Thijs de Graauw</b> <i>ESO emeritus</i>
9:30 AM	9:50 AM		Dual-Band Receiver Design for the Black Hole Explorer (BHEx) Mission	Edward Tong <i>Center for Astrophysics Harvard &amp; Smithsonian</i>
9:50 AM	10:10 AM		Development Overview of Far-Infrared Nebular Emission Receiver Project	Haoran Kang <i>National Astronomical Observatory, Japan</i>
10:10 AM	10:30 AM		The Advanced Large Heterodyne Array for Millimeter Band Radio Astronomy - ALHAMBRA	Carlos Duran <i>IRAM</i>
10:30 AM	11:00 AM	Saal II	Coffee Break	
		<b>Saal C</b>	<b>SIS Mixers I</b>	Chair: Jian-Rong Gao
11:00 AM	11:20 AM		Band-Combining SIS Mixer Designs for the Africa Millimetre Telescope	Jee-Ho Kim <i>University of Oxford</i>
11:20 AM	11:40 AM		An Isolated Waveguide Power Divider with Zebra Chip for 430-510 GHz	Matthias Justen <i>I. Physikalisches Institut Universität zu Köln</i>
11:40 AM	12:00 PM		Development of an ALMA Band 9+10 Terahertz Unilateral Finline Mixer	Boon Kok Tan <i>University of Oxford</i>
12:00 PM	12:20 PM		A 210-375 GHz RF Band SIS Mixer with 4-20 GHz IF Band	Victor Belitsky <i>Chalmers University of Technology</i>
12:20 PM	12:45 PM		Group Photo	
12:45 PM	2:00 PM	Saal II	Lunch Break	
		<b>Saal C</b>	<b>Schottky Diodes/Mixers</b>	Chair: Jan Stake
2:00 PM	2:20 PM		A 325 GHz Sub-Harmonic Mixer with Integrated IF LNA for the ESA / EUMETSAT Arctic Weather Satellite (AWS) Radiometer Instrument	Bertrand Thomas <i>ESA / ESTEC</i>
2:20 PM	2:40 PM		A 230 GHz Sub-Harmonic Mixer For a 50 Gbps Real-time Wireless Communication System	Ting Zhang <i>CSIRO</i>
2:40 PM	3:00 PM		220-330 GHz Single-Pole Single-Throw (SPST) Waveguide Switch Based on Schottky Diodes	Javier Martinez Gil <i>ACST GmbH</i>
3:00 PM	3:20 PM		A High Conversion Gain Triple Cascode Mixer at 32-52 GHz	Elle Franks <i>University of Manchester</i>
3:20 PM	3:50 PM	Saal II	Coffee Break	
		<b>Saal C</b>	<b>Components I</b>	Chair: Jeffrey Hesler
3:50 PM	4:10 PM		Superconducting 4-20 GHz Wideband Lumped-Element Based Hybrid for Radio Astronomy Receivers	Max Behrens <i>Chalmers University of Technology</i>
4:10 PM	4:30 PM		Development of Broadband On-Chip Hybrid Couplers for Millimetre and Submillimetre-Wave Receivers	William McGenn <i>University of Manchester</i>
4:30 PM	4:50 PM		Microfabrication of Rectangular Waveguides for Sub-Millimeter Applications	Avan Mirkhan <i>Chalmers University of Technology</i>
4:50 PM	5:10 PM		SPADE-ST: Superconducting Parametric-Amplifier Design & Simulation Tool	F. Patricio Mena <i>National Radio Astronomy Observatory</i>
5:10 PM	5:30 PM		A 4-20 GHz 5-Section Hybrid Coupler Employing Lump-Capacitance-Coupled Microstrip Lines	Francois Joint <i>Chalmers University of Technology</i>
7:00 PM	9:00 PM	Saal II	<b>MTT-S Reception</b>	

## Tuesday, April 8th, 2025

8:00 AM	5:00 PM	conference area 1st floor	Registration desk & conference office	after 10am till 5.00pm the registration will be in the conference area at the 1st floor, right in front of room "Saal C".
		<b>Saal C</b>	<b>Earth Observation I</b>	Chair: Paul Hartogh
9:00 AM	9:40 AM		<b>Invited Talk: Keystone – A THz Limb-Sounder for the Upper Atmosphere</b>	<b>Daniel Gerber</b> <b>RAL Space</b>
9:40 AM	10:00 AM		THz Limb Sounder (TLS): A Compact Schottky Based Heterodyne Instrument for Sounding of Atomic Oxygen at 2.06 THz	Imran Mehdi <i>Jet Propulsion Laboratory and Caltech</i>
10:00 AM	10:20 AM		Dual-channel Heterodyne Spectrometer for Atomic Oxygen in the Mesosphere and Lower Thermosphere	Martin Wienold <i>German Aerospace Center (DLR)</i>
10:20 AM	10:50 AM	Saal II	Coffee Break	
		<b>Saal C</b>	<b>Earth Observation II</b>	Chair: Imran Mehdi
10:50 AM	11:10 AM		The Submillimeter Wave Instrument (SWI) on JUICE: first results of the Lunar Earth Gravity Assist (LEGA)	Paul Hartogh <i>MPI für Sonnensystemforschung</i>
11:10 AM	11:30 AM		Supra-THz Calibration Targets for Future Earth Observation Missions	Mikko Kotiranta <i>University of Bern</i>
11:30 AM	11:50 AM		325 GHz and 684 GHz Radiometers for NASA's POLSIR Mission	Jeffrey Hesler <i>Virginia Diodes Inc.</i>
11:50 AM	12:10 PM		Tropospheric Phase Correction Using Water Vapor Radiometers	Kyle Massingill <i>National Radio Astronomy Observatory</i>
12:10 PM	2:00 PM	Saal II	Lunch Break / Steering Board Lunch (Salon 7)	
		<b>Saal C</b>	<b>Spectrometers</b>	Chair: Martina Wiedner
2:00 PM	2:20 PM		Metasurface Terahertz Spectrometer	Wenye Ji <i>Delft University of Technology</i>
2:20 PM	2:40 PM		Progress on Superconducting On-Chip Fourier Transform Spectrometers	Nikita Klimovich <i>University of Oxford</i>
2:40 PM	3:00 PM		THz Time Domain Spectroscopy for in-situ Exploration of Comets	Leo Stöckli <i>University of Bern</i>
3:00 PM	3:20 PM		Time-resolved Terahertz Gas Spectroscopy using a 3.4 THz QCL and a Room-Temperature TeraFET Detector Array	Nicholas North <i>University of Leeds</i>
3:20 PM	5:30 PM	Saal II	Poster Session with Coffee Break, Snacks, Drinks	
7:00 PM	10:00 PM	BRASSERIE	Conference Dinner BRASSERIE AM GENDARMENMARKT	BRASSERIE AM GENDARMENMARKT · Taubenstr. 30 · 10117 Berlin

## Wednesday, April 9th, 2025

8:00 AM 5:00 PM conference area  
1st floor Registration desk & conference office

Saal C		Optics	Chair: Edward Tong	
9:00 AM	9:40 AM	<b>Invited Talk: Quasi-Optical Antenna Systems: From Space to Widespread THz Applications</b>	<b>Nuria Lombart</b>	<b>TU Delft</b>
9:40 AM	10:00 AM	Fabrication and Characterization of a Silicon Transmissive Phase Grating	Jérôme Valentin	Observatoire de Paris LIRA
10:00 AM	10:20 AM	Metalens Coupled THz NbN HEB Mixer	Dingding Ren	Delft University of Technology
10:20 AM	10:50 AM	Saal 2	Coffee Break	
Saal C		SIS Mixers II	Chair: Vincent Desmaris	
10:50 AM	11:10 AM	Dual Photon Response of Quantum Limited Superconductor Insulator Superconductor Mixer	Andrey Baryshev	Kapteyn Astronomical Institute /NOVA
11:10 AM	11:30 AM	Separation of Loss Mechanisms in Superconducting Thin-film Transmission Lines for SIS Mixers	Wenlei Shan	National Astronomical Observatory, Japan
11:30 AM	11:50 AM	An Alternative Derivation of Tucker SIS Mixer Design Equations	Phichet Kittara	Faculty of Science Mahidol University
11:50 AM	12:10 PM	Same-Current-Method for Receiver Noise Temperatures of a THz HEB Mixer	Jian-Rong Gao	SRON-TU Delft
12:10 PM	12:30 PM	The Tolerance on the Impedance Recovery Simulations in SIS Mixers	Phichet Kittara	Faculty of Science Mahidol University
12:30 PM	2:00 PM	Saal 2	Lunch Break	
Saal C		Components II	Chair: Patricio Mena	
2:00 PM	2:20 PM	Integration and Packaging of Terahertz Quantum-Cascade Lasers for Satellite Applications	Alexander Valavanis	University of Leeds
2:20 PM	2:40 PM	Development of Space Qualified Signal Processing Readout Electronics for HabWorlds and Origins Space Telescope Detector and Arrays	Tracee Jamison-Hooks	ASU School of Earth and Space Exploration SESE
2:40 PM	3:00 PM	Towards Traveling-Wave Parametric Amplifiers with near-Quantum-Limited added Noise and Two-Octave Bandwidth	Lukas Gruenhaupt	Physikalisch-Technische Bundesanstalt
3:00 PM	3:10 PM	Closing Remarks		Heinz-Wilhelm Hübers German Aerospace Center (DLR)

**Thursday, April 10th, 2025**  
**Excursion to Potsdam**

8:20 AM	8:40 AM	Bus boarding (Maritim proArte)
8:40 AM	10:00 AM	Departure to Potsdam Telegrafenberg - Leibniz Institute for Astrophysics Potsdam (AIP)
10:00 AM	12:30 PM	Telegrafenberg: Leibniz Institute for Astrophysics Potsdam (AIP) Michelson Experiment - Einstein Tower - Big Refractor
12:30 PM	1:00 PM	Departure to Potsdam City
1:00 PM	2:15 PM	Lunch in the Restaurant Wiener
2:30 PM	4:30 PM	Guided tours in Potsdam
4:30 PM	5:45 PM	Departure to Berlin (Maritim proArte)*

Poster Session, Tuesday, April 8th, 2025, 3:40 PM - 5:40 PM

Poster Setup: Sunday, April 6th - Monday, April 7th (Saal II)

1	Design of Extended ALMA Band 9 Mixer with 20 GHz IF bandwidth	Boon Kok Tan	University of Oxford
2	Development of SIS Mixer Working at Frequency from 125-211 GHz with an Intermediate Frequency Bandwidth of 16 GHz	Ming-Jye Wang	ASIAA
3	Fabrication of Ti-based Superconducting Transition Edge Sensor Arrays at Millimeter Waves	Zheng Wang	Purple Mountain Observatory, CAS
4	Optical Response of Microwave Kinetic Inductance Detectors Coupled with Millimeter-Wave on-Chip Bandpass Filters	Shinsuke Uno	RIKEN Center for Advanced Photonics
5	Enhancing Sensitivity of THz HEB Mixer via Negative Differential Resistance Biasing	Changyun Yoo	Jet Propulsion Laboratory
6	Development of a High-Sensitivity Terahertz Graphene Hot-Electron Bolometer with Johnson Noise Thermometry	Wei Miao	Purple Mountain Observatory, CAS
7	Nb/Al-AlN/Nb SIS Junctions Grown with Substrate Bias During Plasma Nitridation of the Tunnel Barrier	Alexey Pavlotsky	Chalmers University of Technology
8	Update on Development of SIS Mixers for ALMA Band 6v2	Joseph Lambert	National Radio Astronomy Observatory
9	Design of Dual-Ridge and Reverse-Coupler Waveguide Orthomode Transducers for 209-281 GHz and Performance Comparison	Alessandro Navarrini	National Radio Astronomy Observatory
10	Magic-T LO Power Divider to Support Hybrid Planar Integration within Focal Plane Arrays	Doug Henke	NRC Canada Herzberg Astronomy and Astrophysics
11	62-117 GHz Waveguide Diplexer across E/W Band with 61.5% Bandwidth	Yuh-Jing Hwang	Academia Sinica Institute of Astronomy and Astrophysics
12	A Piezo-Motor Driven 500-620 GHz SP3T Waveguide Switch for Radiometric Calibration	Yang Yu	National Space Science Center, CAS
13	Design of 4-12.4 GHz Quadrature Hybrid	Teddy Huang	ASIAA
14	Concept of A Dual-Band TWPA for Dark Matter Search Experiments	Boon Kok Tan	University of Oxford
15	A Superconducting Branch Line 4-8 GHz Coupler for Sideband-Separating Mixers	Rebeka Miklosi	Universität zu Köln I. Physikalisches Institut
16	Embedded Optimization of 90° Hybrid Couplers in Power Combined Frequency Doublers	Maxime Missoum	Observatoire de Paris
17	Initial Demonstration of Integrated Shunt THz Switches using Photoconductivity Modulation in Si-on-Sapphire Substrate	Peizhao Li	University of Notre Dame
18	Development of SIS Mixers for the High-Frequency Array in CHAI	Damián Peregrina Garcia	Universität zu Köln I. Physikalisches Institut
19	Cascaded Filter Architectures for On-Chip Filterbank Spectrometry	Himadri Saha	Universität zu Köln I. Physikalisches Institut
20	Small Study of IF (Intermediate Frequency) Cables and Transmission Lines for Heterodyne Receivers	Martina Wiedner	LERMA / LIRA, Observatoire de Paris
21	Pinholes and Defects in Thin Sputtered SiO <sub>2</sub> Films	Eduard Driessen	IRAM
22	Multilayer DRIE Process for Terahertz Mixer Array and Tripler	Haotian Zhu	National Space Science Center, CAS
23	Development of a 4.7-THz Waveguide Schottky Diode Balanced Mixers	Divya Jayasankar	Chalmers University
24	Improving 3-THz 8x8 TeraFET Array Sensitivity by Liquid-Nitrogen Cooling in a Compact Low-Noise Cryostat	Jakob Holstein	Goethe University Frankfurt am Main
25	Phase locking of a 4.7 THz Quantum Cascade Laser	Sajjad Mahdizadeh	Durham university Centre for Advanced Instrumentation
26	Micro-Integrated Terahertz Quantum-Cascade Laser for Space Applications	Robert Voigt	German Aerospace Center (DLR)
27	Measurements of Cross-Polarization Beam Pattern of a Corrugated Horn at 1.9 THz	Yoshihisa Irimajiri	NICT
28	Optics and Supporting Mechanics for LMT-FINER	Tatsuya Takekoshi	Kitami Institute of Technology
29	Study of a New Optics Design for Band 9 Upgrade	Sabrina Realini	University of Groningen
30	Development of a 1.35 THz Phase-Grating Based Focusing Beam Divider	Gregory Gay	OBSERVATOIRE DE PARIS - LIRA
31	Analysis and Design of Blazed Gratings with Extended Spectral Range in the THz for Space Instrumentation	Gonzalo García Lozano	INTA Instituto Nacional de Técnica Aeroespaci
32	A 300GHz Holographic System Design for Fred Young Sub-mm Telescope	Xiaodong Ren	University of Iceland
33	Vacuum Windows for the Wideband Submillimeter Array Receivers	Keara Carter	CIA   Harvard Smithsonian
34	Anti-Reflection Structure for a Silicon Meta-Lens at 1.6 THz	Jian-Rong Gao	SRON and TU Delft
35	3D-Printed Antireflection Structures for Enhanced Transmission in the 30-50 GHz Range	Francois Joint	Chalmers University of Technology
36	3D-Structured Polyethylene Windows for Enhanced Noise Performance in Wideband Cryogenic Terahertz Systems	Francois Joint	Chalmers University of Technology
37	Design of Quasi-Optical Cavity Resonators for Dielectric Measurements	Paul K. Grimes	Center for Astrophysics Harvard & Smithsonian
38	The Black Hole Explorer: Instrument and Mission	Paul K. Grimes	Center for Astrophysics Harvard & Smithsonian
39	Ideas for Polarimetry with AMKID at APEX	Marc Mertens	Max-Planck-Institut für Radioastronomie
40	N3AR: APEX' 67-116 GHz Heterodyne Receiver for VLBI and Spectroscopic Observations	Oliver Ricken	Max-Planck-Institut für Radioastronomie
41	System Engineering applied to the NOEMA Interferometer	Sylvain Mahieu	IRAM
42	A Compact Heterodyne Millimeter-Wave/Terahertz Spectrometer for Remote Sensing	Lukas Jehna	German Aerospace Center (DLR)
43	Progress towards 2 THz and 3.5 THz Receivers for the Keystone Upper Atmosphere Mission	Hui Wang	RAL SPACE STFC
44	Terahertz Spectroscopy of Gas Plumes in the Laboratory	Dominik Belousov	University of Bern Physics Institute