

2006年度 *NRO Workshop* / 名古屋大学太陽地球環境研究所研究集会

7th Workshop on Submillimeter-Wave Receiver Technologies in Eastern Asia

Jointly with 7th Receiver Workshop :

"Workshop on the Development of Low-Noise Receiver Technology
at Millimeter Waves and Terahertz Frequencies"

第7回
受信機ワークショップ
ミリ波テラヘルツ波領域における
低雑音受信機開発に関するワークショップ

January 17-19, 2007

Conference Hall, Osaka Prefecture University, Sakai, Osaka, Japan

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場所：大阪府立大学 学術交流会館

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Laboratory for Millimeter and Terahertz Waves, Osaka Prefecture University
National Astronomical Observatory of Japan
Solar Terrestrial Environment Laboratory, Nagoya University

7th Workshop on Submillimeter-Wave Receiver Technologies in Eastern Asia

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Program

date	time	no.	time	1st author	Affl.	title	
Jan. 17	13:00	Opening Address		H. Ogawa			
	13:05	Session 1: ALMA Receivers (chair: C.T. Li)					
		1-1	13:05	13:25	20 S. Asayama	NAOJ	Progress and Status of the ALMA Band 4 Cartridge Receiver
		1-2	13:25	13:45	20 Y. Sekimoto	NAOJ	ALMA Band 8 Cartridge Receiver - Toward Pre-production -
		1-3	13:45	14:05	20 Y. Uzawa	NAOJ	Status of band 10 development
	14:05	Session 2: Special Talk --THz Technology (chair: C.T. Li)					
		2-1	14:05	14:35	30 N. Sekine	NICT	Terahertz Quantum Cascade Lasers
	14:35	Break					
	15:05	Session 3: Optics (chair: T. Manabe)					
		3-1	15:05	15:25	20 Moon-Hee Chung	KASI	Gain Degradation of KVN 21-m Shaped Cassegrain Antenna Due to Misalignment of Antenna Optics
		3-2	15:25	15:45	20 Yuh-Jing Hwang	ASIAA	Optics Characterization and 320-420GHz SIS Receiver Band Installation of SMA Antenna-7
		3-3	15:45	16:05	20 K. Hara	Osaka Pref. Univ.	The status of the ACA FE (the wedged window for the ACA 7m receiver optics)
		3-4	16:05	16:25	20 Seog-Tae Han	KASI	The evaluation of quasi-optical low-pass filter for KVN receiver quasi-optics circuit
	16:25	Session 4: Poster Introduction & Poster Session (20 posters) (chair: H. Maezawa)					
	18:00	Banquet					
Jan. 18	9:00	Session 5: Projects (1) (chair: M. Seta)					
		5-1	9:00	9:20	20 K. Kohno	Univ. Tokyo	Current status and future plan of ASTE receivers
		5-2	9:20	9:40	20 C.T. Li	ASIAA	The Array for Microwave Background Project (AMIBA)
		5-3	9:40	10:00	20 Z.H. Lin	PMO	A Novel Spectrometer for Radio Astronomy: Fast Fourier Transform Spectrometer
	10:00	Break					
	10:30	Session 6: Direct Detection (chair: K. Kikuchi)					
		6-1	10:30	11:00	30 H. Matsuo	NAOJ	Wideband imaging techniques in terahertz frequencies
		6-2	11:00	11:20	20 Xiaofang Shen	PMO	Direct-detection performance of an NbN superconducting tunnel junction
		6-3	11:20	11:40	20 S. Ariyoshi	RIKEN	STJ-based direct detector array for terahertz imaging applications
		6-4	11:40	12:00	20 S. Miki	NICT	Near infrared single photon detector using superconducting NbN thin films meander line
	12:00	Lab. Tour					
	13:00	Lunch Break					
	14:00	Session 7: SIS Devices and Mixers (chair: T. Noguchi)					
		7-1	14:00	14:20	20 Oleg Koryukin	Russian Academy of Sciences	Balanced Waveguide Mixer for ALMA Band 10 (787-950 GHz): HFSS simulations
		7-2	14:20	14:40	20 S.C. Shi	PMO	Development of Superconducting HEB Mixers at SMLab
		7-3	14:40	15:00	20 Wenlei Shan	PMO	Design of NbN-based Distributed SIS Mixer
		7-4	15:00	15:20	20 S. Kohjiro	AIST	An Octave Bandwidth SIS Mixer for Compact Spectrometers
	15:20	Break					
	15:50	Session 7: SIS Devices and Mixers (continued) (chair: S.C. Shi)					
		7-5	15:50	16:10	20 M.J. Wang	ASIAA	The current status of mixer development in ASIAA
		7-6	16:10	16:30	20 A. Endo	Univ. Tokyo/NAOJ	Novel Techniques for Controlling the R_{ω} of RF Plasma Nitridized AlN barriers for SIS Tunnel Junctions
		7-7	16:30	16:50	20 Chau Ching Chiong	ASIAA	Voltage controlled oscillator as local oscillator source for milli- and submillimeterwave receiver
		7-8	16:50	17:10	20 T. Noguchi	NAOJ	Status of SIS device development at NAOJ
	17:10	Session 8: Project (2) (chair: S.C. Shi)					
		8-1	17:10	17:40	30 R. Kawabe	NAOJ	ALMA Operations Plan; Basic Concept of Maintenance

Program

date	time	no.	time	1st author	Affil.	title	
Jan. 19	9:30	Session 8: Project (2) (continued) (chair: Seog-Tae Han)					
		8-2	9:30	9:50	20 Jung-Won Lee	SNU	230 GHz Receiver Development at SRAO
		8-3	9:50	10:10	20 T. Nakajima	Osaka Pref. Univ.	New 60-cm Radio Survey Telescope with the Sideband-Separating SIS Receiver for the 200 GHz Band
		8-4	10:10	10:30	20 Y. Mizuno	Nagoya Univ.	NANTEN2 project
		8-5	10:30	10:50	20 M. Kaiden	Osaka Pref. Univ.	Progress report of 1.85m telescope development
	10:50	Break					
	11:20	Session 8: Project (2) (continued) (chair: Seog-Tae Han)					
		8-6	11:20	11:50	30 H. Kobayashi	NAOJ	Status and future needs of RX developments for Japanese VLBI stations
		8-7	11:50	12:20	30 Y. Murata	JAXA/ISAS	Space VLBI mission: VSOP-2 (ASTRO-G) and its frontend system
	12:20	Concluding Remarks T. Noguchi					
		posters					
		P-01			M. Sugimoto	NAOJ	Design of scattering mirror surrounding the subreflector of the Cassegrain antenna
		P-02			K. Inaoka	Osaka Pref. Univ.	Evaluation of Alignment Budget for The Optical Configuration of ALMA-band 10 Receiver
		P-03			S. Ochiai	NICT	Development and beam pattern measurements of cryogenic optics for JEM/SMILES
		P-04			H. Inoue	Univ. Tokyo	Development of a cartridge type 350 GHz band 2SB receiver for ASTE
		P-05			H. Horachi	Nagoya Univ.	NANTEN2 optics
		P-06			T. Kuwahara	Nagoya Univ.	A Development of 22GHz band radiometer for observing stratospheric water vapor at San Pedro de Atacar
		P-07			K. Kimura	Osaka Pref. Univ.	Simulation of optical system for VSOP-2 offset cassegrain antenna
		P-08			H. Ujihara	NAOJ	Multimode Honrs for VSOP-2 Satellite
		P-09			N. Shiroyama	Osaka Pref. Univ.	Development of 8GHz ridge waveguide polarizer with stepped septum for VSOP-2
		P-10			A. Kurozumi	Osaka Pref. Univ.	Development of room-temperature 8 GHz band HEMT amplifier for VSOP-2
		P-11			Y. Irimajiri	NICT	Development of a balloon-borne 650-GHz SIS receiver and atmospheric observations
		P-12			H. Maezawa	Nagoya Univ.	A Development of 2THz band HEB mixer
		P-13			M. Takeda	NICT	Measurement of complex dielectric constant of MgO substrate in the THz region
		P-14			M. Nakahashi	Toho Univ.	Development of SISCAM (Superconducting Imaging Submillimeter-wave CAMera) for ASTE telescope
		P-15			T. Kojima	Osaka Pref. Univ.	The Development of Cryogenic HEMT Amplifiers for SIS Mixers
		P-16			T. Tamura	NAOJ	Fabrication of submicron SIS junction using i-line stepper
		P-17			T. Kurita	Nagoya Univ.	Development of A Sideband-Separating SIS Mixer for 300GHz Band
		P-18			S. Ishii	Tsukuba Univ.	Preliminary Results of Site Testing for THz Observations at Dome Fuji in Antarctica
		P-19			K. Tsuji	Osaka Pref. Univ.	Optical design for the 1.85-m antenna
		P-20			Y. Tokko	Osaka Pref. Univ.	High accuracy main reflector for the 1.85 m radio telescope

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