XVI International Conference on Topics in Astroparticle and Underground Physics

September 9-13, 2019, Toyama Japan

TAUP 2019 TOYAMA

HOSTED BY

Institute for Cosmic Ray Research, the University of Tokyo

SUPPORTED BY

Kavli Institute for the Physics and Mathematics of the Universe

University of Toyama

Tohoku University

Nambu Yoichiro Institute of Theoretical and Experimental Physics

SPONSORED BY

International Union of Pure and Applied Physics

Toyama Prefecture
Toyama City
Toyama Prefecture Board of Education
Toyama City Board of Education

FURTHER SUPPORTED BY

HAMAMATSU PHOTONICS K.K.

FUJITSU LIMITED

Kajima Corporation

ORGANO CORPORATION

Mitsui E&S Engineering Co.,Ltd.

CAEN. S.p.A.

Contents

Exhibitors 2

Important Information 3

Schedule At-A-Glance 4

Map of Toyama City 6

Map of Hotels 7

Floor Maps 8

Event Information 10

Daily Schedules 11

Parallel Sessions 16

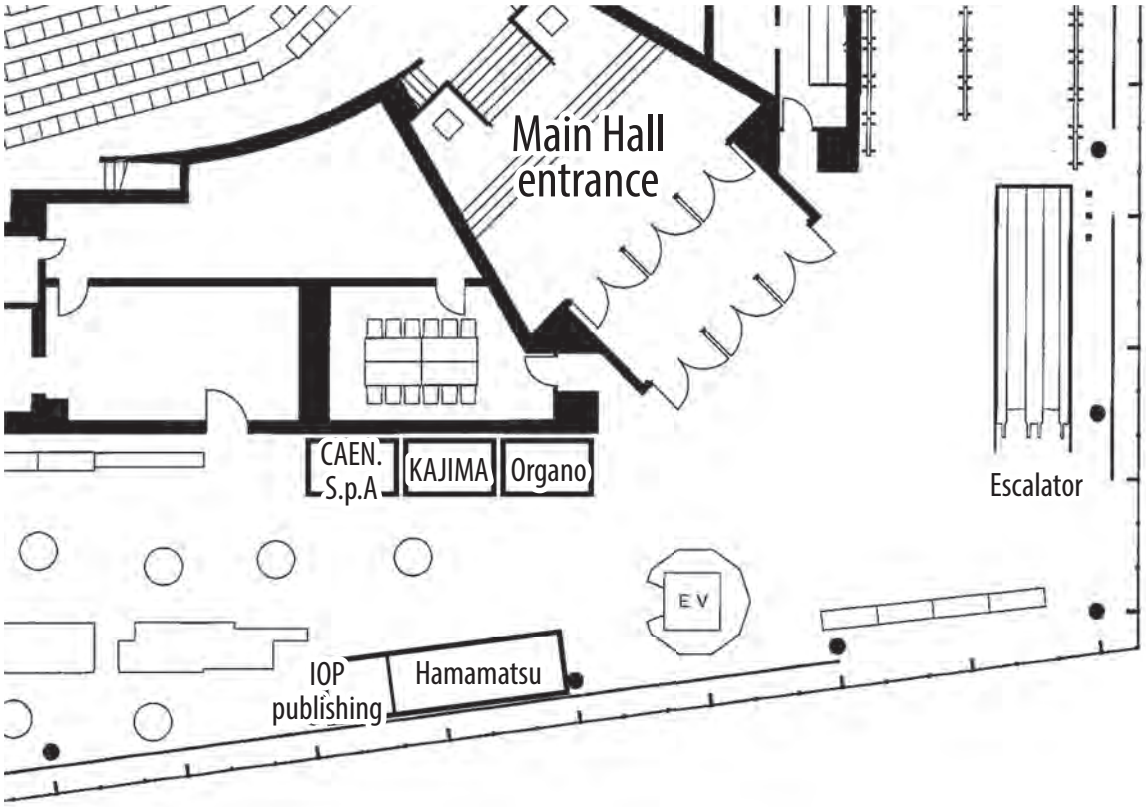
Poster Session 32

TAUP2019 Committees 38

Parallel Session Topics and Conveners 39

Memo 40

Exhibitors



HAMAMATSU
PHOTON IS OUR BUSINESS

KAJIMA
CORPORATION

ORGANO

CAEN
Tools for Discovery

Important Information

Conference Registration

Sunday, Sept. 8 16:00-20:30
Monday-Friday, Sept. 9-13 8:15- End of Session
The registration desk will be open on Sunday, September 8 at the 1st floor of Toyama International Conference Center. Snacks and beverages will be provided by 20:00.

Kamioka Technical Tours

We have organized a trip to the Super-Kamiokande, KamLAND, and KAGRA underground experimental sites. Registration for the tours took place before the conference. However, in case there are spaces available, we will let you know.

If you would like to try and register for a tour during the conference, please visit the registration desk by Wednesday, September 11. The number of available seats will be posted at the registration desk. There are five time slots to go on this excursion:

- Tour 1: Friday, September 13, 13:00 to 17:30
- Tour 2: Friday, September 13, 13:40 to 18:10
- Tour 3: Saturday, September 14, 8:00 to 12:30
- Tour 4: Saturday, September 14, 8:40 to 13:10
- Tour 5: Saturday, September 14, 13:00 to 17:30

Wifi network

Wifi is available at the conference. The connection information can be obtained at the conference site.

At the International Conference Center food and drink is only allowed in the Foyer (exhibition and poster area) on the 3rd floor. Please do NOT bring food or drink to the Main Hall on the 3rd floor, or the Foyer (including poster area) on the 2nd floor.

Schedule At-A-Glance

	Sept. 8 (Sun)	Sept. 9 (Mon)	Sept. 10 (Tue)	Sept. 11 (Wed)
		8:15-8:50 Registration		
		8:50-9:00 **Welcome remarks**		
09:00		09:00 - 10:30 **Plenary I** Gravitational Waves	09:00 - 10:30 **Plenary III** HE Astro /CR /Multi	09:00 - 10:30 **Plenary V** Dark Matter
10:00		10:30 - 11:00 Break	10:30 - 11:00 Break	10:30 - 11:00 Break
11:00		11:00 - 12:30 **Plenary II** Gravitational Waves HE Astro /CR /Multi Dark Matter	11:00 - 12:30 **Plenary IV** HE Astro /CR /Multi Cosmology	11:00 - 13:00 **Plenary VI** Dark Matter
12:00		12:30 - 14:00 Lunch	12:30 - 14:00 Lunch	
13:00	13:30 - 15:00 **Public lecture**			13:00 - 14:30 Lunch
14:00		14:00 - 15:40 **Parallel Session**	14:00 - 15:40 **Parallel Session**	14:30 - 16:10 **Parallel Session**
15:00		15:40 - 16:10 Break	15:40 - 16:10 Break	
16:00	16:00 - 20:30 **Welcome Drink and Registration**	16:10 - 18:10 **Parallel Session**	16:10 - 17:50 **Parallel Session**	16:10 - 16:40 Break
17:00				16:40 - 18:40 **Parallel Session**
18:00		18:10 - 19:00 Free Time	18:00 - 20:00 **Poster Session**	
19:00		19:00 - 21:00 **Welcome Reception**		
20:00				

	Sept. 12 (Thu)	Sept. 13 (Fri)	Sept. 14 (Sat)
			KAMIOKA Technical Tour Tour3 8:00 - 12:30 Tour 4 8:40 - 13:10 Tour 5 13:00 - 17:30
9:00	09:00 - 10:30 **Plenary VII** Neutrinos	09:00 - 10:30 **Plenary IX** Neutrinos	
10:00			
	10:30 - 11:00 Break	10:30 - 11:00 Break	
11:00	11:00 - 12:30 **Plenary VIII** Neutrinos	11:00 - 11:55 **Plenary X** Neutrinos **IUPAP neutrino panel report** **Closing and Farewell**	
12:00		12:00 - 13:00 (13:40) Lunch	
	12:30 - 14:00 Lunch		
13:00		**KAMIOKA Technical Tour** Tour1 13:00 - 17:30 Tour 2 13:40 - 18:10	
14:00	14:00 - 15:40 **Parallel Session**		
15:00			
	15:40 - 16:10 Break		
16:00	16:10 - 17:50 **Parallel Session**		
17:00			
18:00	17:50 - 19:00 Free Time		
19:00	19:00 - 21:00 **Banquet**		
20:00			

Map of Toyama City

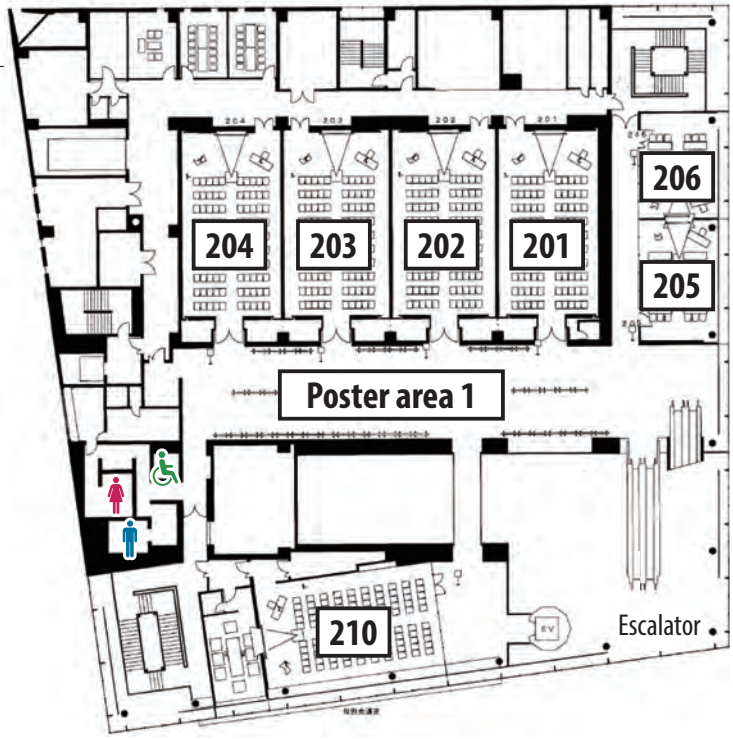
Map of Hotels

©google.com

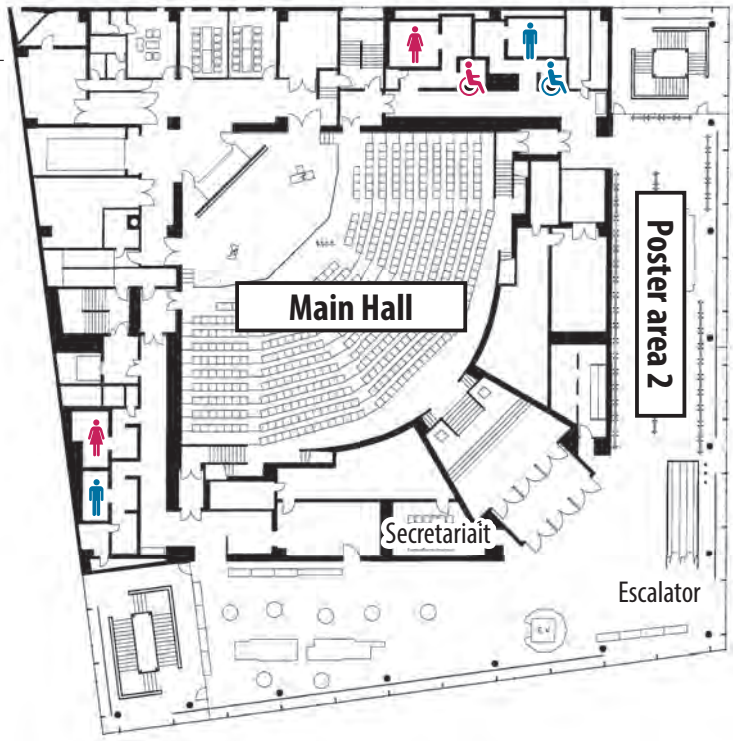
Floor Maps

Toyama International Conference Center

2F

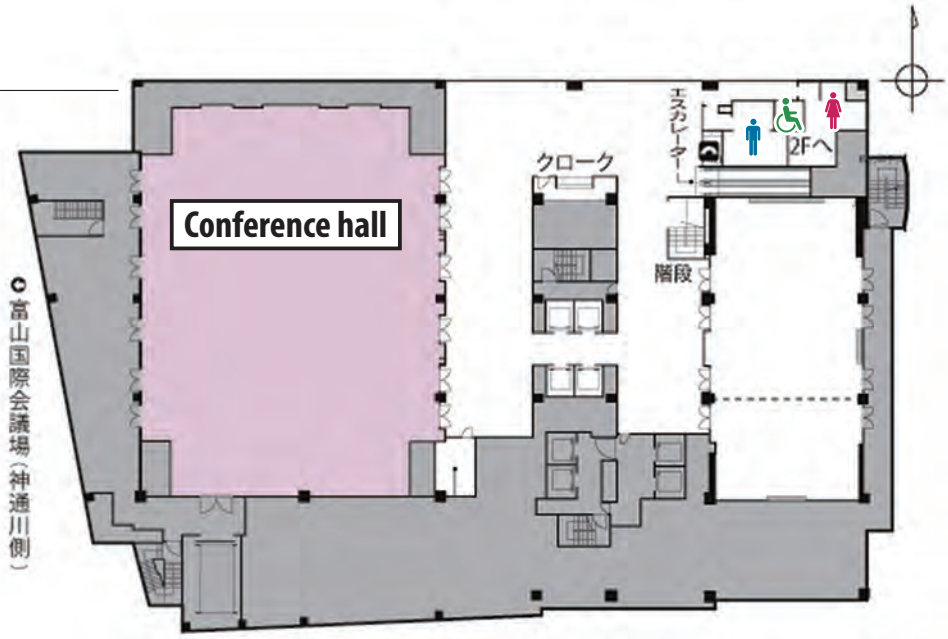


3F



ANA CROWNE PLAZA TOYAMA

3F



Event Information

Welcome Reception

Monday, September 9, 19:00 to 21:00

The welcome reception will take place at Toyama Dai-ichi Hotel.
Map p.7

Banquet Dinner

Thursday, September 12, 19:00 to 21:00

The banquet dinner to celebrate TAUP 2019 will be held on Thursday, 12th September. The event will take place at ANA Crowne Plaza TOYAMA.
Map p.7

Public Lecture

Sunday, September 8, 13:30 to 15:00

We will have a public lecture by Prof. Kajita at the main hall of Toyama International Conference Center. The talk will be given in Japanese.

You must show your conference badge for admission to the above events.

Daily Schedules

Monday, September 9

8:15	Registration	
8:50	Main Hall Chair: T. Kajita	Welcome Remarks
9:00		Latest gravitational wave observation results **Patricia SCHMIDT** (Radboud Univ.)
9:30		Gravitaional wave detectors **Fulvio RICCI** (Rome Univ.)
10:00		Binary black hole formation senarios **Sterl PHINNEY** (Caltech)
Coffee Break		
11:00	Main Hall Chair: A. Etchegoyen	Compact binary coalescence physics **Yuichiro SEKIGUCHI** (Toho Univ.)
11:30		Multimessenger signature of compact binary coalescense **Masaomi TANAKA** (Tohoku Univ.)
12:00		Dark matter candidates and strategies for future **Hitoshi MURAYAMA** (UC Berkeley, Kavli IPMU)
Lunch Time		
14:00	Main Hall	Neutrinos #1
	201	Dark Matter #1
	202	Dark Matter #2
	203	Neutrinos #2
	204	High energy astrophysics and Cosmic Rays/Multi-messenger astronomy #1
	205	Underground laboratories #1
	206	Gravitational Waves #1
	210	Neutrinos #3
Coffee Break		
16:10	Main Hall	Neutrinos #4
	201	Dark Matter #3
	202	Dark Matter #4
	203	Neutrinos #5
	204	High energy astrophysics and Cosmic Rays/Multi-messenger astronomy #2
	205	Underground laboratories #2
	206	Gravitational Waves #2
	210	Neutrinos #6
19:00	Welcome Reception (Toyama Dai-ichi Hotel)	

Tuesday, September 10

9:00	Main Hall Chair: TBD	Multimessenger astronomy with very high energy gamma ray observation **Jim HINTON** (MPI Kernphysik)
9:30		Dark matter signature in Cosmic Ray observation **Alessandro CUOCO** (Aachen Univ.)
10:00		Origin of ultra high energy cosmic ray and high energy neutrino **Kohta MURASE** (Penn. State Univ.)
Coffee Break		
11:00	Main Hall Chair: K. Kohri	Very high energy neutrinos from blazars **Matteo CERRUTI** (Univ. of Barcelona)
11:30		Cosmology Overview **Ofer LAHAV** (University College London)
12:00		Dark Matter and structure formation **Hai-Bo YU** (UC Riverside)
Lunch Time		
14:00	Main Hall	Neutrinos #7
	201	Dark Matter #5
	202	Dark Matter #6
	203	Neutrinos #8
	204	Dark Matter #7
	205	New Technologies #1
	206	Gravitational Waves #3
	210	Neutrinos #9
	3rd floor, ANA Crowne Plaza Toyama	High energy astrophysics and Cosmic Rays/Multi-messenger astronomy #3
Coffee Break		
16:10	Main Hall	Neutrinos #10
	201	Dark Matter #8
	202	Dark Matter #9
	203	Neutrinos #11
	204	Dark Matter #10
	205	New Technologies #2
	206	Gravitational Waves #4
	210	Neutrinos #12
	3rd floor, ANA Crowne Plaza Toyama	High energy astrophysics and Cosmic Rays/Multi-messenger astronomy #4
18:00	Poster Session (2nd & 3rd floor)	

Wednesday, September 11

9:00	Main Hall Chair: F.T. Avignone	Direct dark matter search **Masaki YAMASHITA** (ICRR, Univ. of Tokyo)
9:30		New ideas in conventional detectors **Thomas SHUTT** (SLAC, Stanford Univ.)
10:00		Small scale direct dark matter search experiment **Susana CEBRIAN** (Univ. of Zaragoza)
Coffee Break		
11:00	Main Hall Chair: A. Ianni	Dark matter axion search experiments **Gray RYBKA** (Washington Univ.)
11:30		Dark matter local density determination based on recent observations **Pablo FERNÁNDEZ DE SALAS** (OKC, Stockholm Univ.)
12:00		Dark matter search in accelerators **Priscilla PANI** (DESY)
12:30		Review of underground laboratories **Xavier BERTOU** (National Commission of Atomic Energy/National Scientific and Technical Research Council)
Lunch Time		
14:30	Main Hall	Neutrinos #13
	201	Dark Matter #11
	202	Dark Matter #12
	203	Neutrinos #14
	204	High energy astrophysics and Cosmic Rays/Multi-messenger astronomy #5
	205	New Technologies #3
	206	Cosmology #1
	210	Neutrinos #15
Coffee Break		
16:40	Main Hall	Neutrinos #16 & Outreach
	201	Dark Matter #13
	202	Dark Matter #14
	203	Neutrinos #17
	204	High energy astrophysics and Cosmic Rays/Multi-messenger astronomy #6
	205	New Technologies #4
	206	Cosmology #2
	210	Neutrinos #18

Thursday, September 12

9:00	Main Hall Chair: H. Sobel	Neutrino theory **Eligio LISI** (INFN-Bari)
9:30		Neutrino Oscillation experiments **Hirohisa TANAKA** (SLAC, Stanford Univ.)
10:00		Sterile neutrino **David CARATELLI** (Fermilab)
Coffee Break		
11:00	Main Hall Chair: M. Lindner	Solar neutrinos **Kai ZUBER** (TU-Dresden)
11:30		Geo neutrinos **Hiroko WATANABE** (Tohoku Univ.)
12:00		Supernova neutrino **Evan O'CONNOR** (Stockholm Univ.)
Lunch Time		
14:00	Main Hall	Neutrinos #19
	201	Dark Matter #15
	202	Dark Matter #16
	203	Neutrinos #20
	204	High energy astrophysics and Cosmic Rays/Multi-messenger astronomy #7
	206	Cosmology #3
	210	Neutrinos #21
Coffee Break		
16:10	Main Hall	Neutrinos #22
	201	Dark Matter #17
	202	Dark Matter #18
	203	Neutrinos #23
	204	High energy astrophysics and Cosmic Rays/Multi-messenger astronomy #8
	206	Cosmology #4
	210	Neutrinos #24
19:00	Banquet (ANA Crowne Plaza Toyama)	

Friday, September 13

9:00	Main Hall Chair: D. Sinclair	Neutrino-less double beta decay theory **Fedor SIMKOVIC** (Joint Institute for Nuclear Research)
9:30		Neutrino-less double beta decay experiment **Yong-Hamb KIM** (Center for Underground Physics)
10:00		Coherent neutrino scattering **Kate SCHOLBERG** (Duke Univ.)
Coffee Break		
11:00	Main Hall Chair: A. McDonald	Direct neutrino mass measurement **Guido DREXLIN** (Karlsruhe Institute of Technology)
11:30		IUPAP neutrino panel report **Manfred LINDNER** (MPI Kernphysik)
11:45		Closing and Farewell **Nicolao FORNENGO** (TAUP SC chair, Univ. of Torino and INFN)

Parallel Session Sept. 9 (Mon)

Monday Parallel Sessions: 14:00 - 15:40

Neutrino #1, Room: Maint Hall, Chair: O. Botner		
14:00	Accuracy improvement of the atmospheric neutrino flux prediction using observed muon spectra at mountain altitude	Morihiro HONDA
14:20	Standard Oscillation Physics with Deepcore and IceCube	Juan Pablo YANEZ
14:40	Probing BSM physics via neutrino oscillations with IceCube DeepCore	Summer BLOT
15:00	High-energy particle physics with IceCube	Tianlu YUAN
15:20	Using IceCube to search for time-dependent neutrino emission from blazars	Erin O'SULLIVAN
DM1: Axion and Axion-Like Dark Matter I, Room: 201, Chair: Y. Semertzidis		
14:00	Current Results and R&D Efforts for Higher Frequency Axion Searches with HAYSTAC	Alexander LEDER
14:20	MADMAX: A QCD Axion Direction-Detection Experiment	Xiaoyue LI
14:40	The Dark Matter Radio: Searching for QCD Axion Dark Matter Below 1 Micro-eV Abstract	Kent IRWIN
15:00	DANCE: Dark matter Axion search with RiNg Cavity Experiment	Yuta MICHIMURA
15:20	Updates from the Second Run of the ABRACADABRA-10 cm Axion Dark Matter Search	Jonathan OUELLET
DM2: WIMP Dark Matter I, Room: 202, Chair: J. Gascon		
14:00	The XENONnT experiment	Auke COLIJN
14:20	Low Mass Wimp Result with DarkSide-50 and Prospects for Future Experiments using LAr	Sandro DE CECCO
14:40	The LUX-Zeplin Dark Matter Experiment	Alden FAN
15:00	Results from PICO 60 and status of the PICO 40L experiment	Carsten KRAUSS
15:20	Recent Results from the PandaX-II Experiment	Xiaopeng ZHOU
Neutrino #2, Room: 203, Chair: S. Petcov		
14:00	Neutrino masses beyond the minimal seesaw	Martin HIRSCH
14:20	Leptogenesis with scalar triplets and right handed neutrinos	Anjan GIRI
14:40	Entropy production from decay of GeV scale right-handed neutrinos and the primordial gravitational wave	Hisashi OKUI
15:00	Dark matter stability and Dirac neutrinos using only Standard Model symmetries	Eduardo PEINADO
15:20	Phenomenological Study of Texture Zeros in Lepton Mass Matrices of Minimal Left-Right Symmetric Model	Happy BORGOHAIN

HECR #1, Room: 204, Chair: K. Asano		
14:00	Neutrino Oscillations in ultralong gamma ray bursts	Jose CARPIO
14:25	Neutrino Distributions for a Rotating Core-collapse Supernova with a Boltzmann-neutrino-transport	Akira HARADA
14:50	Supernova neutrinos in the proto-neutron star cooling phase and nuclear matter	Ken'Ichiro NAKAZATO
15:15	Neutrino Flavor Evolution in Dense Neutrino Media	Sajad ABBAR
Underground Labs. #1, Room: 205, Chair: M. Vagins		
14:00	Deep Science at Boulby Underground Laboratory.	Sean PALING
14:20	Low radioactivity and Multi- disciplinarily Underground Laboratory of Modane (LSM)	Ali DASTGHEIBI FARD
14:40	Nuclear astrophysics at Gran Sasso : status and perspectives of the LUNA facility	Sandra ZAVATARELLI
15:00	Sagnac gyroscopes and GINGERINO	Angela DI VIRGILIO
15:15	Characterization of the Sos Enattos site for the Einstein Telescope	Luca NATICCHIONI
Gravitational Wave #1, Room: 206, Chair: K. Kokeyama		
14:00	Overview of KAGRA	Masatake OHASHI
14:15	Cryogenic system at underground site for Large-scale Cryogenic Gravitational Wave Telescope, KAGRA	Nobuhiro KIMURA
14:30	Vibration Isolation System for the Cryogenic Mirrors in KAGRA	Koki OKUTOMI
14:45	Interferometer control of KAGRA	Masayuki NAKANO
15:00	Global control using a laser strainmeter for KAGRA	Koseki MIYO
15:15	Construction and the operation of the interferometer control system and the DAQ system for KAGRA	Takahiro YAMAMOTO
Neutrino #3, Room: 210, Chair: S. Pastor		
14:00	Status of Sterile Neutrino Global Fits	Alejandro DIAZ
14:20	How likely is a light sterile neutrino signal even if no sterile neutrinos exist?	Birgit NEUMAIR
14:40	Sum rules and asymptotic behaviors of neutrino mixing and oscillations in matter	Zhi-Zhong XING
15:00	Precision Neff Calculation	Jack J. BENNETT

Monday Parallel Sessions: 16:10 - 18:30

Neutrino #4, Room: Main Hall, Chair: Y. Hayato		
16:10	Tackling the astrophysical neutrino flux between 5TeV and 100TeV with veto-based methods in IceCube	Austin SCHNEIDER
16:30	Angular power spectrum analysis on current and future high-energy neutrino data	Ariane DEKKER
16:50	Physics Potential of the IceCube Upgrade	Wing Yan MA
17:10	KM3NeT/ORCA: status and prospects	Ronald BRUIJN
17:30	Neutrino CP Violation with the European Spallation Source neutrino Super Beam project	Eirik GRAMSTAD
17:50	Search for nucleon decay with Super-Kamiokande	Hide-Kazu TANAKA
DM3: Directional Searches & Annual Modulation, Room: 201, Chair: G. Gerbier		
16:10	CYGNUS	Kentaro MIUCHI
16:30	Directional Dark Matter searches and the CYGNO project	Elisabetta BARACCHINI
16:50	Directional Dark Matter Search with Nuclear Emulsion	Osamu SATO
17:10	Results of directional dark matter search from the NEWAGE experiment	Tomonori IKEDA
17:30	The COSINUS experiment - A cryogenic direct dark matter search with NaI target	Florian REINDL
17:50	The SABRE Proof of Principle	Simone COPELLO
DM4: Backgrounds in Dark Matter Experiments I, Room: 202, Chair: J. Cooley		
16:10	Material Assay and Cleanliness for the LUX-ZEPLIN Experiment	Alvine KAMAHA
16:30	Backgrounds and Simulations for the LUX-ZEPLIN Experiment	Amy COTTLE
16:50	Background Controls for the DAMIC-M Dark Matter Search	Daniel BAXTER
17:10	Measuring cosmogenic activation rates in active detector material	Richard SALDANHA
17:30	Calculation of (α,n) yields for low background experiments using Geant4	Vicente PESUDO
17:50	Understanding neutrino background implications in LXe-TPC dark matter searches using 127Xe electron captures	Dylan TEMPLES
Neutrino #5, Room: 203, Chair: K. Zuber		
16:10	Observation of two-neutrino double electron capture in Xe-124 with XENON1T	Christian WITTWEG
16:30	Results of the Majorana Demonstrator's Search for Double-Beta Decay to Excited States	Ian GUINN
16:50	Search for triple and quadruple beta decay of 150Nd	Alexander BARABASH
17:10	Search for double capture 2νEC/EC of Cd-106 on a TGV-2 spectrometer	Ekaterina RUKHADZE

HECR #2, Room: 204, Chair: A. Kheirandish		
16:35	Turbulence Particle Acceleration and UHECR	Katsuaki ASANO
17:00	Diffusive shock acceleration of cosmic rays in low mach galaxy cluster shocks.	Allard Jan VAN MARLE
17:25	Chiral transport and turbulence in core-collapse supernovae	Naoki YAMAMOTO
17:50	A new source type of Galactic Cosmic Rays	Vera Y. SINITSYNA
18:15	Equation of state for quark matter with strong magnetic field and hybrid stars	Tomoki ENDO
Underground Labs. #2, Room: 205, Chair: Y. Kim		
16:10	Baksan large volume scintillation telescope: a current status	Valeriy PETKOV
16:30	Radioassay and Purification for Experiments at Y2L and Yemilab in Korea	Moo Hyun LEE
16:50	Rare physics searches at the China Jinping Underground Laboratory	Qian YUE
17:10	Low Background & Large Scale Electronic Circuit Substrate for CDEX-2 Experiment	Yuanyuan LIU
17:25	Measurement of ambient neutrons in an underground laboratory at Kamioka Observatory	Keita MIZUKOSHI
17:40	Radon monitoring in the Kamioka Observatory	Guillaume PRONOST
17:55	Effects of radioactivity on superconducting quantum bits	Laura CARDANI
18:10	The SNOLAB Underground Laboratory	Jeter HALL
18:30	Laboratorio Subterráneo de Canfranc	Carlos PEÑA GARAY
Gravitational Wave #2, Room: 206, Chair: T. Yokozawa		
16:10	A/D and D/A Processing Unit for Advanced Virgo Control Suspension Electronics	Massimiliano BITOSSI
16:30	Small scale ring laser gyros as environmental monitors	Angela DI VIRGILIO
16:50	The amorphous mirror coatings research to improve the sensitivity of the future GW detectors	Francesco PIERGIOVANNI
17:10	Study and experiment on the alternative technique of frequency–dependent squeezing generation with EPR entanglement for Virgo.	Mateusz BAWAJ
Neutrino #6, Room: 210, Chair: R. Mohanta		
16:10	First measurement of the neutron-argon cross section between 100 and 800 MeV	Scott LOCKE
16:30	Recent neutrino-Argon scattering results from MicroBooNE	Supraja BALASUBRAMANIAN
16:50	Characterizing Beam-Correlated Neutron Backgrounds in the ANNIE detector	Amanda WEINSTEIN
17:10	Study of Charged-Current neutrino interactions on water with nuclear emulsion in the NINJA experiment	Ayami HIRAMOTO
17:30	Study of neutrino charged current interactions on iron in the NINJA experiment	Hitoshi OSHIMA

Parallel Session Sept. 10 (Tue)

Tuesday Parallel Sessions: 14:00 - 15:40

Neutrino #7, Room: Main Hall, Chair: O. Cremonesi		
14:00	Experimental studies of axial-vector weak couplings for double beta decays and astro neutrinos.	Hiroyasu EJIRI
14:20	Recent Results and Status of EXO-200	Michael JEWELL
14:40	Results and post-upgrade performance of GERDA Phase II	Christoph WIESINGER
15:00	Majorana Demonstrator Updated 0vBB Search and Background Characterization	Matthew GREEN
DM5: Axions and Axion-Like Dark Matter II, Room: 201, Chair: J. Ouellet		
14:00	New Axion Dark Matter Search with Proto-Planetary Disks	Tomohiro FUJITA
14:20	Dynamics of axion strings and implications for axion dark matter	Toyokazu SEKIGUCHI
14:40	A Unique Multi-Messenger Probe of QCD Axion Dark Matter	Thomas EDWARDS
15:00	Detecting axion-like particles at radio frequencies.	Marco TAOSO
15:20	DM Radio Pathfinder: A Superconducting Lumped-Element Resonator for Wave-Like Dark Matter	Stephen KUENSTNER
DM6: Indirect detection, Room: 202, Chair: A. Cuoco		
14:00	Dark matter distribution in the Galactic dwarf spheroidal galaxies	Kohei HAYASHI
14:20	Modeling evolution of dark matter substructure and annihilation boost	Nagisa HIROSHIMA
14:40	Particle dark matter searches through cross-correlations between gamma-rays and neutral hydrogen intensity mapping	Elena PINETTI
15:00	MeV Gamma-ray imaging spectroscopic observation for Galactic Center and Cosmic Background MeV gammas by SMILE-2+ Balloon Experiment	Toru TANIMORI
15:20	The GAPS experiment – a search for cosmic-ray antinuclei from dark matter	Masayoshi KOZAI
Neutrino #8, Room: 203, Chair: M. Hirsch		
14:00	Modular invariance approach to masses and mixing of neutrino flavors	Morimitsu TANIMOTO
14:20	New Physics and (vector, scalar, dark) Non-Standard Interactions in Neutrino Oscillation	Shao-Feng GE
14:40	Constraints on Nonstandard Neutrino Interaction from Neutrino Electron Scattering	Deniz MUHAMMED
15:00	Electromagnetic neutrinos: New constraints and new effects in oscillations	Alexander STUDENIKIN
15:20	The effects of coherent neutrino mixing modulation by dark matter.	William MARKS

DM7: Low Mass Dark Matter I, Room: 204, Chair: M. Selvi		
14:00	Dark matter search results from DAMIC at SNOLAB	Alvaro CHAVARRIA
14:20	Latest results of CRESST-III's search for sub-GeV/c^2 dark matter	Holger KLUCK
14:40	Current Status of SuperCDMS SNOLAB and Results from Sub-GeV Dark Matter with a Reduced Threshold SuperCDMS-Style Detector	Tsuguo ARAMAKI
15:00	Recent results from EDELWEISS Dark Matter searches	Jules GASCON
15:20	NEWS-G: search for low mass Dark Matter with light targets	Gilles GERBIER
New Technology #1, Room: 205, Chair: A. Weinstein		
14:00	SiPM photosensor development for nEXO	Thomas BRUNNER
14:20	Development of low background PMT R13111	Ko ABE
14:40	Development and performance of the 20″ PMT for Hyper-Kamiokande	Christophe BRONNER
15:00	Large Area Photo-Detection System using 3" PMTs for the Hyper-Kamiokande Outer Detector	Stephane ZSOLDOS
15:20	Use of poly(ethylene naphthalate) as a self-vetoing structural material	Felix FISCHER
Gravitational Wave #3, Room: 206, Chair: N. Kanda		
14:00	Inference on the massive black hole binary population from pulsar timing array searches for gravitational waves	Hannah MIDDLETON
14:20	Astrophysical numerical relativistic simulations: Hypermassive Neutron stars and Core-collapse Supernovae	Ho Yin NG
14:40	Binary black holes originating from globular clusters as sources of gravitational waves	Dorota ROSINSKA
15:00	Formation of binary black holes in star clusters as gravitational wave sources	Jun KUMAMOTO
15:20	Stochastic gravitational wave background mapmaking using regularised deconvolution	Jishnu SURESH
Neutrino #9, Room: 210, Chair: K. Okumura		
14:00	Neutrino physics beyond the Standard Model in DUNE	Mariam TÓRTOLA
14:20	Search for heavy neutrinos with the T2K near-detector ND280	Mathieu LAMOUREUX
14:40	The SHiP experiment at CERN	Annika HOLLNAGEL
15:00	Detector physics with MicroBooNE	Yifan CHEN
HECR #3, Room: 3rd floor, ANA Crowne Plaza Toyama, Chair: Y. Tsunesada		
14:00	Recent results status and perspectives from ANTARES and KM3NeT Mediterranean Neutrino Telescopes.	Antonio CAPONE
14:25	IceCube Search for Galactic Sources of High-Energy Neutrinos based on HAWC Observations	Ali KHEIRANDISH
14:45	CALET results after three years on the International Space Station	Yoichi ASAOKA
15:10	The GRAMS Project: Dual MeV Gamma-Ray and Dark Matter Observatory	Tsuguo ARAMAKI

Tuesday Parallel Sessions: 16:10 - 17:55

Neutrino #10, Room: Main Hall, Chair: F. Avignone		
16:10	Status of 48Ca double beta decay search and its future prospect in CANDLES	Konosuke TETSUNO
16:30	New results from the CUORE experiment	Stefano POZZI
16:50	Final results of the CUPID-0 Phase I experiment	Nicola CASALI
17:10	First results of KamLAND-Zen 800	Yoshihito GANDO
17:30	A Bayesian Approach to Neutrinoless Double Beta Decay Analysis in KamLAND-ZEN	Aobo LI
DM8: Axions and Axion-Like Dark Matter III, Room: 201, Chair: K. Irwin		
16:10	Search for dark matter in the form of axion-like particles and hidden photons in the XMASS detector	Kazufumi SATO
16:30	A comprehensive approach to axion dark matter search and hadronic EDMs	Yannis SEMERTZIDIS
16:50	Axion Dark Matter Search with Interferometric Gravitational Wave Detectors	Ippei OBATA
17:10	Dark matter axion search experiments using 18T HTS magnet	Byeongsu YANG
17:30	Status and plans for NA64	Johannes BERNHARD
DM9: Astrophysical probes of dark matter , Room: 202, Chair: M. Taoso		
16:10	Towards closing the window of primordial black holes as dark matter: The case of large clustering	Paul Frederik DEPTA
16:30	Observable signatures of dark photons from supernovae	William DEROCCO
16:50	Detection of cross-correlation between DES Y1 shear and the extra-galactic gamma-ray background: implications for Dark Matter	Simone AMMAZZALORSO
Neutrino #11, Room: 203, Chair: A. Marrone		
16:10	Developing a long time supernova simulation framework	Masamitsu MORI
16:30	Observing Supernova Neutrino Light Curves with Super-Kamiokande: Expected Event Number over Ten Seconds	Yudai SUWA
16:50	Pre-SN neutrino emission from massive stars and their detection	Chinami KATO
17:10	Supernova Model Discrimination with Hyper-Kamiokande	Jost MIGENDA
17:30	38 years of galactic observations in searching for neutrino bursts from core collapse supernovae with the Baksan Underground Scintillation Telescope	Valeriy PETKOV
DM10: Low Mass Dark Matter II, Room: 204, Chair: J. Cooley		
16:10	Low Energy Rare Event Searches with the Majorana Demonstrator	Clint WISEMAN
16:30	Recent advancements of the NEWS-G experiment	Ioannis KATSIOULAS
16:50	The Future PICO Dark Matter Search Program with Bubble Chambers and Lower Threshold Capability	Tony NOBLE
17:10	The DAMIC-M dark matter experiment	Paolo PRIVITERA

New Technology #2, Room: 205, Chair: S. Kazama		
16:10	22Ne(p,gamma)23Na cross section measurement at astrophysical energies.	Federico FERRARO
16:30	Search for non-Newtonian gravity with optically-levitated microspheres	Akio KAWASAKI
16:50	Front End Electronics Module Design for the Schwarzschild-Couder Telescope (SCT) Camera	Massimiliano BITOSSI
17:10	A binned likelihood for stochastic models	Austin SCHNEIDER
Gravitational Wave #4, Room: 206, Chair: H. Yuzurihara		
16:10	Prompt and accurate sky localization of gravitational-wave sources	Soichiro MORISAKI
16:25	Investigation of the environment influence for the underground and cryogenic gravitational wave detector, KAGRA.	Takaaki YOKOZAWA
16:40	Detector Characterization for the underground-based gravitational-wave detector, KAGRA	Keiko KOKEYAMA
16:55	Newtonian noise from the underground water	Kentaro SOMIYA
17:10	KAGRA Data Tiers	Nobuyuki KANDA
17:25	Overview of KAGRA Data Analysis	Hideyuki TAGOSHI
Neutrino #12, Room: 210, Chair: F. Villante		
16:10	Updated geoneutrino measurement with Borexino	Livia LUDHOVA
16:30	Latest result of solar neutrino analysis in Super-Kamiokande	Yuuki NAKANO
16:50	A comprehensive study of the pp-chain neutrinos with Borexino	Sandra ZAVATARELLI
17:10	Jinping Neutrino Experiment: a Status Report	Benda XU
17:30	Astrophysical neutrinos at Hyper-Kamiokande	Takatomi YANO
HECR #4, Room: 3rd floor, ANA Crowne Plaza Toyama, Chair: I. Lhenry-Yvon		
16:10	Properties of Elementary Particle Fluxes in Primary Cosmic Rays Measured with the Alpha Magnetic Spectrometer on the ISS	Zhicheng TANG
16:30	Anisotropy of Elementary Particle Fluxes in Primary Cosmic Rays Measured with the Alpha Magnetic Spectrometer on the ISS	Miguel Angel VELASCO FRUTOS
16:50	New Properties of Primary Cosmic Rays Measured by AMS on ISS	Valerio FORMATO
17:10	New properties of secondary cosmic rays measured by AMS	Mercedes PANICCIA
17:25	Cosmic Ray Isotopes measured by AMS	Francesca GIOVACCHINI
17:40	Observation of Complex Time Structures in the Cosmic-Ray Electron and Positron Fluxes by the Alpha Magnetic Spectrometer on the ISS	Valerio VAGELLI

Parallel Session Sept. 11 (Wed)

Wednesday Parallel Sessions: 14:30 - 16:10

Neutrino #13, Room: Main Hall, Chair: H. Tanaka		
14:30	Leptonic CP Violation and the Baryon Asymmetry of the Universe	Serguey PETCOV
15:10	Recent T2K Neutrino Oscillation Results	Artur SZTUC
15:30	Neutrino-Nucleus Interaction Cross-Section Measurements at T2K	Callum WILKINSON
15:50	Results and Prospects from the NOvA Experiment.	Fernanda PSIHAS
DM11: Self-interacting dark matter and light mediators, Room: 201, Chair: M. Kakizaki		
14:30	New avenues for Self-Interacting Dark Matter	Camilo Alfredo GARCIA CELY
14:50	Decaying warm dark matter and structure formation	Kingman CHEUNG
15:10	BBN constraints on MeV-scale dark sectors	Marco HUFNAGEL
15:30	The Beam Dump eXperiment	Mariangela BONDI'
15:50	Hidden Monopole Dark Matter via Axion Portal and its Implications for Direct Search and Beam-Dump Experiments	Shu-Yu HO
DM12: Annual Modulation, Room: 202, Chair: F. Reindl		
14:30	PICOLON dark matter search	Ken-Ichi FUSHIMI
14:50	Status of COSINE-100	Young Ju KO
15:10	Dark Matter Searches with the COSINE-100 Experiment	Govinda ADHIKARI
15:30	Results on dark matter annual modulation from ANAIS-112 experiment	María Luisa SARSA
15:50	Is a WIMP explanation of the DAMA modulation effect still viable?	Gaurav Kumar TOMAR
Neutrino #14, Room: 203, Chair: G. Pagliaroli		
14:30	Collective flavor conversion including the neutrino halo in core-collapse supernovae	Masamichi ZAIZEN
14:50	Neutrino and Gravitational Wave Signatures of Core-Collapse Supernovae	Tomoya TAKIWAKI
15:10	Search for event bursts in XMASS-I correlated with gravitational-wave events	Katsuki HIRAIDE
15:30	Expanding Core-Collapse Supernova (CCSN) Search Horizon of Neutrino Detectors	Odysse HALIM
15:50	Pathways to Observing Supernova Neutrinos	Thomas EDWARDS

HECR #5, Room: 204, Chair: A. Ishihara		
14:30	Latest results of the Pierre Auger Observatory	Isabelle LHENRY-YVON
14:55	Telescope Array: Latest Results and Expansion Plans	Douglas BERGMAN
15:15	Telescope Array search for EeV photons	Yana ZHEZHER
15:30	Current status and future prospects of the CRAFFT project for the next generation UHECR observatory	Daisuke IKEDA
15:45	Extreme Energy Events: an extended multi purpose cosmic ray observatory	Ivan GNESI
New Technology #3, Room: 205, Chair: A. Pocar		
14:30	Carbon Nanotube as anisotropic target for dark matter.	Gianluca CAVOTO
14:50	Light detection in DarkSide-20k	Claudio SAVARESE
15:10	Low Radioactivity Argon for Dark Matter and Rare Event Searches	Walter Marcello BONIVENTO
15:30	The XENONnT Neutron Veto Detector	Shingo KAZAMA
15:50	A measurement of the scintillation decay time constant in liquid xenon with the XMASS-I detector	Koichi ICHIMURA
Cosmology #1, Room: 206, Chair: T. Sekiguchi		
14:30	Results of gravitational lensing and primordial gravitational waves from the POLARBEAR experiment	Yuji CHINONE
14:50	Particle Physics with the Cosmic Microwave Background with SPT-3G	Jessica AVVA
15:10	Inflation models and future CMB B-mode observations by LiteBIRD	Kazunori KOHRI
15:30	Searching gamma-rays and dark matter from galaxy clusters at low redshift	Manuel COLAVINCENZO
Neutrino #15, Room: 210, Chair: C. Rott		
14:30	Measurements of the reactor antineutrinos with DANSS experiment	Igor ALEKSEEV
14:50	Latest results from the Double Chooz experiment with near and far detectors	Masaki ISHITSUKA
15:10	NEOS: reactor neutrino experiment at short baseline	Yoomin OH
15:30	Search for eV Sterile Neutrinos – The STEREO Experiment	Adrien BLANCHET

Wednesday Parallel Sessions: 16:40 - 18:40

Neutrino #16 & Outreach, Room: Main Hall, Chair: E. Lisi		
16:40	Sensitivity to leptonic CP violation at Hyper-Kamiokande	Tommaso BOSCHI
17:00	Performances of multi-PMT photodetector for the Hyper-Kamiokande experiment (the Hyper-Kamiokande proto-collaboration)	Benjamin QUILAIN
17:20	Status of DUNE Experiment	Jianming BIAN
17:40	Status of The Dual Phase Liquid Argon TPC Developments for the DUNE experiment.	Laura ZAMBELLI
18:00	Outreach for Hyper-Kamiokande	Jost MIGENDA
DM13: WIMP Dark Matter II, Room: 201, Chair: M. Selvi		
16:40	Analysis and Dark Matter Search Results from DEAP-3600 with 231 Live Days at SNOLAB	Shawn WESTERDALE
17:00	Dark Matter Search with DEAP-3600 at SNOLAB	Mark BOULAY
17:20	Search for WIMP-^{129}Xe inelastic scattering using particle identification in XMASS-I	Takumi SUZUKI
17:40	High Mass WIMP Results with DarkSide-50 and Prospects for Ds20k/Argo	Yi WANG
18:00	Results of direct dark matter detection with CDEX experiment at CJPL	Hao MA
18:20	New Analysis Results from the LUX Dark Matter Experiment	Vitaly KUDRYAVTSEV
DM14: New Ideas in Sub-GeV Dark Matter, Room: 202, Chair: B. Penning		
16:40	Sub-GeV Dark Matter in Superfluid He-4: an Effective Theory Approach	Antonio Davide POLOSA
17:00	Development of a New Detector that Uses Liquid He and Field Ionization to Search for Light Dark Matter	David OSTERMAN
17:20	LBECA: A Low Background Electron Counting Apparatus for Sub-GeV Dark Matter Detection	Kaixuan NI
17:40	The Light-only Liquid Xenon Project	Thomas MCELROY
18:00	Atomic many body calculations for dark matter scattering on electrons: Ge & Xe Detectors	Mukesh Kumar PANDEY
18:20	High sensitivity tests of Spin statistics in the Gran Sasso Underground Laboratory	Johann MARTON
Neutrino #17, Room: 203, Chair: S. Yoshida		
16:40	The Status of AMoRE Double Beta Decay Experiment	Kyungmin SEO
17:00	First data from the CUPID-Mo neutrinoless double beta decay experiment	Benjamin SCHMIDT
17:20	Discovery potential of next-generation neutrinoless double-β decay experiments	Matteo AGOSTINI
17:40	LEGEND: The future of neutrinoless double-beta decay search with germanium detectors	Anna Julia ZSIGMOND
18:00	CUPID: Cuore Upgrade with Particle ID	Maura PAVAN

HECR #6, Room: 204, Chair: P. Privitera		
16:40	Variations of cosmic ray muon flux during thunderstorms as a tool for studying electric field distribution and particle production processes in the atmosphere	Alexander LIDVANSKY
17:00	Search for diffuse cosmic gamma rays of ultra-high energies with the Baksan air shower array	Alexander LIDVANSKY
17:20	Ten years of cosmic muons observation with Borexino	Davide D'ANGELO
17:40	High-multiplicity muon events observed with EMMA array	Wladyslaw Henryk TRZASKA
18:00	LHCf: LHC forward experiment for CR interaction study	Hiroaki MENJO
New Technology #4, Room: 205, Chair: K. Martens		
16:40	The search for Majorana neutrinos with a background-free gaseous Xenon TPC at the tonne scale.	Francesc MONRABAL
17:00	Neutron multiplicity in neutrino interactions and new technologies with ANNIE	Weinstein AMANDA
17:20	LiquidO: A Novel Neutrino Detection Technology	Fumihiko SUEKANE
17:40	The active Pulse Tube noise cancellation technique of the CUORE experiment	Antonio D'ADDABBO
18:00	Phonon-Mediated KIDs as Light Detectors for Rare Event Search: The CALDER Project	Nicola CASALI
18:20	Reveal the K40 Geoneutrinos	Zhe WANG
Cosmology #2, Room: 206, Chair: M. Aoki		
16:40	Improved nuclear reaction network for a reliable estimate of primordial Deuterium yield	Ofelia PISANTI
17:00	Active-sterile neutrino oscillations in the early Universe with the complete mixing matrix	Sergio PASTOR
17:20	MeV-scale reheating temperature and thermalization of three active neutrinos by radiative and hadronic decays of massive particles	Takuya HASEGAWA
Neutrino #18, Room: 210, Chair: M. Ishitsuka		
16:40	Impact of theoretical reactor flux uncertainties and of the near detector on the JUNO measurements	Antonio MARRONE
17:00	Design and Status of JUNO	Hans Theodor Josef STEIGER
17:20	PHYSICS PROSPECTS OF THE JUNO EXPERIMENT	Monica SISTI
17:40	WATCHMAN: A Remote Reactor Monitor and Advanced Instrumentation Testbed	Christopher GRANT

Parallel Session Sept. 12 (Thu)

Thursday Parallel Sessions: 14:00 - 15:40

Neutrino #19, Room: Main Hall, Chair: C. Weinheimer		
14:00	First KATRIN Tritium Data	Thierry LASSERRE
14:20	Analysis strategies and treatment of systematic effects in the KATRIN experiment	Martin SLEZAK
14:40	Project 8: Measuring the Tritium Beta-Decay Spectrum using Cyclotron Radiation Emission Spectroscopy	Noah OBLATH
15:00	The Electron Capture in Ho-163 experiment, ECHo	Loredana GASTALDO
15:20	Direct Detection Prospects for the Cosmic Neutrino Background	Martin SPINRATH
DM15: Accelerator Searches for Dark Matter, Room: 201, Chair: S. Matsumoto		
14:00	Light Fermionic Dark Matter with Light Scalar Mediator	Yue-Lin Sming TSAI
14:20	Hunting for Light Dark Matter with DUNE-PRISM	Valentina DE ROMERI
14:40	Search for Dark Matter in Upsilon Decays at BABAR Experiment	Romulus GODANG
15:00	Search for dark matter and dark sector at Belle II experiment	Cate MACQUEEN
DM16: Backgrounds in Dark Matter Experiments II, Room: 202, Chair: S. Moriyama		
14:00	KDK: Measuring The Direct To Ground State Electron Capture Of Potassium-40 Helping Backgrounds In Dark Matter Searches	Matthew STUKEL
14:20	Studies on liquid argon S1 and S2 properties for low mass WIMP search experiments	Masashi TANAKA
14:40	The LZ Outer Detector	Bjoern PENNING
15:00	Development and performance of high voltage electrodes for the LZ experiment	Kelly STIFTER
15:20	Improved Measurements of the β-Decay Response of Liquid Xenon with the LUX Detector	Jon BALAJTHY
Neutrino #20, Room: 203, Chair: B. Fujikawa		
14:00	The NEXT experiment for neutrinoless double beta decay searches	Jose Maria BENLLOCH-RODRIGUEZ
14:20	The nEXO Detector: Design Overview	Andrea POCAR
14:40	Science Goals and Sensitivity of the nEXO Neutrinoless Double Beta Decay Experiment	Richard SALDANHA
15:00	Prospects for neutrino-less double beta decay detection with the DARWIN experiment	Yanina BIONDI

HECR #7, Room: 204, Chair: D. Bergman		
14:00	Peculiar High-Energy Gamma Rays from the Sun	Kenny Chun Yu NG
14:20	Detection of a γ-ray halo around Geminga with the Fermi-LAT and implications for the positron flux	Fiorenza DONATO
14:40	A compact low threshold gamma-ray detector composed of LaBr3 and SiPMs for GECAM	Xilei SUN
15:00	Recent results from the Tibet air shower experiment	Masato TAKITA
15:20	A new high energy gamma-ray observatory in the southern hemisphere : The ALPACA experiment	Sei KATO
Cosmology #3, Room: 206, Chair: M. Kawasaki		
14:00	Cosmology with Fermi-LAT	Alberto DOMINGUEZ
14:20	Multiwavelength studies of the epoch of reionization	Chang FENG
14:40	Gravitational Waves from Phase Transition in a QCD-like hidden sector	Mayumi AOKI
15:00	Gravitational Waves Induced by Scalar Perturbations during a Gradual Transition from an Early Matter Era to the Radiation Era	Keisuke INOMATA
15:20	Enhancement of Gravitational Waves Induced by Scalar Perturbations due to a Sudden Transition from an Early Matter Era to the Radiation Era	Takahiro TERADA
Neutrino #21, Room: 210, Chair: K. Scholberg		
14:00	Status and Prospects of the JSNS2 Experiment	Carsten ROTT
14:20	Status and new results of the CONUS experiment	Manfred LINDNER
14:40	Coherency in Neutrino-Nucleus Elastic Scattering	Vivek SHARMA
15:00	Exploring coherent neutrino-nucleus scattering with the NUCLEUS experiment	Raimund STRAUSS
15:20	Measuring the coherent elastic neutrino-nucleus scattering with a high intensity 51Cr radioactive source.	Lea DI NOTO

Thursday Parallel Sessions: 16:10 - 17:50

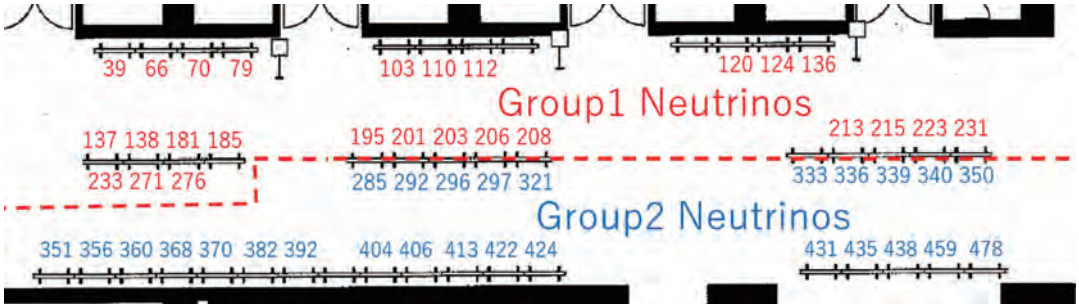
Neutrino #22, Room: Main Hall, Chair: A. Poon		
16:10	The TRISTAN project	Thibaut HOUDY
16:30	TRISTAN measurements at Troitsk nu-mass experiment	Tim BRUNST
16:50	Light sterile neutrinos: the current picture from neutrino oscillations	Stefano GARIAZZO
17:10	Relic neutrino clustering in the Milky Way	Pablo FERNÁNDEZ DE SALAS
17:30	Neutrino Physics with the PTOLEMY project	Gianpiero MANGANO
DM17: Dark matter and neutrinos, Room: 201, Chair: C. Garcia-Cely		
16:10	Probing the sub-MeV window in dark matter direct detection	Tom MELIA
16:30	Exploring Dark Matter, Neutrino mass and flavour anomalies in $L\mu$ - $L\tau$ model	Rukmani MOHANTA
16:50	Scotogenic dark matter and single-zero textures of the neutrino mass matrix	Teruyuki KITABAYASHI
17:10	Searching for Dark Matter with X-ray lines	Kenny Chun Yu NG
17:30	Neutrinophilic Dark Matter at IceCube and Fermi-LAT	Gennaro MIELE
DM18: Beyond G2 Dark Matter Experiments, Room: 202, Chair: K. Miuchi		
16:10	DARWIN: direct dark matter search with the ultimate detector	Carla MACOLINO
16:30	Status and Prospects of PandaX-xT	Jianglai LIU
16:50	Future detectability of a pseudoscalar mediator dark matter model	Motoko FUJIWARA
17:10	Learning from Dark Matter direct detection	Riccardo CATENA
Neutrino #23, Room: 203, Chair: J. Shirai		
16:10	ZICOS experiment for neutrinoless double beta decay search using Zr-96	Yoshiyuki FUKUDA
16:30	AXEL experiment : High pressure Xe gas TPC for neutrinoless double-beta decay search	Sei BAN
16:50	R2D2: a neutrinoless double beta decay experiment	Cécile JOLLET
17:10	Liquid Xenon detector R&D for 0ν2β search (KamXP)	Kota UESHIMA
17:30	Near Detectors for the Hyper-K Neutrino Experiment	Mark HARTZ

HECR #8, Room: 204, Chair: T. Sako		
16:10	Recent highlights from the VERITAS gamma-ray observatory	Amanda WEINSTEIN
16:30	The MAGIC of very-high-energy gamma-ray astronomy	David PANEQUE
16:50	Discovery of VHE gamma rays from GRB 190114C	Koji NODA
17:10	Influence of uncertainty in hadronic interaction models on the sensitivity estimation of Cherenkov Telescope Array	Michiko OHISHI
17:30	Probing galactic cosmic ray distribution with TeV gamma-ray sky	Giulia PAGLIAROLI
Cosmology #4, Room: 206, Chair: M. Kawasaki		
16:10	Bounding the graviton mass using galaxy cluster observations	Shantanu DESAI
16:30	Advances towards a direct measurement of the gravitational interaction on antimatter with the AEgIS experiment	Davide PAGANO
16:50	Numerical General Relativistic simulations: Core Collapse Supernovae and Neutron stars astrophysics	Patrick Chi-Kit CHEONG
Neutrino #24, Room: 210, Chair: M. Yamashita		
16:10	Astroparticle Physics with a Generation-3 Liquid Xenon Detector	Rafael LANG
16:30	Prospects for THEIA: an advanced liquid scintillator neutrino experiment	Daniele GUFFANTI
16:50	Space charge effects in liquid argon TPCs and ion mobility measurement	Roberto SANTORELLI
17:10	Spallation Tagging Techniques in Super Kamiokande	Scott LOCKE
17:30	Neutrino-Oxygen Neutral-Current Elastic Interaction as a Background in Supernova Relic Neutrino Search	Yosuke ASHIDA

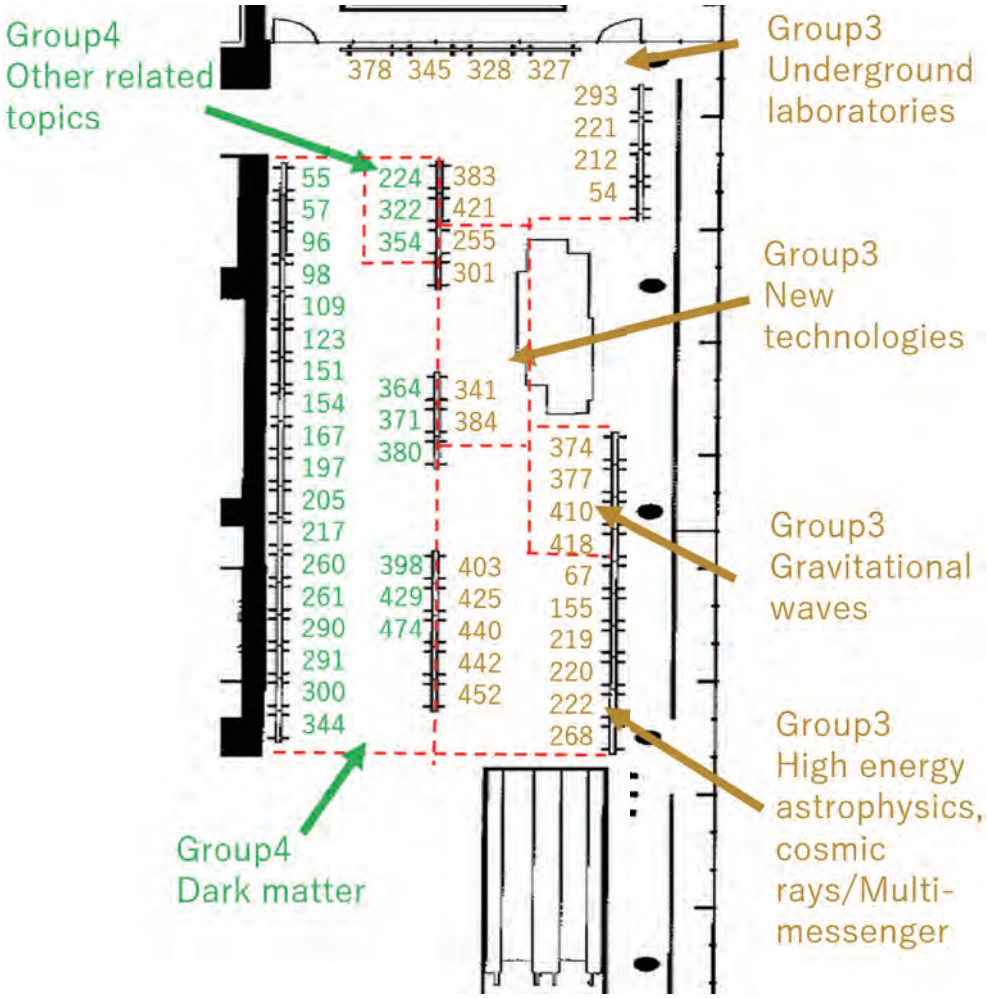
Poster Session

Sep. 10th 18:00~20:00
Poster session areas are shown in the map in page 8

Poster area 1 (The 2nd floor)



Poster area 2 (The 3rd floor)



ID	Title	Presenter	Tracks
Poster session Group 1			
39	Analysis Strategies for the Updated Geoneutrino Measurement with Borexino	Sindhujha KUMARAN	Neutrinos
66	Progress of Veto Detector of JUNO	Peng ZHANG	Neutrinos
70	Study of the radon removal and detection for JUNO	Yongpeng ZHANG	Neutrinos
103	Tested Performance of JUNO 20"PMTs	Haiqiong ZHANG	Neutrinos
110	Taishan Antineutrino Observatory (TAO)	Lianghong WEI	Neutrinos
112	Neutrino evolution and quantum decoherence	Alexander STUDENIKIN	Neutrinos
120	Studies of non-standard neutrino properties with the Borexino detector	Alina VISHNEVA	Neutrinos
124	Background analysis for the SNO+ experiment	Valentina LOZZA	Neutrinos
136	The MicroBooNE Experiment	Supraja BALASUBRAMANIAN	Neutrinos
137	T2K-WAGASCI: MIDAS-based DAQ software and online monitor for the readout of a large number of MPPCs	Giorgio PINTAUDI	Neutrinos
138	Signal Readout Electronics for the LEGEND-200 Experiment	Michael WILLERS	Neutrinos
181	Event reconstruction in KM3NeT/ORCA using Deep Learning techniques	Michael MOSER	Neutrinos
185	Performance of the low energy threshold Optimum Trigger on CUORE data	Antonio BRANCA	Neutrinos
195	Reduction of Cosmic Muon Spallation Background in Liquid Scintillator Detector Using Spherical CNNs	Zhenghao FU	Neutrinos
201	A Glass Study to Reduce Backgrounds of the Hyper-Kamiokande Photodetector	Kodai OKAMOTO	Neutrinos
203	Update of the atmospheric neutrino flux simulation ATMNC for next-generation neutrino experiment	Kazufumi SATO	Neutrinos
206	Low Tc IrPt TES based Light Detectors for CUPID	Bradford WELLIVER	Neutrinos
208	The new CERN low-energy facilities for neutrino detector tests	Johannes BERNHARD	Neutrinos
213	The CROSS experiment: search for 0ν2β decay with surface sensitive bolometers	Anastasiia ZOLOTAROVA	Neutrinos
215	Status of astrophysical neutrino research in Borexino	Liudmila LUKIANCHENKO	Neutrinos
223	Signal Readout Electronics for the LEGEND-1000 Experiment	Frank EDZARDS	Neutrinos
231	Study of neutrons associated with neutrino and anti-neutrino interactions on water at T2KS	Ryosuke AKUTSU	Neutrinos
233	Simulation study of cosmic-ray muon backgrounds for KamLAND-Zen experiment	Sei IEKI	Neutrinos

ID	Title	Presenter	Tracks
271	Study of a Large CaF2(Eu) Scintillating Bolometer for Neutrinoless Double Beta Decay	Xiaolong LI	Neutrinos
276	Prospects of the detection of the various decay modes of Xe-124	Alexander FIEGUTH	Neutrinos

Poster session Group 2

292	Scintillation balloon for liquid scintillator base Neutrinoless double beta decay search experiments	Shuhei OBARA	Neutrinos
296	Unified atmospheric neutrino passing fractions for large-scale neutrino telescopes	Austin SCHNEIDER	Neutrinos
297	R&D on the gas injection system of Beam Induced Fluorescence Monitor toward MW beam power at the J-PARC Neutrino Beam-line	Atsushi NAKAMURA	Neutrinos
321	Bi-probability plots and PMNS compatibility studies with the T2K experiment	Artur SZTUC	Neutrinos
333	Drift field generation with Cockcroft-Walton voltage multiplier in xenon gas for AXEL $0\nu\beta\beta$ search detector	Masashi YOSHIDA	Neutrinos
336	Search for double beta decay of ^{130}Te to the excited states of ^{130}Xe in CUORE	Guido FANTINI	Neutrinos
339	Basic studies of 3-inch PMT for multi-PMT development	Michitaka INOMOTO	Neutrinos
340	Evaluation of position dependent performance of 3-inch PMTs for Multi-PMT development	Nao IZUMI	Neutrinos
350	A Data Acquisition System for the CUORE and CUPID-0 experiments	Laura MARINI	Neutrinos
351	The CUORE cryostat	Irene NUTINI	Neutrinos
356	Proton Decay Search Sensitivity with the Enlarged Fiducial Mass of Super-Kamioknade	Akira TAKENAKA	Neutrinos
360	Development of Timing Synchronization System for Hyper-Kamiokande Electronics	Shota IZUMIYAMA	Neutrinos
368	New ideas for ring formation and reconstruction in water Cherenkov detectors	Lukas BERNS	Neutrinos
370	Inner balloon production for KamLAND-Zen 800	Azusa GANDO	Neutrinos
382	Study on the contributions to the CUORE energy spectra	Valentina DOMPÈ	Neutrinos
392	The laser Isotope separation (LIS) methods for the enrichment of $^{48}\mathrm{Ca}$.	Kohei MATSUOKA	Neutrinos
404	Status of the development of photosensor covers for Hyper-Kamiokande experiment	Jun KAMEDA	Neutrinos
406	Search for proton decay into three charged leptons	Masahiro TANAKA	Neutrinos

ID	Title	Presenter	Tracks
413	Commissioning of T2K-WAGASCI detector complex for first neutrino beam measurement with full setup	Yuki ASADA	Neutrinos
422	Background model for the nEXO neutrinoless double beta decay experiment	John ORRELL	Neutrinos
424	The measurement of gamma rays from neutron-oxygen interactions	Toshiaki HORAI	Neutrinos
431	D-Egg - new optical sensors for the IceCube Upgrade and Gen2 -	Aya ISHIHARA	Neutrinos
435	Classification of Super-Kamiokande atmospheric neutrino events by using neural network	Ryo MATSUMOTO	Neutrinos
438	First KATRIN Tritium Data	Lisa SCHLÜTER	Neutrinos
459	Energy calibration of the SoLid detector	David HENAFF	Neutrinos
478	Sterile neutrino search with KATRIN	Susanne MERTENS	Neutrinos

Poster session Group 3

374	A nonparametric method to evaluate significance of events in search for gravitational waves with false discovery rate	Hirotaka YUZURIHARA	Gravitational waves
377	KAGRA Cryogenic Suspension Control toward the Observation Run 3	Tomohiro YAMADA	Gravitational waves
410	Development of Cryogenic Accelerometer for Vibration Measurement in KAGRA	Rishabh BAJPAI	Gravitational waves
418	Measurement of the sapphire suspension fibers for KAGRA	Takaharu SHISHIDO	Gravitational waves
67	Local shower age and segmented slope parameters of lateral density distributions of cosmic ray shower particles.	Rajat K. DEY	High energy astrophysics, cosmic rays/Multi-messenger
155	The readout system based on the ultra-fast waveform sampler DRS4 for the Large-Sized Telescope of the Cherenkov Telescope Array	Seiya NOZAKI	High energy astrophysics, cosmic rays/Multi-messenger
219	Cygnus X-3 at very high energies	Vera Y. SINITSYNA	High energy astrophysics, cosmic rays/Multi-messenger
220	TeV gamma-rays from the region of Perseus Cluster	Vera G. SINITSYNA	High energy astrophysics, cosmic rays/Multi-messenger
222	Extragalactic Background Light: Constraints from the TeV gamma-ray observations	Sergey S. BORISOV	High energy astrophysics, cosmic rays/Multi-messenger
268	NICHE detector and operations	Yugo OMURA	High energy astrophysics, cosmic rays/Multi-messenger
403	Search for Neutrinos associated with solar flare in Super Kamiokande	Kohei OKAMOTO	High energy astrophysics, cosmic rays/Multi-messenger
425	MC study for TALE Hybrid detector	Keitaro FUJITA	High energy astrophysics, cosmic rays/Multi-messenger

ID	Title	Presenter	Tracks
440	Atmospheric transparency using bistatic-LIDAR for the Telescope Array experiment	Takayuki TOMIDA	High energy astrophysics, cosmic rays/Multi-messenger
442	Study for sensor sensitivity calibration of fluorescence telescope using light source mounted on the UAV	Kengo SANO	High energy astrophysics, cosmic rays/Multi-messenger
452	Numerical Study on Radial Oscillation of Scalar-Gauss-Bonnet Neutron Stars	Alan Tsz-Lok LAM	High energy astrophysics, cosmic rays/Multi-messenger
255	Cryogenic Electronics Development for CUPID	Roger HUANG	New technologies
301	Alpha-ray imaging chamber based on micro-TPC in low radioactive background	Hiroshi ITO	New technologies
341	Characterization of new photo-detectors for the future dark matter experiments with liquid xenon	Kosuke OZAKI	New technologies
384	A multi-PMT Optical Module for the IceCube Upgrade	Summer BLOT	New technologies
54	Radon/Radium measurement from Gd-loaded water	Guillaume PRONOST	Underground laboratories
212	Simulation studies for backgrounds in the AMoRE-II experiment	Hanwook BAE	Underground laboratories
221	The shallow underground laboratory at TUM for rare-event searches	Elizabeth MONDRAGÓN	Underground laboratories
293	Reduction of radioactive impurities from the liquid scintillator by using the Metal Scavenger	Yuto KAMEI	Underground laboratories
327	Delayed coincidence with a day-scale window for tagging ^{232}Th series isotopes in KamLAND	Takahiko HACHIYA	Underground laboratories
328	Development of new trigger system for KamLAND2-Zen	Nanami KAWADA	Underground laboratories
345	Background Characterization of Felsenkeller Underground Laboratory	Marcel GRIEGER	Underground laboratories
378	Improvement of Energy Estimator for KamLAND-Zen 800	Haruhiko MIYAKE	Underground laboratories
383	Geant4 based Simulation Study for Super-Kamiokande	Masayuki HARADA	Underground laboratories
421	Research and development toward KamLAND2-Zen	Rikuo NAKAMURA	Underground laboratories

Poster session Group 4

55	An extensive study of dark matter and neutrino phenomenology in the Triplet + Singlet Scotogenic Model	Ivania MATURANA	Dark matter
57	The electrodes for the XENONnT TPC detector	Carla MACOLINO	Dark matter
96	Preliminary Design of Pulse Digitalization and Readout Electronics for CDEX-10	Jinfu ZHU	Dark matter
98	Discrimination of Dark Matter Mass and Velocity Distribution by Directional Detection	Keiko NAGAO	Dark matter
109	A neutron response measurement of NaI(Tl) scintillator for dark matter search	Kazumi HATA	Dark matter

ID	Title	Presenter	Tracks
123	Annual and diurnal modulations of the angular distribution of the 3-D WIMP velocity observed in an underground laboratory	Chung-Lin SHAN	Dark matter
151	Search for axions using a resonant NMR technique	Nancy AGGARWAL	Dark matter
154	Background Simulations for XENONnT	Diego RAMÍREZ GARCÍA	Dark matter
167	Dark matter signals on laser interferometer	Satoshi TSUCHIDA	Dark matter
197	Optical clocks distributed worldwide to search for SM-DM coupling	Tetsuya IDO	Dark matter
205	Modelling of electromagnetic backgrounds of the CRESST experiment	Valentyna MOKINA	Dark matter
217	The TREX-DM experiment at the Canfranc Underground Laboratory	Susana CEBRIAN	Dark matter
260	Reduction of background from intrinsic radioactive noble gases for DARWIN	Michael MURRA	Dark matter
261	Particle identification capability of Ca(Br, I)$_2$ scintillators for low background experiments	Masao YOSHINO	Dark matter
290	Search for charged excitations of dark matter by KamLAND-Zen experiment	Keishi HOSOKAWA	Dark matter
291	Kinetic inductance detectors on fluoride crystal for spin-dependent dark matter search	Koji ISHIDOSHIRO	Dark matter
300	Search for sub-GeV dark matter by annual modulation using XMASS-I detector	Byeongsu YANG	Dark matter
344	First measurements of SABRE NaI(Tl) crystals	Ambra MARIANI	Dark matter
364	Measurement of the scintillation efficiency for low energy nuclear- and electronic-recoils in liquid argon detector for WIMP search	Masato KIMURA	Dark matter
371	Purification of the NaI(Tl) crystal for dark matter search project PICOLON	Yuta KANEMITSU	Dark matter
380	A new method to determine parameters of scintillation light propagation in a detector	Alexander MASON	Dark matter
398	Increasing light collection efficiency of liquid argon detector for low mass WIMP search	Kazutaka AOYAMA	Dark matter
429	Study of luminescence mechanism by neutral bremsstrahlung in gaseous argon.	Tomomasa TAKEDA	Dark matter
474	Optimized Design Considerations of Magnet Design for Use in DM Radio 50 L and Beyond	Alexander LEDER	Dark matter
224	Contribution of shadowing and antishadowing corrections to the QCD evolution of gluon density at small-x	Mayuri DEVEE	Other related topics
322	Development of Low Background Scintillating Crystals at the CUP in Korea	Ra SEJIN	Other related topics
354	Softening of gravitational effect in noncommutative spacetime	Michiyasu NAGASAWA	Other related topics

TAUP2019 Committees

Organizing Committee

M. Nakahata [co-chair] ICRR, Univ. of Tokyo
M. Ohashi [co-chair] ICRR, Univ. of Tokyo
K. Asano ICRR, Univ. of Tokyo
Y. Hayato ICRR, Univ. of Tokyo
K. Inoue Tohoku University
M. Kakizaki University of Toyama
M. Kawasaki ICRR, Univ. of Tokyo
Y. Kishimoto Tohoku University
K. Martens Kavli IPMU, Univ. of Tokyo
S. Matsumoto Kavli IPMU, Univ. of Tokyo
S. Miyoki ICRR, Univ. of Tokyo
S. Moriyama ICRR, Univ. of Tokyo
K. Okumura ICRR, Univ. of Tokyo
T. Sako ICRR, Univ. of Tokyo
H. Sekiya ICRR, Univ. of Tokyo
M. Shiozawa ICRR, Univ. of Tokyo
H. Tagoshi ICRR, Univ. of Tokyo
Y. Tsunesada Osaka City University
T. Uchiyama ICRR, Univ. of Tokyo
M. Vagins Kavli IPMU, Univ. of Tokyo
K. Yamamoto University of Toyama

Steering Committee

N. Fornengo [chair] University of Torino and INFN
F.T. Avignone University of South Carolina
B.C. Barish CALTECH
J. Bernabeu University of Valencia
E. Coccia Gran Sasso Science Institute and INFN
T. Kajita ICRR, Univ. of Tokyo
G. Raffelt Max Planck Institute for Physics, Munich
N. Roe Lawrence Berkeley National Laboratory
D. Sinclair University of Carleton

International Advisory Committee

E. Aprile Columbia University, USA
R. Battiston ASI and University of Trento, Italy
R. Bernabei University of Rome "Tor Vergata", Italy
J. Bluemer Karlsruhe Institute of Technology, Germany
L. Cadonati Georgia Institute for Technology, USA
B. Dasgupta TIFR Mumbai, India
M. de Naurois Ecole Polytechnique, France
A. Etchegoyen ITeDA, Argentina
M. Fonseca Universidad Complutense de Madrid, Spain
M. Fukugita Kavli IPMU, Univ. of Tokyo, Japan
G. Gelmini UCLA, USA
G. Gerbier Queen's University (CERC), Canada
F. Halzen University of Wisconsin, USA
W. Haxton LNBL and UC Berkeley, USA
A. Ianni Canfranc Laboratory, Spain
E. Katsavounidis MIT, Boston, USA
T. Lasserre CEA Paris, France
M. Lindner MPI of Nuclear Physics, Heidelberg, Germany
E. Lisi INFN, Italy
A. Masiero University of Padova and INFN, Italy
A. McDonald Queen's University, Canada
C. Munoz Universidad Autonoma and IFT/CSIC, Madrid, Spain
S. Ragazzi LNGS, INFN and University of Milano, Italy
E. Resconi TUM Munich, Germany
V. Rubakov INR and Lomonosov University, Moscow, Russia
Y. Semertzidis CAPP, Daejeon, South Korea
A. Smirnov MPI of Nuclear Physics, Heidelberg, Germany
N. Smith SNOLAB, Canada
C. Spiering DESY, Germany
N. Spooner University of Sheffield, UK
Y. Suzuki Kavli IPMU, Univ. of Tokyo, Japan
J.W.F. Valle IFIC/University of Valencia, Spain
Y. Wang Chinese Academie of Science, China
E. Waxman Weizmann Institute, Israel
Y. Wong University of New South Wales, Australia

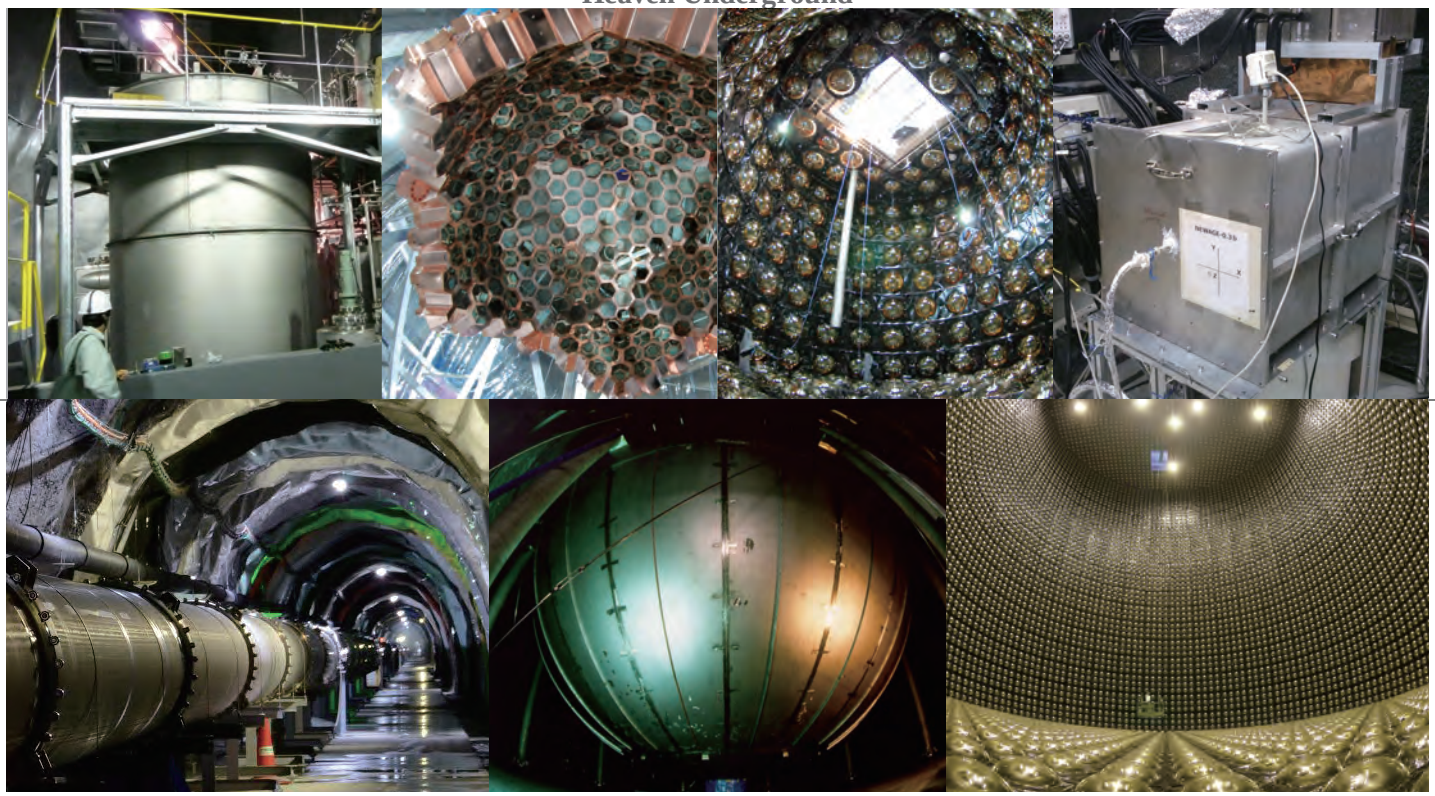
Parallel Session Topics and Conveners

Topics	Conveners
Cosmology	Steen Hannestad Aarhus Univ., Denmark Masahiro Kawasaki ICRR, The Univ. of Tokyo, Japan
Dark Matter	Jodi Cooley Southern Methodist Univ., USA Felix Kahlhoefer Aachen Univ., Germany Mitsuru Kakizaki Univ. of Toyama, Japan Shigeki Matsumoto Kavli IPMU, The Univ. of Tokyo, Japan Shigetaka Moriyama ICRR, The Univ. of Tokyo, Japan Marco Selvi INFN-Bologna, Italy
High energy astrophysics and Cosmic rays/Multi-messenger astronomy	Jose Bellido Adelaide Univ., Australia Aya Ishihara Chiba Univ., Japan Yoshiki Tsunesada Osaka City Univ., Japan Xiang-Yu Wang Nanjing Univ., China
Neutrinos	Guido Drexlin KIT, Germany Jennifer Raaf FNAL, USA Werner Rodejohann MPI-Heidelberg, Germany Itaru Shimizu Tohoku Univ., Japan Masato Shiozawa ICRR, The Univ. of Tokyo, Japan Francesco Villante Univ. of L'Aquila, Italy
Gravitational Waves	Stefan Ballmer Syracuse Univ., USA Masatake Ohashi ICRR, The Univ. of Tokyo, Japan Michele Punturo INFN-Perugia, Italy Hideyuki Tagoshi ICRR, The Univ. of Tokyo, Japan
New Technologies	Kai Martens Kavli IPMU, The Univ. of Tokyo, Japan Mayly Sanchez Iowa State Univ., USA
Underground laboratories	Yeongduk Kim CUP, South Korea Mark Vagins Kavli IPMU, The Univ. of Tokyo, Japan

Memo

KAMIOKA

Heaven Underground



TAUP 2019 TOYAMA

XVI International Conference on Topics in Astroparticle and Underground Physics

September 9-13, 2019, Toyama Japan

http://taup2019.icrr.u-tokyo.ac.jp/