

---

# UHECR2016

Kyoto Research Park, Oct. 11-14, 2016

---

The poster features a dark background with a colorful, abstract pattern of hexagons in shades of purple, blue, orange, and yellow. A dense stream of thin, multi-colored lines (representing cosmic rays) flows from the top right towards the bottom left. In the bottom right corner, there is a faint, white silhouette of a traditional Japanese pagoda.

INTERNATIONAL SYMPOSIUM ON  
"THE RECENT PROGRESS AND  
FUTURE DIRECTIONS OF  
ULTRA-HIGH ENERGY  
COSMIC RAY PHYSICS"

# UHECR2016

Oct.11-14, 2016  
Kyoto Research Park, KYOTO, JAPAN

<https://indico.cern.ch/event/504078/>



---

## Preface

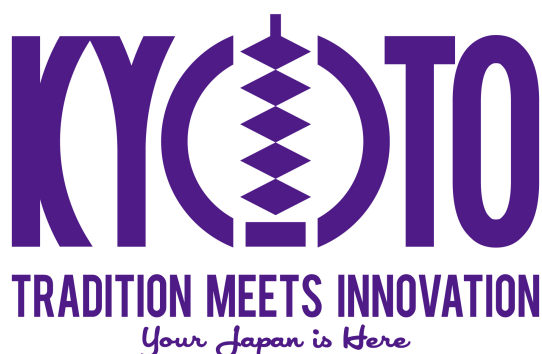
Observational studies of UHECRs achieved remarkable progress in the last decade. The upgrade of the Pierre Auger Observatory (AugerPrime) and the extension of the Telescope Array (TAx4) are ongoing to elucidate the origin and nature of cosmic rays at the highest energies. UHECR 2016 is the fourth conference in a series that started in Nagoya (2010), and continued at CERN (2012) and Springdale in Utah (2014). The symposium will focus on the highest energy cosmic rays as well as cosmic rays at lower energies above 1 PeV, and multi-messenger approaches, including

- Recent results from UHECR observations and upgrade/extension plans
- Reports of the Working Groups on energy spectrum, composition, anisotropy, hadron interaction models and multi-messenger
- Next-generation observatories from space and ground

UHECR2016 will be held at the Kyoto Research Park (KRP, <http://www.krp.co.jp/english/>). Room 1 on the second floor of the Western Zone Building #4 is the main venue, and screen view in Room 2 on the same floor is also available. The conference dinner is at the *Atrium* (Building #1) of KRP on Oct 12. Enjoy Japanese food, wine, whiskey, and also a traditional *Kyoto Maiko's* performance.



Kobayashi-Maskawa Institute  
for the Origin of Particles and the Universe



\* The sizes of the logos are not exactly scaled by the amount of grant provided.

---

## International Advisory Committee

S.W. Barwick,  
V.S. Berezinsky,  
P. Blasi,  
T. Ebisuzaki,  
R. Engel,  
P.L. Ghia,  
F.L. Halzen,  
Y. Itow,  
K.-H.Kampert (Chair),  
P. Lipari,  
K. Makishima,  
S. Ogio,  
A.V. Olinto,  
M.I. Panasyuk,  
I.H. Park,  
P. Picozza,  
P. Privitera,  
D. Ryu,  
H. Sagawa,  
P. Sokolsky,  
R. Yamazaki

## Local Organizing Committee

Y. Kawasaki,  
K. Kawata,  
S. Nagataki,  
T. Nonaka,  
S. Ogio (Secretary),  
H. Sagawa (Chair),  
T. Sako,  
M. Takeda,  
Y. Tsunesada,  
S. Udo,  
T. Yamamoto

## From Kansai International Airport to Kyoto City



- MK Skygate shuttle (3,600 JPY)

This service takes you directly to your destination. A Shuttle reservation is required 2 days before your arrival date. The Meeting point (MK counter) is located next to Gate H of the airport South Exit. Traveling time is about 120 minutes. For more information: <http://www.mktaxi-japan.com/>



- Kansai Airport Limited Express *HARUKA*, by Japan Railway (JR) (2,850 JPY for non-reservation seat)

Traveling time to Kyoto Station is 75 minutes. The tickets can be purchased at the station office. For more information:



- Limousine Bus, by KATE (Kansai Airport Transportation Enterprise) (2,550 JPY)

This bus leaves every 30-40 minutes. Traveling time to JR Kyoto Station is about 85 minutes. The tickets can be purchased from vending machines located near the bus stops.

## From JR Kyoto Station to KRP

**TAXI**



- Taxi

10 minutes (Approx. 1,000 JPY)

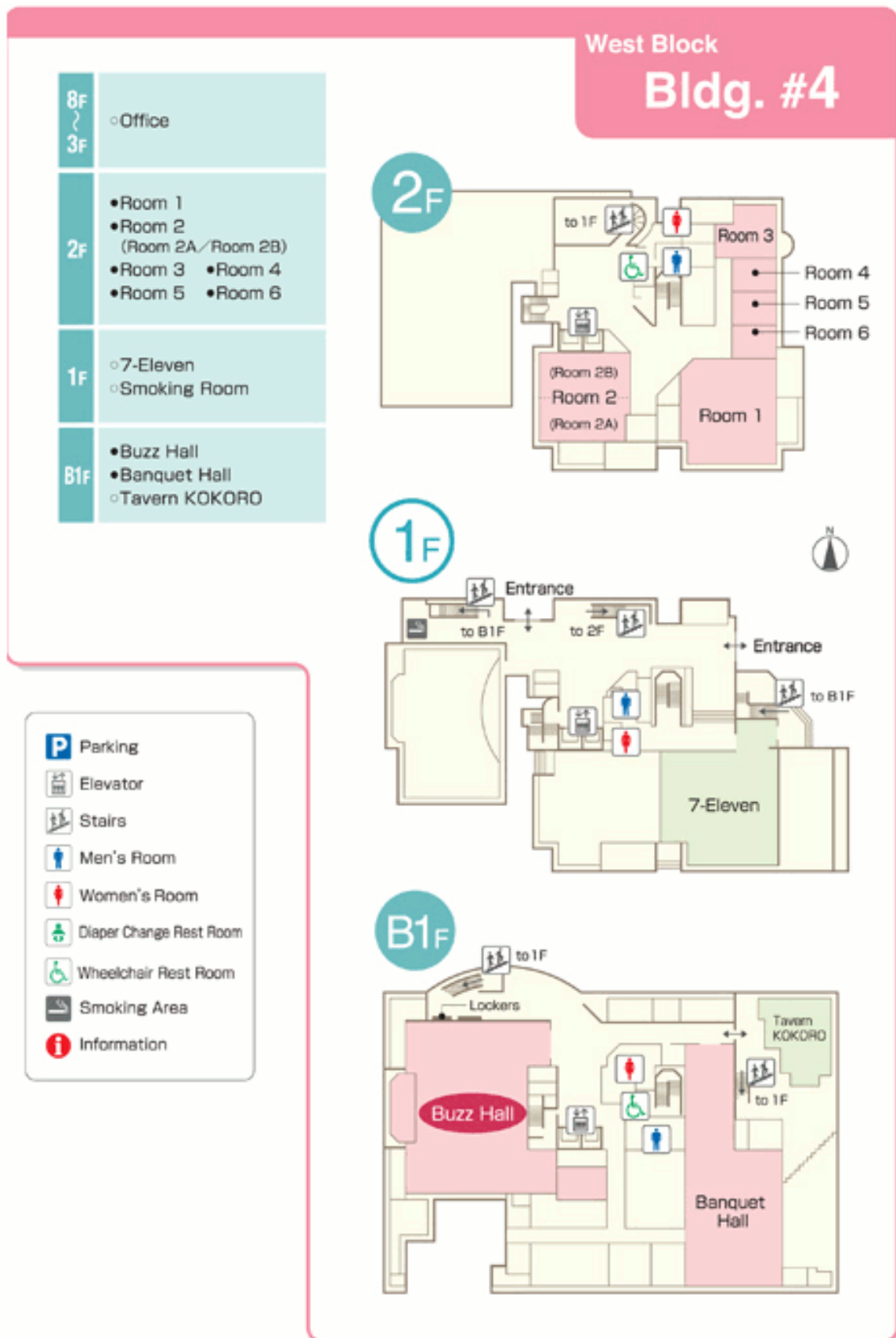


- JR *San-in* or *Sagano* line (Local)

Please get off at the first stop, Tambaguchi Station (4 minutes, 140 JPY). 4 minutes to walk from the station to Kyoto Research Park.

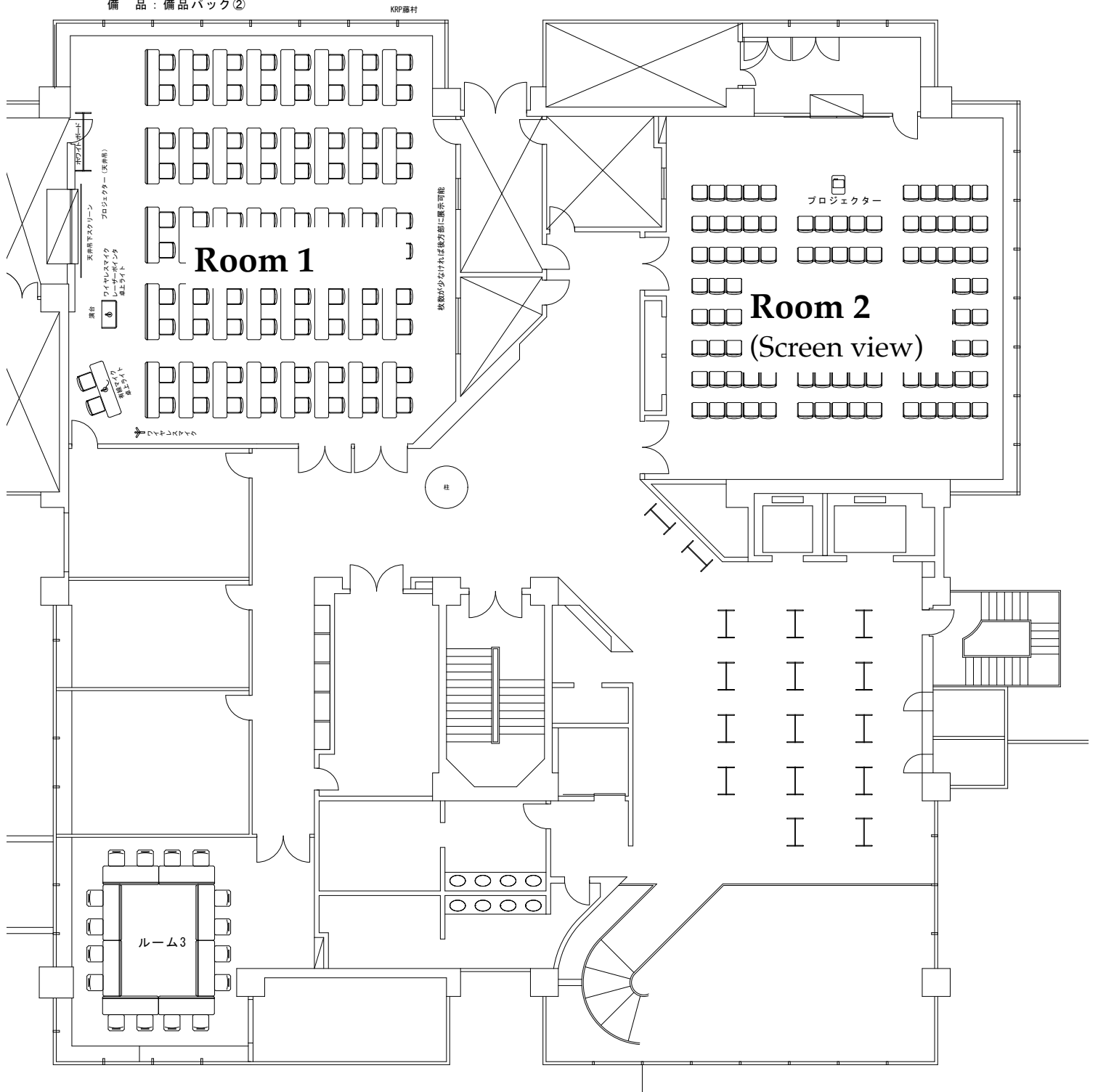
# Venue

Room 1 and 2, Building #4 in the Western Zone of the KRP



主催者：最高エネルギー宇宙線国際会議2016 (UHECR2016)  
 部屋前表示：最高エネルギー宇宙線国際会議2016 (UHECR2016)  
 日程：2016年10月10日～14日 9時～18時  
 会場：ルーム1 (西地区4号館2階)  
 設営：スクール80席  
 備品：備品バック②

会場：ルーム2 (西地区4号館2階)  
 設営：シアター115席



---

## Information

- Venue: Room 1 and Room 2, the 2nd floor of the W4 Building
  - The presentations are given at the Room 1, and screen-viewed in the Room 2.
- Poster sessions: During the coffee breaks, in the Room 2.
  - Posters are exhibited all the days in the conference, no changes.
- Rooms are available in
  - Oct 10: 15:00 - 19:00 (Registration and *Welcome Cocktail*)
  - Oct 11 and 14: 08:00 - 20:00
  - Oct 12:
    - Room 1 : 08:00 - 18:00
    - Room 2 : 08:00 - 17:00
  - Oct 13: 08:00 - 13:00
- Registration: 2nd floor of the W4 building, from 13:00 Oct 10. Enjoy also *Welcome Cocktail*.
- Welcome cocktail: 2nd floor of the W4 building, 15:00 - 19:00, Oct 10
  - Wine and snacks served.
- Conference dinner: 18:00 - 20:00 On Oct 12, at *Atrium* (Building #1) of the KRP.
  - Enjoy traditional Kyoto *Maikos'* performance.
- No session in the afternoon Oct 13.
  - Rooms are not available after 13:00.
- Internet access: Wi-Fi available. Instruction will be given at the conference.
- Lunch: Not served from the conference organizer. The KRP restaurant in the Building #1 is available, and there are several restaurants in the vicinity of the KRP.

UHECR2016 (Kyoto) Time table for Oral Presentations (ver. 2016.09.30)

	10.Oct (Mon)	11.Oct (Tue)	12.Oct (Wed)	13.Oct (Thu)	14.Oct (Fri)
	8:30	8:30	8:30	8:30	8:30
		Registration (if not yet)			
	9:00	Opening			
	9:10	TA Spectrum Summary		Constraints on UHECR sources from IceCube	Auger Prime
	9:30	Dmitri Ivanov (abstractID=59)	9:25	Aya Ishihara (abstractID=56)	(TBA)
		Measurement of the energy spectrum of cosmic rays with the Pierre Auger Observatory	Composition Measurements via Depth of Airshower Maximum at the Telescope Array	Multi-messengers from transient candidates of UHECRs	The TA x 4 Experiment
	9:55	Ines Valino (abstractID=39)	9:45	Kumiko Kotera (abstractID=62)	Eiji Kido (abstractID=19)
		Auger-TA energy spectrum working group report	Auger-TA composition working group report	UHECR and cosmogenic neutrinos	Telescope Array Low energy Extension: TALE
	10:15	(abstractID=37)	10:05		Shoichi Ogio (abstractID=26)
		Coffee Break	Hadronic interaction studies at the Pierre Auger Observatory	Venya Berezhinsky (abstractID=66)	The status of the TAIGA project
	10:45		10:25	Coffee Break	Coffee Break
		The sFLASH experiment: Measuring air fluorescence from Laboratory EAS at SLAC.	Darko Veberic (abstractID=64)		
	11:05	Pierre Sokolsky (abstractID=45)	10:55		
		Energy spectrum and composition constraints on the transition from Galactic to extragalactic cosmic rays	<Xmax> Uncertainty from Extrapolation of Cosmic Ray Air Shower Parameters.	A novel study connecting UHECRs, neutrinos, and gamma-rays with the objective to identify common counterparts of the three astrophysical messenger	IceCube-Gen2: The next generation neutrino observatory in Antarctica
	11:25	Etienne Parizot (abstractID=48)	11:15	Stefan Coenders (abstractID=69)	LU Lu (abstractID=63)
		Can ultrahigh energy protons come from steady astrophysical sources?	Review of accelerator experiments relevant to air shower development	Multi-messenger signals from UHECR propagation	The JEM-EUSO Program to study UHECRs from Space
	11:45	Ke Fang (abstractID=6)	11:45	Alexander Kusenko (abstractID=73)	Marco Casolino (abstractID=5)
		Particle acceleration to ultra-high rigidities	Takashi Sako (abstractID=71)	Constraining UHECR models with cosmogenic photon and neutrino predictions	The first results of the TUS orbital detector of ultra high energy cosmic rays and transient events in the
	12:05	Martin Lemoine (abstractID=75)	12:10	Arien Van Vliet (abstractID=10)	Mikhail Zotov (abstractID=12)
		Memorial Address (for Prof. James Watson Cronin) (for Prof. Motohiko Nagano)	The recent results from the LHCf experiment	High-Energy Particle Showers Observed at Ground Level in Coincidence With Downward Lightning Leaders at the Telescope Array	Prospects of silicon photomultipliers for ground-based cosmic ray experiments
	12:35		Review of model predictions for extensive air showers	John Belz (abstractID=54)	Christine Peters (abstractID=13)
		Lunch	12:35	Auger multidisciplinary subjects	Lunch
	14:20		Tanguy Pierog (abstractID=74)	(TBA)	
		Cosmic Rays Energy Spectrum observed by the TALE detector	14:25		Progress in Development of High Energy Neutrino Detectors in Antarctica using Coherent Radio Techniques
	14:40	Tareq Abuzayyad (abstractID=31)	14:45		Steven Barwick (abstractID=40)
		Cosmic ray physics with the KASCADE-Grande observatory	Search for Anisotropies in the measured Arrival Directions of Ultra-High Energy Cosmic Rays at the Pierre Auger Observatory		Radio detection of cosmic rays - achievements and future potential
	15:00	ARTEAGA-VELAZQUEZ (abstractID=57)	14:55		Tim Huege (abstractID=42)
		Results of CR energy spectrum and mass composition study with EAS Arrays in the Tunka Valley	TA anisotropy summary		Poster Session /Coffee
	15:20	Vasily Prosin (abstractID=43)	15:05	Peter Tinyakov (abstractID=29)	
		Estimation of the invisible energy with the data collected by the Pierre Auger Observatory	Arrival Directions at Ultra-High Energies: A Review		
	15:40	Analisa Gabriela Mariazzi (abstractID=9)	15:25	Armando DI MATTEO (abstractID=36)	
		Poster Session /Coffee	Poster Session /Coffee		
	16:10		15:55	UHECR anisotropies and the Large-Scale matter distribution	
		Summary of low energy (E < 1 EeV) spectrum and composition	16:20	Peter Tinyakov (abstractID=35)	
	16:35	Andrea Chavassa (abstractID=72)	16:40	Monte Carlo Bayesian search for the plausible source of the Telescope Array hotspot	
		(Galactic acceleration and transport) (TBA)	16:40	Hao-ning He (abstractID=4)	
	17:00		17:00	A Close Correlation of TA Hotspot Events with Filaments of Galaxies Connected to the Virgo Cluster	
		The physics of ultra-high energy cosmic rays: spectra, composition and the transition between galactic and extra-galactic cosmic rays.	RYU Dongsu (abstractID=17)	Influence of the galactic magnetic field on the trajectory of ultra-high energy cosmic rays	
	17:25	Roberto Aloisio (abstractID=67)	17:20	Jihyun Kim (abstractID=18)	
		Anisotropy Search in Energy Distribution in the Northern Hemisphere Using the Telescope Array	Nonlinear Diffusive Shock Acceleration in GRB Afterglows		
	17:45	Toshiyuki Nonaka (abstractID=34)	17:40	Don Warren (abstractID=52)	
		Lightest Nuclei UHECR from nearby galactic and nearest AGN sources	17:50		
	18:05	Daniele Fargion (abstractID=46)			
	18:20				
		IAC/LOC meeting	Banquet (at B1F Banquet hall)		
	19:00				
	20:00				