

# 10. Education

The Institute for Space–Earth Environmental Research primarily offers graduate programs in three schools: Science, Engineering, and Environmental Studies at Nagoya University. The institute has its own graduate course program for Heliospheric and Geospace Physics as part of the Division of Particle and Astrophysical Science in the Graduate School of Science. It also cooperates with the Department of Electrical Engineering through the Space Electromagnetic Environment group in the Graduate School of Engineering and the Department of Earth and Environmental Sciences as a group in the Earth and Planetary Sciences Course and the Hydrospheric–Atmospheric Sciences Course in the Graduate School of Environmental Studies, by teaching/training graduate students in disciplines related to Space–Earth Environmental Research.

Our graduate students use various approaches and techniques, such as ground observations, fieldwork, laboratory experiments, radioactive dating, numerical simulations and modeling, and theoretical research. Their research includes the development of satellites and balloon and aircraft instruments, as well as analysis of observational data. As this institute conducts research that involves the analysis of data taken by the instruments inside and outside of the country and/or collaborative research with foreign researchers, our students are active in pioneering new research fields by working with researchers through international collaborations and conducting interdisciplinary research. Their work is published as master’s or doctoral theses in academic journals and presented at international workshops and conferences. We nurture researchers who can apply their knowledge to benefit society and who have a broad perspective and an international mindset.

**Staff association between the research divisions in the ISEE and the graduate schools**

		Graduate School of Science					Graduate School of Engineering		Graduate School of Environmental Studies					
		Division of Particle and Astrophysical Science					Department of Electrical Engineering and Computer Science		Department of Earth and Environmental Sciences					
		Heliospheric and Geospace Physics					Electrical Engineering Course Space Electromagnetic Environment		Earth and Planetary Sciences Course Earth History Study		Hydrospheric-Atmospheric Sciences Course Global Water Cycle			
		Atmospheric and Environmental Science (AM)	Space Science – Experiment (SSE)	Solar and Space Physics - Theory (SS <sub>T</sub> )	Cosmic-Ray Physics (CR)	Heliospheric Plasma Physics (SW)	Space Observation	Information Engineering	CHIME	Tandemron AMS	Meteorology	Cloud and Precipitation Sciences	Atmospheric Chemistry	Hydroclimatology
Institute for Space–Earth Environmental Research	Integrated Studies			●			●							
	Cosmic-Ray Research				●									
	Heliospheric Research					●								
	Ionospheric and Magnetospheric Research		●			●								
	Meteorological and Atmospheric Research	●				●				●	●	●		
	Land–Ocean Ecosystem Research												●	●
	Chronological Research							●	●					
	Center for International Collaborative Research	●	●		●	●		●					●	
	Center for Intergrated Data Science			●	●		●	●		●	●			●
	Center for Orbital and Suborbital Observations	●	●		●					●	●			●

## Number of Students Supervised by ISEE Staff

(April 1, 2018–March 31, 2019)

	M1	M2	D1	D2	D3	Undergraduate Students	Non-regular students	Total
Graduate School of Science	14	15	4	3	10	-	1 * <sup>1</sup>	47
Graduate School of Engineering	5	8	0	1	1	-	-	15
Graduate School of Environmental Studies	9	9	2	7	8	-	-	35
School of Science	-	-	-	-	-	10	-	10
School of Engineering	-	-	-	-	-	7	-	7
ISEE	-	-	-	-	-	-	1 * <sup>2</sup>	1
Total	28	32	6	11	19	17	2	115

\* cumulative total in FY 2018, \*<sup>1</sup> Special Research Student, \*<sup>2</sup> Research Student

## Faculty Members

(April 1, 2018–March 31, 2019)

### ■ Graduate School of Science Division of Particle and Astrophysical Science

Field/Topics	Professor	Associate Professor	Lecturer	Assistant Professor
Solar-Terrestrial Chemistry	Akira Mizuno	Tomoo Nagahama		
Solar-Terrestrial Relationships	Masafumi Hirahara	Satoru Nozawa	Shin-ichiro Oyama	
	Kanya Kusano	Yuichi Otsuka		
Solar-Terrestrial Physics	Yoshitaka Itow	Satoshi Masuda		Akimasa Ieda
	Hiroyasu Tajima	Fumio Abe	Akira Okumura	Hiroaki Menjo
		Yutaka Matsubara		
	Munetoshi Tokumaru	Fusa Miyake		
		Kazumasa Iwai		Ken-ichi Fujiki

### ■ Graduate School of Engineering Department of Electrical Engineering and Computer

Field/Topics	Professor	Associate Professor	Lecturer	Assistant Professor
Space Electromagnetic Environment	Kazuo Shiokawa	Nozomu Nishitani		Taku Nakajima
		Masahito Nosé		
	Yoshizumi Miyoshi	Takayuki Umeda	Shinsuke Imada	

### ■ Graduate School of Environmental Studies Department of Earth and Environmental

Field/Topics	Professor	Associate Professor	Lecturer	Assistant Professor
Hydrospheric-Atmospheric Sciences Course Global Water Cycle	Kazuhisa Tsuboki	Taro Shinoda		
	Nobuhiro Takahashi	Hirohiko Masunaga		
	Michihiro Mochida			Sho Ohata
	Tetsuya Hiyama	Naoyuki Kurita	Hatsuki Fujinami	
	Joji Ishizaka	Hidenori Aiki		Yoshihisa Mino
Earth and Planetary Sciences Course Earth History Study	Masaki Enami	Takenori Kato		
	Hiroyuki Kitagawa	Masayo Minami		Hiroataka Oda

## Undergraduate Education

Based on demand, the faculty of the institute offers numerous undergraduate courses in the School of Science, the School of Engineering, and in other departments and at other universities in the adjacent area.

### ■ During the 2018 Academic Year, The Following Courses were Offered;

- Astrophysics and Space Science
- Astrophysics III
- Atmospheric and Hydrospheric Sciences
- Electric Circuits with Exercise
- Electromagnetic Wave Engineering
- Environmental Earth Sciences (Geosphere Environmental Chemistry)
- Experimental Physics
- Experiments in Physics - Advanced Course
- First Year Seminar A
- First Year Seminar B
- From the Big Bang to the Present-day Human Society
- Fundamentals of Atmospheric and Hydrospheric Sciences
- Geochemical Analysis II and Experiments
- Geology Experiments
- Introduction to Earth Science
- Introduction to Physics I, II
- Isotope Geochemistry
- Laboratory in Physics
- Mathematics 1 with Exercises A/B
- Petrology
- Petrology Experiments
- Physics Experiments I, II
- Probability Theory and Numerical Analysis with Exercises
- Science of Atmospheric-Hydrospheric Environment
- Solar System Science
- Topics in Advanced Physics

# 11. International Relations

## Academic Exchange

(28 in total)

Institution	Country/Region	Establishment
Indonesian National Institute of Aeronautics and Space	Indonesia	May 31, 1988
Korean Space Weather Center	Korea	December 24, 2012
Korea Institute of Ocean Science and Technology, Korea Ocean Satellite Center	Korea	April 17, 2014
Pukyong National University, College of Fisheries Sciences	Korea	October 2, 2006
Institute of High Energy Physics, Chinese Academy of Sciences	China	February 20, 2001
Polar Research Institute of China	China	November 11, 2005
Department of Atmospheric Sciences, National Taiwan University	Taiwan	October 30, 2009
Center for Weather Climate and Disaster Research, National Taiwan University	Taiwan	September 3, 2014
Bangladesh University of Engineering & Technology, Department of Physics	Bangladesh	March 4, 2008
National Institute of Water and Atmospheric Research	New Zealand	July 26, 1989
Centre for Geophysical Research, University of Auckland	New Zealand	December 7, 1992
Faculty of Science, University of Canterbury	New Zealand	July 30, 1998
Geophysical Institute, University of Alaska Fairbanks	U.S.A.	July 16, 1990
Space Environment Center, National Oceanic and Atmospheric Administration	U.S.A.	December 15, 1992
National Geophysical Data Center, National Oceanic and Atmospheric Administration	U.S.A.	January 5, 1993
Haystack Observatory, Massachusetts Institute of Technology	U.S.A.	October 24, 1994
Center for Astrophysics and Space Sciences, University of California at San Diego	U.S.A.	December 22, 1997
Center for Space Science and Engineering Research, Virginia Polytechnic Institute and State University	U.S.A.	January 23, 2013
Chacaltaya Cosmic Ray Observatory, Faculty of Sciences, Universidad Mayor de San Andres, La Paz	Bolivia	February 20, 1992
National Institute for Space Research	Brazil	March 5, 1997
Swedish Institute of Space Physics	Sweden	September 1, 2005 (since March 25, 1993)
Faculty of Science, University of Tromsø	Norway	April 2, 2003 (since October 8, 1993)
Department of Geophysics, Finnish Meteorological Institute	Finland	October 21, 1994
Yerevan Physics Institute	Armenia	October 18, 1996
Institute of Cosmophysical Research and Radiowave Propagation, Far Eastern Branch, Russian Academy of Sciences	Russia	April 14, 2007
Institute of Solar-Terrestrial Physics, Siberian Branch of the Russian Academy of Sciences	Russia	October 28, 2008
Yu.G. Shafer Institute of Cosmophysical Research and Aeronomy, Siberian Branch of the Russian Academy of Sciences	Russia	November 28, 2012
The Polar Geophysical Institute, Murmansk	Russia	March 13, 2017

Note: The List includes the academic exchanges established in the former organizations before ISEE.

## Research Projects

### ■ Major International Collaborative Projects

(78 in total)

Research Project	ISEE Representative	Collaborating Country/Region	Collaborating Organization
Study of the Onset Mechanism of Solar Eruptions	K. Kusano	Germany	University of Potsdam
Observational Study of the Onset Mechanism of Solar Eruptions	K. Kusano	U.S.A China	New Jersey Institute of Technology University of Science and Technology of China
Study of Modeling of Solar Eruptions	K. Kusano	U.S.A.	Harvard-Smithsonian Center for Astrophysics
Study of Triggering Mechanism of Solar Flares	K. Kusano	U.K.	UCL-Mullard Space Science Laboratory
Study of Magnetic Reconnection	K. Kusano	U.K.	University of Manchester
Solar Researches with Nobeyama Radioheliograph	S. Masuda	U.S.A. China Korea Russia U.K. Germany Switzerland Belgium	GSFC/NASA, Catholic University of America, New Jersey Institute of Technology National Astronomical Observatories, Chinese Academy of Sciences KASI, Seoul National University Russian Academy of Sciences University of Warwick Georg-August-Universität Göttingen University of Applied Sciences and Arts Northwestern Switzerland Katholieke Universiteit Leuven
Radiation Belt Storm Probes (RBSP) Project	Y. Miyoshi	U.S.A.	NASA, JHUAPL
Modeling Study of Inner Magnetosphere	Y. Miyoshi	U.S.A.	Los Alamos National Laboratory
Pulsating Aurora as a Manifestation of Non-Linear Wave Particle	Y. Miyoshi	U.S.A China Finland Czech	UCLA Peking University Sodankylä Geophysical Observatory: SGO Czech Academy of Sciences
Collaborative study on ERG project	Y. Miyoshi	Taiwan	Institute of Astronomy and Astrophysics, Academia Sinica
A Search for Dark Objects Using the Gravitational Microlensing Effect	F. Abe	New Zealand U.S.A.	University of Auckland, University of Canterbury, Victoria University of Wellington, Massey University University of Maryland, NASA
Study in Cosmic Neutrinos by Using a Large Water Cherenkov Detector	Y. Itow	U.S.A. Canada U.K. Spain Korea China Poland	Boston University, Brookhaven National Laboratory, UCI, Duke University, George Mason University, University of Hawaii, Indiana University, Los Alamos National Laboratory, University of Maryland, State University of New York, University of Washington University of British Columbia, University of Toronto, TRIUMF Queen Mary University of London, Imperial College London, University of Liverpool, University of Oxford, University of Sheffield Complutense University of Madrid Chonnam National University, Seoul National University, Sungkyunkwan University Tsinghua University University of Warsaw

Research Project	ISEE Representative	Collaborating Country/Region	Collaborating Organization
Study in Interaction of Very High Energy Cosmic Rays by Using Large Hadron Collider	Y. Itow	Italy France Switzerland U.S.A.	University of Florence, Catania University École Polytechnique CERN Lawrence Berkeley National Laboratory
Study of Dark Matter and Solar Neutrinos Using a Liquid Xenon Detector	Y. Itow	Korea	Seoul National University, Sejong University, Korea Research Institute of standards and Science
Research and Development for the Next Generation Water Cherenkov Detector, Hyper-Kamiokande	Y. Itow	U.S.A.  Korea China U.K.  Italy France Switzerland  Spain Poland Brazil <i>Canada, Russia Portugal</i>	Boston University, Brookhaven National Laboratory, UCI, Duke University, George Mason University, Indiana University, University of Hawaii, Los Alamos National Laboratory, University of Maryland, State University of New York, University of Washington Chonnam National University, Seoul National University, Sungkyunkwan University Tsinghua University Imperial College London, Lancaster University, University of Oxford, Queen Mary University of London, University of Sheffield, Rutherford Appleton Laboratory INFN Sezione di Bari, INFN Sezione di Napoli, INFN Sezione di Padova, INFN Sezione di Roma CEA Saclay, École Polytechnique University of Bern, Swiss Federal Institute of Technology Zurich Autonomous University of Madrid University of Warsaw University of São Paulo <i>and other Institutions</i>
Study of Dark Matter and Solar Neutrinos Using a 2-phase Liquid Xenon TPC Detector	Y. Itow	Germany  Italy Switzerland U.S.A  Sweden Israel Portugal <i>France, UAE, Netherlands</i>	Max-Planck-Institut, Albert-Ludwigs-Universität Freiburg INFN, Università di Bologna University of Zurich Columbia University, University of Chicago, Purdue University, UCSD Stockholms universitet Weizmann Institute of Science Universidade de Coimbra <i>and other institutions</i>
Study in Interaction of Very High Energy Cosmic Rays by Using Relativistic Heavy Ion Collider	Y. Itow	Italy U.S.A.	University of Florence, Catania University Brookhaven National Laboratory
Study of Solar Neutrons	Y. Matsuura	Bolivia  Armenia China  Switzerland U.S.A. Mexico	Research Institute of Physics, University of San Andrés Yerevan Physics Institute Institute of High Energy Physics, Chinese Academy of Sciences University of Bern University of Hawaii National Autonomous University of Mexico
Search for Cosmic-ray Excursions in the Past by Single-year Measurements of $^{14}\text{C}$ in Tree Rings	F. Miyake	U.S.A. Switzerland	The University of Arizona Swiss Federal Institute of Technology
Solar Flare Research with Hard X-ray Spectral Imaging Observations	H. Tajima	U.S.A.	UCB, MSFC/NASA, Air Force Research Laboratory
Solar Flare Research with Gamma-ray Spectral Imaging Observations with Polarimetry	H. Tajima	U.S.A.	UCB, Lawrence Berkeley National Laboratory, GSFC/NASA

Research Project	ISEE Representative	Collaborating Country/Region	Collaborating Organization
Research on Origin of Cosmic Rays with Fermi Satellite	H. Tajima	U.S.A. France Italy Sweden	Stanford University, SLAC National Accelerator Laboratory, GSFC/NASA, U.S. Naval Research Laboratory, UCSC, Sonoma State University, University of Washington, Purdue University, Ohio State University, University of Denver, CENS, CNRS, École Polytechnique, INFN, Italian Space Agency, IFSI, Royal Institute of Technology, Stockholm University
Research on Origin of Cosmic Rays with CTA (Cherenkov Telescope Array)	H. Tajima	Germany France Italy Spain Switzerland U.K. U.S.A. <i>Brazil, Argentina, Poland, Armenia, Australia, Czech, Bulgaria, Croatia, Finland, Greece, Sweden Slovenia, India, Ireland, South Africa</i>	Deutsches Elektronen-Synchrotron, Max-Planck-Institut, Heidelberg University, CENS, École Polytechnique, University of Paris, INFN, IFSI, University of Barcelona, Complutense University, University of Zürich, Durham University, University of Leicester, University of Leeds, SLAC National Accelerator Laboratory, Argonne National Laboratory, University of Washington, Iowa State University, UCLA, UCSC, University of Chicago, Smithsonian Observatory and other institutions
Observations of Interplanetary Disturbances Using the International IPS Network	M. Tokumaru	U.K. Russia India Mexico Australia	LOFAR-UK, Lebedev Physical Institute, Tata Institute of Fundamental Research, National Autonomous University of Mexico, Murchison Widefield Array
Study of 3-D Solar Wind Structure and Dynamics Using Heliospheric Tomography	M. Tokumaru	U.S.A.	CASS/UCSD
Study on the Application of Interplanetary Scintillation Observations to Space Weather Forecast	M. Tokumaru	Korea	Korean Space Weather Center
Study of the Heliospheric Boundary Region Using Observations of Interplanetary Scintillation	M. Tokumaru	U.S.A.	Interstellar Boundary Explorer, IMAP
Ionosphere and Upper Atmosphere Research, Observations and Monitoring	Y. Otsuka	Thailand	Chiang Mai University
Variation of the Thermosphere and Ionosphere owing to the Energy of Atmospheric Waves	Y. Otsuka	Indonesia	LAPAN
SDI-3D project: Development of SDI	S. Oyama	U.S.A. Finland Sweden	Geophysical Institute/UAF, University of Oulu, Finnish Meteorological Institute, Sodankylä Geophysical Observatory, Lappeenranta-Lahti University of Technology, The Swedish Institute of Space Physics (IRF), KTH Royal Institute of Technology
Study of Auroral Energetic Electron Precipitation (EEP) Impacts on the Upper/Middle Atmosphere	S. Oyama	Finland New Zealand U.K. Norway U.S.A.	Sodankylä Geophysical Observatory, University of Oulu, Finnish Meteorological Institute, University of Otago, British Antarctic Survey, University Centre in Svalbard, University of Alaska Fairbanks

Research Project	ISEE Representative	Collaborating Country/Region	Collaborating Organization
VarSITI (Variability of the Sun and Its Terrestrial Impact)	K. Shiokawa	U.S.A., France, Germany, U.K., Italy, Canada,	SCOSTEP
Magnetic Conjugate Observations of Midlatitude Thermospheric Disturbances	K. Shiokawa	Australia	Radio and Space Service/IPS
High-Sensitive Imaging Measurements of Airglow and Aurora and electromagnetic waves in Canadian Arctic	K. Shiokawa	U.S.A. Canada	University of California, Augsburg College Virginia Polytechnic Institute and State University University of Calgary, Athabasca University
Comparison of Dynamical Variations of the Mesosphere, Thermosphere, and Ionosphere between Asian and Brazilian Longitudes	K. Shiokawa	Brazil	INPE
Ground and Satellite Measurements of Geospace Environment in the Far-Eastern Russia	K. Shiokawa	Russia	Institute of Cosmophysical Research and Radiowave Propagation, Far Eastern Branch, Russian Academy of Sciences
Observations of the Equatorial Ionosphere in South-East Asia and West Africa	K. Shiokawa	Nigeria Cote d'Ivoire	National Space Research and Development Agency, Federal University of Technology, Akure Université Félix Houphouët-Boigny
Observations of Waves and Particles in the Inner Magnetosphere in the Siberian Region of Russia	K. Shiokawa	Russia	IKFIA/SB RAS, ISTP/SB RAS
Study of the Polar/Midlatitude Ionosphere and Magnetosphere Using the SuperDARN HF Radar Network	N. Nishitani	U.S.A. U.K. France South Africa Australia Canada	JHUAPL, Virginia Polytechnic Institute and State University University of Leicester LPC2E/CNRS University of KwaZulu-Natal La Trobe University University of Saskatchewan
Study of the Polar Upper Atmosphere Using the EISCAT Radars and Other Instruments	S. Nozawa	Norway Sweden, Finland, Germany, U.K., China	University of Tromsø EISCAT Scientific Association
Derivation of substorm index from low-latitude geomagnetic field data	M. Nosé	Australia Turkey Germany Spain Denmark U.S.A.	Geoscience Australia Boğaziçi University Ludwig-Maximilians-Universität München Universitat Ramon Llull Technical University of Denmark United States Geological Survey (USGS)
Future Satellite Mission for the Terrestrial Magnetosphere-Ionosphere-Thermosphere Explorations by Formation Flight Observations and its Feasibility Study and Collaboration of the Satellite and Ground-Based Observations	M. Hirahara	Sweden	Swedish Institute of Space Physics (IRF), Swedish National Space Board
Research and Development of the Plasma/Particle Instrument Suite for the Mercury Magnetospheric Exploration Mission	M. Hirahara	France Sweden U.K. U.S.A. Switzerland	CESR-CNRS, CETP-IPSL Institute for Solar Physics of the Royal Swedish Academy of Sciences Rutherford Appleton Laboratory Boston University University of Bern
Study on Science Subjects and Developmental Techniques of Observational Instruments toward Future Spacecraft Exploration Missions for the Space-Earth Coupling System	M. Hirahara	U.S.A. Canada Sweden	University of Colorado Boulder, UCB University of Calgary Swedish Institute of Space Physics (IRF)
Continuous Observation of Methane at a Paddy Field in Northern India	Y. Matsumi	India	University of Delhi
Observation of PM2.5 in Hanoi	Y. Matsumi	Vietnam	Hanoi University of Science and Technology



Research Project	ISEE Representative	Collaborating Country/Region	Collaborating Organization
Observation of PM2.5 in Ulan Bator	Y. Matsumi	Mongolia	National University of Mongolia
Study of aerosols and atmospheric trace gases by using SAVER-Net observation network in South America	A. Mizuno	Argentina Chile Bolivia	CEILAP, Servicio Meteorológico Nacional Argentina University of Magallanes (UMAG), Dirección Meteorológica de Chile University of La Frontera, Universidad Mayor de San Andrés
High Energy Particles in Geospace: the Acceleration Mechanism and the Role in Earth's Climate	A. Mizuno	U.S.A. Norway Sweden	University of Colorado Boulder, UCLA, University of Arizona University of Tromsø EISCAT Scientific Association
Source Apportionment of Organic Aerosols in Beijing	M. Mochida	China	Tianjin University
Aircraft observation of aerosols and clouds in the Arctic	S. Ohata	Germany	Alfred Wegener Institute, Universität Leipzig
Long-term observation of black carbon aerosols in the Arctic	S. Ohata	Norway U.S.A. Canada Russia	Norwegian Polar Institute National Oceanic and Atmospheric Administration Government of Canada Arctic and Antarctic Research Institute
Global Precipitation Measurement Mission (GPM)	H. Masunaga N. Takahashi	U.S.A.	NASA
Tropical Rainfall Measuring Mission	N. Takahashi	U.S.A.	NASA
Study on tropical convective-radiative interactions	H. Masunaga	France	Laboratoire de Meteorology Dynamique/CNRS
Study on tropical-subtropical atmospheric dynamics	H. Masunaga	U.S.A.	University of Miami
Tropical Cyclones-Pacific Asian Research Campaign for Improvement of Intensity Estimations/Forecasts (T-PARCI)	K. Tsuboki T. Shinoda	Taiwan	National Taiwan University Atmospheric Sciences
Advanced Study on Precipitation Enhancement in Arid and Semi-Arid Regions	M. Murakami	United Arab Emirates	National Centre of Meteorology, Khalifa University
Study of Equatorial Waves in the Atmosphere and Ocean	H. Aiki	Germany	GEOMAR Helmholtz Centre for Ocean Research Kiel
Validation of GOCI Products and Application to Environmental Monitoring of Japanese Coastal Waters	J. Ishizaka	Korea	Korea Institute of Ocean Science and Technology
Collection of Validation Dataset of GCOM-C Coastal Products	J. Ishizaka	Korea U.S.A. Taiwan Thailand China Estonia	Korea Institute of Ocean Science and Technology Columbia University, East Carolina University National Cheng Kung University Burapha University First Institute of Oceanography, Nanjing, University of Science and Technology University of Tartu
Sea Surface Nitrate and Nitrate Based New Production - two innovative research products from SGLI on board GCOM-C	J. Ishizaka	U.S.A.	Columbia University
Investigating the optical characteristics of red tides in the upper Gulf of Thailand	J. Ishizaka	Thailand	University of Burapa, Kasetsart University
Validation of ocean color products in the western North Pacific and Japanese coastal waters : Collaboration with JAXA GCOM-C project	J. Ishizaka	Germany	European Organisation for the Exploitation of Meteorological Satellites
Towards a Deeper understanding of Tropical Isoscapes	N. Kurita	Australia	James Cook University, Cairn

Research Project	ISEE Representative	Collaborating Country/Region	Collaborating Organization
Integrated Land Ecosystem - Atmosphere Processes Study (iLEAPS), one of the Global Research Projects (GRPs) of the Future Earth	T. Hiyama	U.K., India, Finland, New Zealand, China, Korea <i>and others</i>	iLEAPS/Future Earth
Observational Study of Vegetation, Energy and Water in Eastern Siberia Towards Elucidation of Climate and Carbon Cycle Changes	T. Hiyama	Russia	Institute for Biological Problems of Cryolithozone /SB RAS
Arctic Challenge for Sustainability (ArCS) Project	T. Hiyama	U.S.A.	International Arctic Research Center of the University of Alaska Fairbanks (IARC)
Estimating Permafrost Groundwater age in Central Mongolia	T. Hiyama	Mongol	Institute of Geography and Geoecology of the Mongolian Academy of Sciences
Study of methane flux observation in Eastern Siberia and the obtained data analysis	T. Hiyama	Russia	Institute for Natural Science, North Eastern Federal University
Radiocarbon dating of bronze wares excavated from Indian archeological site	H. Oda	India	Deccan College
Radiocarbon dating of bronze wares excavated from Russian archeological site	H. Oda	Russia	Institute of Ethnology and Anthropology Russian Academy of Science
Geochronological Research on the Basement Rocks in Japan and Korea	T. Kato	Korea	Korea Institute of Geoscience and Mineral Resources (KIGAM)
Development of New Analytical Techniques and Accurate Quantification of Electron Microprobe Analysis	T. Kato	Korea	Pusan National University (PNU)
Climate change reconstruction of the Central Highlands in Vietnam	H. Kitagawa	Vietnam	Vietnam Academy of Science and Technology
International Continental Scientific Drilling Program - Dead Sea Deep Drilling Project (ICDP-DSDDP)	H. Kitagawa	Israel U.S.A Germany Switzerland	Geological Survey of Israel, Hebrew University of Jerusalem Columbia University, University of Minnesota German Research Centre for Geosciences, Max-Planck-Institute Mainz for Chemistry Université de Genève
Study of Grand-Water Circulation Based on <sup>14</sup> C Ages of Underground Water and Hot-Spring Water Samples from Korea	M. Minami	Korea	Korea Institute of Geoscience and Mineral Resources (KIGAM)
Climate reconstruction using travertine from Takht-e-Soleyman area in Kurdistan, Iran	M. Minami	Iran	University of Kurdistan

**Visitors from Foreign Institutes****(219 in total)**

Name	Country/ Region	Affiliation	Period	Status at Nagoya University
Mark Looper	U.S.A.	The Aerospace Corporation	Apr. 15 - 20, 2018	Visitor
Jianwei Lin	Taiwan	National Taiwan University	Apr. 16 - 20, 2018	Foreign Collaborative Researcher
Bernhard Kliem	Germany	University of Potsdam	Apr. 17 - May 3, 2018	Visitor
Antonia Savcheva	U.S.A.	Smithsonian Observatory	Apr. 18 - May 3, 2018	Visitor
Naomi Maruyama	U.S.A.	Univ. of Colorado	May 13 - 19, 2018	Participant in the Symposium
Joaquim E R Costa	Brazil	National Institute for Space Research	May 13 - 25, 2018	Participant in the Symposium
Felix Riehn	Portugal	Laboratório de Instrumentação e Física Experimental de Partículas	May 14 - 20, 2018	Participant in the Symposium
Reinhard Friedel	U.S.A.	Los Alamos National Laboratory	May 14 - 20, 2018	Participant in the Symposium
Juan Americo Gonzales Esparza	Mexico	National Autonomous University of Mexico	May 14 - 24, 2018	Participant in the Symposium
Sebastien Rougerie	France	Centre National d'Études Spatiales	May 14 - 24, 2018	Participant in the Symposium
Joel T Dahlin	U.S.A.	NASA Goddard Space Flight Center	May 14 - 25, 2018	Participant in the Symposium
Brett Anthony Carter	Australia	RMIT University	May 15 - 26, 2018	Participant in the Symposium
Changhyu Ko	Korea	Korean Space Weather Center	May 16 - 18, 2018	Participant in the Symposium
Charles Lin	Taiwan	National Cheng Kung University	May 16 - 18, 2018	Participant in the Symposium
Danny Summers	Canada	Memorial University of Newfoundland	May 16 - 18, 2018	Participant in the Symposium
Jangsuk Choi	Korea	Korean Space Weather Center	May 16 - 18, 2018	Participant in the Symposium
Jiyoung Kim	Korea	Korea Meteorological Administration	May 16 - 18, 2018	Participant in the Symposium
Marcin Marek Latocha	Austria	Seibersdorf Laboratories	May 16 - 18, 2018	Participant in the Symposium
Suhaila Binti M Buhari	Malaysia	Universiti Teknologi Malaysia	May 16 - 18, 2018	Participant in the Symposium
Xiaoxin Zhang	China	China Meteorological Administration	May 16 - 18, 2018	Participant in the Symposium
Michael Terkildsen	Australia	Bureau of Meteorology	May 16 - 24, 2018	Participant in the Symposium
Gerald David Stedje	U.S.A.	Abt Associates	May 18 - 25, 2018	Participant in the Symposium
Gupta Sunilkumar	India	Tata Institute of Fundamental Research	May 19 - 25, 2018	Participant in the Symposium
Semen Khokhlov	Russia	NRNU MEPhI	May 19 - 25, 2018	Participant in the Symposium
Ke Fang	U.S.A.	University of Maryland	May 19 - 26, 2018	Participant in the Symposium
Alexander Iakovlev	Kazakhstan	Nazarbayev University	May 19 - 27, 2018	Participant in the Symposium
Juan Carlos Arteaga-Velazquez	Mexico	Universidad Michoacana	May 19 - 27, 2018	Participant in the Symposium

Name	Country/ Region	Affiliation	Period	Status at Nagoya University
Igor Petrov	Russia	Yu.G. Shafer Institute of Cosmophysical Research and Aeronomy	May 20 - 26, 2018	Participant in the Symposium
Akihiko Monnai	France	Institut de Physique Théorique, CNRS/CEA	May 21 - 25, 2018	Participant in the Symposium
Alberto Oliva	Switzerland	Centro de Investigaciones Energéticas Medioambientales y Tecno	May 21 - 25, 2018	Participant in the Symposium
Alexander Borisov	Russia	Lebedev Physical Institute	May 21 - 25, 2018	Participant in the Symposium
Alexander Lidvansky	Russia	INR RAS	May 21 - 25, 2018	Participant in the Symposium
Anatoli Fedynitch	Germany	Deutsches Elektronen-Synchrotron	May 21 - 25, 2018	Participant in the Symposium
Anatoly Ivanov	Russia	Shafer Institute for Cosmophysical Research and Aeronomy	May 21 - 25, 2018	Participant in the Symposium
Andrea Chiavassa	Italy	Università degli studi & INFN Torino	May 21 - 25, 2018	Participant in the Symposium
Anton Lukyashin	Russia	NRNU MEPhI	May 21 - 25, 2018	Participant in the Symposium
Artur Tkachenko	Russia	INR RAS	May 21 - 25, 2018	Participant in the Symposium
Bryan Pattison	Switzerland	CERN	May 21 - 25, 2018	Participant in the Symposium
Cunfeng Feng	China	Shandong University	May 21 - 25, 2018	Participant in the Symposium
Daniel Garcia-Fernandez	France	Subatech	May 21 - 25, 2018	Participant in the Symposium
Daniel Biehl	Germany	Deutsches Elektronen-Synchrotron	May 21 - 25, 2018	Participant in the Symposium
Dennis Soldin	U.S.A.	University of Delaware and Bartol Research Institute	May 21 - 25, 2018	Participant in the Symposium
Dmitriy Beznosko	Kazakhstan	Nazarbayev University	May 21 - 25, 2018	Participant in the Symposium
Donghwa Kang	Germany	Karlsruhe Institute of Technology	May 21 - 25, 2018	Participant in the Symposium
Edison Hiroyuki Shibuya	Brazil	University of Campinas	May 21 - 25, 2018	Participant in the Symposium
Eduardo De La Fuente Acosta	Mexico	Universidad de Guadalajara	May 21 - 25, 2018	Participant in the Symposium
Eli Waxman	Israel	Weizmann Institute	May 21 - 25, 2018	Participant in the Symposium
Ervin Kafexhiu	Germany	Max-Planck-Institute for Nuclear Physics	May 21 - 25, 2018	Participant in the Symposium
Etienne Parizot	France	APC, University of Paris	May 21 - 25, 2018	Participant in the Symposium
Fiorenza Donato	Italy	Torino University	May 21 - 25, 2018	Participant in the Symposium
Frank Schroder	Germany	Karlsruhe Institute of Technology	May 21 - 25, 2018	Participant in the Symposium
Gernot Maier	Germany	Deutsches Elektronen-Synchrotron	May 21 - 25, 2018	Participant in the Symposium
Hans Dembinski	Germany	Max-Planck-Institute for Nuclear Physics	May 21 - 25, 2018	Participant in the Symposium
Hermes Leon Vargas	Mexico	National Autonomous University of Mexico	May 21 - 25, 2018	Participant in the Symposium
Il Park	Korea	Sungkyunkwan University	May 21 - 25, 2018	Participant in the Symposium

Name	Country/ Region	Affiliation	Period	Status at Nagoya University
Janusz Kempa	Poland	Warsaw University of Technology	May 21 - 25, 2018	Participant in the Symposium
Javier Gonzalez	U.S.A.	University of Delaware	May 21 - 25, 2018	Participant in the Symposium
Jing Huang	China	Institute of High Energy Physics, Chinese Academy of Sciences	May 21 - 25, 2018	Participant in the Symposium
Kenichi Sakai	U.S.A.	GSFC/NASA	May 21 - 25, 2018	Participant in the Symposium
Kfir Blum	Switzerland	Weizmann Institute & CERN	May 21 - 25, 2018	Participant in the Symposium
Klaus Werner	France	Université de Nantes	May 21 - 25, 2018	Participant in the Symposium
Krzysztof Wieslaw Wozniak	Poland	Poland Academy of Science	May 21 - 25, 2018	Participant in the Symposium
Leif Lonnblad	Sweden	Lund University	May 21 - 25, 2018	Participant in the Symposium
Lev Timofeev	Russia	The Yu.G. Shafer Institute of Cosmophysical Research and Aeronomy SB RAS	May 21 - 25, 2018	Participant in the Symposium
Maria Lavrova	Russia	Joint Institute for Nuclear Research	May 21 - 25, 2018	Participant in the Symposium
Markus Ackermann	Germany	Deutsches Elektronen-Synchrotron	May 21 - 25, 2018	Participant in the Symposium
Mauricio Bustamante	Denmark	Niels Bohr Institute	May 21 - 25, 2018	Participant in the Symposium
Mikhail Kuznetsov	Russia	INR RAS	May 21 - 25, 2018	Participant in the Symposium
Minho Kim	Korea	Korea University	May 21 - 25, 2018	Participant in the Symposium
Nikolay Topchiev	Russia	Lebedev Physical Institute	May 21 - 25, 2018	Participant in the Symposium
Paschal Coyle	France	Centre de Physique des Particules de Marseille	May 21 - 25, 2018	Participant in the Symposium
Ralf Matthias Ulrich	Germany	Karlsruhe Institute of Technology	May 21 - 25, 2018	Participant in the Symposium
Ralph Engel	Germany	Karlsruhe Institute of Technology	May 21 - 25, 2018	Participant in the Symposium
Raul Ribeiro Prado	Germany	Deutsches Elektronen-Synchrotron	May 21 - 25, 2018	Participant in the Symposium
Rim Mirzafatikhov	Russia	Lebedev Physical Institute	May 21 - 25, 2018	Participant in the Symposium
Rostislav Kokoulin	Russia	NRNU MEPhI	May 21 - 25, 2018	Participant in the Symposium
Sebastian Baur	Germany	Karlsruhe Institute of Technology	May 21 - 25, 2018	Participant in the Symposium
Sergey Ostapchenko	Germany	Frankfurt Institute for Advanced Studies	May 21 - 25, 2018	Participant in the Symposium
Sergey Shaulov	Russia	Frankfurt Institute for Advanced Studies	May 21 - 25, 2018	Participant in the Symposium
Sergey Suchkov	Russia	Lebedev Physical Institute	May 21 - 25, 2018	Participant in the Symposium
Sergey S. Borisov	Russia	Lebedev Physical Institute	May 21 - 25, 2018	Participant in the Symposium
Sergio Petrera	Italy	Gran Sasso Science Institute and INFN Laboratori Nazionali del Gran Sasso	May 21 - 25, 2018	Participant in the Symposium
Soomin Jeong	Korea	Sungkyunkwan University	May 21 - 25, 2018	Participant in the Symposium

Name	Country/ Region	Affiliation	Period	Status at Nagoya University
Spencer Klein	U.S.A.	UCB	May 21 - 25, 2018	Participant in the Symposium
Stefan Ohm	Germany	Deutsches Elektronen-Synchrotron	May 21 - 25, 2018	Participant in the Symposium
Sunny Seo	Korea	Institute of Basic Science	May 21 - 25, 2018	Participant in the Symposium
Tanguy Pierog	Germany	Institute for Nuclear Physics/IKP	May 21 - 25, 2018	Participant in the Symposium
Thorsten Glusenkamp	Germany	Erlangen Center for Astroparticle Physics	May 21 - 25, 2018	Participant in the Symposium
Tileubek Uakhitov	Kazakhstan	Nazarbayev University	May 21 - 25, 2018	Participant in the Symposium
Vera Georgievna Sinitsyna	Russia	Lebedev Physical Institute	May 21 - 25, 2018	Participant in the Symposium
Vera Yurievna Sinitsyna	Russia	Lebedev Physical Institute	May 21 - 25, 2018	Participant in the Symposium
Vladimir Ryabov	Russia	Lebedev Physical Institute	May 21 - 25, 2018	Participant in the Symposium
Wen Yin	China	Institute of High Energy Physics, Chinese Academy of Sciences	May 21 - 25, 2018	Participant in the Symposium
William Hanlon	U.S.A.	University of Utah	May 21 - 25, 2018	Participant in the Symposium
Xu Chen	China	Institute of High Energy Physics, Chinese Academy of Sciences	May 21 - 25, 2018	Participant in the Symposium
Ying Zhang	China	Institute of High Energy Physics, Chinese Academy of Sciences	May 21 - 25, 2018	Participant in the Symposium
Yuhui Lin	China	Institute of High Energy Physics, Chinese Academy of Sciences	May 21 - 25, 2018	Participant in the Symposium
Zbigniew Plebaniak	Poland	National Centre for Nuclear Research	May 21 - 25, 2018	Participant in the Symposium
Zbigniew Włodarczyk	Poland	Jan Kochanowski University, Kielce	May 21 - 25, 2018	Participant in the Symposium
Zhe Li	China	Institute of High Energy Physics, Chinese Academy of Sciences	May 21 - 25, 2018	Participant in the Symposium
Zhen Cao	China	Institute of High Energy Physics, Chinese Academy of Sciences	May 21 - 25, 2018	Participant in the Symposium
Zohra Bouhali	Algeria	Badji Mokhtar University	May 21 - 25, 2018	Participant in the Symposium
Kohta Murase	U.S.A.	Pennsylvania State University	May 21 - 26, 2018	Participant in the Symposium
Asgari-Targhi Mahboubeh	U.S.A.	Harvard-Smithsonian Center for Astrophysics	Jun. 10 - 20, 2018	Participant in the Symposium
Mikinori Kuwata	Singapore	Nanyang Technological University	Jul. 2, 2018	Participant in the Symposium
Erica Lastufka	Switzerland	University of Applied Sciences and Arts Northwestern Switzerland	Jul. 2 - 13, 2018	Visitor
Khan-Hyuk Kim	Korea	National Space Science Center, Chinese Academy of Science	Jul. 5, 2018	Visitor
Bernard Jackson	U.S.A.	University of California San Diego	Jul. 6, 2018	Visitor
V. Lakshmi Narayanan	India	National Atmospheric Research Laboratory	Jul. 8 - 15, 2018	Participant in the Symposium
Hai Guo	China	The Hong Kong Polytechnic University	Jul. 9, 2018	Participant in the Symposium
Exner Willi	Germany	Technische Universität Braunschweig	Jul. 11 - 13, 2018	Visitor

## 11. International Relations

Name	Country/ Region	Affiliation	Period	Status at Nagoya University
Hyomin Kim	U.S.A.	New Jersey Institute of Technology	Jul. 21 - Aug. 3, 2018	Visitor
Marcos Anzorena	Mexico	National Autonomous University of Mexico	Jul. 23 - Sep. 20, 2018	Visitor
Rocio Garcia Ginez	Mexico	National Autonomous University of Mexico	Jul. 23 - Sep. 20, 2018	Visitor
Hajihosseini Azizi	Iran	University of Kurdistan	Aug. 1 - Sep. 1, 2018	Visitor
Mitsuo Oka	U.S.A.	UCB	Aug. 3 - 10, 2018	Participant in the Symposium
Nariaki Vincent Nitta	U.S.A.	Lockheed Martin Advanced Technology Center	Aug. 4 - 11, 2018	Participant in the Symposium
Seiji Yashiro	U.S.A.	The Catholic University of America	Aug. 4 - 12, 2018	Participant in the Symposium
Joseph Benjamin Harold Baker	U.S.A.	Virginia Polytechnic Institute and State University	Aug. 6, 2018	Visitor
Jonathan Abbatt	Canada	University of Toronto	Sep. 22 - 24, 2018	Participant in the Symposium
Hartmut Herrmann	Germany	Leibniz Institute for Tropospheric Research	Sep. 22 - 25, 2018	Participant in the Symposium
Florian Billy Alexis Mekhaldi	Sweden	Lund University	Sep. 27 - Oct. 6, 2018	Participant in the Symposium
Edward Cliver	U.S.A.	National Solar Observatory	Sep. 29 - Oct. 6, 2018	Participant in the Symposium
Clive Dyer	U.K.	CSDRAD Consultancy	Sep. 30 - Oct. 7, 2018	Participant in the Symposium
Evgueni Rozanov	Switzerland	Physical Meteorological Observatory in Davos/ World Radiation Centre	Sep. 30 - Oct. 7, 2018	Participant in the Symposium
Ilya Usoskin	Finland	University of Oulu	Sep. 30 - Oct. 7, 2018	Participant in the Symposium
Lukas Wacker	Switzerland	Ion Beam Physics, ETH Zurich	Sep. 30 - Oct. 7, 2018	Participant in the Symposium
Markku Oinonen	Finland	Finnish Museum of Natural History	Sep. 30 - Oct. 7, 2018	Participant in the Symposium
Stepan Poluianov	Finland	University of Oulu	Sep. 30 - Oct. 7, 2018	Participant in the Symposium
Dmitry Sokolov	Russia	Moscow State University	Oct. 1 - 5, 2018	Participant in the Symposium
Fayin Wang	China	Nanjing University	Oct. 1 - 6, 2018	Participant in the Symposium
Anthony John Timothy Jull	U.S.A.	The University of Arizona	Oct. 1 - 7, 2018	Participant in the Symposium
Milija Zupnaski	U.S.A.	Colorado State University	Oct. 3, 2018	Participant in the Symposium
Aaron Hendry	Czech	Institute of Atmospheric Physics AS CR	Oct. 12 - 20, 2018	Foreign Collaborative Researcher
Benjamin Grison	Czech	Institute of Atmospheric Physics AS CR	Oct. 12 - 20, 2018	Foreign Collaborative Researcher
Ivana Kolmasova	Czech	Institute of Atmospheric Physics AS CR	Oct. 12 - 20, 2018	Foreign Collaborative Researcher
Ondrej Santolik	Czech	Institute of Atmospheric Physics AS CR	Oct. 12 - 20, 2018	Foreign Collaborative Researcher
Ulrich Taubenschuss	Czech	Institute of Atmospheric Physics AS CR	Oct. 12 - 20, 2018	Foreign Collaborative Researcher
Nariaki Vincent Nitta	U.S.A.	Lockheed Martin Advanced Technology Center	Oct. 14 - 21, 2018	Foreign Collaborative Researcher

Name	Country/ Region	Affiliation	Period	Status at Nagoya University
Chihyu Chiang	Taiwan	National Cheng Kung University	Oct. 21 - 27, 2018	Visitor
Jeffrey D. Hawkins	U.S.A.	Naval Research Laboratory	Oct. 23 - 30, 2018	Visitor
Cheng-Yu Chen	Taiwan	National Taiwan University	Oct. 25, 2018	Visitor
Hua Hsu	Taiwan	National Taiwan University	Oct. 25, 2018	Visitor
Hung Chi Kuo	Taiwan	National Taiwan University	Oct. 25, 2018	Visitor
Hungjui Yu	Taiwan	National Taiwan University	Oct. 25, 2018	Visitor
Yu Han Chen	Taiwan	National Taiwan University	Oct. 25, 2018	Visitor
Feng Chen	U.S.A.	University of Colorado Boulder	Nov. 1 - 10, 2018	Participant in the Symposium
Margaret Shanafield	Australia	Flinders University	Nov. 2, 2018	Participant in the Symposium
Okke Batelaan	Australia	Flinders University	Nov. 2, 2018	Participant in the Symposium
Saskia Noorduijn	Australia	Flinders University	Nov. 2, 2018	Participant in the Symposium
Matthias Rempel	U.S.A.	National Center for Atmospheric Research	Nov. 3 - 10, 2018	Participant in the Symposium
Yuhong Fan	U.S.A.	National Center for Atmospheric Research	Nov. 3 - 11, 2018	Participant in the Symposium
Georgios Chintzoglou	U.S.A.	LMSAL	Nov. 4 - 10, 2018	Participant in the Symposium
Mark Derosa	U.S.A.	LMSAL	Nov. 4 - 10, 2018	Participant in the Symposium
Mark Cheung	U.S.A.	LMSAL	Nov. 4 - 10, 2018	Participant in the Symposium
Meng Jin	U.S.A.	LMSAL	Nov. 4 - 10, 2018	Participant in the Symposium
Sanja Danilovic	Sweden	Stockholm University	Nov. 4 - 10, 2018	Participant in the Symposium
Xudong Sun	U.S.A.	University of Hawaii	Nov. 4 - 10, 2018	Participant in the Symposium
Chaowei Jiang	China	Harbin Institute of Technology, Shenzhen	Nov. 5 - 10, 2018	Participant in the Symposium
Han He	China	National Astronomical Observatories Chinese Academy of Sciences	Nov. 5 - 10, 2018	Participant in the Symposium
Sandric Chee Yew Leong	Singapore	National University of Singapore	Nov. 6 - 7, 2018	Participant in the Symposium
Go Iwahana	U.S.A.	University of Alaska Fairbanks	Nov. 11 - 14, 2018	Participant in the Symposium
Hyyangpyo Kim	Korea	Korea Astronomy & Space Science Institute	Nov. 11 - 14, 2018	Participant in the Symposium
Yukinaga Miyashita	Korea	Korea Astronomy & Space Science Institute	Nov. 11 - 14, 2018	Visitor
Takanobu Yamaguchi	U.S.A.	University of Colorado Boulder	Nov. 20, 2018	Visitor
Takuma Nakamura	Austria	Austrian Academy of Sciences	Nov. 21 - 29, 2018	Foreign Collaborative Researcher
Tong Phuoc Hoang Son	Vietnam	Institute of Oceanography, Vietnam Academy Science and Technology	Dec. 1 - 6, 2018	Foreign Collaborative Researcher



## 11. International Relations

Name	Country/ Region	Affiliation	Period	Status at Nagoya University
Playfer Stephen Michael	U.K.	University of Edinburgh	Dec. 3 - 19, 2018	Foreign Collaborative Researcher
Nariaki Vincent Nitta	U.S.A.	Lockheed Martin Solar and Astrophysics Laboratory	Dec. 6 - 18, 2018	Foreign Collaborative Researcher
John Morgan	Australia	Curtin University	Dec. 7, 2018	Foreign Collaborative Researcher
Kamorn Bandudej	Thailand	National Astronomical Research Institute of Thailand	Dec. 21, 2018	Foreign Collaborative Researcher
Pattarapong Phasukkit	Thailand	King Mongkut's Institute of Technology Ladkrabang	Dec. 21, 2018 - Dec. 21, 2019	Foreign Collaborative Researcher
Bjorn Stevens	Germany	Max-Planck Institute for Meteorology	Dec. 25 - 26, 2018	Foreign Collaborative Researcher
Magnus Woods	U.K.	Mullard Space Science Laboratory, University College London	Jan. 5 - 18, 2019	Foreign Collaborative Researcher
Baolin Tan	China	National Astronomical Observatories Chinese Academy of Sciences	Jan. 7 - 25, 2019	Visitor
Valentina Zharkova	U.K.	Northumbria University	Jan. 10 - Feb. 1, 2019	Visitor
Fei Liu	China	National Astronomical Observatories Chinese Academy of Sciences	Jan. 21 - 25, 2019	Visitor
Linjie Chen	China	National Astronomical Observatories Chinese Academy of Sciences	Jan. 21 - 25, 2019	Visitor
Wei Wang	China	National Astronomical Observatories Chinese Academy of Sciences	Jan. 21 - 25, 2019	Visitor
Yihua Yan	China	National Astronomical Observatories Chinese Academy of Sciences	Jan. 21 - 25, 2019	Visitor
Zhijun Chen	China	National Astronomical Observatories Chinese Academy of Sciences	Jan. 21 - 25, 2019	Visitor
Yoichi Kazama	China	Academia Sinica Institute of Astronomy and Astrophysics	Feb. 1, 2019	Visitor
Chengming Tan	China	National Astronomical Observatories Chinese Academy of Sciences	Feb. 1 - 12, 2019	Visitor
Hisao Takahashi	Brazil	INPE	Feb. 22 - Mar. 3, 2019	Visitor
Gupta Sunilkumar	India	Tata Institute of Fundamental Research	Feb. 23 - Mar. 1, 2019	Visitor
John Richardson	U.S.A.	Massachusetts Institute of Technology	Feb. 23 - Mar. 1, 2019	Visitor
Justyna Sokolov	Poland	Poland Academy of Science	Feb. 23 - Mar. 16, 2019	Visitor
Daniel Verscharen	U.K.	University College London	Feb. 24 - Mar. 1, 2019	Visitor
Ming Zhnag	U.S.A.	Florida Institute of Technology	Feb. 24 - Mar. 1, 2019	Visitor
Zhongwei Yang	China	Chinese Academy of Sciences	Feb. 24 - Mar. 1, 2019	Visitor
Asgari-Targhi Mahboubeh	U.S.A.	Harvard-Smithsonian Center for Astrophysics	Feb. 24 - Mar. 2, 2019	Visitor
Marco Velli	U.S.A.	UCLA	Feb. 25 - Mar. 2, 2019	Visitor
Lee Kun-Han	Taiwan	Institute of Earth Sciences, Academia Sinica	Mar. 1, 2019	Visitor
Kristen Lani Rasmussen	U.S.A.	Colorado State University	Mar. 5 - 10, 2019	Visitor
Robert Fulton Rogers	U.S.A.	National Oceanic and Atmospheric Administration	Mar. 5 - 10, 2019	Visitor

Name	Country/ Region	Affiliation	Period	Status at Nagoya University
Deanna Alicia Hence	U.S.A.	University of Illinois	Mar. 5 - 11, 2019	Visitor
Michael Monroe Bell	U.S.A.	Colorado State University	Mar. 5 - 11, 2019	Visitor
Ming-Jen Yang	Taiwan	National Taiwan University	Mar. 5 - 11, 2019	Visitor
Wen-Chau Lee	U.S.A.	National Center for Atmospheric Research	Mar. 5 - 11, 2019	Visitor
Anthony Carl Didlake	U.S.A.	Pennsylvania State University	Mar. 7 - 10, 2019	Visitor
Anukul Buranapratheprat	Thailand	Burapha University	Mar. 8 - 14, 2019	Visitor
Yukinaga Miyashita	Korea	Korea Astronomy & Space Science Institute	Mar. 14 - 19, 2019	Visitor
Daniel Billett	U.K.	Lancaster University	Mar. 15, 2019	Visitor
Akira Konaka	Canada	TRIUMF (Canada's particle accelerator centre)	Mar. 18 - 22, 2019	Visitor
Tanguy Pierog	Germany	Karlsruhe Institute of Technology	Mar. 18 - 23, 2019	Visitor
Giles Barr	U.K.	University of Oxford	Mar. 19 - 22, 2019	Visitor
Jie Cheng	China	Institute of High Energy Physics, Chinese Academy of Sciences	Mar. 19 - 22, 2019	Visitor
Ryuji Takeishi	Korea	Sungkyunkwan University	Mar. 19 - 22, 2019	Visitor
Jitraporn Phaksopa	Thailand	Kasetsart University	Mar. 19 - 27, 2019	Visitor
Boaz Lazar	Israel	Hebrew University of Jerusalem	Mar. 20 - 31, 2019	Visitor
Moti Stein	Israel	Institute of Earth Sciences	Mar. 20 - 31, 2019	Visitor
Antonia Savcheva	U.S.A.	Smithsonian Observatory	Mar. 21 - 29, 2019	Visitor
Anatoli Fedynitch	Canada	University of Alberta	Mar. 23, 2019	Visitor
Stephan Meighen-Berger	Germany	Technische Universität München	Mar. 23, 2019	Visitor
Felix Riehn	Portugal	Laboratório de Instrumentação e Física Experimental de Partículas	Mar. 23 - 29, 2019	Visitor
Aline De Almeida Vidotto	Ireland	Trinity College Dublin	Mar. 24 - 30, 2019	Participant in the Symposium
Stephen A. Ledvina	U.S.A.	UCB	Mar. 24 - 30, 2019	Participant in the Symposium
Yingjuan Ma	U.S.A.	UCLA	Mar. 24 - 30, 2019	Participant in the Symposium
David Andrew Brain	U.S.A.	University of Colorado Boulder	Mar. 25 - 29, 2019	Participant in the Symposium

**Seminars by Foreign Visitors****(31 in total)**

Date	Name	Affiliation	Title	Number of Participant
April 5, 2018	Fulvia Pucci	Princeton University	Solar Seminar/ Energy transfer and electron energization in collisionless magnetic reconnection for different guide-field intensities	13
May 1, 2018	Zhongping Lee*	University of Massachusetts Boston	34th ISEE/CICR colloquium / Remote sensing of basin-scale primary production: Abandoning the use of chlorophyll concentration	12
May 8, 2018	Stephen Michael Playfer*	University of Edinburgh	35th ISEE/CICR colloquium / Matter antimatter asymmetries	22
May 14, 2018	Samuel Krucker*	University of Applied Sciences Northwestern Switzerland	36th ISEE/CICR colloquium / Hard X-ray Observations as Diagnostics of Particle Acceleration in Solar Flares	21
July 2, 2018	Mikinori Kuwata	Nanyang Technological University	Seminar/ Atmospheric chemistry of wildfire in tropical Asia induced by peatland fire	unknown
July 5, 2018	Khan-Hyuk Kim	School of Space Research, Kyung Hee University, South Korea	37th ISEE/CICR colloquium/ Large and small scale geomagnetic perturbations	12
July 9, 2018	Hai Guo	The Hong Kong Polytechnic University	Seminar/ High-resolution analysis of vehicle-related organic aerosols observed at a roadside site in Hong Kong with the application of TAG-GC-ToF-MS	Unknown
July 9, 2018	Erica Lastufka	University of Applied Sciences Northwestern Switzerland	Solar seminar/ Occulted Flare of May 1, 2013 and the MiSolFA Hard X-ray Imager	17
July 13, 2018	Willi Exner	Technische Universität Braunschweig	special seminar/ Mercury's magnetosphere in strict positive and negative Bz	12
July 23, 2018	K. D. Leka*	NorthWest Research Associates	Solar seminar/ Understanding and Forecasting the Solar Origins of Space Weather	18
August 2, 2018	Hyomin Kim	New Jersey Institute of Technology	Special seminar/ ULF Wave Observations Using Van Allen Probes and Ground-Based Interhemispheric Magnetometer Arrays	14
October 3, 2018	Milija Zupanski	Colorado State University	38th ISEE/CICR colloquium/ New directions for development of high-dimensional data assimilation	13
October 12, 2018	Alexandre Vasilyevich Koustov*	University of Saskatchewan	39th ISEE/CICR colloquium/ Contributions of coherent radars to studies of the near Earth's environment	30
November 2, 2018	Daqing Yang*	Environment and Climate Change Canada	40th ISEE/CICR colloquium/ Arctic hydroclimatic regimes and changes in a warming climate	18
November 2, 2018	Okke Batelaan	Flinders University	Urban Water-Food-Energy Nexus workshop in Nagoya University/ Introduction of the MLFP project	8
November 5, 2018	Feng Chen	University of Colorado, Boulder	Solar seminar/ Solar eruptions during magnetic flux emergence from the convection zone to the corona	19
November 10, 2018	Yukinaga Miyashita	Korea Astronomy & Space Science Institute	Special seminar/ Dipolarization observed by Arase	18

Date	Name	Affiliation	Title	Number of Participant
November 10, 2018	Hyyangpyo Kim	Korea Astronomy & Space Science Institute	Special seminar/ EMIC waves observed from various satellites	18
November 20, 2018	Takanobu Yamaguchi	NOAA ESRL	41st ISEE/CICR colloquium/ Role of vertical wind shear in aerosol-cloud interactions in marine shallow cumulus clouds	21
November 30, 2018	Michael Jürgen Kosch*	South African National Space Agency	42nd ISEE/CICR colloquium/ Sprites research in Africa	29
December 6, 2018	Qurnia Wulan Sari*	Sriwijaya University	Oceanography Seminar/ The variability of the surface chlorophyll-a in the Karimata Strait	14
December 17, 2018	K. D. Leka*	NorthWest Research Associates	Solar seminar/ Photospheric Magnetic Field Properties of Flaring vs. Flare Quiet Active Regions, V: Results from HMI	19
December 17, 2018	Nariaki Vincent Nitta	Lockheed Martin Advanced Technology Center	Solar seminar/ CMEs as the Dominant Player of Space Weather	18
December 25, 2018	Bjorn Stevens	Max Planck Institute for Meteorology/ University of Hamburg	43rd ISEE/CICR colloquium / Shallow clouds and circulations	23
January 16, 2019	Valentina Zharkova	Northumbria University	CICR colloquium/ Acceleration and transport of energetic particles in flaring atmospheres and their diagnostics from HXR and MW emission	13
January 21, 2019	Baolin Tan	National Astronomical Observatories Chinese Academy of Sciences	Solar seminar/ Solar radio spectral fine structures and diagnostics of nonthermal processes	18
March 1, 2019	Hisao Takahashi	National Institute for Space Research	45th ISEE/CICR colloquium/ Equatorial Plasma Bubble Occurrence under Propagation of MSTIDs and MGWs	16
March 1, 2019	Lee Kun-Han	Institute of Earth Sciences, Academia Sinica	Special seminar/ Voyager 1 observations of interstellar electron turbulence spectrum	11
March 15, 2019	Daniel Billett	Lancaster University	Special seminar/ The role of neutral winds, plasma convection, and aurora on high-latitude thermosphere-ionosphere coupling	9
March 18, 2019	Anukul Nranapratheprat	Burapha University	Oceanography Seminar/ Detection and modeling of green Noctiluca bloom in the Gulf of Thailand using satellite ocean color	14
March 25, 2019	Jitraporn Phaksopa	Kasetsart University	Oceanography Seminar/ Dr.Fridtjof Nansen Andaman Expedition in October 2019: water masses, currents and internal wave of the Andaman Sea	14

\* Foreign Visiting Staff

### <Abbreviations>

AS CR:	Academy of Sciences of the Czech Republic
CASS:	Center for Astrophysics and Space Sciences
CERN:	Conseil Européen pour la Recherche Nucléaire, European Organization for Nuclear Research
CESR:	Centre d'Etude Spatiale des Rayonnements
CETP:	Centre d'étude des Environnements Terrestre et Planétaires
CNRS:	Centre National de la Recherche Scientifique
EISCAT:	European Incoherent Scatter Scientific Association
GSFC:	Goddard Space Flight Center
IBEX:	Interstellar Boundary Explorer
IFSI:	Istituto di Fisica dello Spazio Interplanetario
iLEAPS:	Integrated Land Ecosystem-Atmosphere Processes Study
IKFIA:	Institute of Cosmophysical Research and Aeronom
IMAP:	Interstellar Mapping and Acceleration Probe
INFN:	Istituto Nazionale di Fisica Nucleare
INPE:	Instituto Nacional de Pesquisas Espaciais, Brazilian Institute of Space Research
INR RAS:	Institute for Nuclear Research of the Russian Academy of Sciences
IPS:	Ionospheric Prediction Services
IPSL:	Institut Pierre-Simon Laplace
ISTP:	Institute of Solar-Terrestrial Physics
JHUAPL:	Johns Hopkins University Applied Physics Laboratory
KASI:	Korea Astronomy and Space Science Institute
LAPAN:	Lembaga Penerbangan dan Antariksa Nasional, National Institute of Aeronautics and Space
LMSAL:	Lockheed Martin Solar and Astrophysics Laboratory
LOFAR:	Low Frequency Array
LPC2E:	Laboratoire de Physique et Chimie de l'Environnement et de l'Espace
MSFC:	Marshall Space Flight Center
MWA:	Murchison Widefield Array
NASA:	National Aeronautics and Space Administration
NOAA:	National Oceanic and Atmospheric Administration
NRNU MEPHI:	National Research Nuclear University Moscow Engineering Physics Institute
SB RAS:	Siberian Branch, Russian Academy of sciences
SCOSTEP:	Scientific Committee on Solar Terrestrial Physics
SLAC:	Stanford Linear Accelerator Center
UCB:	University of California, Berkeley
UCI:	University of California, Irvine
UCLA:	University of California, Los Angeles
UCSC:	University of California, Santa Cruz
UCSD:	University of California, San Diego

## 12. Outreach

### Public lectures, open labs, and school visits

ISEE members have contributed to public education through 19 lecture visits, seven public lectures at the university, three open laboratory events, four public laboratory demonstrations, one field trip for children, and four high-school student visits.

ISEE held open laboratory sessions and special lectures for the public on June 9 and 10 during the 2018 Nagoya University Festival, and a half-day public lecture meeting on September 29, 2018.

ISEE and the former STEL have maintained a close relationship with the town of Rikubetsu in Hokkaido since 2003. Public lectures were held on November 9, 2018 at Rikubetsu Elementary School and Rikubetsu Junior High School. Public laboratory demonstrations were presented on November 10, 2018 at the Rikubetsu Space Earth Science Museum.

ISEE distributes a series of booklets that answer 50 questions on various topics, as well as informative comic books related to space–Earth subjects for the public.

A English version of the video introducing ISEE for young students and the public was produced, and is available on the ISEE website (<http://www.isee.nagoya-u.ac.jp/>).

The ISEE website continues to publish the most up-to-date activities and outcomes of laboratory science to the public. The digitized booklet series can also be browsed at this site.



Public lecture on the ISEE open laboratory (June 9, 2018).

## Addresses of Facilities

Location		Name	Address	TEL/FAX
Nagoya	①	ISEE Research Institutes Buildings I/II	Furo-cho, Chikusa-ku, Nagoya, Aichi 464-8601	TEL:+81-52-747-6303 FAX:+81-52-747-6313
Toyokawa	②	Toyokawa Branch	3-13 Honohara, Toyokawa-shi, Aichi 442-8507	TEL:+81-533-89-5206 FAX:+81-533-86-3154
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