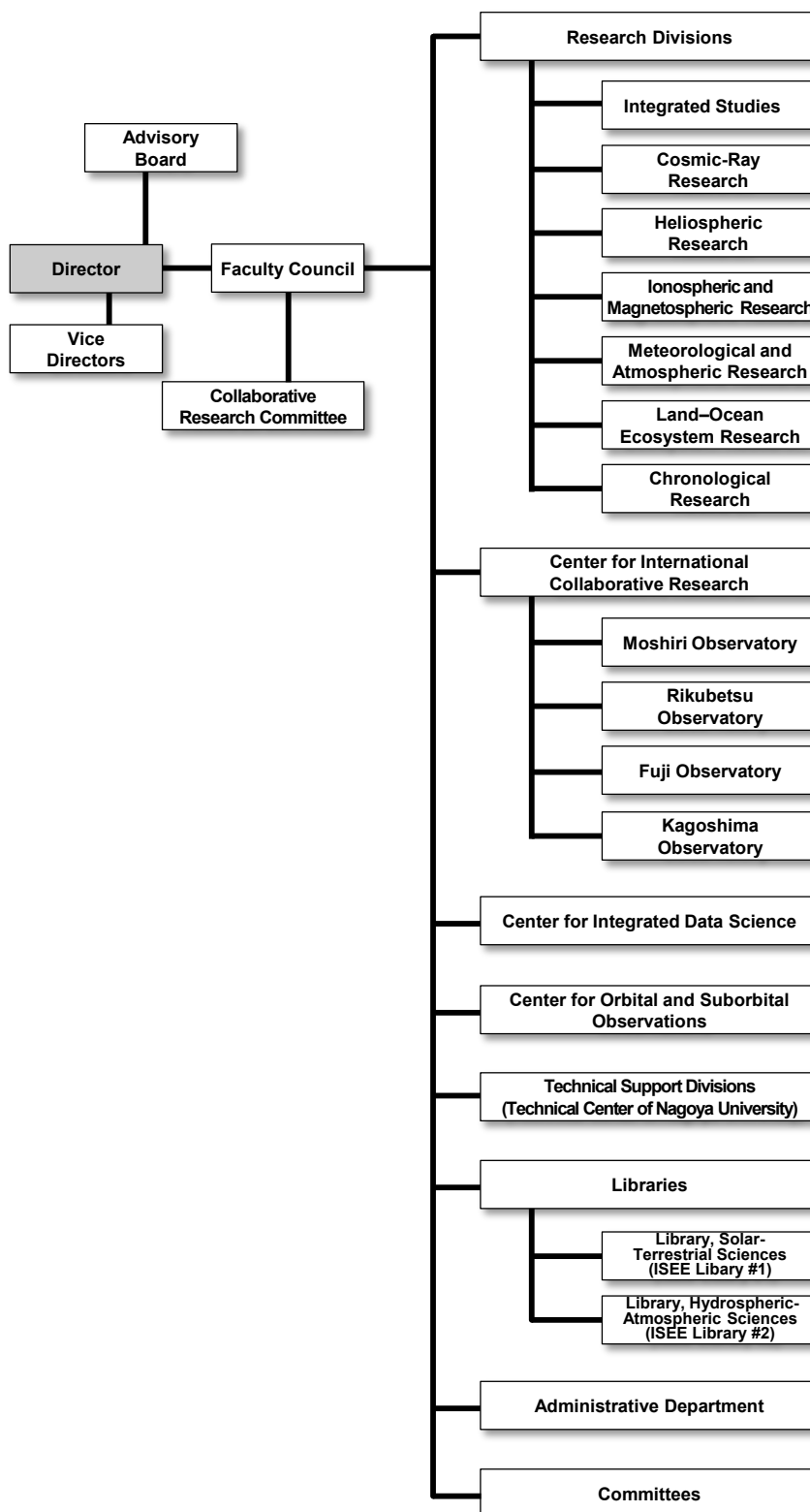


1. History

Solar-Terrestrial Environment Laboratory	Hydrospheric Atmospheric Research Center (HyARC)	The Nagoya University Center for Chronological Research
<p>May, 1949 Research Institute of Atmospherics, Nagoya University was established.</p> <p>April, 1958 Cosmic-ray Research Laboratory, Faculty of Science, Nagoya University was established.</p>	<p>April, 1957 The Water Research Laboratory, Faculty of Science, Nagoya University was established.</p> <p>September, 1973 The Water Research Institute (WRI), Nagoya University was organized.</p>	<p>February, 1981 The Tandetron Accelerator Laboratory was established in the Radioisotope Research Center of Nagoya University.</p>
<p>June, 1990 The Solar-Terrestrial Environment Laboratory (STEL) was established.</p> <p>April, 1995 The Center for Joint Observations and Data Processing was organized.</p>	<p>April, 1993 The Institute for Hydrospheric-Atmospheric Sciences (IHAS), Nagoya University was organized.</p>	<p>March, 1982 Installation of the Tandetron Accelerator Mass Spectrometry (AMS) machine No.1 was completed.</p> <p>January, 1987 Inter-University Service of ^{14}C measurements was started with the Tandetron AMS machine No.1.</p> <p>June, 1990 The Nagoya University Dating and Material Research Center was established.</p>
<p>April, 2003 The Rikubetsu Observatory was organized.</p> <p>April, 2004 The Geospace Research Center was established.</p> <p>March, 2006 Laboratory was relocated to the Higashiyama Campus.</p>	<p>April, 2001 The Hydrospheric Atmospheric Research Center (HyARC), Nagoya University was established.</p>	<p>March, 1997 The Tandetron AMS machine No. 2 was newly introduced.</p> <p>April, 2000 The Nagoya University Center for Chronological Research was organized. The CHIME dating system was transferred from the School of Science.</p>
<p>April, 2010 Approved as one of the Joint Usage/Research Centers.</p>	<p>April, 2010 Approved as one of the Joint Usage/Research Centers.</p>	
<p>October, 2015 Institute for Space–Earth Environmental Research (ISEE), merging the laboratory and two centers, was established.</p>		
<p>January, 2016 ISEE was approved as one of the Joint Usage/Research Centers.</p>		

2. Organization



3. Staff

Director	Kanya Kusano	April 1, 2020–March 31, 2021
Vice Director	Kazuo Shiokawa	*: Concurrent post
Vice Director	Nobuhiro Takahashi	▲: Left the Institute in the 2020 academic year ○: Joined the Institute in the 2020 academic year ※: Belongs to Institute for Advanced Research Section

Division for Integrated Studies

Professor	Kanya Kusano
Professor	Yoshizumi Miyoshi (*)
Associate Professor	Satoshi Masuda
Associate Professor	Takayuki Umeda (*)
Lecturer	Shinsuke Imada
Assistant Professor	Akimasa Ieda
Designated Assistant Professor	Yumi Bamba ※
Designated Assistant Professor	Takafumi Kaneko
Designated Assistant Professor	Hisashi Hayakawa ○※
Researcher	Hyangpyo Kim ○▲
Technical Assistant	Momoko Hattori ○▲
Technical Assistant (Research Support Facilitator)	Nanako Hirata

Division for Ionospheric and Magnetospheric Research

Professor	Masafumi Hirahara
Professor	Kazuo Shiokawa (*)
Associate Professor	Yuichi Otsuka
Associate Professor	Satonori Nozawa
Associate Professor	Masahito Nosé
Associate Professor	Nozomu Nishitani (*)
Associate Professor	Claudia Martinez-Calderon (*)
Lecturer	Shin-ichiro Oyama
Designated Assistant Professor	Atsuki Shinbori
Designated Assistant Professor	Sneha Yadav ○
Researcher	Sivakandan Mani ○▲
JSPS Postdoctoral Fellowships for Research in Japan (Short-term)	Audrey Nathalie Ghislaine Schillings ▲

Division for Cosmic-Ray Research

Professor	Yoshitaka Itow
Professor	Hiroyasu Tajima (*)
Associate Professor	Yutaka Matsubara
Associate Professor	Fusa Miyake
Designated Associate Professor	Masaki Yamashita ○▲
Lecturer	Akira Okumura
Assistant Professor	Hiroaki Menjo
Designated Assistant Professor	Shingo Kazama ※
Designated Assistant Professor	Kazufumi Sato
Technical Assistant	Kazuhiro Huruta

Division for Meteorological and Atmospheric Research

Professor	Akira Mizuno
Professor	Michihiro Mochida
Professor	Nobuhiro Takahashi (*)
Professor	Kazuhisa Tsuboki (*)
Associate Professor	Tomoo Nagahama
Associate Professor	Hirohiko Masunaga
Associate Professor	Taro Shinoda (*)
Assistant Professor	Sho Ohata ※
Assistant Professor	Taku Nakajima
Researcher	Daichi Tsutsumi ▲
Researcher	Fumie Furuzawa
JSPS Postdoctoral Fellowships for Research in Japan (Standard)	Yunhua Chang ○
Technical Assistant (Research Support Facilitator)	Kazuji Suzuki ○

Division for Heliospheric Research

Professor	Munetoshi Tokumaru
Associate Professor	Kazumasa Iwai
Assistant Professor	Ken-ichi Fujiki

Division for Land–Ocean Ecosystem Research

Professor	Joji Ishizaka
Professor	Tetsuya Hiyama (✳)
Associate Professor	Hidenori Aiki
Associate Professor	Naoyuki Kurita
Lecturer	Hatsuki Fujinami
Assistant Professor	Yoshihisa Mino
Researcher	Akiko Mizuno ▲
Researcher	Mengmeng Yang ▲
Technical Assistant	Qingyang Song ▲

Division for Chronological Research

Professor	Hiroyuki Kitagawa
Professor	Masayo Minami
Associate Professor	Takenori Kato (✳)
Assistant Professor	Hiroataka Oda
Designated Assistant Professor	Masako Yamane
Research Institution Researcher	Yukiko Kozaka ▲
Designated Technical Staff	Masami Nishida
Designated Technical Staff	Yuriko Hibi
Technical Assistant	Yuki Wakasugi ▲

Center for International Collaborative Research

Director • Professor	Kazuo Shiokawa
Professor	Tetsuya Hiyama
Professor	Akira Mizuno (✳)
Professor	Masayo Minami (✳)
Designated Professor (Cross Appointment)	K. D. Leka
Designated Professor (Cross Appointment)	Lynn Marie Kistler
Associate Professor	Nozomu Nishitani
Associate Professor	Claudia Martinez-Calderon
Associate Professor	Naoyuki Kurita (✳)
Associate Professor	Satonori Nozawa (✳)
Lecturer	Hatsuki Fujinami (✳)
Assistant Professor	Hiroaki Menjo (✳)
Designated Assistant Professor	Masafumi Shoji
Designated Assistant Professor	Hirohiko Nagano ○▲
Designated Assistant Professor	Sung-Hong Park
Researcher	Hironari Kanamori

Foreign Visiting Research Fellow

January 25 – May 31, 2020	Veenadhari Bhasakrapantula
January 1 – March 31, 2021	Chio Zong Cheng

Center for Integrated Data Science

Director • Professor	Kazuhisa Tsuboki
Professor	Yoshizumi Miyoshi
Professor	Joji Ishizaka (✳)
Professor	Kanya Kusano (✳)
Associate Professor	Takayuki Umeda
Associate Professor	Takenori Kato
Associate Professor	Hidenori Aiki (✳)
Associate Professor	Satoshi Masuda (✳)
Associate Professor	Hirohiko Masunaga (✳)
Designated Associate Professor	Tomoaki Hori
Lecturer	Shinsuke Imada (✳)
Assistant Professor	Akimasa Ieda (✳)
Designated Assistant Professor	Haruhisa Iijima
Designated Assistant Professor	Shun Imajo ▲
Designated Assistant Professor	Sachie Kanada
Designated Assistant Professor	Masahiro Kitahara ○
Designated Assistant Professor	Satoko Nakamura
Designated Assistant Professor	Chae-Woo Jun
Designated Assistant Professor	YunHee Kang
Researcher	Norio Umemura ▲
Researcher	Masaya Kato
Researcher	Yoshiki Fukutomi
Researcher	Yutaka Matsumi ▲
Researcher	Sandeep Kumar
Designated Technical Staff	Mariko Kayaba
Designated Technical Staff	Asayo Maeda
Designated Technical Staff	Kinji Morikawa
Technical Assistant	Luteru Agaali Tauvale ○▲

Center for Orbital and Suborbital Observations

Director • Professor	Nobuhiro Takahashi
Professor	Hiroyasu Tajima
Designated Professor	Hidetaka Tanaka ▲
Designated Professor	Masataka Murakami
Professor	Joji Ishizaka (✳)
Professor	Kazuhisa Tsuboki (✳)
Professor	Masafumi Hirahara (✳)
Associate Professor	Taro Shinoda
Associate Professor	Hidenori Aiki (✳)
Designated Associate Professor	Kazutaka Yamaoka
Assistant Professor	Sho Ohata (✳)※
Designated Assistant Professor	Hiroyuki Tomita ▲
Designated Assistant Professor	Mayumi Yoshioka ▲
Designated Assistant Professor	Youko Yoshizumi
Research Institution Researcher	Takeharu Kouketsu
Research Institution Researcher	Ji Hyun Park ▲
Technical Assistant	Tomoko Tanaka ▲

Visiting Academic Staff/Visiting Faculty Members

Visiting Professor	Yoshiya Kasahara
Visiting Professor	Tomo'omi Kumagai
Visiting Professor	Yoshikatsu Kuroda
Visiting Professor	Yoko Kokubu
Visiting Professor	Hiroyuki Shinagawa
Visiting Professor	Nobuo Sugimoto
Visiting Professor	Kanako Seki
Visiting Professor	Hotaek Park
Visiting Associate Professor	Fumio Abe ○
Visiting Associate Professor	Christian Leipe
Visiting Associate Professor	Yasunobu Ogawa
Visiting Associate Professor	Shinji Saito
Visiting Associate Professor	Daikou Shiota
Visiting Associate Professor	Iku Shinohara
Visiting Associate Professor	Toru Tamura ○
Visiting Associate Professor	Yasutaka Nurusawa
Visiting Associate Professor	Hiroki Mizuochi ○
(Emeritus Professor)	Toshio Nakamura
	Shun Ohishi ○

Technical Center of Nagoya University

Senior Technician	Akiko Ikeda
Senior Technician	Yasusuke Kojima
Senior Technician	Haruya Minda
Technician	Wataru Okamoto
Technician	Tetsuya Kawabata
Technician	Tomonori Segawa
Technician	Yoshiyuki Hamaguchi
Technician	Ryuji Fujimori
Technician	Yasushi Maruyama
Technician	Takayuki Yamasaki
Technician	Yuka Yamamoto
Assistant Technician	Takumi Adachi
Assistant Technician	Moeto Kyushima

Cooperating Research Fellow

Satoshi Inoue ◯▲
Hiroatsu Sato ◯▲

Foreign Visiting Cooperation Researcher

Jun 5, 2019 – May 29, 2020 Sneha Yadav
August 5, 2019 – August 4, 2020 Xia Yuan
September 16, 2019 – August 31, 2020 Hyangpyo Kim

Administration Department

Director, Administration Department	Takashi Murate ▲
General Affairs Division Manager, General Affairs Division	Mitsuyuki Hirokawa
Specialist, General Affairs Section	Hideaki Yano
Section Head, General Affairs Section	Kazuhiro Yokoyama ▲
Section Head, General Affairs Section	Shoji Asano ▲
Section Head, General Affairs Section	Tomoko Mizutani ◯
Section Head, Personnel Affairs Section	Munetika Mizuno ▲
Section Head, Budget Planning Section	Mirei Miyao
Administrator	Yuka Ito ▲
Administrator	Junpei Okada ◯
Administrator	Asana Goto
Administrator	Megumi Goto ◯
Administrator	Hisako Watabe
Designated Supervisor	Tadashi Tsuboi

Toyokawa Branch

Designated Technical Staff	Kayoko Asano
Technical Assistant (Research Support Facilitator)	Yasuo Kato

4. Committee of Other Organizations

Committee of Other Organizations

Contact Post	Job Title	Organizations	Name of Committee / Title
Joji Ishizaka	Professor	North Pacific Marine Science Organization (PICES)	Co-Chair of Advisory Panel for a CREAMS/PICES Program in East Asian Marginal Seas
Joji Ishizaka	Professor	North Pacific Marine Science Organization (PICES)	Member of Working Group 35: Third North Pacific Ecosystem Report
Joji Ishizaka	Professor	Northwest Pacific Action Plan (NOWPAP)	Focal Point of Center for Special Monitoring and Coastal Environmental Assessment Regional Active Center (CEARAC)
Yoshitaka Itow	Professor	International Union of Pure and Applied Physics	Commission C4 member
Yoshitaka Itow	Professor	Institute of Particle and Nuclear Studies, KEK	J-Parc Program Advisory Committee member
Yoshitaka Itow	Professor	International Symposium for Very High Energy Cosmic Ray Interactions	International Advisory Committee member
Yoshitaka Itow	Professor	Ultra High Energy Cosmic Ray Conference	International Advisory Committee member
Hiroyuki Kitagawa	Professor	International Continental Scientific Drilling Program (ICDP), Dead Sea Deep Sea Drilling Project (DSDDP)	Principal Investigator
Hiroyuki Kitagawa	Professor	Geosciences	Editor
Kazuo Shiokawa	Professor	Scientific Committee on Solar-Terrestrial Physics (SCOSTEP)	President
Kazuo Shiokawa	Professor	Committee on Space Research (COSPAR)	Chair of the COSPAR Sub-Commission C1 (The Earth's Upper Atmosphere and Ionosphere)
Kazuo Shiokawa	Professor	Journal of Atmospheric and Solar-Terrestrial Physics	Chief guest editor for VarSITI/STP-14 Special Issue
Nobuhiro Takahashi	Professor	National Aeronautics and Space Administration (NASA)	ACCP Science Assessment Team (SIT-CCP) member
Hiroyasu Tajima	Professor	Institute of Particle and Nuclear Studies, KEK	B-factory Programme Advisory Committee member
Hiroyasu Tajima	Professor	Progress of Theoretical and Experimental Physics	Editor
Hiroyasu Tajima	Professor	The Scientific World Journal	Editorial Board member
Tetsuya Hiyama	Professor	International Arctic Science Committee (IASC)	Terrestrial Working Group (TWG) member
Yoshizumi Miyoshi	Professor	EISCAT Scientific Association	Strategy Group on the Future of EISCAT member

Contact Post	Job Title	Organizations	Name of Committee / Title
Yoshizumi Miyoshi	Professor	Committee on Space Research (COSPAR)	Chair of Panel on Radiation Belt Environment Modeling
Yoshizumi Miyoshi	Professor	Scientific Committee on Solar-Terrestrial Physics (SCOSTEP)	Bureau member
Yoshizumi Miyoshi	Professor	National Science Foundation/ Geospace Environment Modeling (NSF/GEM)	Steering Committee member
Yoshizumi Miyoshi	Professor	EU-Horizon 2020: SafeSpace	Advisory Panel
Yoshizumi Miyoshi	Professor	Annales Geophysicae	Editor
Yoshizumi Miyoshi	Professor	Earth and Planetary Physics	Editor
Yoshizumi Miyoshi	Professor	Earth, Planets and Space (EPS)	Guest editor for the special issue of “Solar-Terrestrial Environment Prediction: Toward the Synergy of Science and Forecasting Operation of Space Weather and Space Climate”
Yoshizumi Miyoshi	Professor	Polar Research	Guest editor
Michihiro Mochida	Professor	International Commission on Atmospheric Chemistry and Global Pollution (iCACGP)	Commission member
Michihiro Mochida	Professor	Atmospheric Environment	Editorial Advisory Board member
Yuichi Otsuka	Associate Professor	Journal of Astronomy and Space Sciences	Editor
Yuichi Otsuka	Associate Professor	Earth and Planetary Physics	Guest editor for the special issue of “Recent Advances in Equatorial Plasma Bubble and Ionospheric Scintillation”
Nozomu Nishitani	Associate Professor	Earth, Planets and Space (EPS)	Vice editors-in-chief
Nozomu Nishitani	Associate Professor	Super Dual Auroral Radar Network (SuperDARN)	Vice chair of Executive Council
Nozomu Nishitani	Associate Professor	Polar Science	Guest editor for the special issue of “SuperDARN / Studies of Geospace Dynamics - Today and Future”
Nozomu Nishitani	Associate Professor	Earth, Planets and Space (EPS)	Guest editor for the special issue of 20th Anniversary Issue: Earth, Planetary, and Space Sciences in the Next Decade
Satonori Nozawa	Associate Professor	EISCAT Scientific Association	Council member
Masahito Nosé	Associate Professor	International Association of Geomagnetism and Aeronomy (IAGA)	Division V Chair

4. Committee of Other Organizations

Contact Post	Job Title	Organizations	Name of Committee / Title
Masahito Nosé	Associate Professor	Earth, Planets and Space (EPS)	Editor (~December 31, 2020) Vice editors-in-chief (January 1, 2021~)
Masahito Nosé	Associate Professor	Earth, Planets and Space (EPS)	Guest editor for the special issue of “ International Geomagnetic Reference Field - The Thirteenth Generation”
Hirohiko Masunaga	Associate Professor	National Aeronautics and Space Administration (NASA)	ACCP Science Community Cohort
Hirohiko Masunaga	Associate Professor	World Climate Research Programme (WCRP) Global Energy and Water cycle Exchanges (GEWEX)	GEWEX Data and Analysis Panel (GDAP) member
Toshio Nakamura	Visiting Faculty	Radiocarbon	Editorial Board member

5. Joint Research Programs

One of the major functions of ISEE is to promote and conduct collaborative research on Space–Earth Environmental Science together with researchers from universities and institutes outside the ISEE. On January 14, 2016, ISEE was certified as a core research institution of Space–Earth Environmental Science, a “Joint Usage/Research Center,” as defined by the MEXT of Japan. We prepared application forms for joint research programs focusing on the following two research issues: the “Study of the coupling processes in the solar–terrestrial system using ground-based observation networks” and the “Establishment of an international collaborative research hub to solve research issues in the global (terrestrial) environment and space applications based on comprehensive studies of the space–Sun–Earth system.” The former focuses on coupling processes in the solar–terrestrial system and the interactions of neutral and plasma components in the Earth’s atmosphere by establishing an international ground-based observation network ranging from low- to high-latitude regions, especially in Asia and Africa. The latter aims to establish an international collaborative research hub for comprehensive studies of the space–Sun–Earth system, space applications, space weather forecasting, and environmental problems such as global warming. The following 11 research programs, including the SCOSTEP Visiting Scholar program that was incorporated into joint use and research from FY2020, were prepared for application during the 2020 Japanese fiscal year. The ISEE symposium became an independent category from the ISEE/Center for International Collaborative Research (CICR) International Workshop, and the announcement for the ISEE symposium was made three months prior to other programs. In addition, we switched the proposed application process from an email-based to a web-based system with support from the Research Organization of Information and Systems. The new system was introduced for the FY2020 program applications.

- 01) Joint Research Program (International)
 - 02) ISEE International Joint Research Program (*)
 - 03) ISEE/CICR International Workshop
 - 04) Joint Research Program (General)
 - 05) Joint Research Program (Student Encouragement)
 - 06) Joint Research Program (Symposium)
 - 07) Joint Research Program (Computing Infrastructure)
 - 08) Joint Research Program (Database Management)
 - 09) Joint Research Program (Accelerator Mass Spectrometry Analysis)
 - 10) Carbon 14 Analysis Service
 - 11) SCOSTEP Visiting Scholar (SVS) Program (*)
- (*) Applicable only to foreign researchers

These collaborative research programs will be executed using the instruments, software/databases, and facilities of ISEE. Joint research programs 01) to 03), described above, will be managed by the CICR, 07) and 08) will be managed by CIDAS, and 09) and 10) will be managed by the Division for Chronological Research.

In 2020, the third ISEE symposium was held online from March 8 to 12, 2021, entitled “International conference and school on dynamic variation of particles and waves in the inner magnetosphere and ionosphere using satellite and ground-network observations and modeling (PWING-ERG conference and school),” led by Professor Kazuo Shiokawa who is the vice director of ISEE. The third ISEE Award was awarded to Prof. Ilya G. Usoskin and Dr. Stepan V. Poluianov of the University of Oulu, Finland, for their great contribution to space–Earth environmental research through international joint research on extreme solar particle events and their environmental and social impacts. The award ceremony and memorial lectures were held online on March 11, 2021.

Due to the influence of COVID-19, the international joint research programs and international workshops of this fiscal year were canceled or postponed for the next year or implemented by changing the scope. Most symposiums and research meetings were conducted online.

In October, the community meeting that aims to share information about the ISEE’s joint research program across the field of study and discuss the future joint research program was held online with the participation of the joint research program participants.

Lists of Accepted Proposals

■ ISEE International Joint Research Program

Proposer	Affiliation*	Job title*	Corresponding ISEE researcher	Title of the research program
Kariyappa, Rangaiah	Indian Institute of Astrophysics	Former Professor	Imada, S.	Understand the EUV and UV (PROBA2/LYRA) and X-ray (GOES 1-8 A) irradiance variability from spatially resolved images of SDO/AIA/HMI & PROBA2/SWAP and Hinode/XRT instruments
Chen, Xingyao	National Astronomical Observatories, Chinese Academy of Sciences	Research Assistant	Masuda, S.	Quasi-periodic Pulsations from solar radio and microwave observations
Abadi, Prayitno	Indonesian National Institute of Aeronautics and Space	Researcher	Otsuka, Y.	Empirical Model of Equatorial Plasma Bubble Occurrence Rate in Southeast Asia deduced from GPS Receivers
Yuan, Xia	Nanjing Xiaozhuang University	Lecturer	Nozawa, S.	Winter sudden stratospheric warming (SSW) impact on mesosphere sodium layer observed at middle and high latitudes
Opgenoorth, Hermann	University of Umea	Professor Emeritus	Nishitani, N.	Study of sub-auroral storm time magnetic and convection disturbances
Shreedevi, Porunkatu Radhakrichna	Beihang University	Postdoctoral Researcher	Miyoshi, Y.	Understanding the role of EMIC wave scattering in causing ion precipitation into the ionosphere: Comparison of SWMF simulations with Arase and PWING observations
Lazzara, Matthew	University of Wisconsin-Madison	Senior Scientist	Kurita, N.	Creation of a new high-quality dataset of East Antarctic meteorological observations
Gordovskyy, Mykola	University of Manchester	Research Associate	Kusano, K.	Fluid-kinetic modelling of magnetic reconnection in solar flares and solar energetic particle escape into the heliosphere
Braga, Carlos Roberto	George Mason University	Senior Research Scientist	Kusano, K.	Predicting coronal mass ejections Time-of-arrival and magnetic field orientation in the Earth's vicinity using observations and MHD propagation
Azizi, Hajihosseini	University of Kurdistan	Professor	Minami, M.	Beryllium-10 (¹⁰ Be)-Nd isotope analysis to investigate magma source of the Quaternary volcanoes in northwest Iran
Min, Kyungguk	Chungnam National University	Assistant Professor	Miyoshi, Y.	Understanding the Generation Process of Fast Magnetosonic Waves by Combining ERG Observations and PIC Simulations
Ren, Jie	Peking University	Assistant Researcher	Miyoshi, Y.	ULF Waves' Interaction with the Charged Particles and the Effects on the Whistler Mode Waves
Chen, Linjie	National Astronomical Observatories, Chinese Academy of Sciences	Associate Researcher/ Professor	Iwai, K.	Studying the solar wind with the multi-station Interplanetary Scintillation (IPS) Telescope
Krucker, Samuel	Fachhochschule Nordwestschweiz	Professor	Masuda, S.	The NoRH/RHESSI flare catalogue: time-dependent analysis
Mouikis, Christoforos	University of New Hampshire	Research Scientist	Miyoshi, Y.	The impact of storm-time ion composition changes in the near-earth plasma sheet on the ring current pressure development
Langematz, Ulrike	Freie Universität Berlin	Professor	Miyake, F.	Modeling the transport and deposition of cosmogenic isotopes of historical MIYAKE Events and recent decades

* Proposer's affiliation and job title are as of the proposal submission date.

■ ISEE/CICR International Workshop

Proposer	Affiliation*	Job title*	Corresponding ISEE researcher	Title of the research program
Gopalswamy, Nat	Goddard Space Flight Center	Astrophysicist	Masuda, S.	Origin of High-Energy Protons Responsible for Late-Phase Pion-Decay Gamma-Ray Continuum from the Sun

* Proposer's affiliation and job title are as of the proposal submission date.

List of Collaboration Resources

■ Instruments

Name	Contact Person
Fourier Transform Infrared (FTIR) Spectrometer for Atmospheric Composition Measurement (Rikubetsu)	T. Nagahama
Optical Mesosphere Thermosphere Imagers	K. Shiokawa
ISEE Magnetometer Network	K. Shiokawa
ELF/VLF Network	K. Shiokawa
Sodium LIDAR (Tromsø)	S. Nozawa
MF Radar (Tromsø)	S. Nozawa
Meteor Radar (Alta)	S. Nozawa
Solar Neutron Telescope (Norikura Observatory, Institute for Cosmic Ray Research, the University of Tokyo)	Y. Matsubara
Low-Background Beta-Ray Counter	N. Kurita
Multi-Station IPS Solar Wind Observation System (Toyokawa, Fuji, and Kiso)	M. Tokumaru
Multi-Directional Cosmic Ray Muon Telescope (Nagoya)	Y. Matsubara
SuperDARN Hokkaido Pair of (HOP) Radars (Rikubetsu)	N. Nishitani
Upper Air Sounding Systems (two sets)	K. Tsuboki
Polarimetric Radar Systems (two sets)	K. Tsuboki
Ka-Band Polarimetric Radar	K. Tsuboki
Hydrometeor Video Sonde (HYVIS) System	K. Tsuboki
ISEE Riometer Network	K. Shiokawa
Sea Spray Aerosol Optical Particle Counter	H. Aiki
Five-Wavelength Photometer (Tromsø)	S. Nozawa
Water Isotope Analyzer (Picarro L2130-i)	N. Kurita

■ Software/Databases

Name	Contact Person
Atmospheric Composition Data by FT-IR Measurements (Moshiri and Rikubetsu)	T. Nagahama
NO ₂ and O ₃ Data by UV/Visible Spectrometer Measurements (Moshiri and Rikubetsu)	T. Nagahama
Coordinated Magnetic Data Along 210° Magnetic Meridian (Moshiri, Rikubetsu, Kagoshima, and Overseas MM Stations)	K. Shiokawa
All-Sky Auroral Data (Canada, Alaska, and Siberia)	K. Shiokawa, Y. Miyoshi

Name	Contact Person
Database of the Optical Mesosphere Thermosphere Imagers	K. Shiokawa
VHF Radar/GPS Scintillation (Indonesia)	Y. Otsuka
EISCAT Database	S. Nozawa, S. Oyama
ELF/VLF Wave Data	K. Shiokawa
Interplanetary Scintillation Data	M. Tokumaru
Solar Wind Speed Data	M. Tokumaru
Cosmic Ray Intensity Database	Y. Matsubara
MHD Simulation on the Magnetospheric Environment	T. Umeda
Hinode Science Center, Nagoya University	K. Kusano
ERG Science Center	Y. Miyoshi
QL Plot Archive of Satellite Data for Integrated Studies	Y. Miyoshi
Remei Satellite Observation Database	M. Hirahara
SuperDARN Hokkaido Pair of (HOP) Radars Database	N. Nishitani
Numerical Simulation Codes for Plasma Kinetics	T. Umeda
Cloud Resolving Strom Simulator (CReSS)	K. Tsuboki
Satellite Data Simulator Unit (SDSU)	H. Masunaga
ISEE Riometer Network Database	K. Shiokawa
Energy Flux Diagnosis Code for Atmospheric and Oceanic Waves	H. Aiki

■ Facilities

Name	Contact Person
Computer System for Solar-Terrestrial Environmental Research (Supercomputer System)	T. Umeda
CHN Analyzer, Isotope Ratio Mass Spectrometer	Y. Mino
Tandem Accelerator Mass Spectrometry	H. Kitagawa, M. Minami
Electron Probe Microanalyzer (EPMA)	T. Kato
Ion/Electron Beamline and Calibration Facility	M. Hirahara
Clean Room Facility for Instrument Development	M. Hirahara
CIDAS System	S. Masuda, T. Umeda, Y. Miyoshi
X-Ray Fluorescence Spectrometer (XRF)	T. Kato
X-Ray Diffractometer (XRD)	T. Kato
Facilities at Moshiri Observatory	A. Mizuno
Facilities at Rikubetsu Observatory	A. Mizuno
Facilities at Kiso Station	M. Tokumaru
Facilities at Fuji Observatory	M. Tokumaru
Facilities at Kagoshima Observatory	K. Shiokawa

ISEE Award

Winner	Title	Date of Award Ceremony
Ilya G. Usoskin (Professor, University of Oulu, Finland) Stepan Poluianov (Senior Researcher, University of Oulu, Finland)	Contribution to solar-terrestrial environmental research through international joint research on extreme solar particle events and their environmental and social impacts	March 11, 2021

6. Governance

As of March 31, 2021

Advisory Board

Mamoru Ishii	Space Environment Laboratory, Applied Electromagnetic Research Institute, National Institute of Information and Communications Technology
Takaaki Kajita	Institute for Cosmic Ray Research, The University of Tokyo
Takeshi Kawano	Japan Agency for Marine-Earth Science and Technology
Nobuko Saigusa	Center for Global Environmental Research, National Institute for Environmental Studies
Yukari N. Takayabu	Atmosphere and Ocean Research Institute, The University of Tokyo
Tsuneto Nagatomo	Nara University of Education
Takuji Nakamura	National Institute of Polar Research, Research Organization of Information and Systems
Tohru Hada	Interdisciplinary Graduate School of Engineering Sciences, Kyushu University
Hironobu Hyodo	Research Institute of Frontier Science and Technology, Okayama University of Science
Masahiro Hoshino	Graduate School of Science, The University of Tokyo
Kazuhisa Mitsuda	National Astronomical Observatory of Japan, National Institutes of Natural Sciences
Tetsuzo Yasunari	Research Institute for Humanity and Nature, National Institutes for the Humanities
Mamoru Yamamoto	Research Institute for Sustainable Humanosphere, Kyoto University
Junichi Watanabe	National Astronomical Observatory of Japan, National Institutes of Natural Sciences
Hiroshi Ikuta	Graduate School of Engineering, Nagoya University
Yasushi Yamaguchi	Graduate School of Environmental Studies, Nagoya University
Tomohiko Watanabe	Graduate School of Science, Nagoya University
Joji Ishizaka	Institute for Space–Earth Environmental Research, Nagoya University
Yoshitaka Itow	Institute for Space–Earth Environmental Research, Nagoya University
Hiroyuki Kitagawa	Institute for Space–Earth Environmental Research, Nagoya University
Kazuo Shiokawa	Institute for Space–Earth Environmental Research, Nagoya University
Nobuhiro Takahashi	Institute for Space–Earth Environmental Research, Nagoya University
Munetoshi Tokumaru	Institute for Space–Earth Environmental Research, Nagoya University
Masafumi Hirahara	Institute for Space–Earth Environmental Research, Nagoya University

Collaborative Research Committee

Akira Kadokura	Polar Environment Data Science Center, Joint Support-Center for Data Science Research, Research Organization of Information and Systems
Kazuyuki Kita	College of Science, Ibaraki University
Yuki Kubo	Applied Electromagnetic Research Institute, National Institute of Information and Communications Technology
Yoko S. Kokubu	Tono Geoscience Center, Japan Atomic Energy Agency
Akinori Saitou	Graduate School of Science, Kyoto University
Takeshi Sakanoi	Graduate School of Science, Tohoku University
Iku Shinohara	Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency
Shoichi Shibata	College of Engineering, Chubu University
Kanako Seki	Graduate School of Science, The University of Tokyo
Yoichiro Hanaoka	National Astronomical Observatory of Japan, National Institutes of Natural Sciences
Atsushi Higuchi	Center for Environmental Remote Sensing, Chiba University
Hiroyuki Matsuzaki	The University Museum, The University of Tokyo
Takashi Minoshima	Japan Agency for Marine-Earth Science and Technology
Akihiko Morimoto	Center for Marine Environmental Studies, Ehime University
Hiroyuki Yamada	Faculty of Science, University of the Ryukyus
Yuichi Otsuka	Institute for Space–Earth Environmental Research, Nagoya University
Takenori Kato	Institute for Space–Earth Environmental Research, Nagoya University
Kanya Kusano	Institute for Space–Earth Environmental Research, Nagoya University
Naoyuki Kurita	Institute for Space–Earth Environmental Research, Nagoya University
Kazuo Shiokawa	Institute for Space–Earth Environmental Research, Nagoya University
Taro Shinoda	Institute for Space–Earth Environmental Research, Nagoya University
Nobuhiro Takahashi	Institute for Space–Earth Environmental Research, Nagoya University
Munetoshi Tokumaru	Institute for Space–Earth Environmental Research, Nagoya University
Nozomu Nishitani	Institute for Space–Earth Environmental Research, Nagoya University
Masahito Nosé	Institute for Space–Earth Environmental Research, Nagoya University
Satoshi Masuda	Institute for Space–Earth Environmental Research, Nagoya University
Hirohiko Masunaga	Institute for Space–Earth Environmental Research, Nagoya University
Yutaka Matsubara	Institute for Space–Earth Environmental Research, Nagoya University
Masayo Minami	Institute for Space–Earth Environmental Research, Nagoya University
Kazuhisa Tsuboki	Institute for Space–Earth Environmental Research, Nagoya University

Joint Research Technical Committee**Integrated Studies Technical Committee**

Ayumi Asai	Graduate School of Science, Kyoto University
Yuto Katoh	Graduate School of Science, Tohoku University
Iku Shinohara	Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency
Kanako Seki	Graduate School of Science, The University of Tokyo
Hirohisa Hara	National Astronomical Observatory of Japan, National Institutes of Natural Sciences
Akimasa Yoshikawa	Graduate School of Sciences, Kyushu University
Takayuki Umeda	Institute for Space–Earth Environmental Research, Nagoya University
Kanya Kusano	Institute for Space–Earth Environmental Research, Nagoya University
Satoshi Masuda	Institute for Space–Earth Environmental Research, Nagoya University
Yoshizumi Miyoshi	Institute for Space–Earth Environmental Research, Nagoya University

Heliospheric and Cosmic-Ray Research Technical Committee

Chihiro Kato	Faculty of Science, Shinshu University
Shoichi Shibata	College of Engineering, Chubu University
Tomoko Nakagawa	Faculty of Engineering, Tohoku Institute of Technology
Yasuhiro Nariyuki	University of Toyama
Tohru Hada	Interdisciplinary Graduate School of Engineering Sciences, Kyushu University
Yoichiro Hanaoka	National Astronomical Observatory of Japan, National Institutes of Natural Sciences
Yoshitaka Itow	Institute for Space–Earth Environmental Research, Nagoya University
Kazumasa Iwai	Institute for Space–Earth Environmental Research, Nagoya University
Munetoshi Tokumaru	Institute for Space–Earth Environmental Research, Nagoya University
Yutaka Matsubara	Institute for Space–Earth Environmental Research, Nagoya University

Ionospheric and Magnetospheric Research Technical Committee

Takumi Abe	Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency
Yoshiya Kasahara	Information Media Center, Kanazawa University
Akinori Saito	Graduate School of Science, Kyoto University
Shin Suzuki	Faculty of Regional Policy, Aichi University
Yuichi Otsuka	Institute for Space–Earth Environmental Research, Nagoya University
Satonori Nozawa	Institute for Space–Earth Environmental Research, Nagoya University
Masahito Nosé	Institute for Space–Earth Environmental Research, Nagoya University

Meteorological, Atmospheric and Land-Ocean Ecosystem Research Technical Committee

Yoshizumi Kajii	Graduate School of Human and Environmental Studies, Kyoto University
Kenshi Takahashi	Research Institute for Sustainable Humanosphere, Kyoto University
Atsushi Higuchi	Center for Environmental Remote Sensing, Chiba University
Masafumi Hirose	Department of Environmental Science and Technology, Faculty of Science and Technology, Meijo University
Akihiko Morimoto	Center for Marine Environmental Studies, Ehime University
Naoyuki Kurita	Institute for Space–Earth Environmental Research, Nagoya University
Tomoo Nagahama	Institute for Space–Earth Environmental Research, Nagoya University
Hirohiko Masunaga	Institute for Space–Earth Environmental Research, Nagoya University
Akira Mizuno	Institute for Space–Earth Environmental Research, Nagoya University

Chronological Research Technical Committee

Yoko S. Kokubu	Tono Geoscience Center, Japan Atomic Energy Agency
Motohiro Tsuboi	Department of Applied Chemistry for Environment, School of Science and Technology, Kwansai Gakuin University
Hiroyuki Matsuzaki	The University Museum, The University of Tokyo
Katsuyoshi Michibayashi	Graduate School of Environmental Studies, Nagoya University
Hiromi Yamazawa	Graduate School of Engineering, Nagoya University
Naoto Yamamoto	Graduate School of Humanities, Nagoya University
Takenori Kato	Institute for Space–Earth Environmental Research, Nagoya University
Hiroyuki Kitagawa	Institute for Space–Earth Environmental Research, Nagoya University
Masayo Minami	Institute for Space–Earth Environmental Research, Nagoya University
Fusa Miyake	Institute for Space–Earth Environmental Research, Nagoya University

Airplane Usage Technical Committee

Seiho Uratsuka	Applied Electromagnetic Research Institute, National Institute of Information and Communications Technology
Kazuyuki Kita	College of Science, Ibaraki University
Makoto Koike	Graduate School of Science, The University of Tokyo
Akihiko Kondo	Center for Environmental Remote Sensing, Chiba University
Hiroyuki Yamada	Faculty of Science, University of the Ryukyus
Taro Shinoda	Institute for Space–Earth Environmental Research, Nagoya University
Nobuhiro Takahashi	Institute for Space–Earth Environmental Research, Nagoya University
Hiroyasu Tajima	Institute for Space–Earth Environmental Research, Nagoya University

Steering Committee of the Center for International Collaborative Research

Yusuke Ebihara	Research Institute for Sustainable Humanosphere, Kyoto University
Wallis Simon	Graduate School of Science, The University of Tokyo
Yoichiro Hanaoka	National Astronomical Observatory of Japan, National Institutes of Natural Sciences
Akihiko Morimoto	Center for Marine Environmental Studies, Ehime University
Kazuo Shiokawa	Institute for Space–Earth Environmental Research, Nagoya University
Nozomu Nishitani	Institute for Space–Earth Environmental Research, Nagoya University
Tetsuya Hiyama	Institute for Space–Earth Environmental Research, Nagoya University

Steering Committee of the Center for Integrated Data Science

Shin-ichiro Shima	Graduate School of Simulation Studies, University of Hyogo
Tohru Hada	Interdisciplinary Graduate School of Engineering Sciences, Kyushu University
Masahiro Hoshino	Graduate School of Science, The University of Tokyo
Kazuhisa Mitsuda	National Astronomical Observatory of Japan, National Institutes of Natural Sciences
Katsuyoshi Michibayashi	Graduate School of Environmental Studies, Nagoya University
Junichi Watanabe	National Astronomical Observatory of Japan, National Institutes of Natural Sciences
Takayuki Umeda	Institute for Space–Earth Environmental Research, Nagoya University
Takenori Kato	Institute for Space–Earth Environmental Research, Nagoya University
Kanya Kusano	Institute for Space–Earth Environmental Research, Nagoya University
Kazuhisa Tsuboki	Institute for Space–Earth Environmental Research, Nagoya University
Yoshizumi Miyoshi	Institute for Space–Earth Environmental Research, Nagoya University

Steering Committee of the Center for Orbital and Suborbital Research

Riko Oki	Earth Observation Research Center, Space Technology Directorate I, Japan Aerospace Exploration Agency
Kazuyuki Kita	College of Science, Ibaraki University
Masato Nakamura	Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency
Hiroyuki Yamada	Faculty of Science, University of the Ryukyus
Nobuhiro Takahashi	Institute for Space–Earth Environmental Research, Nagoya University
Hiroyasu Tajima	Institute for Space–Earth Environmental Research, Nagoya University
Masafumi Hirahara	Institute for Space–Earth Environmental Research, Nagoya University

7. Finance

External Funding and Industry–Academia–Government Collaborations

Researches of ISEE members as principal investigator were supported by the following external funds.

Kakenhi category	Number of subjects	Total amount (JPY)
Grant-in-Aid for Specially Promoted Research	1	58,890,000
Grant-in-Aid for Scientific Research on Innovative Areas	5	31,590,000
Grant-in-Aid for Scientific Research (S)	3	117,780,000
Grant-in-Aid for Scientific Research (A)	3	20,020,000
Grant-in-Aid for Scientific Research (B)	14	84,370,000
Grant-in-Aid for Scientific Research (C)	3	4,290,000
Grant-in-Aid for Challenging Research (Exploratory)	10	30,160,000
Grant-in-Aid for Early-Career Scientists	3	3,380,000
Grant-in-Aid for Research Activity Start-up	1	1,430,000
Fund for the Promotion of Joint International Research (Fostering Joint International Research (B))	4	15,860,000
Total	47	367,770,000

- Forty-seven research subjects listed in the table were supported by the JSPS Kakenhi.
- Thirty-one research subjects received total 128,603,299 JPY from governmental funds except KAKENHI, and from other universities and companies. Thirteen of them were collaborative researches between ISEE and companies, or national institutes.
- Three research subjects received total 5,500,000 JPY of donation.

Libraries

■ Library, Solar-Terrestrial Sciences (ISEE Library #1)

Books

Japanese	2,999
Foreign	11,140

Journals

Japanese	47
Foreign	207

■ Library, Hydrospheric-Atmospheric Sciences (ISEE Library #2)

Books

Japanese	4,534
Foreign	8,858

Journals

Japanese	273
Foreign	249

Properties

	Site (m ²)	Bulidings (m ²)	Location
Higashiyama Campus (Main campus of Nagoya University)	-	8,442	Nagoya
Toyokawa Campus	94,212	1,461	Toyokawa
Moshiri Observatory	110,534	325	Hokkaido
Rikubetsu Observatory	24,580	167	Hokkaido
Kagoshima Observatory	13,449	287	Kagoshima
Fuji Observatory	19,926	174	Yamanashi
Sugadaira Station	3,300	0	Nagano
Kiso Station	6,240	66	Nagano
Total	272,241	10,922	