Symposium Program

Date	Time	Session Number	Speaker	Title
March 5	10:30 - 10:40	**opening**	T. Miyoshi	
		Chair	H. Hotta	
	10:40 - 11:10	**keynote**	K. Kusano	Status and Possibilities of Space-Earth Environmental Research as Predictive Science
	11:10 - 11:40	**1. Advanced simulation and numerical experiments for prediction**	M. Rempel (Invited)	Flare simulations with the MURaM radiative MHD code
	11:40 - 12:10		M. Satoh (Invited)	Supercomputing for Climate Extremes: Global Storm-Resolving Models and Advanced Satellite Observations
	12:10 - 13:10	lunch		
		Chair	T. Miyoshi	
	13:10 - 13:40		F. Takahashi (Invited)	Numerical modeling of the Earth and planetary dynamos for the understanding of the interior dynamics and prediction of magnetic secular variation
	13:40 - 14:10		Y. Matsumoto (Invited)	Supercomputer modeling of the solar wind charge exchange process around the Earth's magnetosphere and its application to

				understanding mesoscale dynamics
	14:10 - 14:25		S. Toriumi	Magnetic flux emergence simulations with the radiative MHD code R2D2: Status and the way to predictions
	14:25 - 14:40		K. Akutagawa	Multi-scale nature of magnetic reconnection by multi-hierarchy simulation
	14:40 - 15:15	coffee		
		Chair	H. Iijima	
	15:15 - 15:45	**4. Disaster mitigation through forecast**	T. Koyaguchi (Invited)	The mathematical framework for forecasting complex evolutions of volcanic eruptions
	15:45 - 16:15		T. Onsager (Invited)	Integrating Fundamental Science and Space Weather Applications
	16:15 - 16:45		M. Ishii (Invited)	Toward Establishing the Global Space Weather Warning System
	16:45 - 17:00		E-K. Lim	The Role of Small-Scale Magnetic Reconnections in Triggering the X1.3 Flare in NOAA AR 13777
March 6		Chair	H. Hayakawa	
	09:00-09:15		H. Liu	How does global warming regulates space weather impacts on the thermosphere and ionosphere

	09:15 - 09:45	**3. Paleo-space climatology as a reference for predictions**	C. Beggan (Invited)	Digitizing the Continuous Magnetic Recordings from London UK for the 1859 'Carrington' Storm
	09:45 - 10:15		Y. Motizuki (Invited)	Relationship between climate and solar activity suggested by Dome Fuji ice cores and RIKEN AGDF Project
	10:15 - 10:45		R. Muscheler (Invited)	Paleo-Space-Weather inferred from cosmogenic radionuclides in ice cores
	11:00 - 12:00	**poster & coffee**		
	12:00 - 13:00	lunch		
		Chair	S. Masuda	
	13:00 - 13:30		H. Miyahara (Invited)	Cosmogenic isotopes as a tool to explore solar cycle dependence of extreme space weather
	13:30 - 13:45		A. Ferriz-Mas	Model for the recurrence of grand minima based on stochastic resonance
	13:50 - 15:00	**ISEE Award ceremony and commemorative lecture**	KD Leka &S-H. Park	Grounding and Rebounding: Establishing some Hard Truths [about Solar Flare Forecasting] so that Progress can be (is being) Made!
	15:00 - 15:30	coffee		
		Chair	N. Takahashi	

	15:30 - 16:00	**5. Perspectives for prediction and interdisciplinary research in various fields**	T. Ohira (Invited)	Some Aspects of Predictions with Noise and Delay
	16:00 - 16:30	**2. Mathematical science, statistics, and machine learning for prediction**	T. Miyoshi (Invited)	Prediction Science: the fifth science integrating inductive and deductive sciences
	16:30 - 17:00		S. Nakano (Invited)	Modelling of the magnetosphere-ionosphere system with reservoir computing
	17:00 - 17:15		Y. Bamba	Implementation of a physics-based flare prediction model κ-scheme to operational space weather forecasting in NICT
		Group Photo		
	18:00-20:00	**Informal Dinner**		**First Floor of Noyori Conference Hall**
March 7		Chair	Ieda	
	09:00 - 09:30		T. Asai A. (Invited)	An Explainable AI by discovery science and machine learning - "Wide Learning" technology and its applications-
	09:30 - 10:00		D. Wang (Invited)	Statistical Characteristics of Whistler Mode Chorus Waves Based On Observations from Van Allen Probes and ARASE Satellite

	10:00 - 10:15		N. AlHaddad	Technique for Extracting the Total Magnetic Helicity of CMEs
	10:15 - 10:30	coffee		
	10:30 - 12:00	**Panel Discussion** **Exploring the future of predictive sciences**	Moderators: T. Onsager, K. Kusano	Panelists: T. Asai, K. Tsuboki, KD Leka, N. Lugaz, Y. Miyoshi, H. Jin
	12:00 - 13:15	lunch		
		Chair	Y. Miyoshi	
	13:15 - 13:45	**5. Perspectives for prediction and interdisciplinary research in various fields**	S. Shima (Invited)	20th anniversary of the super-droplet method
	13:45 - 14:15		T-H. Watanabe (Invited)	Simulation of auroral formation and dynamics by means of an interdisciplinary approach of fusion and space research
	14:15 - 14:30		A. Shinbori	Generation of equatorial plasma bubble after the 2022 Tonga volcanic eruption
	14:30 - 14:45		N. Yokoi	Astrophysical and geophysical turbulence modelling based on a multiple-scale and response-function formulation
	14:45 - 15:45	**poster & coffee**		
		Chair	K. Kusano	

	15:45 - 16:15		Z. Yoshida (Invited)	How do plasmas generate structures?
	16:15 - 16:30	**4. Disaster mitigation through forecast**	K-S. Cho	Opening New Horizons with the Korea-led L4 Mission: March 2025 Progress Report
	16:30 - 16:45		N. Lugaz	The need for a sub-L1 space weather research mission: Current knowledge gaps on Coronal Mass Ejections
	16:45 - 17:00	**Closing**	K. Kusano	
		Adjourn		