

S1: Space Weather: Prediction Technique

Organizers: T. Detman and H. Lundstedt

Tuesday, October 3; Room 3

- 9:30 S1-01 REPORT ON THE SOLAR CYCLE 23 PREDICTION PROJECT
J. A. JOSELYN (Solicited)
- 9:50 S1-02 MEASUREMENTS OF SPACE WEATHER FORECAST PERFORMANCE
P. WILKINSON, R. Thompson (Solicited)
- 10:10 S1-03 THE POSSIBILITY OF SOLAR FLARE AND CME PREDICTION FROM PHOTOSPHERIC MAGNETIC FIELD MEASUREMENTS
A. I. PODGORNY, I. M. Podgorny, S. Minami
- 10:50 *Break*
- 11:10 S1-04 USE OF SOLAR IMAGES FOR PREDICTIONS OF INTERPLANETARY DISTURBANCES
S. WATARI, T. Watanabe (Solicited)
- 11:30 S1-05 ESTIMATION OF THE SOLAR WIND SPEED BY THE EXPANSION RATE OF THE CORONAL MAGNETIC FIELD
K. HAKAMADA, M. Kojima, M. Tokumaru, T. Ohmi, A. Yokobe, K. Fujiki
- 11:50 S1-06 MONITORING THE PROGRESS OF TRAVELLING SHOCKS BETWEEN THE SUN AND THE EARTH USING PARTICLE AND PLASMA SIGNATURES RECORDED ABOARD SOHO, ACE, WIND AND INTERBALL
S. MCKENNA-LAWLOR, K. Kecskemety, C. D. Fry, M. Dryer, Z. Smith, W. Sun, D. Berdichevsky, K. Kudela
- 12:10 S1-07 A REAL-TIME HYBRID HELIOSPHERIC MODELING SYSTEM
T. R. DETMAN, Z. Smith, N. Arge, V. Pizzo, M. Dryer (Solicited)
- 12:30 *Lunch*
- 14:00 S1-08 THE USE OF ARTIFICIAL NEURAL NETWORKS AS FORECASTING DRIVERS FOR THE MAGNETOSPHERIC SPECIFICATION MODEL AND THE ENERGETIC ELECTRON MAGNETOSPHERIC SPECIFICATION MODEL (EEMSM)
J. W. FREEMAN, B. Hausman, K. Costello (Solicited)
- 14:20 S1-09 DIURNAL AND SEASONAL EFFECTS OBSERVED IN THE Dst INDEX
R. L. MCPHERRON (Solicited)
- 14:40 S1-10 NONLINEAR DYNAMICS: A NEW APPROACH IN HIGH-LATITUDE IONOSPHERIC ELECTRODYNAMICS MODELING
D. VASSILIADIS, A. J. Klimas, R. J. Parks, J. A. Valdivia
- 15:00 S1-11 SPECIFICATION AND FORECAST OF ENERGETIC MAGNETOSPHERIC ELECTRONS AND IONS
D. F. MOORER, D. N. BAKER
- 15:20 *Break*
- 15:40 S1-12 FORECASTING SOLAR ACTIVITY WITH AI
H. LUNDSTEDT (Solicited)
- 16:00 S1-13 PREDICTING MAGNETOSPHERIC ACTIVITY WITH A LOW-DIMENSIONAL DYNAMICAL MODEL
I. DOXAS, W. Horton, R. Weigel (Solicited)
- 16:20 S1-14 REAL-TIME PREDICTION OF LARGE GEOMAGNETIC STORMS
J. CHEN, N. Arge, S. Slinker
- 16:40 S1-15 THE SAPPORO 2000 OLYMPIC SPACE WEATHER PREDICTION CHALLENGE
T. R. DETMAN, H. LUNDSTEDT (Solicited)

Poster Session

Wednesday, October 4; Sapporo Media Park

8:30 - 12:00

- S1-P01 OPERATIONAL MODELS USING A NEURAL NETWORK FOR PREDICTING Dst INDEX
S. WATANABE, E. Sagawa, K. Ohtaka, H. Shimazu
- S1-P02 SIMULTANEOUS ANALYSIS OF SOLAR TERRESTRIAL MEASUREMENTS
HARI OM VATS, H. S. Sawant, F. C. R. Fernandes, R. R. Rosa, J. R. Cecatto, J. A. C. F. Neri
- S1-P03 MULTI-FACTOR ANALYSIS OF RELATION OF GEOMAGNETIC ACTIVITY TO SOLAR WIND PARAMETERS
Y. P. MALTSEV, I. V. Golovchanskaya
- S1-P04 STUDY OF SOLAR WIND - MAGNETOSPHERE COUPLING USING THE FILTERING TECHNIQUE
V. V. SHELOMENTSEV
- S1-P05 PRINCIPLES AND TECHNIQUES FOR SHORT-TERM PREDICTING VARIATIONS IN THE CRITICAL FREQUENCIES OF THE IONOSPHERIC F2 REGION IN MIDDLE LATITUDES EMPLOYING THE SOLAR AND GEOMAGNETIC INDICES
O. F. TYRNOV, I. G. Zakharov, V. Karasin
- S1-P06 REAL-TIME PREDICTION OF IONOSPHERIC DISTURBANCES CAUSED BY STORMS AND SUBSTORMS
D. V. BLAGOVESHCHENSKY, A. S. Rodger
- S1-P07 NONLINEAR PREDICTION OF SPACE WEATHER USING RADIAL BASIS FUNCTIONS
C. DYER, P. Cannon, N. Francis, D. Rodgers, S. Clucas, R. Smith
- S1-P08 AN IMPROVEMENT IN STORM FIELD PREDICTION
T. IYEMORI
- S1-P09 THE GEOSPACE ENVIRONMENT DATA ANALYSIS SYSTEM (GEDAS)
Y. KAMIDE, S. Masuda, H. Shirai, H.-J. KIM, T. Ogino, N. Nishitani, H. Shinagawa, M. Kojima
- S1-P10 SHORT-TIME NEURAL NETWORK PREDICTIONS OF COSMIC RAY NEUTRON MONITOR RESPONSES TO SOLAR ACTIVITY MODULATION FROM SOLAR WIND DATA
V. DOVHEDEN, H. Lundstedt
- S1-P11 NEURAL NETWORK PREDICTION OF GEOSYNCHRONOUS RELATIVISTIC ELECTRON FLUX FROM SOLAR WIND DATA
P. WINTOFT, H. Lundstedt
- S1-P12 ARTIFICIAL NEURAL NETWORK APPLICATIONS FOR NOWCASTING AND FORECASTING OF THE SPACE WEATHER
A. V. DMITRIEV
- S1-P13 IMPROVED Kp AND Dst FORECAST USING ANFIS TECHNIQUES
E. KIHN, M. Zhizhin
- S1-P14 THE USE OF ONE-MINUTE DATA OF EMILIO SEGRE OBSERVATORY (ISRAEL) OF TOTAL AND DIFFERENT NEUTRON MULTIPLICITIES COUNTING RATES FOR AUTOMATICALLY SEARCHING THE START OF DANGEROUS FLARE ENERGETIC PARTICLE EVENTS
L. I. DORMAN, N. Iucci M. Murat, Y. Noter, L. A. Pustil'nik, G. Villoresi, I. G. Zukerman
- S1-P15 PREDICTING HIGH-LATITUDE GEOMAGNETIC DISTURBANCE PATTERNS USING NEURAL NETWORKS
H. Gleisner, H. Lundstedt
- S1-P16 FORECASTING GEOMAGNETIC STORMS USING ENERGETIC ION ENHANCEMENTS: CONTINUED
Z. SMITH, W. Murtagh
- S1-P17 REAL-TIME UPDATING OF THE MID-LATITUDE IONOSPHERIC TROUGH MODEL
I. STANISLAWSKA, H. Rothkaehl, Z. Zbyszynski, G. Juchnikowski
- S1-P18 RESULTS FROM GLOBAL MHD SIMULATIONS FOR SPACE WEATHER MONTH
M. WILTBERGER, J. G. Lyon, C. C. Goodrich, S. Shepard, K. Baker, M. K. Hudson, S. K. Elkington
- S1-P19 FORECASTING EVOLUTION OF Dst INDEX FROM SOLAR WIND MEASUREMENT USING SUPPORT VECTOR METHODS
P. M. Drezet, R. F. Harrison, M. BALIKHIN

- S1-P20 FORECASTING EVOLUTION OF Dst INDEX FROM SOLAR WIND MEASUREMENT USING
NONLINEAR ADAPTIVE FILTERS
P. M. Drezet, R. F. Harrison, M. BALIKHIN
- S1-P21 FINAL VALIDATION RESULTS AND DATABASES FOR TWO SOLAR EVENT-INITIATED
INTERPLANETARY SHOCK PROPAGATION MODELS
S. QUIGLEY, K. Kadinsky-Cade (Solicited)
- S1-P22 SOLAR PROTON FLUX FORECAST
E. DEL POZO GARCIA, J. F. Valiente Marques
- S1-P23 A 3-BASE METHOD OF GEOMAGNETIC DISTURBANCE PREDICTION
WEI FENGSI, Cai Hongchang, Feng Xueshang, Xu Ya (Solicited)
- S1-P24 PREDICTION OF THE SUNSPOT MAXIMUM FOR SOLAR CYCLE 23
R. P. KANE
- S1-P25 PERIODICITIES IN THE TIME SERIES OF SOLAR EMISSIONS AT DIFFERENT SOLAR ALTITUDES
R. P. KANE
- S1-P26 DATA ASSIMILATION TECHNIQUES IN THE LOW LATITUDE IONOSPHERE: ESTIMATION OF
VERTICAL EXB DRIFTS FROM OBSERVED IONOSPHERIC PARAMETERS
D. ANDERSON, A. Anghel, S. Heironymus
- S1-P27 RADIOHELIOGRAPHIC DIAGNOSTICS OF SOLAR FACTORS THAT DETERMINE AND DISTURB
THE SPACE WEATHER
G. SMOLKOV, V. Maksimov, A. Uralov, V. Zandanov, N. Kardapolova
- S1-P28 POSSIBLE TRIGGER FOR SOLAR FLARES
S. IBADOV, F. S. Ibodov, S. S. Grigorian
- S1-P29 A STATISTICAL MODEL OF THE ANNUAL MAGNETIC STORM OCCURRENCE
M. P. FREEMAN, M. Daws, R. B. Horne
- S1-P30 TREND, NON-STATIONARY CYCLES DERIVED IN SELF-CONSISTENT STUDY OF SUNSPOT
NUMBERS AND PROBLEMS OF FORECASTING
L. B. Tsurulnik, T. V. KUZNETSOVA, V. N. Oraevsky
- S1-P31 COMPARISON OF METHODS FOR SOLAR CYCLE PREDICTION
P. LANTOS
- S1-P32 ARTIFICIAL NEURAL NETWORK TECHNIQUE FOR PREDICTION OF SOLAR ACTIVITY INDEXES
FOR DIFFERENT TERMS
N. BARKHATOV, S. Ponomarev, S. Sakharov
- S1-P33 FORECASTING DANGEROUS SITUATIONS FOR SPACECRAFTS AND AIRCRAFTS CAUSED BY
LARGE SOLAR ENERGETIC PARTICLE EVENTS
L. I. DORMAN
- S1-P34 IMPROVING SOLAR PROTON EVENTS STATISTICAL MODELS
A. HILGERS
- S1-P35 PREINCREASE EFFECT BEFORE FORBUSH-DECREASE AS A PHENOMENON IMPORTANT IN
SPACE WEATHER FORECASTING
Z. KOBYLINSKI