SH: Oral Sessions
SH: Solar & Heliospheric Phenomena

July 31
14:30–16:18 Convention Hall 200

SH 1.2

1 Impulsive Flare Material: A Seed Population for Large Solar Particle Events
   R. A. Mewaldt et al.

2 A Statictical Study of $^3$He Enhancement in the High-Energy Solar Particles
   Jarno Laivola, J. Torsti, and L. Kocharov

3 The Solar Cycle Variability of Solar Energetic Particle Composition
   R. A. Leske et al.

4 Modelling Energy-Dependent Fe/O Ratios Observed above 12 MeV/Nucleon
   C. M. S. Cohen et al.

5 The $^3$He-Rich SEP Events of August 2002: Exceptional Elemental and Isotopic Composition Patterns at Energies above 10 MeV/Nucleon
   M. E. Wiedenbeck et al.

6 Light Isotope Abundances in Solar Energetic Particles Measured by the NINA-2 Instrument
   Vladimir V. Mikhailov for the NINA-WIZARD Collaboration

7 High Energy Ionic Charge State Composition in Recent Large Solar Energetic Particle Events
   Allan Wayne Labrador et al.

8 Strong Energy Dependence of Ionic Charge States in Impulsive Solar Events
   Eberhard Moebius et al.

9 On the Energy Dependence of Ionic Charge States
   Berndt Klecker et al.

August 1
9:10–10:34 Convention Hall 200

SH 1.1

1 What We Know and Do Not Know about High Energy Neutral Emissions from Solar Flares (A Challenge for Future Missions)
   Edward Lowell Chupp et al.

2 Solar Neutron Event in Association with the 24 September 2001 Flare
   Takashi Sako et al.

   Kyoko Watanabe et al.

4 Gamma and X-Ray Solar Flare Emissions: CORONAS-F Measurements
   Karel Kudela et al.

5 Solar Gamma-Ray Lines at High Resolution with RHESSI
   Ronald J. Murphy et al.

6 Energetics of Nonthermal Electrons and Protons in Intense Solar Flares
   Masato Yoshimori, H. Hirayama, and S. Mori
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<td>Solar Fast Wind Regions as Sources of Gradual 20 MeV Solar Energetic Particle Events</td>
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6 A Search for the 200 GeV Muon Intensity Bursts during Powerful Solar Flares of 23rd Solar Cycle
Sergei N. Karpov et al.

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SH 2.3 (previous SH 2.3+SH 2.4+SH 2.6)
1 Particle Acceleration at Fluid Compressions and What That Teaches Us about Shock Acceleration
Kittipat Malakit et al.

2 Finite-Time Shock Acceleration
David J. Ruffolo and Chanruangrith Channok

3 Diffusive Compression Acceleration of Charged Particles
Jack R. Jokipii, J. Giacalone, and J. Kota

4 Energetic Electrons Associated with Transient Interplanetary Shocks: Evidence for Weak Interaction
George C. Ho et al.

5 Electron Heating Process at Quasi-Perpendicular Shocks
Tooru Sugiyama et al.

6 Pitch Angle Diffusion of Energetic Particles by Large Amplitude MHD Waves
Tohru Hada et al.

7 Probing the Turbulent Solar Wind with Cosmic Rays
Curt A. de Koning and John W. Bieber

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1 Calculation of Type III Radio Emission from a Particle Transport Model
Paul A. Evenson

2 Perpendicular Diffusion and Drift of Solar Energetic Particles in Heliospheric Magnetic Fields
Ming Zhang, J. R. Jokipii, and R. B. McKibben

3 Conditional Statistics of Magnetic Turbulence and the Lateral Transport of Solar Energetic Particles
Piyanate Chuychai, D. Ruffolo, and W. H. Matthaeus

4 Some Statistical Properties of the Decay Phase of SEP-Events
Karoly Kecskemety et al.

Mohamed Ali El-Borie and S. S. Al-Thoyaib

6 Spatial Distribution of Energetic Heavy Ions and Its Time Structure in the Radiation Belt
Daisuke Miki et al.

7 Interacting and Escaping 100 MeV Solar Protons Observed on 11 and 15 June 1991
Alexei Struminsky

8 Action on Cosmic Rays on Latent Energy of the Atmosphere
Vladislav E. Timofeev et al.

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SH 3.2
1 Cosmic Rays and the Global Heliospheric Magnetic Field: Meridional Motion of Footpoints
Jozsef Kota and J. R. Jokipii

2 Heliospheric Solar Wind Turbulence Model with Implications for Latitudinal Transport of Cosmic Rays
Shyamsundar Parhi et al.
| 3 | A Simple Model of Cosmic Ray Modulation in the Heliosphere  
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| 4 | Long-Term Cosmic Ray Modulation by Heliospheric Parameters: Non-linear Relations  
Ilya G. Usoskin et al. |
| 5 | Cosmic Ray Drifts at Solar Maximum  
Marius S. Potgieter and B. Heber |
| 6 | Direct Evidence of Energy-Loss in Electron-Capture-Decay Secondary Isotopes in the Heliosphere  
Lauren M. Scott et al. |
| 7 | Heliospheric Modulation Potential from SOHO/EPHIN Observations of Protons  
Raul Gomez-Herrero et al. |
| 8 | Modeling a Few-MeV Jovian and Galactic Electron Spectra in the Inner Heliosphere  
Vance K. Henize, S. E. S. Ferreira, and M. S. Potgieter |
| 9 | Modulation of Cosmic Rays at and beyond the Heliospheric Termination Shock  
Marius S. Potgieter and W. R. Webber |
| 10 | Radial Intensity Profiles of Galactic Cosmic Rays in the Outer Heliosphere  
Harm Moraal, R. A. Caballero-Lopez, and F. B. McDonald |

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**SH 3.2**

| 11 | Radial Intensity Gradients and Diffusion Coefficients of Cosmic Rays in the Outer Heliosphere at Solar Maximum  
Zenjiro Fujii et al. |
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| 12 | Local Reacceleration of Galactic Cosmic Rays at the Heliosphere's Termination Shock  
Frank B. McDonald et al. |
| 13 | Modulation of Galactic Cosmic Rays near and beyond the Termination Shock  
Ming Zhang and Bryan Ball |
| 14 | Galactic Cosmic-Ray Interactions with the Outer Heliosphere: A Self-Consistent Approach  
Vladimir Florinski and G. P. Zank |

**SH 1.5** (previous SH 1.6+SH 2.7+SH 3.7)

| 1 | A New Solar Neutron Telescope in Mexico  
Jose F. Valdes-Galicia et al. |
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| 2 | Super Solar Neutron Telescope for the Next Solar Maximum  
Takashi Sako et al. |
| 3 | First Results of a Mobile Neutron Monitor to Intercalibrate the Worldwide Network  
Harm Moraal et al. |

**August 3**

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| 1 | Coronal and Interplanetary Environment of Large Solar Energetic Particle Events  
Nat Gopalswamy, S. Yashiro, and R. A. Howard |
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| 2 | Possible Cosmic Ray Using for Forecasting of Major Geomagnetic Storms, Accompanied by Forbush-Effects  
Lev A. Pustil’nik et al. |
| 3 | A Global Structure of the Magnetic Flux Rope Observed in Interplanetary Space Fitted by a Torus-Type Force-Free Model  
Akifumi Ihara et al. |
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<td>Cosmic Ray Variability around the Geomagnetic Disturbances</td>
<td>Karel Kudela and M. Storini</td>
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<td>Yoshiaki Shikaze for the BESS Collaboration</td>
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<td>Ilya G. Usoskin et al.</td>
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8 Long Term Cosmic Ray Variations in Association with Solar Magnetic Flux
José F. Valdes-Galicia, A. Lara, and B. Mendoza

9 The Solar Cycle and Energetic Particle Streaming Patterns in and around the Terrestrial Magnetosphere
Peter Kiraly

10 Sun Shadow in the Solar Activity Cycle 23 Observed with the Tibet Air Shower Array
Masaki Nishizawa for the Tibet ASgamma Collaboration

11 The Cosmic Ray Shadows of the Moon and the Sun Detected by the Milagro Gamma Ray Observatory
Gus Sinnis for the Milagro Collaboration

August 5
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SH 3.3 (previous SH 3.3+SH 3.4)

1 The Approach of Voyager 1 to the Termination Shock
E. C. Stone and A. C. Cummings

2 Sustained Energetic Particle Intensity Enhancements at Voyager 1 Beginning in 2002
Matthew E. Hill et al.

3 Voyager Observations of Anomalous Cosmic Ray Gradients and the Role of Diffusion and Drifts in the
Outer Heliosphere
A. C. Cummings and E. C. Stone

4 Effective Energy of Neutron Monitors
Katja Maria Alanko et al.

5 Galactic Cosmic Ray Fluctuations: Long-Term Modulation of Power Spectrum
Ilya G. Usoskin and S. Starodubtsev

6 Galactic Anisotropy of Multi-TeV Cosmic-Ray Intensity Observed by the Tibet III Air Shower Array
Shigeharu Udo for the Tibet ASgamma Collaboration

7 Observation of Anisotropy of Cosmic Rays with Solar Time Using the Multidirectional Muon Telescope of
GRAPES-3 Shower Array
Hiroshi Kojima for the GRAPES Collaboration

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SH 3.3 (previous SH 3.3+SH 3.4)

8 Variation of Cosmic Ray Intensity with Angular Distance from Earth to the Current Sheet
Badruddin and Y. P. Singh

9 Effect of Interplanetary Turbulences Causing Unusual Behaviour in CR Intensity
M. L. Chauhan et al.

10 Study of High/Low Amplitude Wave Trains in CR Intensity and Associated Solar Features
Sushil Kumar Dubey et al.

11 Effect of Solar Heliospheric Parameters on Different Components of Daily Variation in Cosmic Ray Intensity
Rekha Agarwal Mishra and Rajesh K. Mishra

12 Long Term Behavior of Higher Harmonics of Cosmic Ray Intensity on Quiet Days
Mahendra Kumar Richharia, B. K. Kathal, and S. K. Dubey

13 Energetic Particle Intensity Increases at Voyagers 1 and 2 during 2002–03
Robert Blair Decker et al.

14 Angular Distributions and Energy Spectra of Energetic Particles Observed by Voyager 1 at 85-88 AU
Robert Blair Decker et al.
## August 6

### 9:10–10:10  
Convention Hall 200

**SH 3.1** (previous SH 3.1+SH 2.6)

1. Modulation of Anomalous Protons with Increasing Solar Activity  
   Marius S. Potgieter and U. W. Langner

2. Anomalous Cosmic Rays at a Termination-Shock Crossing  
   Jack R. Jokipii and J. Giacalone

3. Heliospheric Termination Shock Mediation by Anomalous Cosmic Rays: Insights from Recent Voyager Data  
   Vladimir Florinski et al.

4. Unusual Enhancements of MeV Ions and Electrons as Voyager 1 Approaches the Heliospheric Termination Shock  
   Frank B. McDonald et al.

5. Voyager 1 Observations of the Anisotropies of Enhanced MeV Ion Fluxes at 85 AU  
   A. C. Cummings et al.

### 14:00–16:00  
Convention Hall 200

**SH 3.5** (previous SH 3.5+SH 3.6)

1. Properties of the Long Term Heliospheric Modulation - Tests to Be Met by Modulation Theory  
   Juerg Beer, K. G. McCracken, and F. B. McDonald

2. The Accuracy of Cosmogenic $^{10}$Be as a Quantitative Measurement of the GCR  
   Ken McCracken

   Lev A. Pustil'nik, L. I. Dorman, and G. Yom Din

4. Measurements of C-14 Concentration for 22 Single-Year Tree Rings of an Old Cedar ca. 2500 Years Ago  
   Hirohisa Sakurai et al.

5. Variation of the Radiocarbon Content of Tree Rings during the Spoerer Minimum  
   Hiroko Miyahara et al.

6. Radiocarbon Content in Japanese Cedar during the Maunder Minimum  
   Hiroko Miyahara et al.

**SH 3.6**

1. Cosmic Rays in the Mechanism of Thundercloud Production  
   Yuri Ivanovich Stozhkov and V. I. Ermakov

2. Light Flashes Observations on Board Mir and ISS with Sileye Experiments  
   Marco Casolino for the Sileye Collaboration

   Aleksandr S. Lidvansky et al.

   Aleksandr S. Lidvansky, N. S. Khaerdinov, and V. B. Petkov

### 17:00–19:00  
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**SH 3.6**

5. Acceleration below Thunder Clouds at Mount Norikura  
   Yasushi Muraki et al.
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<td>The Relation between Malfunctions of Satellites at Different Orbits and Cosmic Ray Variations</td>
<td>Lev I. Dorman et al.</td>
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<td>Seasonal Variations in $^7$Be Radioactivity Measured at Ground Level</td>
<td>Masato Yoshimori et al.</td>
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<td>Daily Variation of Cosmogenic Nuclide Be-7 Concentration in the Atmosphere and Solar Activities</td>
<td>Hirohisa Sakurai et al.</td>
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Multi-Purpose Hall

**SH 1.1**

1-P-163 RHESSI Discovery of a Coronal Non-Thermal Hard X-Ray Source in the 23 July 2002 Gamma-Ray Line Flare
  Robert P. Lin et al.

1-P-164 Simultaneous Observations of Solar Neutrons in Association with a Large Solar Flare on June 6, 1991
  Kyoko Watanabe et al.

1-P-165 GEANT Applications for the Interpretation of Ground-Based Solar Neutron Observations
  Erwin O. Flueckiger et al.

1-P-166 Time Profile of the 2.223 MeV Gamma-Line Emission and Some Features of the 16 December 1988 Solar Event
  Leonty I. Miroshnichenko et al.

1-P-167 Solar Gamma Ray Events Detected by the GEOTAIL Plasma Instrument
  Yasuhiro Takei et al.

**SH 1.2**

1-P-168 The Unusual Solar Particle Events of August 2002
  R. A. Leske et al.

1-P-169 $^3$He-Rich SEP Events Detected by EPHIN 1996-2000
  Raul Gomez-Herrero et al.

1-P-170 Possible Detection of Large Solar Particle Event at Balloon Altitudes during the 2001-2002 TIGER Flight
  Sven Geier et al.