

**Program of the 15th Symposium on Coordinated Observations of the Ionosphere
and the Magnetosphere in the Polar Regions held at the National
Institute of Polar Research, Tokyo,
January 28-29, 1992**

I. Solar Wind-Magnetosphere Interaction

1. Origin of interplanetary southward magnetic fields for major magnetic storms. K. MARUHASHI and J. A. JOSELYN.
2. Numerical simulation of the geomagnetic sudden commencement. S. OSADA, T. ARAKI, S. HUIJITANI, Y. YAMADA, K. YUMOTO, K. SHIOKAWA and H. LUHR.
3. Heliomagnetospheric control on substorm activity. T. SAITO, T. TAKAHASHI, Y. KOZUKA and S. AKASOFU.
4. Comparative magnetospheric disturbances between comets and the earth. Y. KOZUKA, T. SAITO, S. MINAMI, I. KONNO and S. AKASOFU.

II. Magnetospheric Disturbances

5. Earthward electric field in the magnetospheric tail. S. MINAMI and I. M. PODGORNYY.
6. Computer simulations of development of fast magnetic reconnection. M. UGAI.
7. Comparison between the polar cap index and the polar cap AE index. S. SAROSO, M. SUGIURA, T. IEMORI, T. ARAKI and T. KAMEI.
8. Auroral electrojet activity during isolated substorms at different local times: A statistical study. Y. KAMIDE and H. W. KROEHL.

PI. Poster Session I

9. Syowa station aurora radar observation from February 1990 to January 1991. K. OHTAKA, E. MAENO and K. IGARASHI.
10. Day of the week dependence of 30 Mhz interference signals observed by riometer in Antarctica. A. YUKIMATU, M. EJIRI, A. KADOKURA and T. ARAKI.
11. A possible mechanism to cause CNA modulation by Toroidal Pc 5 pulsations. O. SAKA, H. YAMAGISHI, N. SATO and D. N. BAKER.
12. Characteristics of short period geomagnetic pulsation observed during geomagnetic storms. S. TSUNOMURA.
13. Pc 3-4 pulsations in high latitudes during large IMF cone angle. K. HAYASHI and K. HAYASHI.
14. Correlation study of compressional Pc 3-4 waves observed by AMPTE/CCE and GOES-5. H. MATSUOKA and K. YUMOTO.
15. Evidence of global cavity mode and Alfvén mode Pc 3's observed along 210° magnetic meridian after sudden commencement. A. ISONO, K. YUMOTO, Y. TANAKA, B. J. FRASER and F. W. MENK.
16. Local time variation of wave mode of Pi 2 pulsations observed by synchronous satellites. H. TAKEUCHI, T. SAITO, T. SAKURAI and T. TAKAHASHI.
17. Pc 5 pulsation features modified by induced currents. K. KATO, I. AOYAMA, Y. TONEGAWA, N. SATO and O. SAKA.
18. Relationship between quasi-periodic (QP) VLF emissions and magnetic pulsations observed simultaneously at Syowa-Iceland conjugate pair stations and on board AMPTE/CCE satellite. H. KAMIZONO, N. SATO, K. TAKAHASHI and T. YOSHINO.
19. Statistical study on the conjugacy of magnetic field variations. K. HASHIMOTO, N. SATO and M. KUSUNOSE.
20. A consideration of the lower ionospheric disturbances based on the changes of the phase and frequency of Omega signal. N. KAWAKAMI, S. SHIMAKURA, N. SATO, H. YAMAGISHI and M. HAYAKAWA.

21. On the estimation of the ionospheric exit-region of magnetospheric VLF waves observed at the polar region. M. IMAI, S. SHIMAKURA, N. SATO and M. HAYAKAWA.
 22. On the direction finding measurements of chorus emissions in the magnetosphere and the generation/propagation mechanism of chorus emissions. K. HATTORI and M. HAYAKAWA.
- III. Magnetosphere-Ionosphere Coupling I
23. Simulation scheme for magnetosphere-ionosphere couplings. T. TANAKA.
 24. A theory of current generator in the magnetosphere-ionosphere coupling. T. YAMAMOTO and C.-I. Meng.
 25. Scale dependence of the ratio between the magnetic and the electric field perturbation observed in the polar ionosphere. M. ISHII, T. IEMORI, M. TAKEDA, A. OKA, M. SUGIURA and J. A. SLAVIN.
 26. Coupled hydromagnetic oscillations in the ionosphere-magnetosphere. S. FUJITA.
- IV. Magnetosphere-Ionosphere Coupling II
27. Signatures of dayside solar wind/magnetosphere/ionosphere coupling as revealed by the PACE HF radars and associated experiments. J. R. DUDENEY.
 28. High resolution observations of simultaneous radio and optical auroras over Mizuho Station. K. IGARASHI and T. OGAWA.
 29. Doppler spectrum characteristics observed by VHF auroral radar at Syowa Station. M. KUNITAKE, T. TANAKA, K. IGARASHI, S. YAMAMOTO, H. MAENO and T. OGAWA.
 30. Poleward propagating feature of energetic electron precipitation at the time of Pc 4-5 pulsation as observed by the imaging riometer. H. YAMAGISHI, O. SAKA and K. KATO.
 31. Imaging riometer observation at Ny-Alesund, Svalbard. M. NISHINO, Y. TANAKA, T. OGUTI, S. NOZAWA, H. YAMAGISHI and J. HOLTET.
 32. Relation between penetrating ions from solar wind at cusp region and interplanetary magnetic field. S. WATANABE, E. SAGAWA, I. IWAMOTO, B. A. WHALEN and A. W. YAU.
- V. Polar Patrol Balloon Experiment
33. JARE Polar Patrol Balloon experiment. H. AKIYAMA, R. FUJII, T. ONO, M. EJIRI, S. OHTA, N. YAJIMA and H. YAMAGISHI.
 34. Numerical modeling of the vertical motion of a Polar Patrol Balloon (PPB). A. KADOKURA.
 35. Measurement of geomagnetic total field with Polar Patrol Balloons. F. TOHYAMA, R. FUJII, M. EJIRI, T. ONO, S. KOKUBUN, Y. TONEGAWA and N. YAJIMA.
- VI. ELF/VLF/LF Plasma Waves
36. Direction finding of magnetospheric VLF/ELF emissions. M. HAYAKAWA.
 37. Ground-based observation of VLF/ELF waves in Iceland. S. SHIMAKURA, N. SATO and Y. TONEGAWA.
 38. Interrelation between particles and VLF waves observed by Akebono. T. TAGUCHI, I. KIMURA, A. SAWADA and T. MUKAI.
 39. Simultaneous enhancement of AKR in the polar region and UHR in the plasmasphere. A. MORIOKA and H. OYA.
- VII. Aurora
40. Patterns of aurora configuration in substorm. E. KANEDA and T. YAMAMOTO.
 41. Initial observations of aurora by the ATV-VIS aboard the EXOS-D (Akebono). M. EJIRI, A. KADOKURA, T. OGUCHI and EXOS-D ATV team.
 42. Auroral stereo observation campaign in Iceland, 1991. M. EJIRI, H. MIYAOKA, T. ONO, T. ASO, N. SATO and H. YAMAGISHI.
 43. Analysis of aurora stereo observations in Iceland. T. ASO, T. HASHIMOTO, T. YABU, M. ABE, M. EJIRI, H. MIYAOKA and T. ONO.
 44. An average energy and a total energy of precipitating electrons derived by using a photometric

measurement at multiple wavelengths. T. ONO.

45. Variations of auroral oval during substorms. T. HIRASAWA.

PII. Poster Session II

46. Doppler imaging observation of thermospheric dynamics at Syowa Station, Antarctica by JARE 31. H. NAKAJIMA, H. FUKUNISHI, T. ONO and S. OKANO.
47. Test observations of airglow by using high-sensitive monochromatic all-sky TV camera and 4-channel meridian scanning photometer. K. SHIOKAWA, K. YUMOTO, T. KATO, Y. TANAKA, T. OGUTI and Y. KIYAMA.
48. The development of auroral surges by ARSAD system. K. ROKUYAMA, T. HIRASAWA and T. ONO.
49. Time-spatial variation of auroral spectral features. H. OKAMURA, M. EJIRI, T. YOKOTA and S. SASAKI.
50. Time and spatial developments of visible aurora activities observed by Akebono ATV-VIS. A. KADAKURA, M. EJIRI, T. OGUTI and EXOS-D ATV team.
51. Simultaneous rocket/ground observations of pulsating auroras with the S-520-14 rocket at Andoya, Norway. H. MIYAOKA, A. MORIOKA, H. OYA, M. EJIRI and K. TSURUDA.
52. Mode conversion process from UHR waves to electromagnetic waves —Numerical calculation using multilayer model—. M. IIZIMA and H. OYA.
53. BRIFLE phenomena observed by the EXOS-D satellite —Generation mechanism and structure of plasmasphere—. M. KIKUCHI, H. OYA, A. MORIOKA, M. IIZIMA and K. KOBAYASHI.
54. The collaborative observations of Tromsø ionospheric heating experiments by Akebono satellite. K. ISHIDA, I. KIMURA, Y. KASAHARA, I. NAGANO, P. STUBBE, M. RIETVELD and R. BARR.
55. On the structure of the polar ionosphere based on the coordinated observation of the satellites Ohzora and DMSP. T. TAKAHASHI, H. OYA and T. SAITO.

VIII. ULF Waves

56. Polar cusp characteristics of ULF waves and magnetic field variations. T. SAKURAI, Y. TONEGAWA, K. KATO, N. SATO, H. YAMAGISHI and K. MAKITA.
57. A global signature of Pi 2 excitation in the magnetosphere. O. SAKA, T. UOZUMI, N. SATO and D. N. BAKER.
58. Ion cyclotron wave generated with SSC and SI. Y. KATO and Y. TONEGAWA.
59. Sunlight effects on the conjugacy of auroral phenomena. N. SATO.

IX. Event Session for Red Aurora

X. Future Plan

60. Syowa-Iceland conjugate observations in the present condition and in the future plan. N. SATO.
61. Study on the conjugacy of auroral absorption images by the use of Syowa Station-Iceland imaging riometer pair —A future plan—. H. YAMAGISHI, I. YAMAZAKI, M. NISHINO, M. SATO, Y. KATO, T. KIKUCHI and N. SATO.
62. A plan of vector magnetic field measurement by the polar patrol balloon. Y. TONEGAWA, H. TOHYAMA, A. KADOKURA, N. SATO and M. EJIRI.
63. New doors opened by the antarctic ballooning. T. SAITO.