

**Program of the 18th Symposium on Coordinated Observations of the
Ionosphere and the Magnetosphere in the Polar Regions, held
at the National Institute of Polar Research, Tokyo,
November 1-2, 1994**

- I. Ionosphere/magnetosphere (Review)
 1. Post EXOS-D study of polar upper atmosphere. K. TSURUDA.
 2. Dynamics of magnetotail and its relationship to the polar region phenomena. T. NAGAI.
 3. Recent observations and theories regarding internally excited magnetic pulsations. K. TAKAHASHI.
 4. Review: Magnetosphere-ionosphere interactions. R. FUJII.
- II. Poster session (#1)
 1. Poster-Introduction
 2. Poster-Session
 - P 1. Aurora tomography and international collaboration of multi-station observation. T. ASO, T. HASHIMOTO, M. ABE, T. YABU, M. EJIRI, H. MIYAOKA, U. BRANDSTROM and A. STEEN.
 - P 2. Study of global aurora dynamics by CG-animation. E. KANEDA and I. SHINOHARA.
 - P 3. Conjugacies of periodic pulsating auroras. H. MINATOYA, N. SATO, H. HIRASAWA and T. YOSHINO.
 - P 4. Proton auroras related to torch structures. Y. TAKAHASHI, H. FUKUNISHI and T. MUKAI.
 - P 5. Conjugacy of geomagnetic field variations at the onset of auroral substorms. K. HASHIMOTO and N. SATO.
 - P 6. Observation of VLF wave energy distribution and polarization. S. SHIMAKURA and N. SATO.
 - P 7. Polarization of ssc-triggered Pc 1 pulsations and their generation. H. KOMATSU, Y. HOBARA, M. HAYAKAWA, S. SHIMAKURA and N. SATO.
 - P 8. Penetration of magnetic ultra low frequency waves from the bow-shock region into the magnetosphere as a possible mechanism of Pc1-2 pulsations. O. MOGCHANOV, O.A. MALTSEVA, M. HAYAKAWA, T.A. PLYASOVA-BAKOUNINA and Y. HOBARA.
 - P 9. Direction finding for VLF-ELF radio waves based of Bayesian information criterion. M. HIRARI and M. HAYAKAWA.
 - P10. Direction finding of ELF/VLF emissions at Syowa Station. K. ROKUYAMA, T. YOSHINO, M. HAYAKAWA, K. OHTA, S. SHIMAKURA and N. SATO.
 - P11. Observation of geomagnetic variation at two stations Onagawa and Abukuma. T. TAKAHASHI and H. OYA.
 - P12. The comparison of individual shell oscillation and coupled magnetospheric cavity oscillation type of the shear Alfvén waves under the comparable condition of the Alfvén wave conductance and ionospheric conductivities. A. YOSHIKAWA, M. ITONAGA and T. KITAJIMA.
 - P13. Complex demodulation applied to geomagnetic pulsations associated with SSC's. I. RIKOU, M. ITONAGA and Y. KITAMURA.
 - P14. A comparison between aurora modulation and equatorial Pi2 geomagnetic pulsation. O. WATANABE, O. SAKA, T. KITAMURA and A. KADOKURA.
 - P15. Concurrent occurrence of the equatorial localized phase differences of Pi2 and Pc4 type pulsations with the equatorial enhancement. M. SHINOHARA, N. HOSEN and T.-I. KITAMURA.
 - P16. Correlations between Pi2 geomagnetic pulsations observed at the 210° MM chain stations and auroral dynamics observed at Tixie. H. OSAKI, K. YUMOTO, K. SHIOKAWA and Y. TANAKA.
 - P17. The global-scale MHD oscillation in the outer magnetosphere. S. FUJITA and K. KAMIDE.
 - P18. Particle precipitation associated with transverse Pc5 pulsations. M. NOSÉ, T. IYEMORI, M. SUGIURA and J.A. SLAVIN.
 - P19. Observation results of source region of BRIFLE phenomena. M. KIKUCHI and H. OYA.
 - P20. Characteristics of AKR waves observed in the dayside polar ionosphere. A. MORIOKA.

III. Aurora

5. Conjugacy and non-conjugacy of visible auroras. N. SATO.
6. Polar cap aurora. K. MAKITA.
7. Auroral emissions and wave particle interactions associated with precipitation of auroral particles. T. ONO.
8. Auroral study: observations and simulations. M. EJIRI.

IV. Thermosphere/mesosphere

9. Future subjects on middle atmosphere dynamics in polar regions. T. TSUDA.
10. Disturbances of thermosphere and ionosphere in response to geomagnetic activity. S. MAEDA.
11. Achievements and prospects in studies of the polar mesosphere and ionosphere-thermosphere coupling system. H. FUKUNISHI.

V. Solar activity and climate change

12. A role of Antarctic observations in the study of climate impact of solar activity. T. WATANABE.

VI. Poster session (#2)

1. Poster-Introduction
2. Poster-Session

- P21. Oscillatory formation of Poker Flat mesospheric summer echoes. T. SUGIYAMA, Y. MURAOKA, N. SOGAWA and S. FUKAO.
- P22. Middle atmosphere observation with MF radar at Syowa Station. K. IGARASHI and T. OGAWA.
- P23. EISCAT CP database at STE laboratory. S. NOZAWA, R. FUJII, N. MATUURA, T. YAMAGUTI and Y. TSUKIJI.
- P24. Database system for aurora image files of DMSP satellites. H. TAMENAGA, Y. KUROZUMI, S. MAEDA, T. ONO, H. MIYAOKA and A. YUKIMATU.
- P25. GBMR, M-Type storm, and 3-dipole model. T. SAITO, Y. MORI, Y. MATUURA, Y. KOZUKA and M. KOJIMA.
- P26. Computer experiments on spacecraft-plasma interaction. M. OKADA, Y. OMURA, H. MATSUMOTO and M. EJIRI.
- P27. Computer experiments for interactions of inhomogeneous plasma and HF electromagnetic waves on ionospheric heating experiments. H. UEDA, Y. OMURA and H. MATSUMOTO.
- P28. The MHD vortices in the magnetospheric boundary layer. H. YANG, Z. ZHAO and S. WANG.
- P29. Earth's magnetosphere drastically changes? S. MINAMI, Y. SUZUKI and S. MIONO.
- P30. Atmospheric wave coupling experiment-artificial stimulation. S. MINAMI, Y. SUZUKI, R. NAKANISHI and K. TANAKA.
- P31. A future plan on cosmic ray observation by Polar Patrol Balloons. J. NISHIMURA, S. TORII and T. YAMAGAMI.
- P32. Pulsation phenomena of energetic precipitation particles deduced from correlation between PPB X-ray observations and ground-based observations at Syowa Station and Iceland. Y. HIRASIMA, H. SHIMOBAYASHI, H. SUZUKI, H. MURAKAMI, H. YAMAGISHI, N. SATO, M. NISHINO, I. YAMAZAKI, T. YAMAGAMI, M. NAMIKI and M. KODAMA.
- P33. Ionospheric response to the IMF variation — An analysis of the PPB#4 data with ground-based magnetometer data —. Y. EBIHARA, F. TOHYAMA, Y. TONEGAWA, A. KADOKURA, N. SATO, M. EJIRI, Y. HIRASIMA, M. NAMIKI, E.A. BERING II, J.R. BENBROOK and PPB WG.
- P34. Continuous ionospheric observations by a pulsed chirp sounder at Syowa Station, Antarctica. Y. MAKITA and K. NOZAKI.
- P35. Ionospheric tomography — Simulation, case study by using 4 stations data in Japan, and a proposal for antarctic observation —. M. KUNITAKE, K. OHTAKA, T. MARUYAMA, A. MORIOKA and S. WATANABE.
- P36. HF radar observation at Moshiri, Hokkaido. H. YAMAGISHI, A. YUKIMATU, N. SATO, M. NISHINO, Y. TANAKA and K. NOZAKI.
- P37. Development of 256 beams imaging riometer. Y. MARUYAMA, S. KAINUMA, H. MORI, K.

- IGARASHI, H. YAMAGISHI and M. NISHINO.
- P38. An examination of directivity pattern for the imaging riometer at Syowa by using an airplane. Y. TONEGAWA, H. FUJITA, H. YAMAGISHI.
- P39. Location and spatial scale of the dayside ionospheric absorption in the polar cusp/cleft. M. NISHINO, Y. TANAKA, H. YAMAGAMI, P. STAUNING and J.A. HOLTET.
- P40. Conjugacy of dynamic behavior of CNA associated with substorms. Y. FUJITA, H. YAMAGISHI, N. SATO and T. YOSHINO.
- P41. CNA pulsation and periodic VLF emission associated with Pc5 geomagnetic pulsation. K. KATO, H. YAMAGISHI, N. SATO and Y. TONEGAWA.
- P42. An anomalous enhancement of hall conductance in the morning sector. M. ISHII, K. SCHLEGEL and H. LUHR.
- P43. General behavior of electron temperature in the high latitude. K. OYAMA, T. ABE, Y. SAKAIDE, I. KUTIEV and Y. CHOI.
- P44. Energy dispersion of thermal ions from the solar wind in the polar cap region measured by Akebono satellite. S. WATANABE, E. SAGAWA, I. IWAMOTO, B.A. WHALEN, A.W. YAU, T. MUKAI and H. HAYAKAWA.
- P45. Structural variation of radiation belt observed by RDM aboard Akebono (EXOS-D). A.S. YUKIMATU, S. TAKAGI, T. KOHNO, T. TERASAWA, F. MAKINO and M. EJIRI.
- P46. Relativistic electron precipitation near the outer boundary of the radiation belt. R. NAKAMURA, D.N. BAKER, J.B. BLAKE and S. KANEKAL.
- P47. Magnetospheric particle simulation of a low-latitude aurora. H. MIYAOKA and M. EJIRI.
- P48. Morphology of geomagnetic storms. K. MARUBASHI, K. OHTAKA and H. MIYAOKA.
- P49. The dependence of magnetospheric currents on the dipole tilt angle. H. KUSAKA, T. IJIMA, T.A. POTES, L.J. ZANETTI and S. OHTANI.
- P50. A superposed epoch analysis of geomagnetic indices and solar wind parameters for magnetic storms. N. YOKOYAMA and Y. KAMIDE.
- P51. Numerically adjusted electrojet model based on ground observations of magnetic field. T. COLQUI and T. KITAMURA.
- P52. Ionospheric electric fields and currents associated with substorms. M. SATO, Y. KAMIDE, A. RICHMOND, A. BREKKE and S. NOZAWA.
- P53. Relationships between polar magnetic substorms and low-latitude Dst and ASY variation. T. IYEMORI.
- VII. Future plans
13. Antarctic future programs — Introduction —. N. SATO.
14. HF radar observation at Syowa Station. H. YAMAGISHI, A. YUKIMATU, N. SATO, A. KADOKURA, H. MIYAOKA, M. EJIRI, T. HIRASAWA, T. OGAWA, K. IGARASHI and Y. TANAKA.
15. Radar observation at Syowa Station, Antarctica. S. FUKAO.
16. Antarctic lidar system and evaluation of measurements by simulation. A. NOMURA, K. KOBAYASHI, Y. SAITO and C. NAGASAWA.
17. Future aspect of Polar Patrol Balloon. N. YAJIMA and T. YAMAGAMI.
18. Visible and near infrared remote sensing of the polar mesosphere and thermosphere. H. FUKUNASHI and S. OKANO.
19. Present status of R&D on microwave free-electron laser amplifiers. K. TAKAYAMA, J. KISHIRO and M. SHIHO.
20. Antarctic future programs — Summary —, N. SATO.