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## **ANAND KUMAR SINGH**

National Centre for Antarctic & Ocean Research,  
(Ministry of Earth Sciences)  
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### **Education**

Ph. D. Physics  
Indian Institute of Geomagnetism, Navi Mumbai, India.

M. Sc. in Physics  
D. D. U. Gorakhpur University, Gorakhpur, Uttar Pradesh, India.

B. Sc. in Physics & Mathematics  
D. D. U. Gorakhpur University, Gorakhpur, Uttar Pradesh, India.

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### **Fellowship/Qualifications**

- Research Fellowship, Indian Institute of Geomagnetism, Navi Mumbai (December 2005 – June 2011).
  - Graduate Aptitude Test in Engineering (**GATE**) in years 2005 and 2006.
  - Council of Scientific and Industrial Research (**CSIR**) National Eligibility Test (**NET**) in year 2005.
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### **Career Summary**

- Presently (April 2013 onwards): Faculty at National Centre for Antarctic & Ocean Research, Vasco da Gama, Goa, India.
  - Research Associate (April 2012 – April 2013) at Indian Institute of Geomagnetism, Navi Mumbai, India.
  - Research Fellow (December 2005 – June 2011) at Indian Institute of Geomagnetism, Navi Mumbai, India.
  - Deputation (December 2007 – April 2008) at National Center for Antarctic and Ocean Research, Goa as a summer member of XXVII Indian Scientific Expedition to Antarctica.
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### Area of Research Interest

- (i) Substorm dynamics and energetic particles precipitation
  - (ii) Earth's Radiation belts
  - (iii) Geomagnetic activity indices
  - (iv) ULF waves
  - (v) Schumann resonance and global atmospheric electricity
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### Publications in Peer-Reviewed Journals

1. **Singh, A. K.**, R. Rawat and B. M. Pathan (2013), On the UT variations of the standard and SuperMAG auroral electrojet indices, *Journal of Geophysical Research*, 118, 1-9, doi:10.1002/jgra.50488.
  2. **Singh, A. K.**, A. K. Sinha, B. M. Pathan and R. Rawat (2013), Effect of prompt penetration on the low latitude ASY indices, *Journal of Atmospheric and Solar-Terrestrial Physics*, 94, 34-40, doi:10.1016/j.jastp.2012.12.015.
  3. **Singh, A. K.**, A. K. Sinha, R. Rajaram and B. M. Pathan (2012), Storm-time longitudinally propagating asymmetric modes at low latitudes, *Annales Geophysicae*, 30, 131-141, doi:10.5194/angeo-30-131-2012.
  4. **Singh, A. K.**, A. K. Sinha, Rahul Rawat, B. Jayashree, B. M. Pathan and A. Dhar (2012), A broad climatology of very high latitude substorms, *Advances in Space Research*, 50, 1512-1523, doi:10.1016/j.asr.2012.07.034.
  5. **Singh, A. K.**, A. K. Sinha, B. M. Pathan and R. Rawat (2012), Solar flare effect on low latitude asymmetric indices, *Journal of Atmospheric and Solar-Terrestrial Physics*, 77, 119-124, doi: 10.1016/j.jastp.2011.12.010.
  6. **Singh, A. K.**, B. Jayashree, A. K. Sinha, R. Rawat, B. M. Pathan and A. Dhar (2011), Observations of near-conjugate high latitude substorms and their low latitude implications, *Current Science*, 101(8), 1073-1078.
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### **Selected Publications in Conference Proceedings and Scientific Reports**

1. Hanchinal, A. N., A. Dhar, **A. K. Singh**, and B. M. Pathan, Geomagnetic and Riometer observations at Maitri during 22nd Expedition, *Scientific Report, XXII Indian Expedition to Antarctica*, Technical Publication No. 20, National Center for Antarctic and Ocean Research, MoES, Goa, 2009.
2. **Singh, A.K.**, K. Jeeva, B. M. Pathan, A. K. Sinha, A. Dhar, and A. N. Hanchinal, Cosmic noise absorption during geomagnetic substorms and the possible influence of substorms on global electric circuit, *Electrodynamical Coupling of Atmospheric Regions workshop proceedings*, Mumbai, India, 25-26 November, 2008.
3. Pathan, B. M., A. Dhar, and **A. K. Singh**, Importance of magnetic observations at Indian Antarctic station Maitri, in *special issue of Indian Antarctic Expeditions - Silver Jubilee*, Ed. Manjula Mehta, Ministry of Earth Sciences, New Delhi, 2007.
4. Dhar, A., **A. K. Singh**, P. Elango, A. N. Hanchinal, and B. M. Pathan, Halloween storm of magnetic storms of October - November, 2003: Ground geomagnetic signatures from Maitri, Antarctica, *Scientific Report, XXIII Indian Expedition to Antarctica*, National Center for Antarctic and Ocean Research, MoES, Goa, (*In Press*).
5. Dhar, A., **A. K. Singh**, K. U. Nair, A. S. Kulkarni, and B. M. Pathan, Geomagnetic storm of 21-22 January 2005: Ground signatures at Indian Antarctic Station, Maitri, *Scientific Report, XXV Indian Expedition to Antarctica*, National Center for Antarctic and Ocean Research, MoES, Goa, (*Accepted*).

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### **Selected Presentations in National and International conferences**

1. **Singh, A. K.**, B. M. Pathan, A. Dhar, R. Rawat, A. K. Soman, R. Mehraj, Characteristics of Dayside Pc5 Waves Observed at Very High Latitude Indian Antarctic Station Bharati, 'International Symposium on Solar-terrestrial Physics' held at Pune, India during 9-6 November, 2012.
2. **Singh, A. K.**, A. K. Sinha, R. Rajaram, and B. M. Pathan, Storm-time azimuthally propagating asymmetric modes in the Earth's magnetosphere, '39<sup>th</sup> COSPAR Scientific Assembly' held at Mysore, India during 14-22 July 2012.
3. Sinha, A. K., **A. K. Singh**, B. M. Pathan, R. Rawat, E. R. Williams, and V. C. Mushtak, The impact of the July 22, 2009 solar eclipse on Schumann resonance observations in India, '39<sup>th</sup> COSPAR Scientific Assembly' held at Mysore, India during 14-22 July 2012.

4. Sinha, A. K., **A. K. Singh**, B. Jayashree, R. Rawat, and B. M. Pathan, Observations of near-conjugate high latitude substorms and their low latitude implications, 'International Union of Geodesy and Geophysics' held at Melbourne, Australia during 28 June - 7 July 2011.
  5. **Singh, A. K.**, A. K. Sinha and B. M. Pathan, Multi-scale modulations of SYM and ASY-H disturbances during substorm, presented at '38<sup>th</sup> COSPAR Scientific Assembly' held at Bremen, Germany during 18-25 July 2010.
  6. **Singh, A.K.**, A. K. Sinha and B. M. Pathan, ULF waves at dayside equator during disturbed geomagnetic conditions, presented at 'Asia Oceania Geosciences Society' held at Hyderabad, India during 5-9 July 2010.
  7. **Singh, A.K.**, A. K. Sinha, B. M. Pathan and R. Rawat, Characteristics of auroral electrojets during intense geomagnetic activities, presented at 'AGU Chapman Conference on Complexity and Extreme Events' held at Hyderabad, India during 15-19 February 2010.
  8. **Singh, A.K.**, A. K. Sinha and B. M. Pathan, Spatial and temporal structures in Pi3 pulsations using singular spectrum analysis: a case study, Presented at 'International Association of Geomagnetism and Aeronomy' held at Sopron, Hungary during 23-30 August 2009.
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