



Dear SuperMAG Friend

Latest news from the SuperMAG service:

- 1) SuperMAG reaches a milestone – 500 registered users.
- 2) New SuperMAG website.
- 3) Updated mag data holdings.
- 4) Updated solar wind data holdings.
- 5) Recent published papers.
- 6) Feedback.

As always, comments and suggestions are most welcome.

Best wishes on behalf of the entire SuperMAG team,
Jesper W Gjerloev and Shin Ohtani

1) SuperMAG reaches a milestone – 500 registered users.

SuperMAG reached this milestone in October 2013. Other notable usage numbers:

- ~1600 unique visitors per month;
- ~1500 data products are downloaded per month;
- >35,000 data products has been downloaded in total;
- The average user spends ~12 min visiting ~14 pages.

2) New SuperMAG website.

The release of the new SuperMAG website marks the end of an extensive redesign process that has lasted more than a year. The purpose was to make the site easier to use for the non-expert, faster and more robust as well as esthetically pleasing. This includes easier downloads, faster plot and movie generation and easier navigation. The new site was made possible by Brage Foerland (SuperMAG lead programmer), Robin Barnes (head of software development), Tove Dehn (design), and Mathew Potter (support). Also, thanks to all the members of the beta testing team. The funding for this work was generously provided by NSF and ESA.

All feedback is most welcome.

3) Updated mag data holdings.

A large update of the data holdings has been released.

- 1) This includes data from recent years 2010-2013;
- 2) Expansion of the data holdings earlier years;
- 3) Data correction. Extensive and time-consuming error correction;
- 4) Baseline update as described in the SuperMAG data technique paper.

This was made possible by the herculean effort of Matthew Friel and Polly Martin.

All data products (indices, polar plots, substorm list, daily movies) have been reproduced.

4) Updated solar wind data holdings.

With the help of Dr. James Weygand we have updated the ACE data holdings. We are grateful to Dr. Weygand and the ACE/MFI and ACE/SWEPAM teams.

5) Recent published/accepted papers.

- Cresswell-Moorcock, K., C. J. Rodger, A. Kero, A. B. Collier, M. A. Clilverd, I. Häggström, and T. Pitkänen (2013), A reexamination of latitudinal limits of substorm-produced energetic electron precipitation, *J. Geophys. Res.*, (in press).
- Lui, A. T. Y. (2013), Cross-tail current evolution during substorm dipolarization, *Ann. Geophys.*, 31, 1131-1142, doi:10.5194/angeo-31-1131-2013.
- Newell, P. T., J. W. Gjerloev, and E. J. Mitchell (2013), Space climate implications from substorm frequency, *J. Geophys. Res. Space Physics*, 118, doi:10.1002/jgra.50597.
- Noah, M. A. and W. J. Burke (2013), Sawtooth-substorm connections: A closer look, *J. Geophys. Res. Space Physics*, 118, Issue 8, pages 5136-5148, doi:10.1002/jgra.50440, August 2013.
- Ohtani, S., T. Uozumi, H. Kawano, A. Yoshikawa, H. Utada, T. Nagatsuma, and K. Yumoto (2013), The response of the dayside equatorial electrojet to step-like changes of IMF Bz, *J. Geophys. Res. Space Physics*, 118, doi:10.1002/jgra.50318.
- Ohtani, S., H. Korth, S. Wing, E. R. Talaat, H. U. Frey, and J. W. Gjerloev (2012), The double auroral oval in the dusk-midnight sector: Formation, mapping and dynamics, *J. Geophys. Res.*, 117, A08203, doi:10.1029/2011JA017501.
- Singh, A. K., R. Rawat, and B. M. Pathan (2013), On the UT and seasonal variations of the standard and SuperMAG auroral electrojet indices, *J. Geophys. Res. Space Physics*, 118, doi:10.1002/jgra.50488.
- Wei, L. H., N. Homeier, and J. L. Gannon (2013), Surface electric fields for North America during historical geomagnetic storms, *Space Weather*, 11, 451-462, doi:10.1002/swe.20073.
- Zou, S., M. B. Moldwin, M. J. Nicolls, A. J. Ridley, A. J. Coster, E. Yizengaw, L. R. Lyons, and E. F. Donovan (2013), Electrodynamics of the high-latitude trough: Its relationship with convection flows and field-aligned currents, *J. Geophys. Res. Space Physics*, 118, 2565-2572, doi:10.1002/jgra.50120.

6) Feedback.

Thanks for the recent feedback. We always appreciate if you let us know of SuperMAG related papers. We will include your reference on the website and broadcast it to the community.