

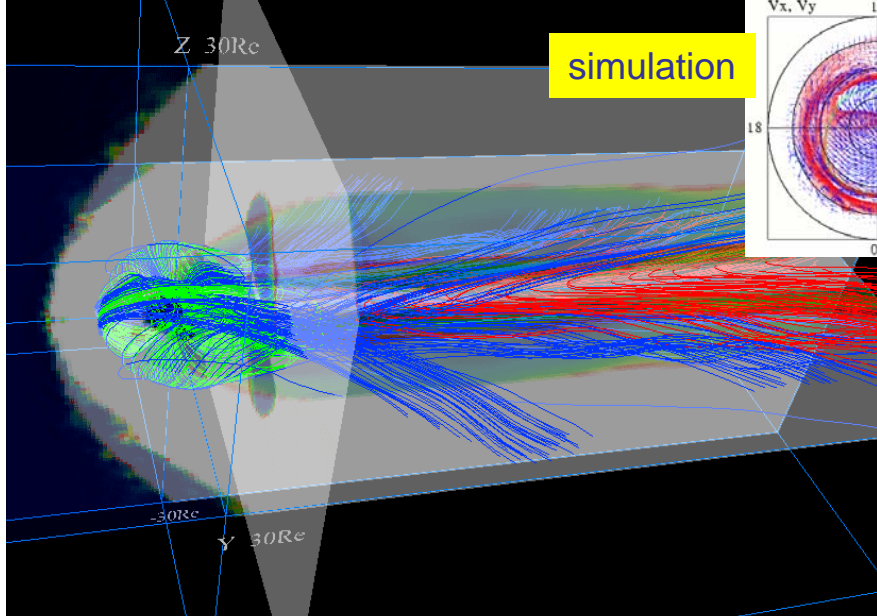
MHD Simulation of Interaction of the Solar Wind with Earth's Magnetosphere for the Magnetospheric Storm Events

Tatsuki Ogino[1]; Ryuho Kataoka[2]; Takahiro Obara[3];
Yoshiharu Omura[4]; Kanya Kusano[5]; Kazunari Shibata[6]
and Modeling Task Force Group
of the Creative Scientific Research Project

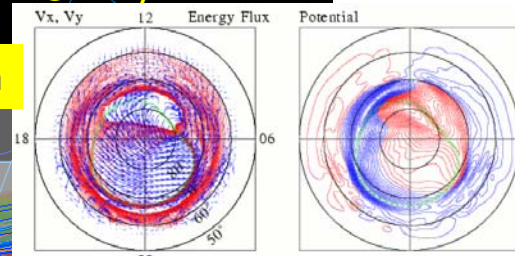
[1] STEL, Nagoya Univ.; [2] RIKEN; [3] NICT; [4] RISH, Kyoto Univ;
[5] ESC/JAMSTEC; [6] Kwasan Obs., Kyoto Univ.

Magnetospheric Structure and Polar Convection of Simulation, KRM and SuperDARN

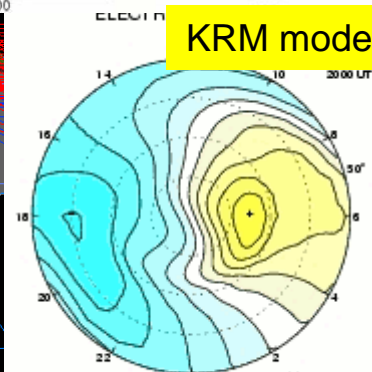
Dec.14 20:00 (shock arrival time: 13:47)



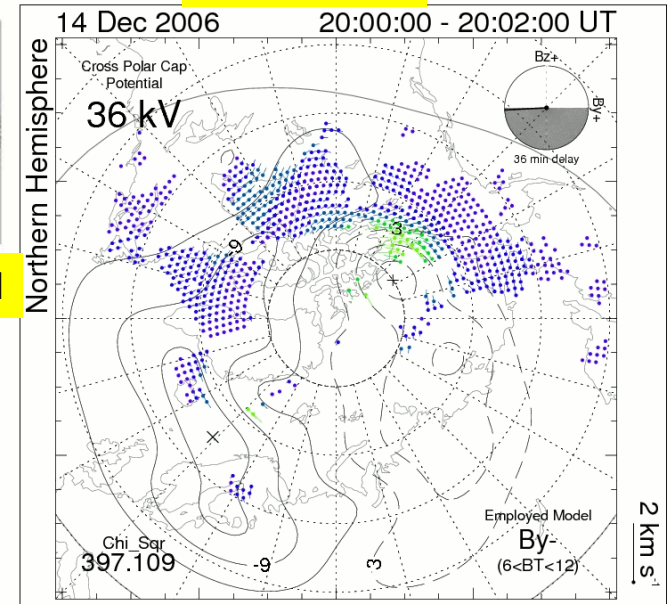
simulation



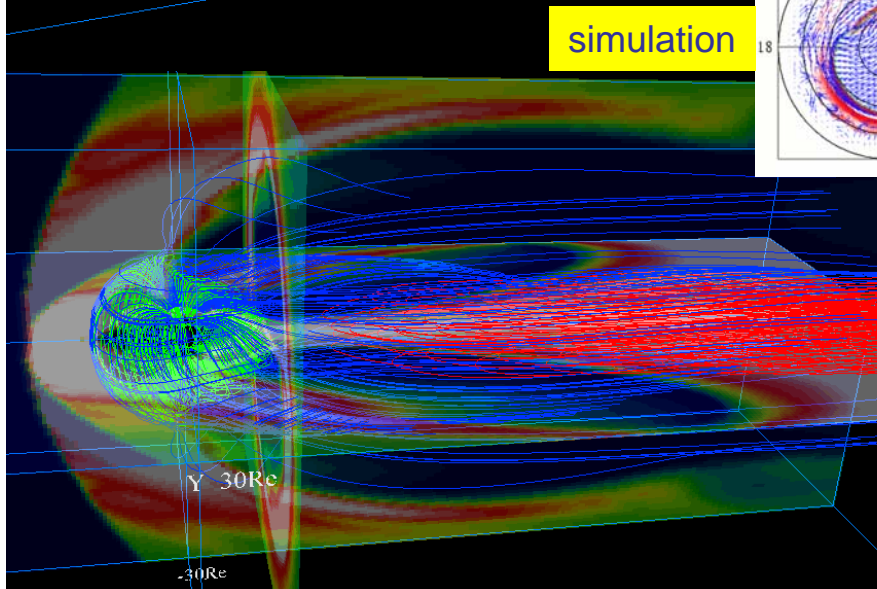
KRM model



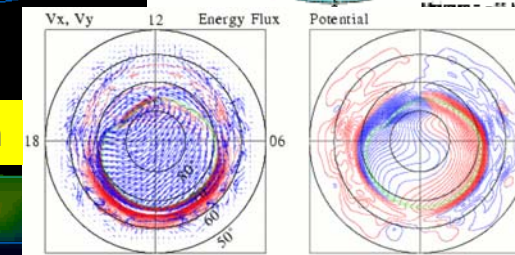
SuperDARN



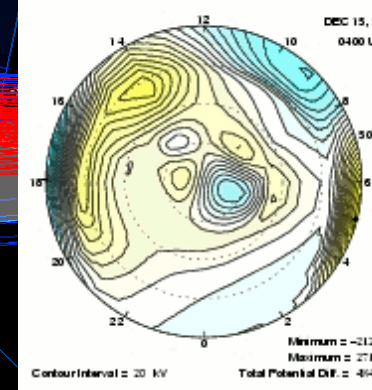
Dec.15 04:00 (magnetic storm)



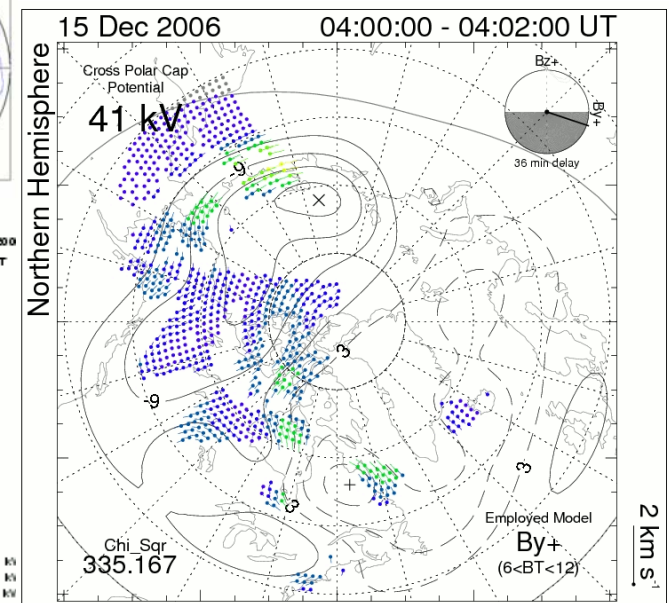
simulation



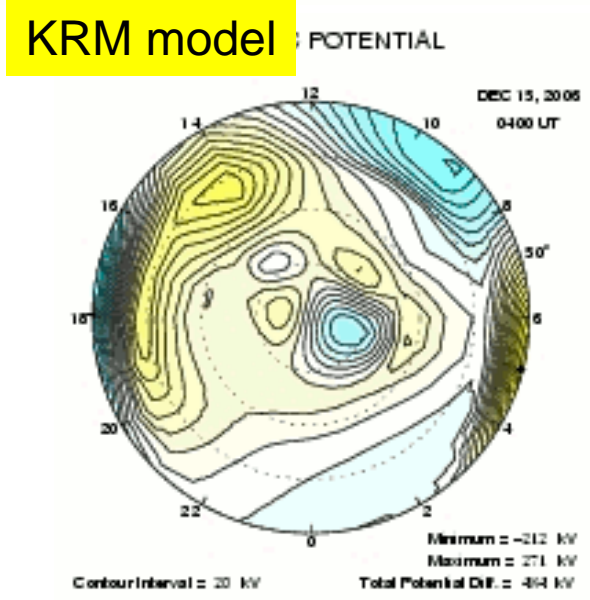
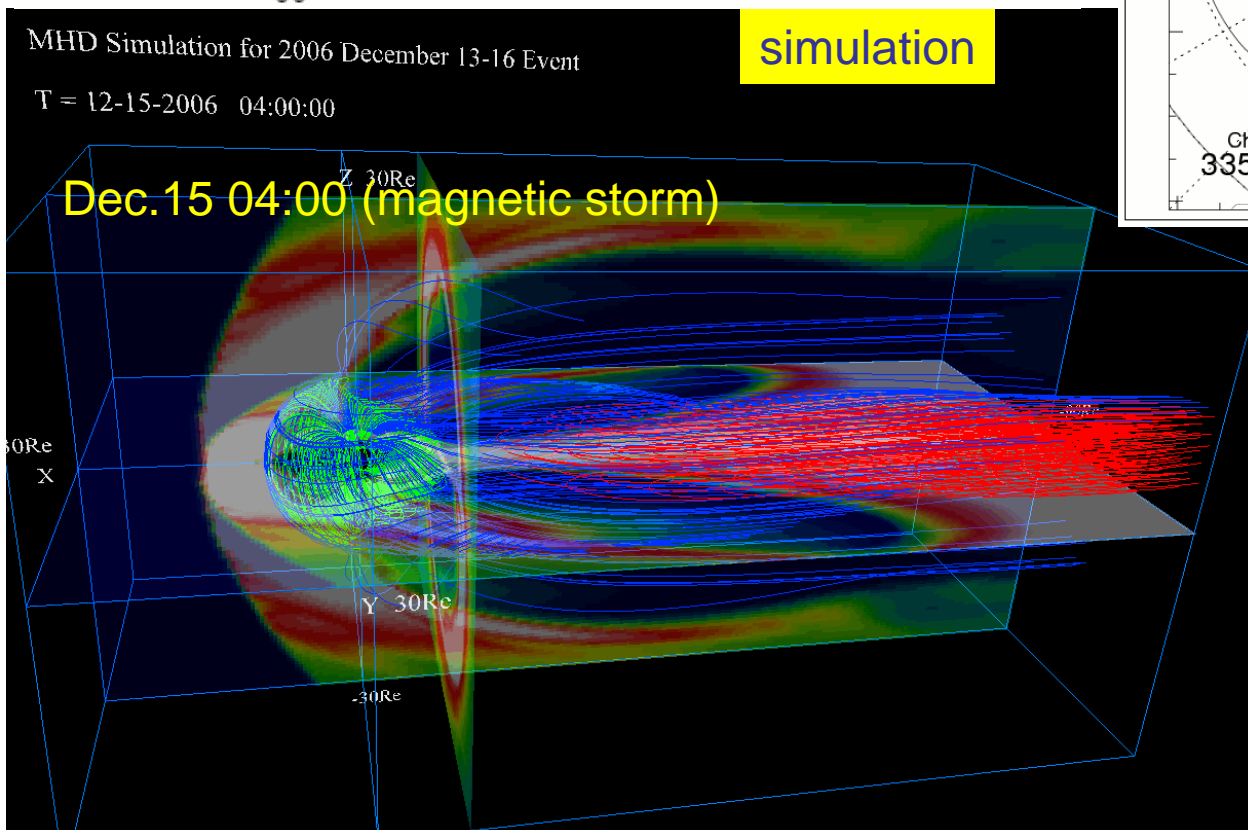
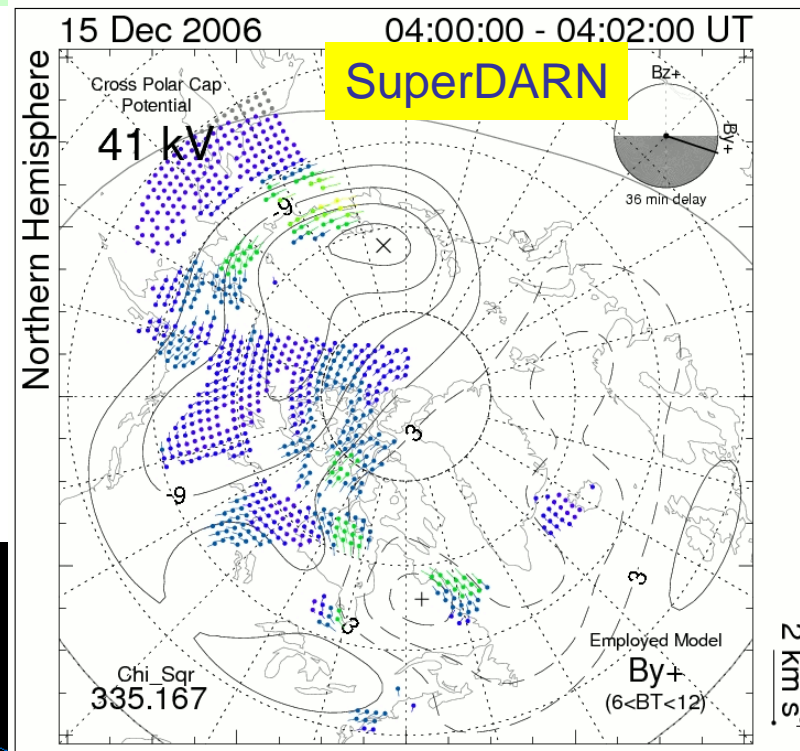
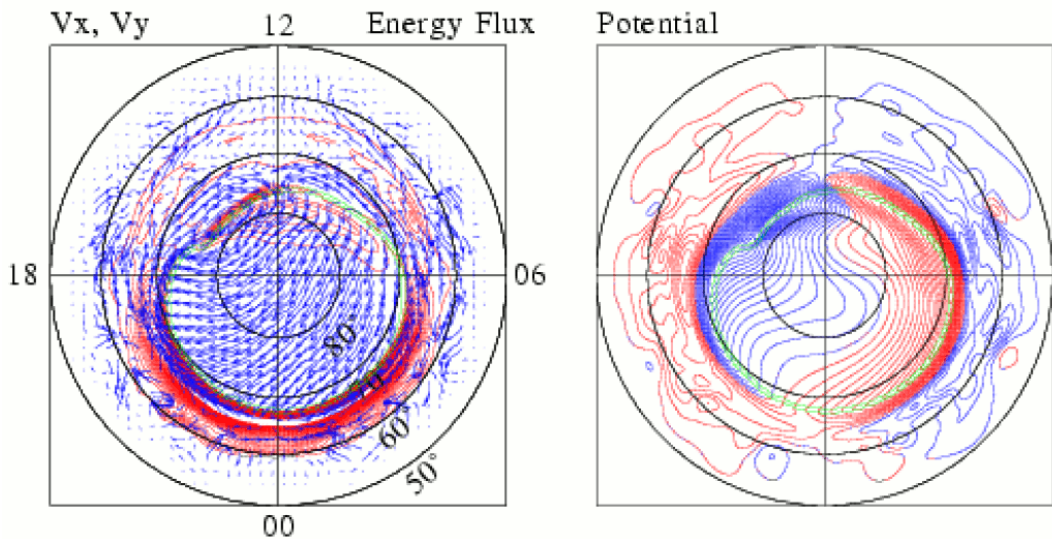
ELECTRIC POTENTIAL



SuperDARN

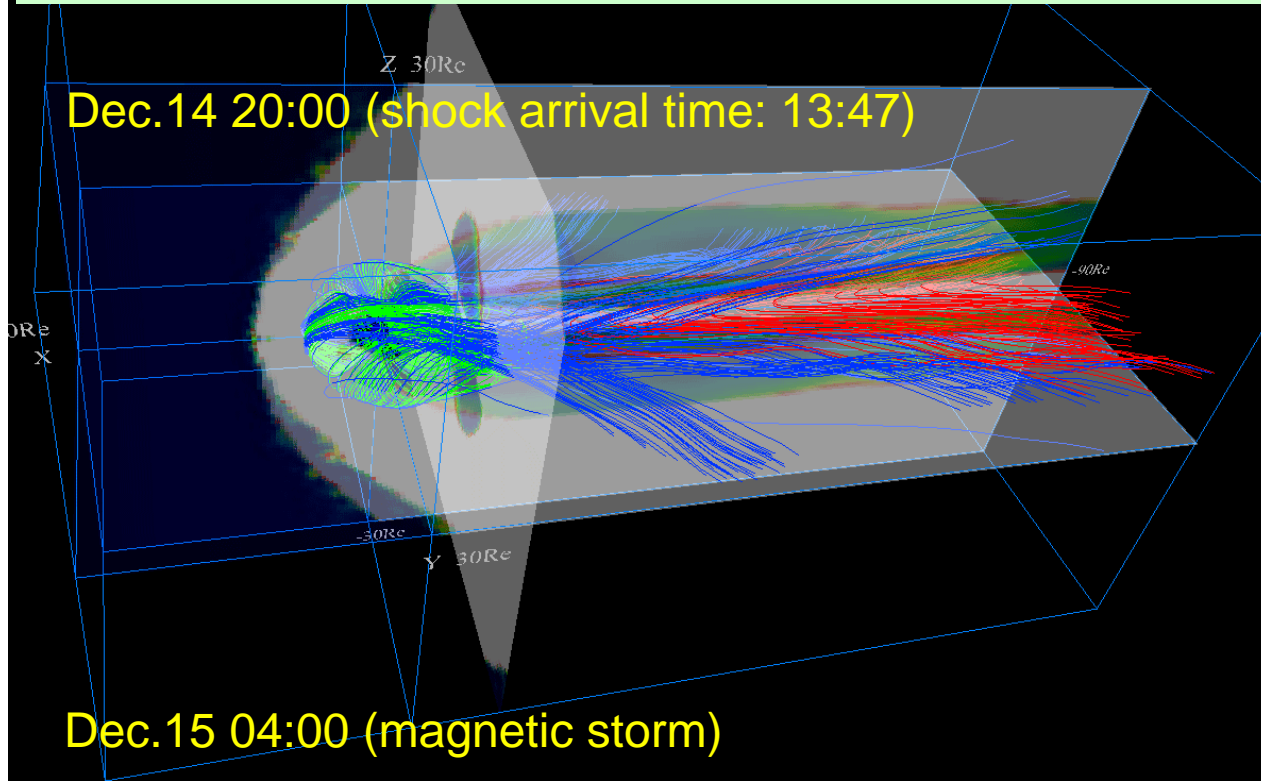


Magnetospheric Structure and Polar Convection of Simulation, KRM and SuperD

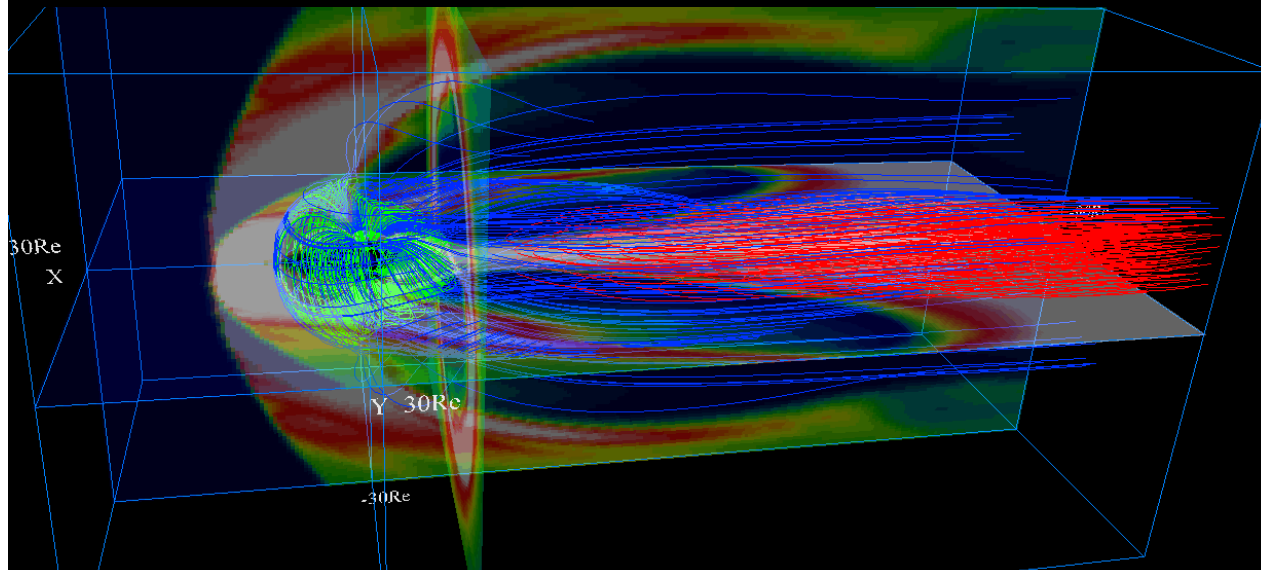


Magnetospheric Structure and Polar Convection of Simulation, KRM and SuperD

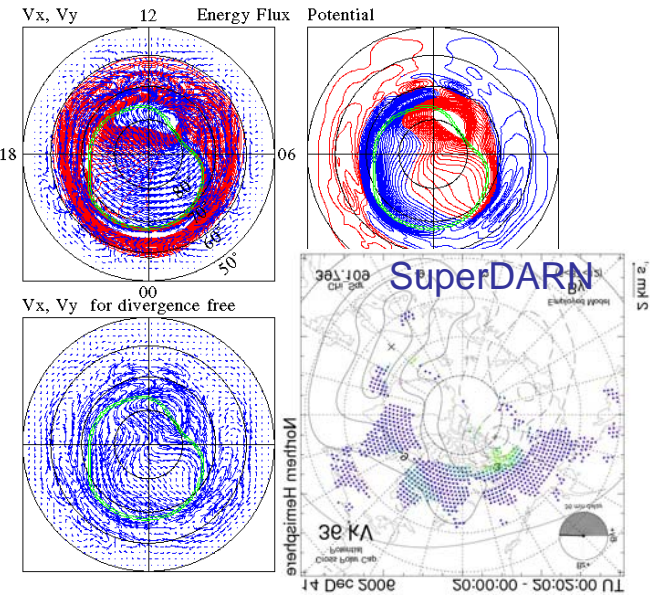
Dec.14 20:00 (shock arrival time: 13:47)



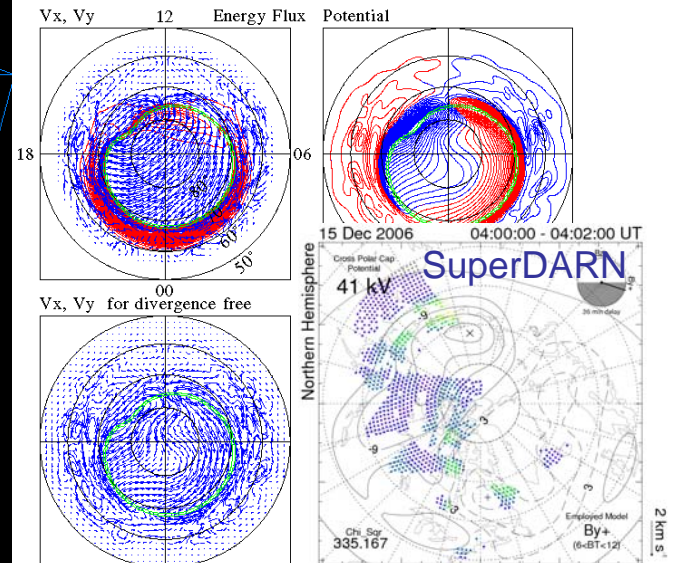
Dec.15 04:00 (magnetic storm)



MHD Simulation for 2006 December 14 Event
T = 12-14-2006 21:45:00

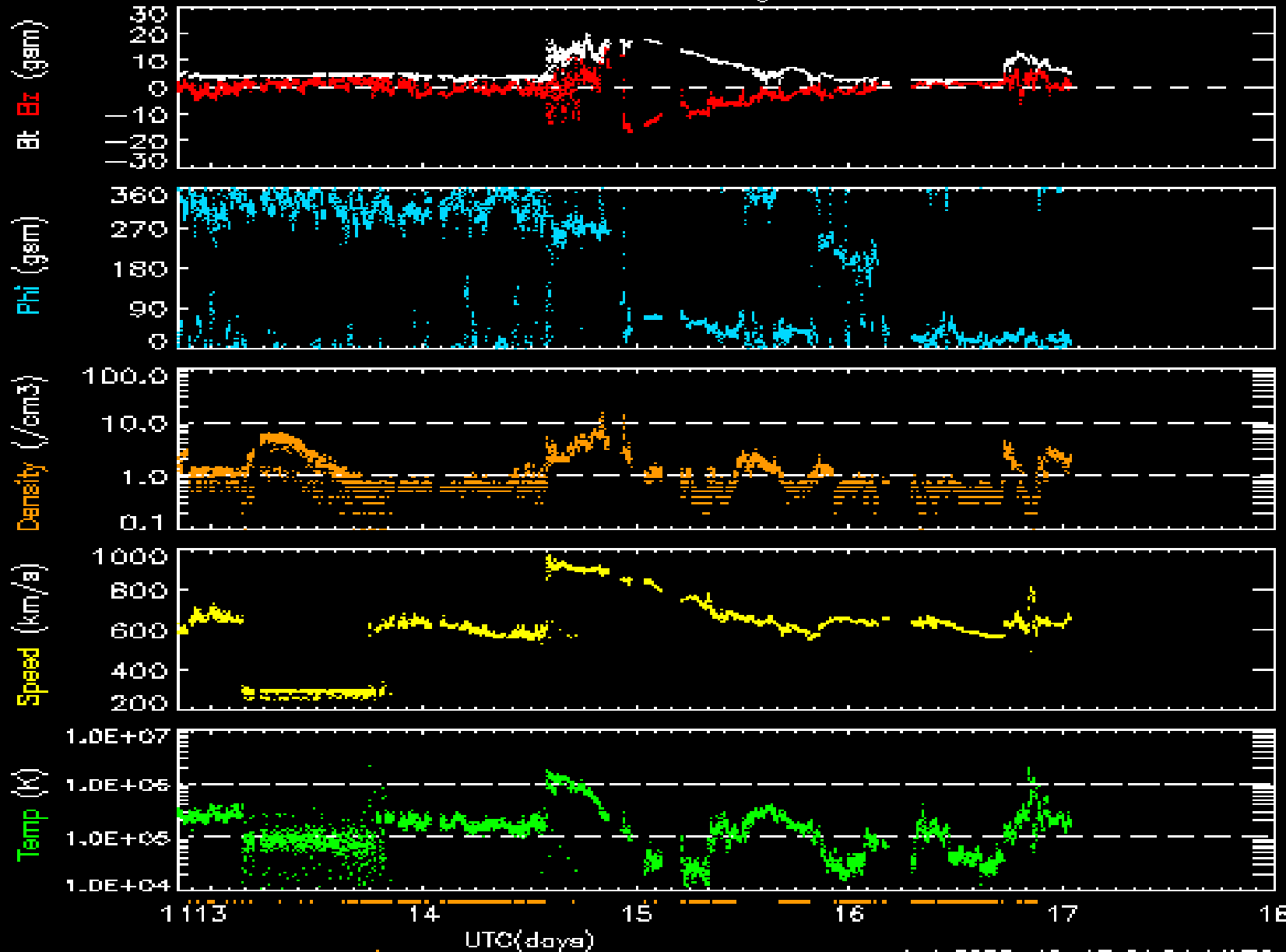


MHD Simulation for 2006 December 15 Event
T = 12-15-2006 04:00:00



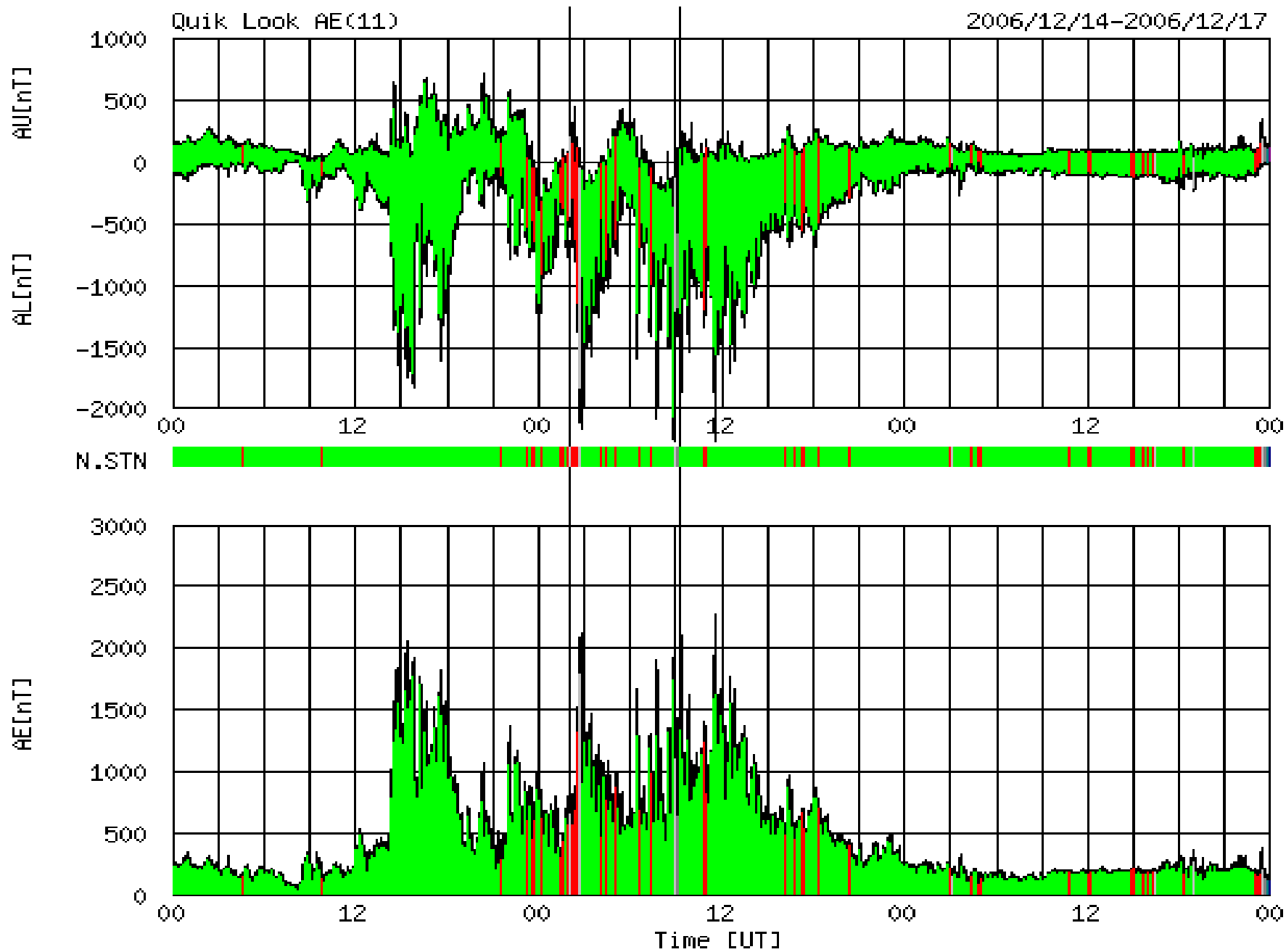
AAG & SWEPAM

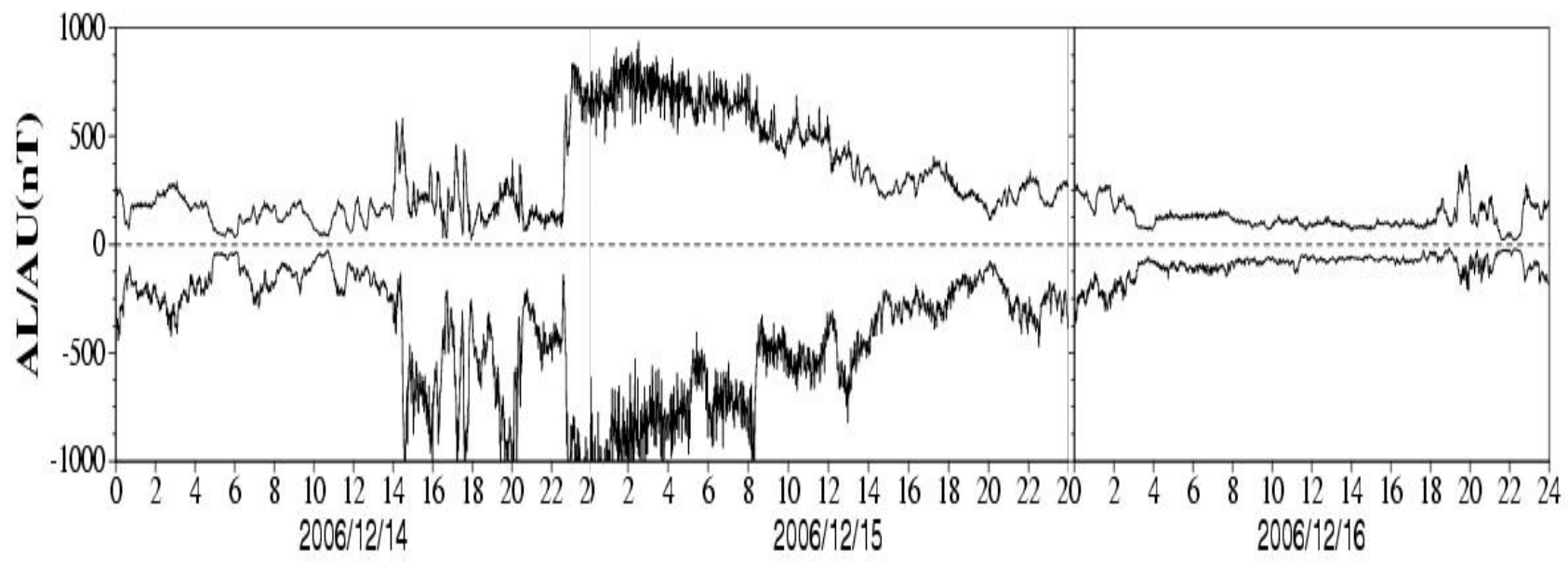
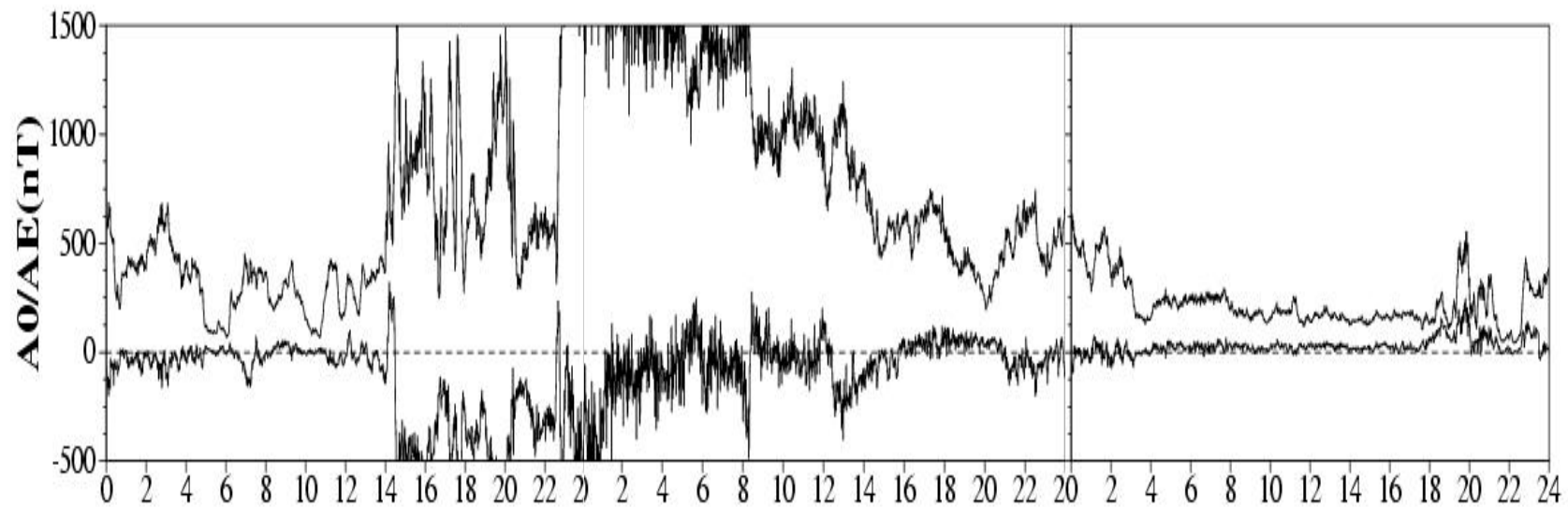
Begin: 2006-12-11 00:00:00UTC



E maneuver density < 1

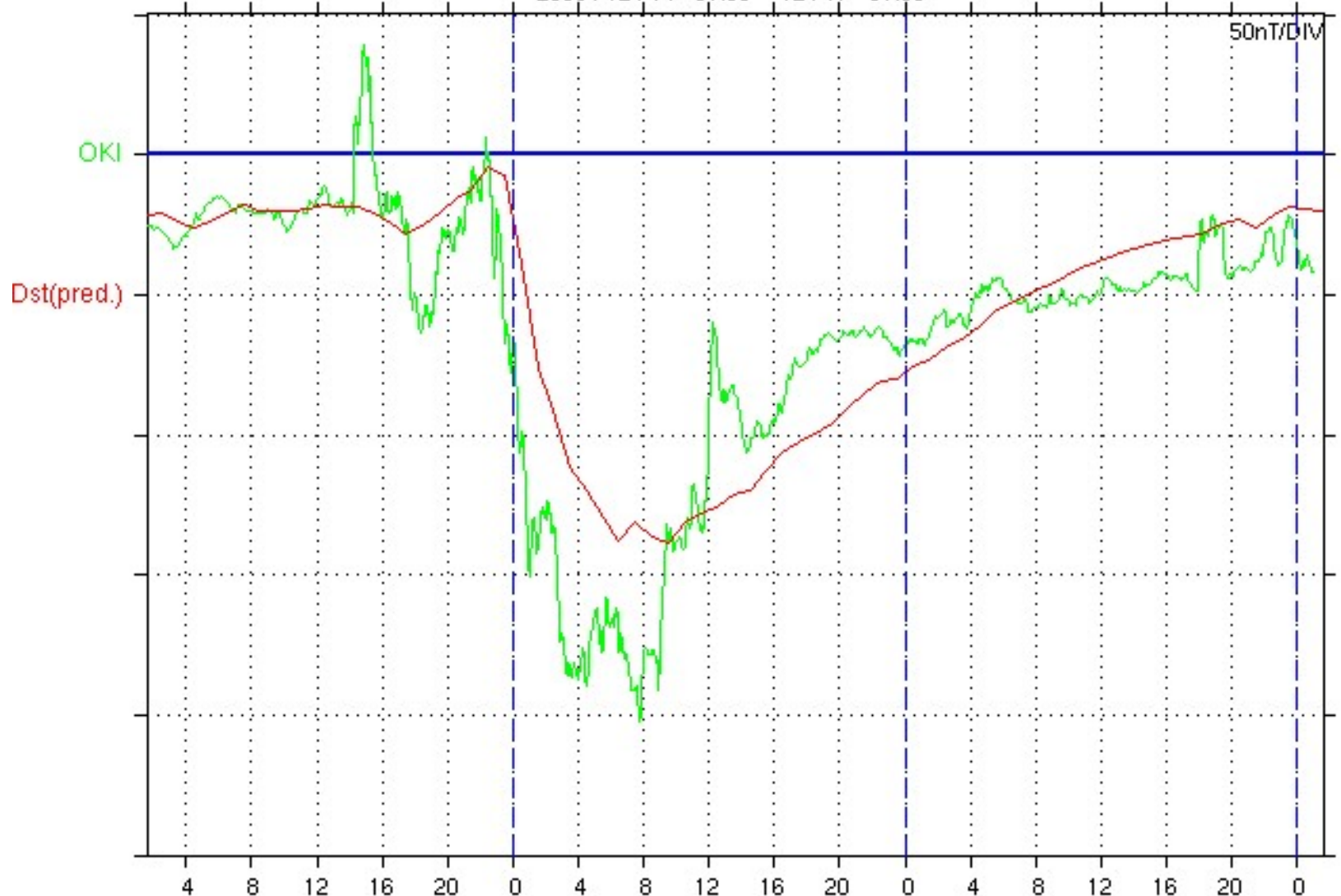
created: 2006-12-17 01:04:14UTC



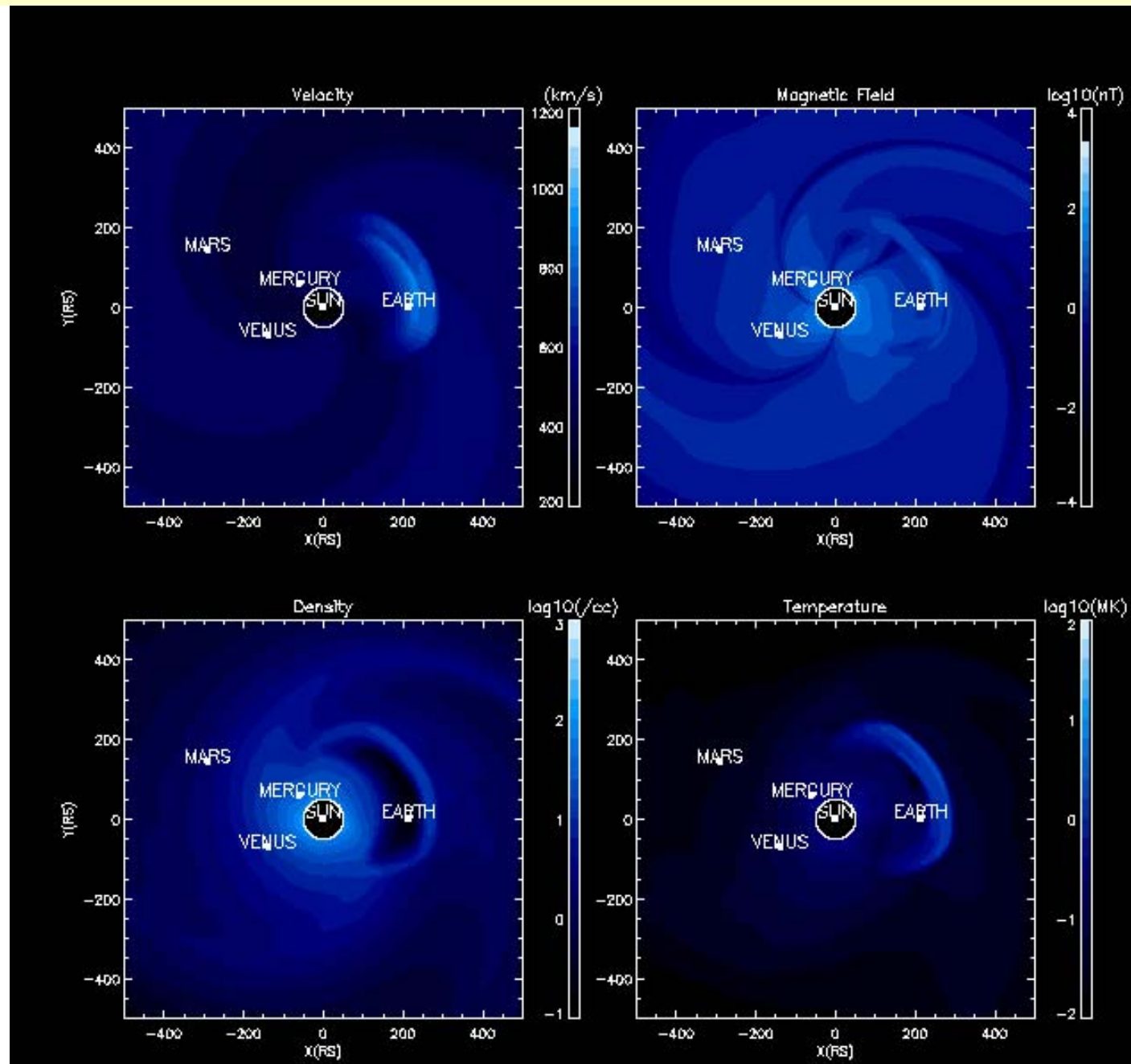


NICT Magnetometer Network

2006 / 12 / 14 01:35 -- 12 / 17 01:35



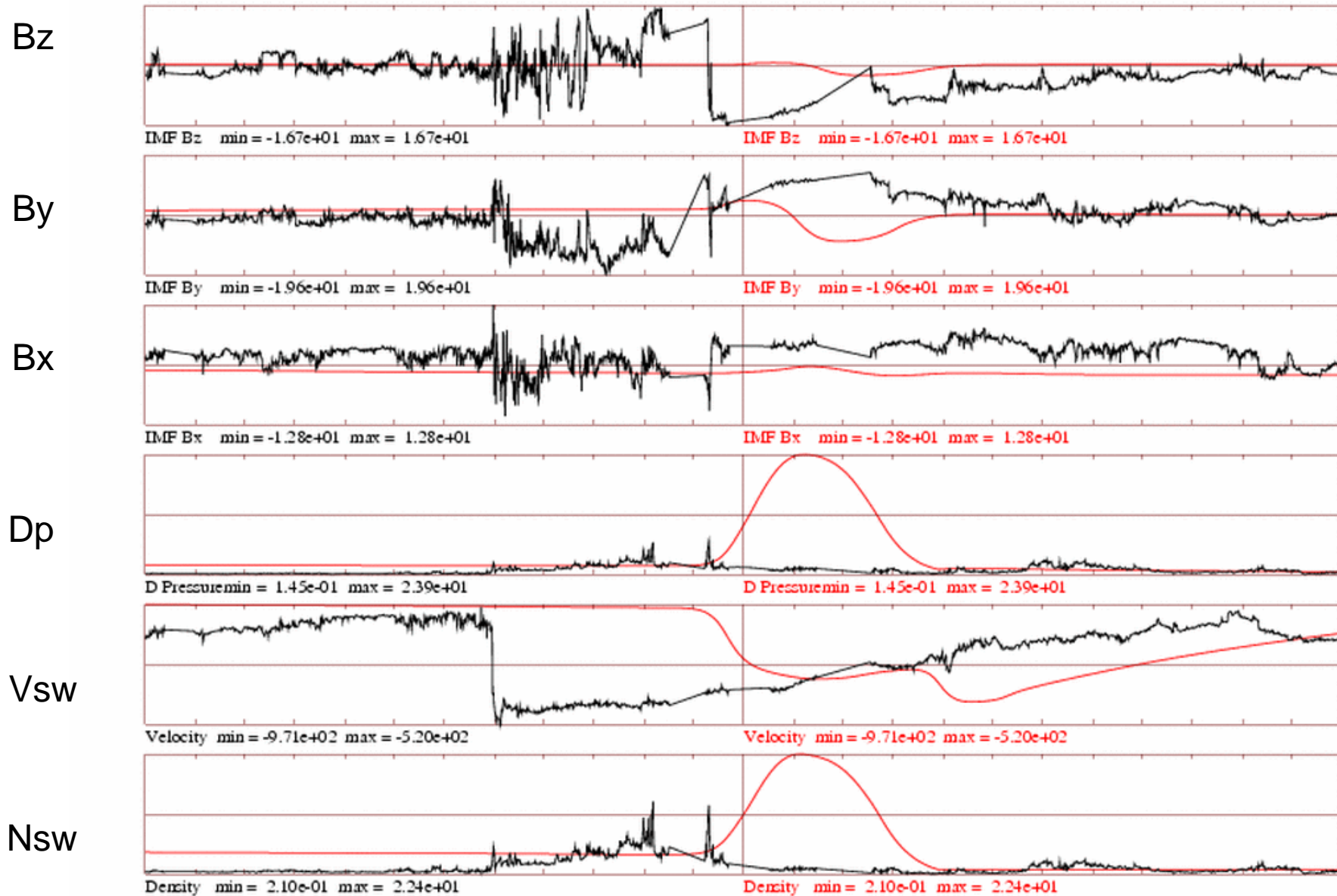
3D MHD Simulation of Solar Wind



SIM Data, 00:00-24:00, 12/14-15, 2006

Simulation

ACE Observation



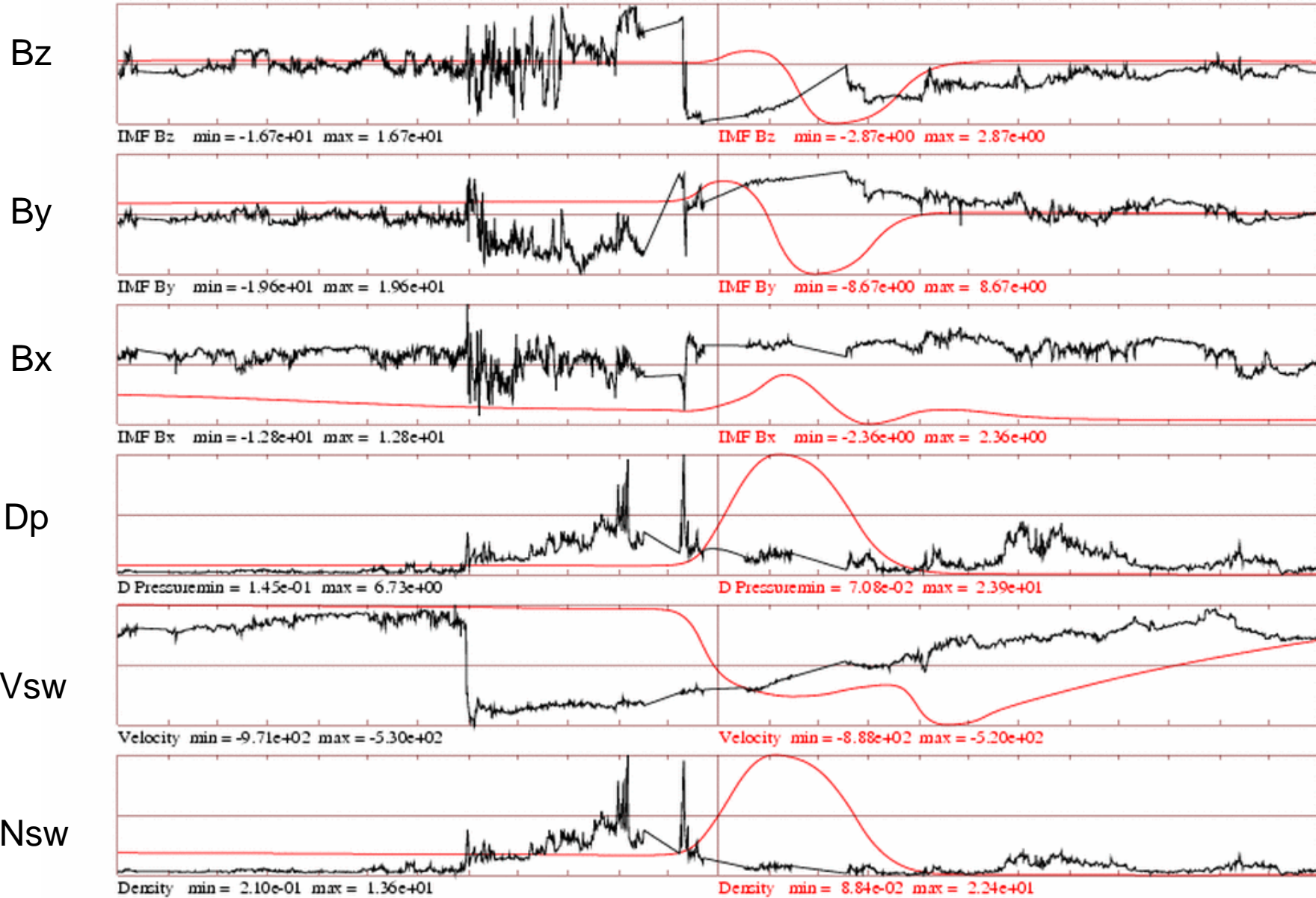
12/14

12/15

SIM Data, 00:00-24:00, 12/14-15, 2006

Simulation

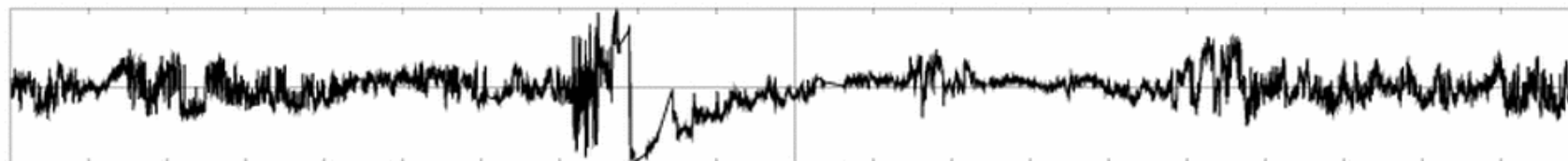
ACE Observation



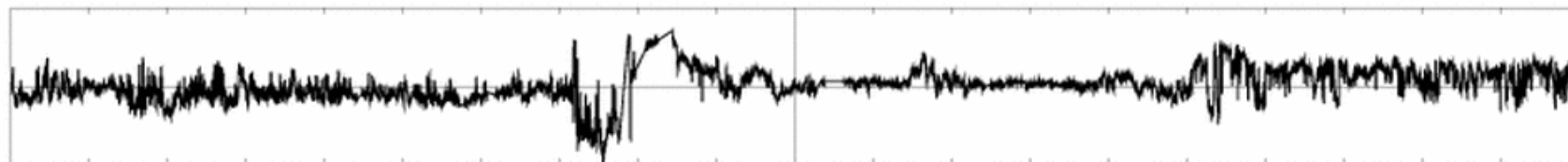
12/14

12/15

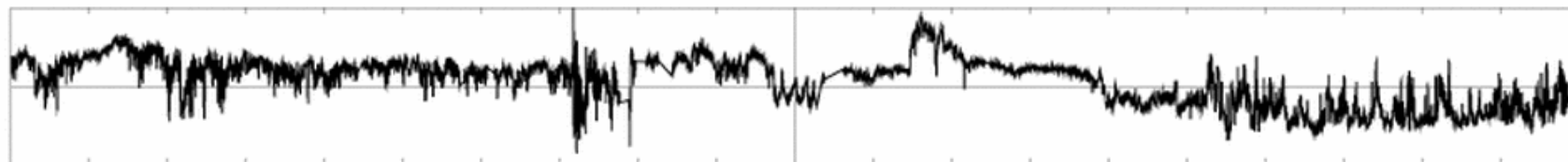
ACE Data, 00:00-24:00, 12/11-20, 2006



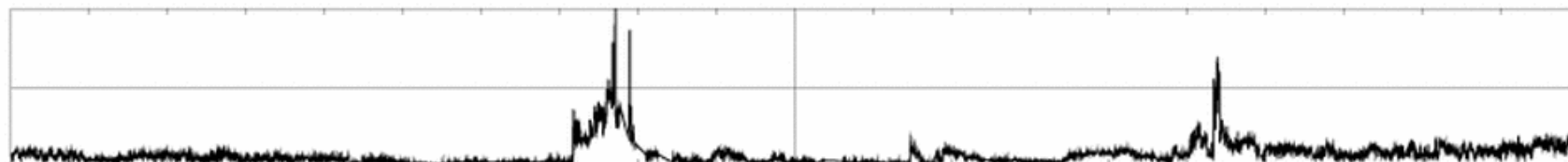
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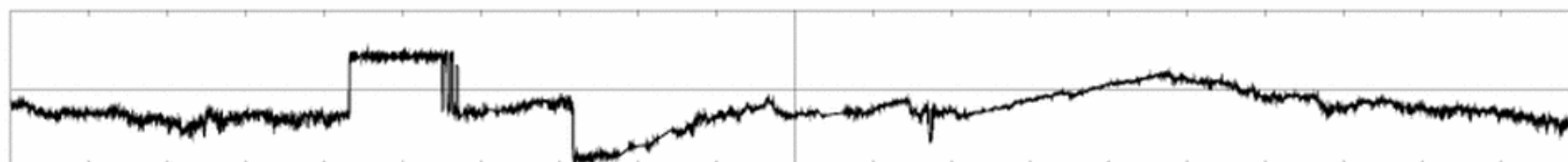
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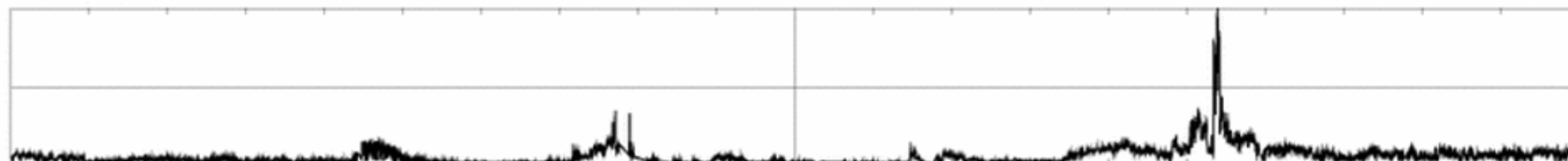
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D Pressuremin = 0.00e+00 max = 1.81e+01

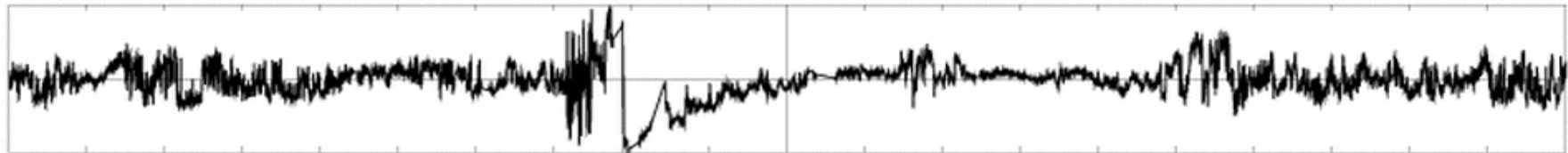


Velocity min = -9.71e+02 max = 0.00e+00

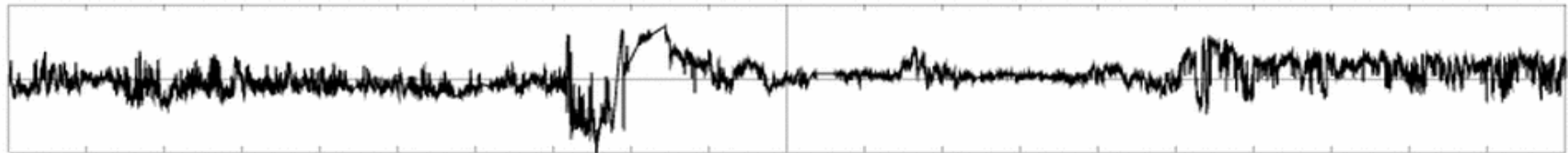


Density min = 0.00e+00 max = 3.92e+01

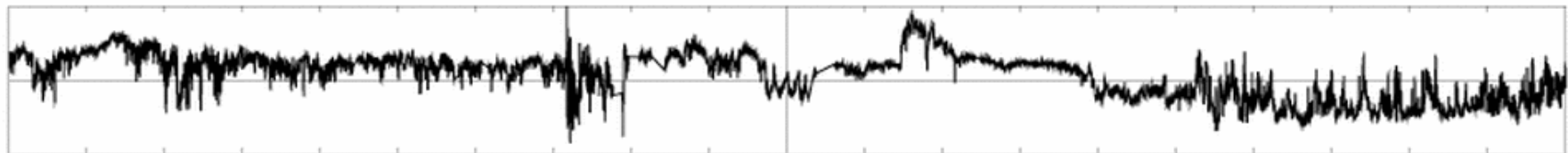
ACE Data, 00:00-24:00, 12/11-20, 2006



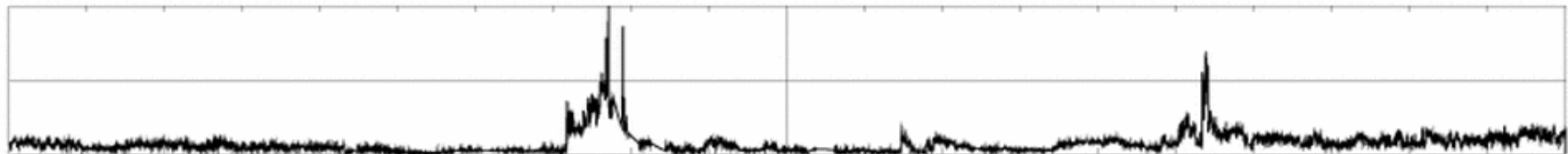
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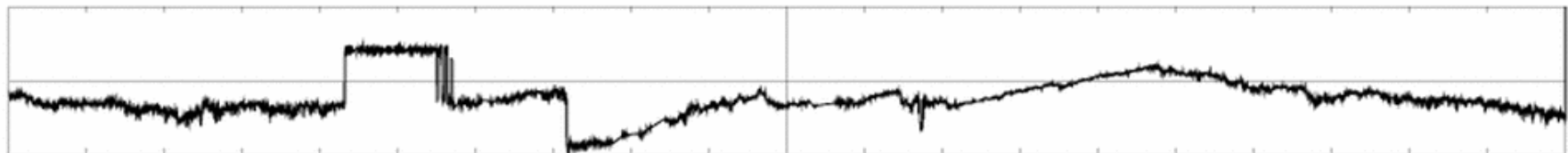
IMF By min = -1.96e+01 max = 1.96e+01



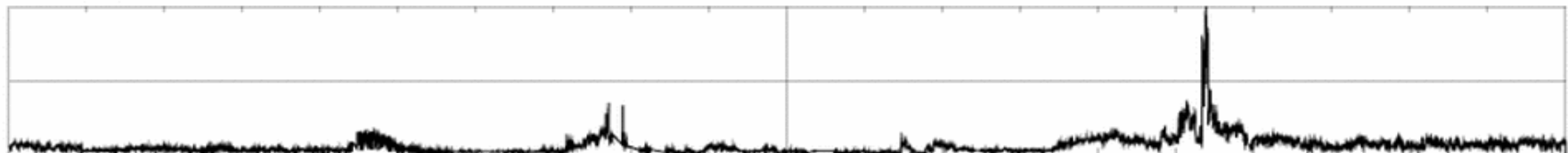
IMF Bx min = -1.28e+01 max = 1.28e+01



D Pressure min = 0.00e+00 max = 1.81e+01



Velocity min = -9.71e+02 max = 0.00e+00



Density min = 0.00e+00 max = 3.92e+01

