SPACE SYSTEMS SYMPOSIUM (D1)
Poster Session (P)

Author: Dr. huan he
National Space Science Center (NSSC), Chinese Academy of Sciences, China, hehuan@nssc.ac.cn

Mr. Wenming Xie
National Space Science Center (NSSC), Chinese Academy of Sciences, China, xiewenming@nssc.ac.cn
Dr. Xiaodong Peng
National Space Science Center (NSSC), Chinese Academy of Sciences, China, pxd@nssc.ac.cn

# THE INTEGRATED MONITORING SYSTEM FOR THE OPERATIONAL STATUS OF THE MERIDIAN PROJECT SOUNDING ROCKETS

**Abstract**

A mega-project of science research on space weather monitoring, namely the Meridian Space Weather Monitoring Project(Meridian Project for short), has been built recently by several research institutes and universities in China. With the objectives of investigating the space weather cause-consequence chain in the solar-terrestrial space, understanding the processes of the catastrophic space weather events, and the regional characteristics of the environment above China's territory so as to help ensuring the safety of space activities such as satellite operation etc., the project set up a large-scale ground-based monitoring system composed of 15 stations along the longitude of 120E and the latitude of 30N.

Sounding Rocket integrated monitoring subsystem of Space weather monitoring system, centering on sounding rocket, constructed space weather comprehensive monitoring station in Hainan. Making use of meteorological rocket, sounding rocket and ground-based monitoring equipment, the station detects near space atmospheric environment parameters in a low-latitude region.

An integrated monitoring system was developed for monitoring the operational status of sounding rockets. Driven by real-time data, the system eliminated abnormal data which were spoiled in transmission process, exhibited information, such as sounding rocket's trajectory, attitude, rocket's key components' working status, movement and scientific data during launch phase, in a variety of ways such as three-dimensional view, two-dimensional view, curves, charts, and etc.. After launching mission, the system can re-exhibit history launching process in the same way by history data which were recorded during real-time mission. The experiments proved that the integrated monitoring system provided a powerful tool for monitoring real-time status of launching missions, supporting post- analysis and evaluation for the missions.