



iGMAS Update and Status

DONG Xurong SUN Hanrong LU Xiaochun

OUTLINE



II iGMAS M&A Results

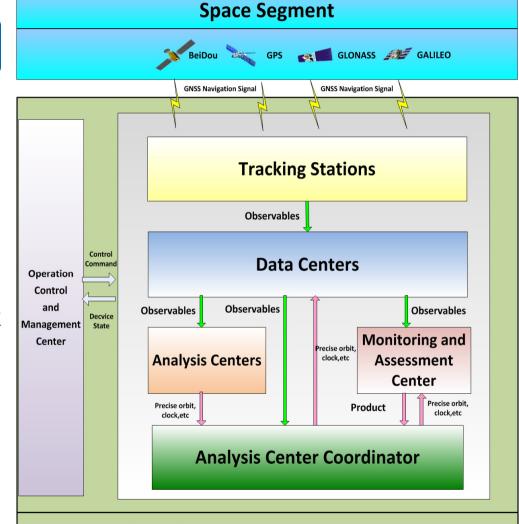
III iGMAS Announcement

iGMAS Tasks

Establish global real-time tracking network, which could track the whole orbits of BDS, GPS, GLONASS and Galileo satellites, as well as platform with data collection, storage, analysis, management, publishing abilities. This platform would monitor and assess the GNSS operational status and key indicators, then generate precise ephemeris, Earth Orientation Parameters, station coordinates and speed, global ionospheric delay and GNSS integrity to support satellite navigation technology test, monitoring and assessment, service in scientific research and various applications.

System Components

- 30+ tracking stations;
- 4 signal monitoring stations;
- 3 data centers;
- 8 analysis centers;
- 1 monitoring and assessment center;
- 1 product integration and service center;
- 1 operational control and management center.

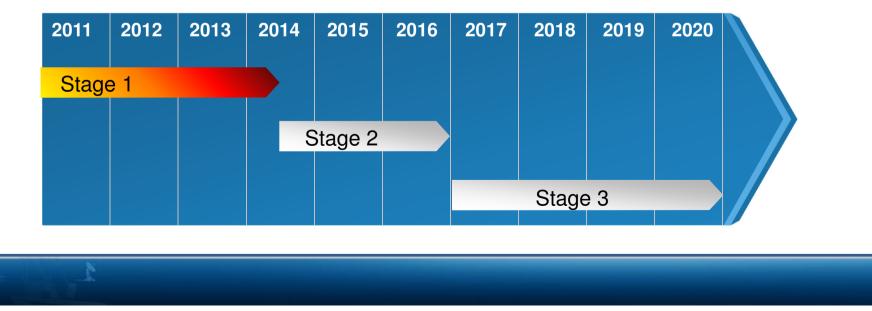


International Monitoring And Assessment System



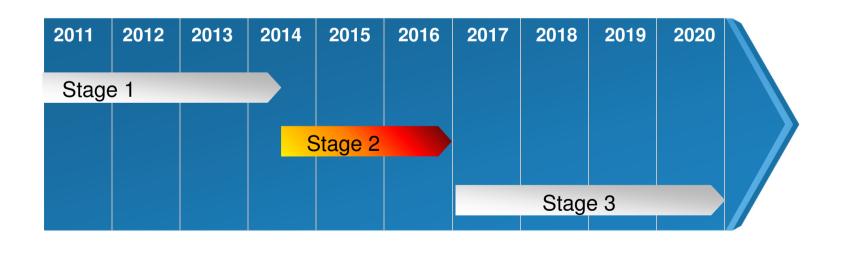
Procedure

Stage 1: 2011-2014, built 20 tracking stations, 2 data centers, 5 analysis centers, 1 monitoring and assessment center, 1 product integration and service center, 1 operational control and management center.





Stage 2: 2014-2016, build more 10 tracking stations, 1 data center, 2 analysis centers, and update the system for more stations processing ability.





Stage 3

Stage 2

Milestones

- Sep. 2007, idea of iGMAS;
- Aug. 2010, requirements analysis and project approachment;
- Mar. 2011, first proposed concept of iGMAS;
- Dec. 2012, iGMAS project approval;
- May 2013, start of iGMAS construction;
- Jan. 2014, start of integration testing;
- Jul. 2014, start of trial running.





Unicore, CETC 54 and CETC 20 have finished production of muli-GNSS receivers, some of them have been installed on stations.



Tracking Stations

Infrastructure construction of 8 domestic stations have been completed, receiver equipments have been installed.



BeiJing







Chang Chun



Kun Ming



Shang Hai



Wu Han



Xi'an



- Arctic and Antarctic stations infrastructure construction have been completed and equipped with receiver and network equipment.
- Several stations outside China,e.g. in Pakistan have been equipped with receiver and network equipment.
- Stations in Russia, Germany, England and South Africa are progressing.



- Signal monitoring station
- Apr. 2009, an 7.3m antenna started to work in Xi'an;
- Oct. 2014, an 40m antenna was put into service in Xi'an;
- International cooperation with Canada, Malaysia and Argentina for signal quality monitoring and assessment has been determined.





- Construction of Centers
- 3 data centers have finished internal integration testing;
- 10 analysis centers have finished internal integration testing;
- Monitoring and assessment center, operational control and management center, product integration and service center have finished internal integration testing;
- iGMAS has started trial running since July,2014.

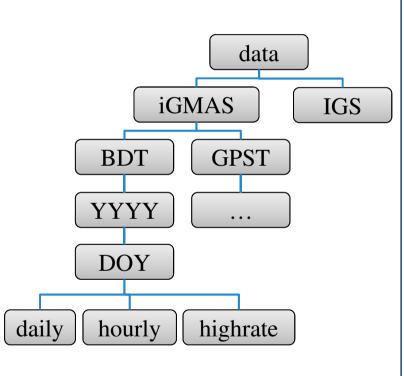


Data Center





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Data directory



Analysis Center









Center

Xi'an Satellite Control Shanghai Astronomical Information Engineering Chang'an University Observatory University



Space Information Relay and Transmission Technology Research Center



Beijing Aerospace Control Center







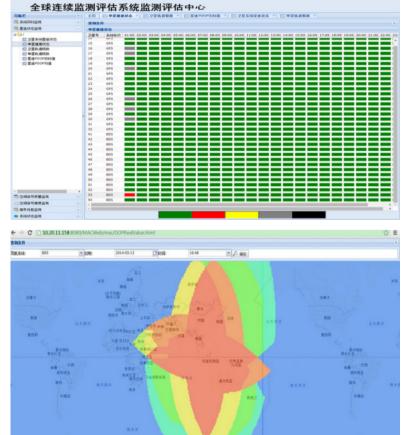
Institute of Geodesy and Geophysics



• Monitoring and Assessment Center







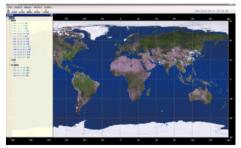


Operational Control and Management Center











• Product Integration and Service Center



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OUTLINE



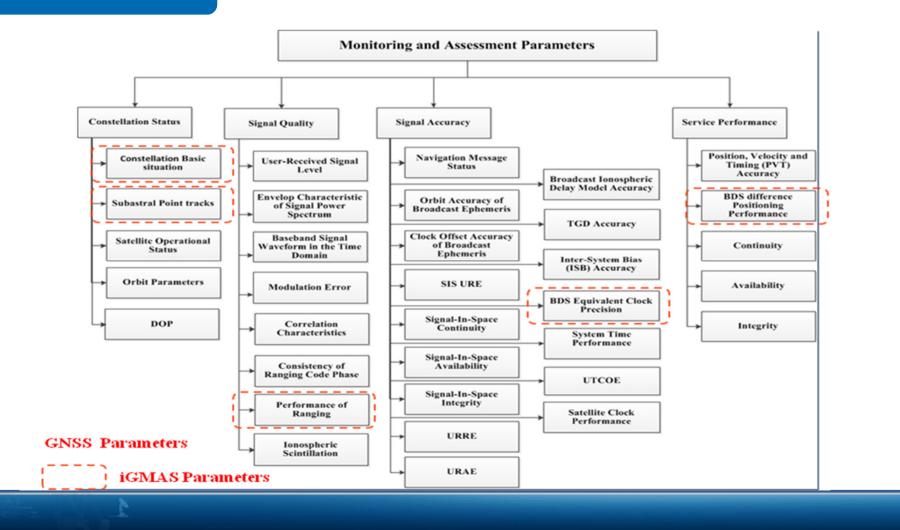
II iGMAS M&A Results

III iGMAS Announcement



iGMAS M&A Results

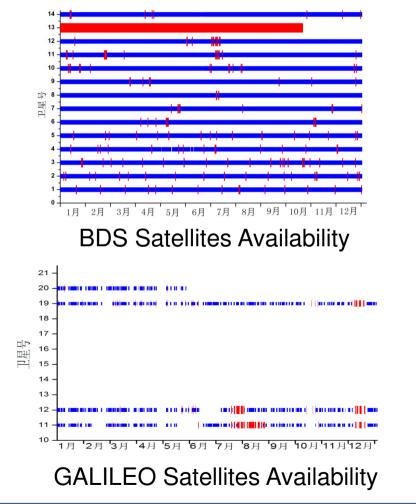
Core Products

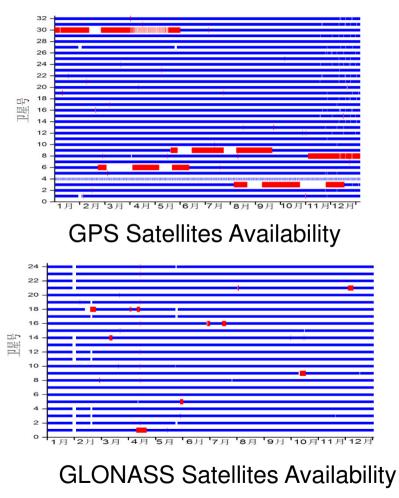


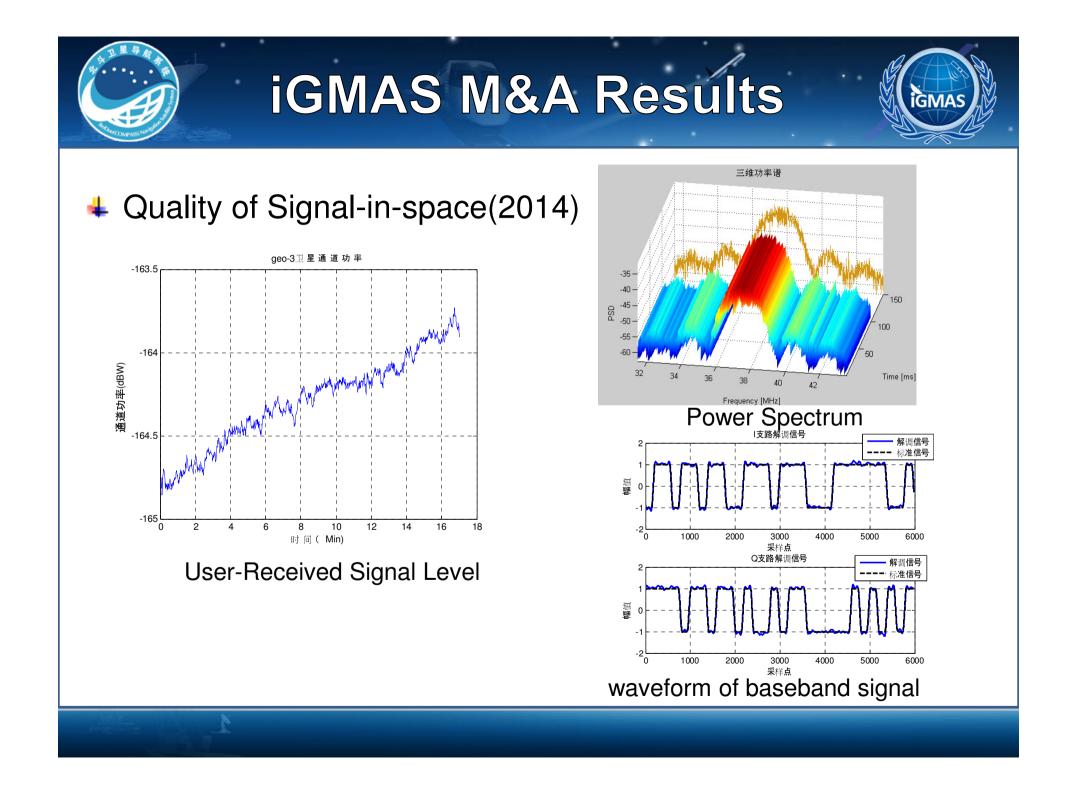


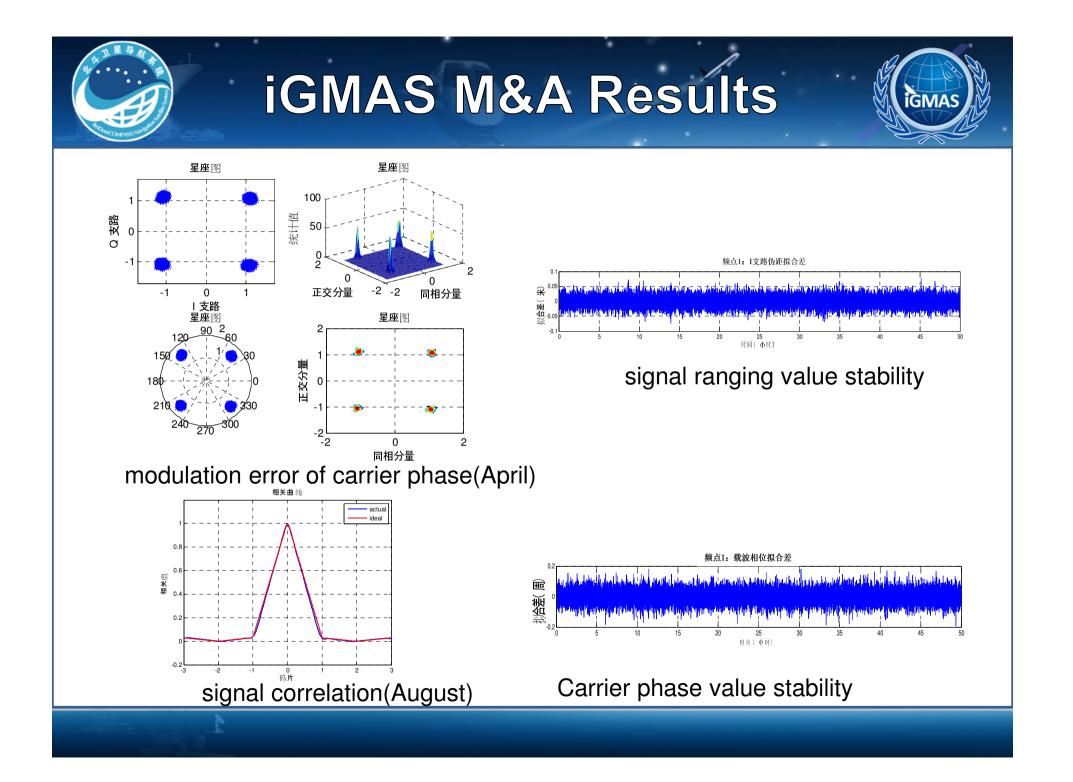
iGMAS M&A Results

Constellation Status (2014)









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