



Report from Host

22nd IRDR Scientific Committee Meeting

October 8, 2019 Xiamen, China



History

The Aerospace Information Research Institute (AIR) under the Chinese Academy of Sciences (CAS) was established in 2018 through the merger of three CAS institutes, namely the Institute of Remote Sensing and Digital Earth (RADI), the Institute of Electronics (IECAS), and the Academy of Opto-Electronics (AOE).

RADI was established in 2012 through merging two CAS institutes: the Institute of Remote Sensing Applications (IRSA) founded in 1979, and the Center for Earth Observation and Digital Earth founded in 2007.

IECAS was established in 1956 as China's first comprehensive research institute of electronic science.

AOE was established in 2003, in charge of the R&D of CAS satellite navigation system, aerostat system, and management as well as overall technology.



AIR is designated to promote the development of aerospace information science and technology, and to facilitate economic and social sustainable development .



Human Resource and Education

Pooling Talents to Build Excellent Research Team



- ❖ 2,683 employees
- ❖ 1,655 scientists and technicians
- ❖ 211 supporting personnel



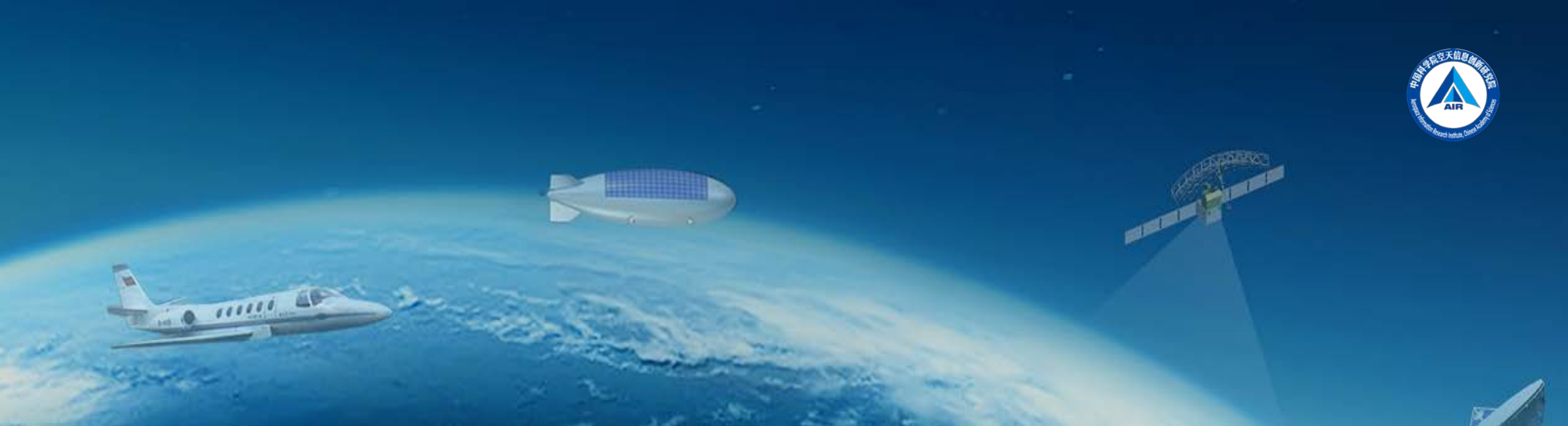
- ❖ 1,357 postgraduate students
- ❖ School of Electronic, Electrical and Communication Engineering under the UCAS
- ❖ School of Optoelectronics under the UCAS
- ❖ Recruiting international students funded by CAS talent programs



Campuses across China

There are a total of 12 campuses in Beijing, Suzhou, Kashgar, Sanya, Huailai, Siziwangqi and other places. Besides them, Lijiang campus, Mohe campus and other campuses are also under construction or to be built.





AIR Research Fields

AIR is devoted to exploring Earth system science for better understanding of our planet; developing frontier technologies for better Earth observation; building an integrated space-air-ground civil space infrastructure to maximize the value of utilizing aerospace data for social benefits.



Major Research Fields



Airborne Remote Sensing Platform



Payload and Device Technology



Global Satellite Data Receiving Station Network



Remote Sensing Science and Digital Earth



Beidou Navigation and Positioning Technology



Aerospace Information Technology Applications

Airborne Remote Sensing Platform

Airborne remote sensing for social benefits

Equipped with four remote sensing aircraft, AIR undertakes missions including scientific experiments, sensor calibration, and disasters and environmental monitoring.

Airborne Remote
Sensing Platform

Scientific
Experiments

Public Welfare
Missions

Lighter-Than-Air System

Exploring Near Space

AIR develops lighter-than-air aircraft such as aerostats, tethered balloons, and airships.

Electric Mid-low-altitude Airship

Super-Pressure Balloon

High-altitude Zero Pressure Balloon

Payload and Device Technology

Develop New Concept and Technology

Microwave
Detection
Technology and
System

Optical Payload
Technology and
system

Electromagnetic
Detection
technology and
System

Electronic
Devices

Global Satellite Data Receiving Station Network

Watching over Earth, Serving Science and Society

Global Ground Station
Network for Earth
Observation Satellites

Serving Space Science
Research

Virtual Ground Station,
a New Way to Access
EO Data

Remote Sensing Science and Digital Earth

Extending Our Knowledge of the Planet

Remote Sensing
Science

Digital Earth and
Global Spatial
Information
System

Quantitative
Remote Sensing
Information
Technology

Key Technologies
of Remote
Sensing Satellite
Applications

Remote Sensing
Application
Engineering
Technologies

Beidou Navigation and Positioning Technology

Contributing to Global Navigation Satellite System

Developing Key Technologies for BDS Navigation, Positioning and Timing

Promoting BDS Global Application

Conferences, Exhibitions, Popular Science Activities

Big Earth Data Science Engineering Program (CASEarth)

Big Earth Data Supporting SDGs

CASEarth has built a Big Earth Data Sharing Platform and developed a PB-level prototype system for big Earth data. CASEarth aims to make use of the big Earth data to investigate critical scientific issues, to make new strides with respect to decision support, and to serve 2030 SDGs.





International Exchange and Cooperation

Partnering with national and international organizations to promote S&T innovation, to accelerate application, to discover and demonstrate innovative uses and practical values, tackling global issues and serving SDGs.

Connect AIR with the Rest of the World

AIR views international collaboration as an effective means to maximize global potential and resources to advance aerospace information science and tackle global issues.





International Platforms

AIR hosts international platforms including the International Centre on Space Technologies for Natural and Cultural Heritage (HIST) under the auspices of UNESCO, the International Society for Digital Earth (ISDE), the International Program Office for Integrated Research on Disaster Risk (IRDR), and the CAS-TWAS Centre of Excellence on Space Technology for Disaster Mitigation (SDIM).



United Nations
Educational, Scientific and
Cultural Organization

International Centre on Space Technologies for
Natural and Cultural Heritage
under the auspices of UNESCO

To support implementation
of the World Heritage
Convention with space
technologies.



International Society for
Digital Earth

To benefit society
by promoting the
development and
realization of Digital Earth.



IRDR
Integrated Research on Disaster Risk

Integrated research on
disaster risk for resilient
and sustainable societies.



SDIM

To strengthen capacities for
disaster risk reduction in
developing countries with
space technology.



International Exchange



International Conference of Digital Belt & Road (DBAR)



Huangshan Dialogue on UNESCO Sites and Sustainable Development



Asian Conference on Remote Sensing



International Conference of Asia-Oceania GEOSS



International Symposium on Digital Earth



International Training Courses



International Science Programs

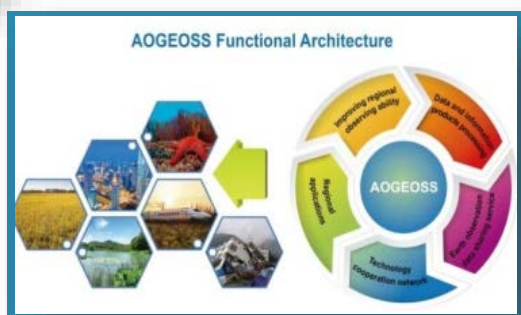


Digital Belt & Road Program (DBAR) supports sustainable development with Big Earth Data

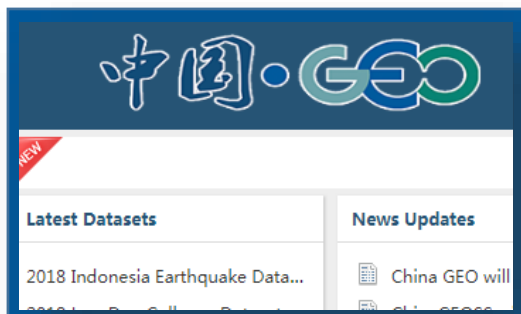


CropWatch participates in the GEO/GEOS Global Agricultural Monitoring

AOGEOSS supports regional sustainable development with earth observation technology.



Boosting global application of Beidou Navigation System



China GEOSS DSNet An important international disaster reduction partner.

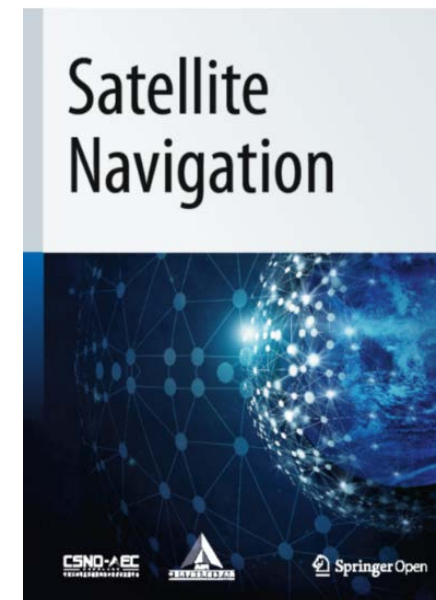
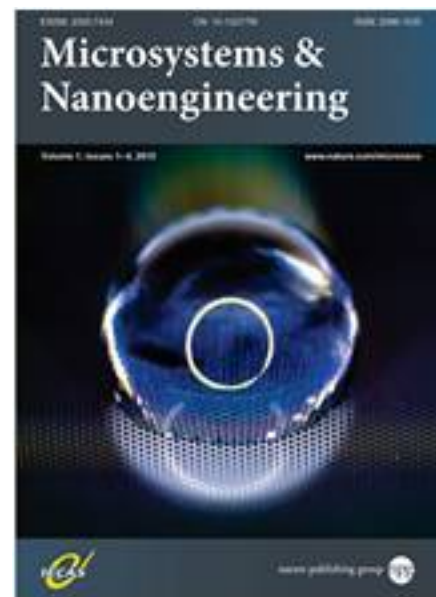


Cooperation Agreements with UNEP and UNESCO to Serve SDGs



International Journals

AIR hosts international journals such as the *International Journal of Digital Earth*, *Microsystems & Nanoengineering*, *Big Earth Data* and *Satellite Navigation*.





Thank you!

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