

Protection of the Dark and Quiet Skies in China

Fengyu Wang

Senior Engineer

**Earth Observation and Data Center of
China National Space Administration**

Site Protection in China

The dark and quiet sky is a valuable natural resource and cultural heritage for the human beings

Ecological Environment

Astronomical Observations

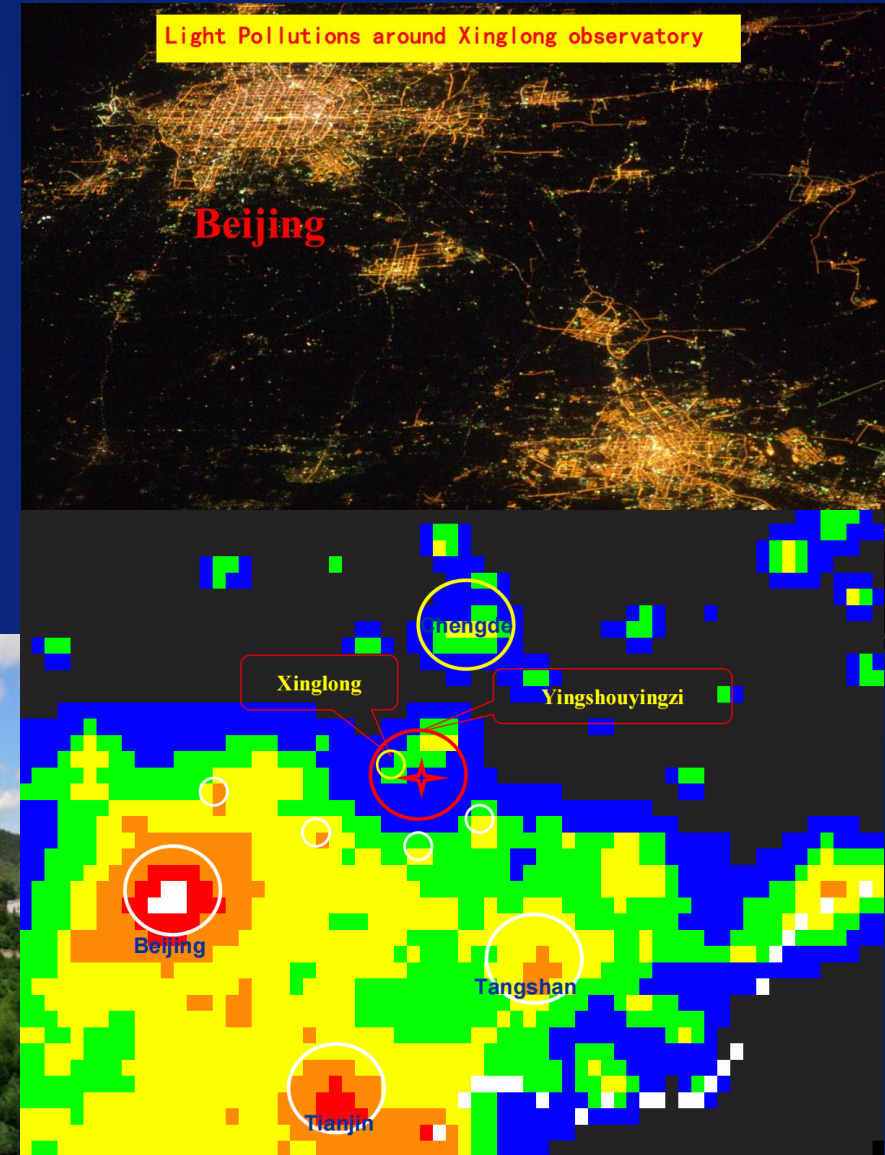
**Negative
Impacts
from:**

- Light pollution from the artificial light at night
- Radio emissions
- Satellites in low-Earth orbits (LEO)

Site Protection in China

■ LAMOST: Large Sky Area Multi-Object Fiber Spectroscopic Telescope

Scientific achievements in the fields of the structure and evolution of the Galaxy, the stellar physics, and multi-waveband cross-identification of celestial objects.



Protection of the optical dark sky



- Outline and define the dark sky protection standard
- Carry out quantitative measurements of the light pollution and the brightness distribution of satellites
- Formulate protocols and regulations for the dark-sky reserves or protected zones for the existing and candidate observational sites

Site protection of the radio astronomy

Radio astronomy facilities in China



Site protection of the radio astronomy



Five-hundred-meter Aperture Spherical radio Telescope (FAST)



- Develop electromagnetic compatibility (EMC) methods for radio telescopes
- Carry out studies on the Radio Frequency Interference (RFI) mitigation technology
- Establish Radio Quiet Zones (RQZs) around radio telescopes

FAST sciences

- HI survey, Pulsar research,
- Molecular lines,
- Joining VLBI network, SETI

Site Protection in China

- International collaborations for the dark and quiet sky protection
- CNSA, as the space authority in China, has led the program and policymaking in collaboration with the research intuitions and space industrial entities, such as the CAS and CASC.
- Outreach activities





**Let's work together for the
sustainable development of
science and society !**

Thank you!

If you have any question, please contact me: iwangfengyu@icloud.com