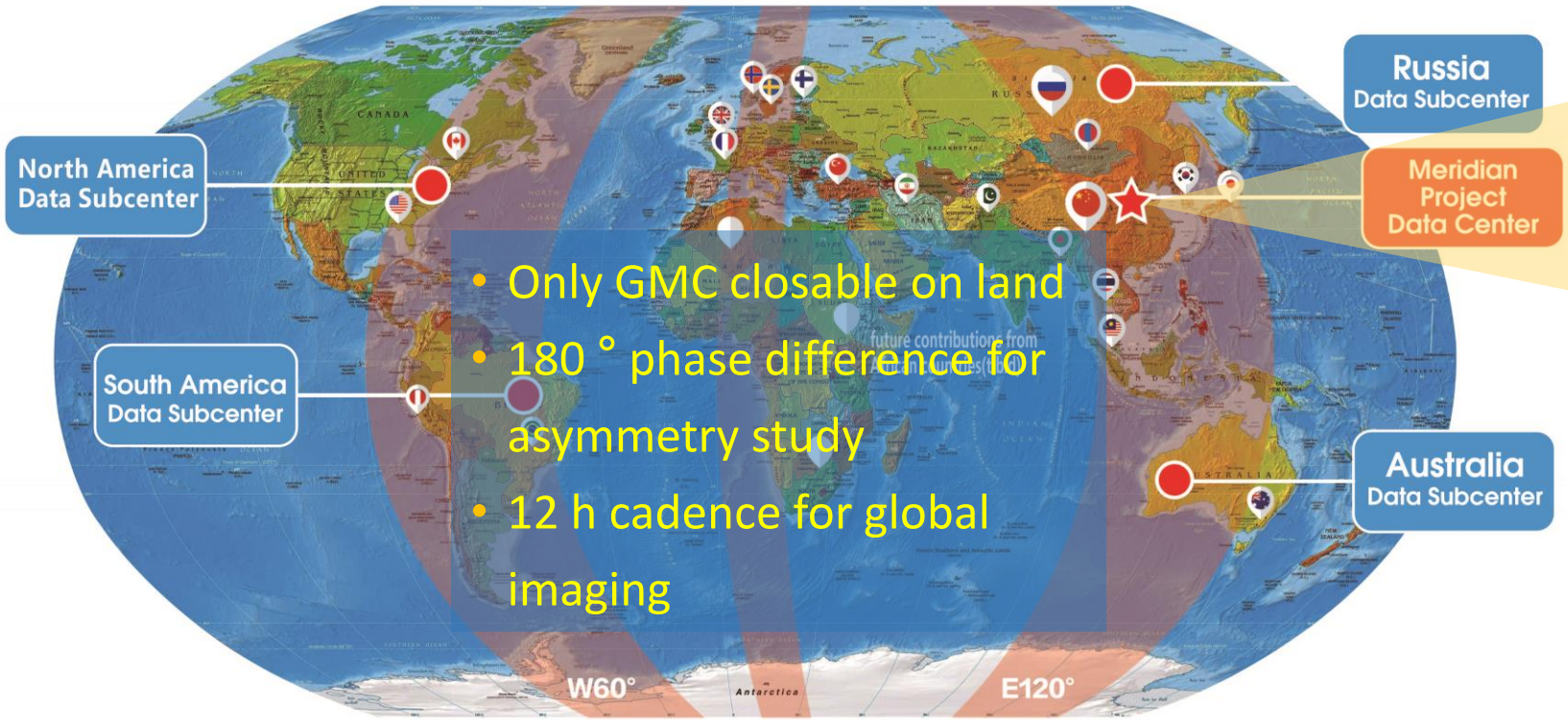
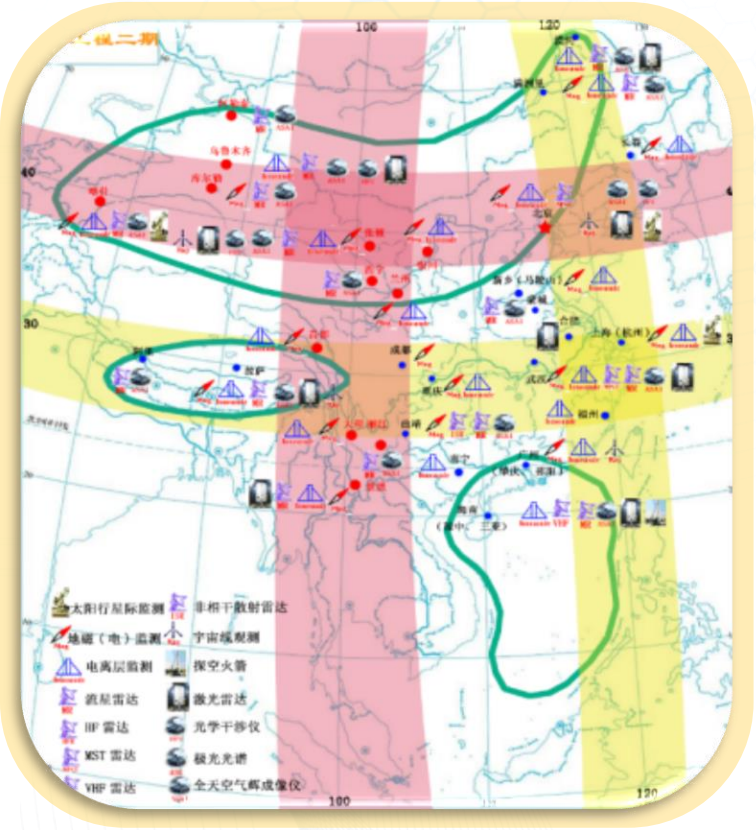
1. International Meridian Circle Program (IMCP)



Chinese Meridian Project



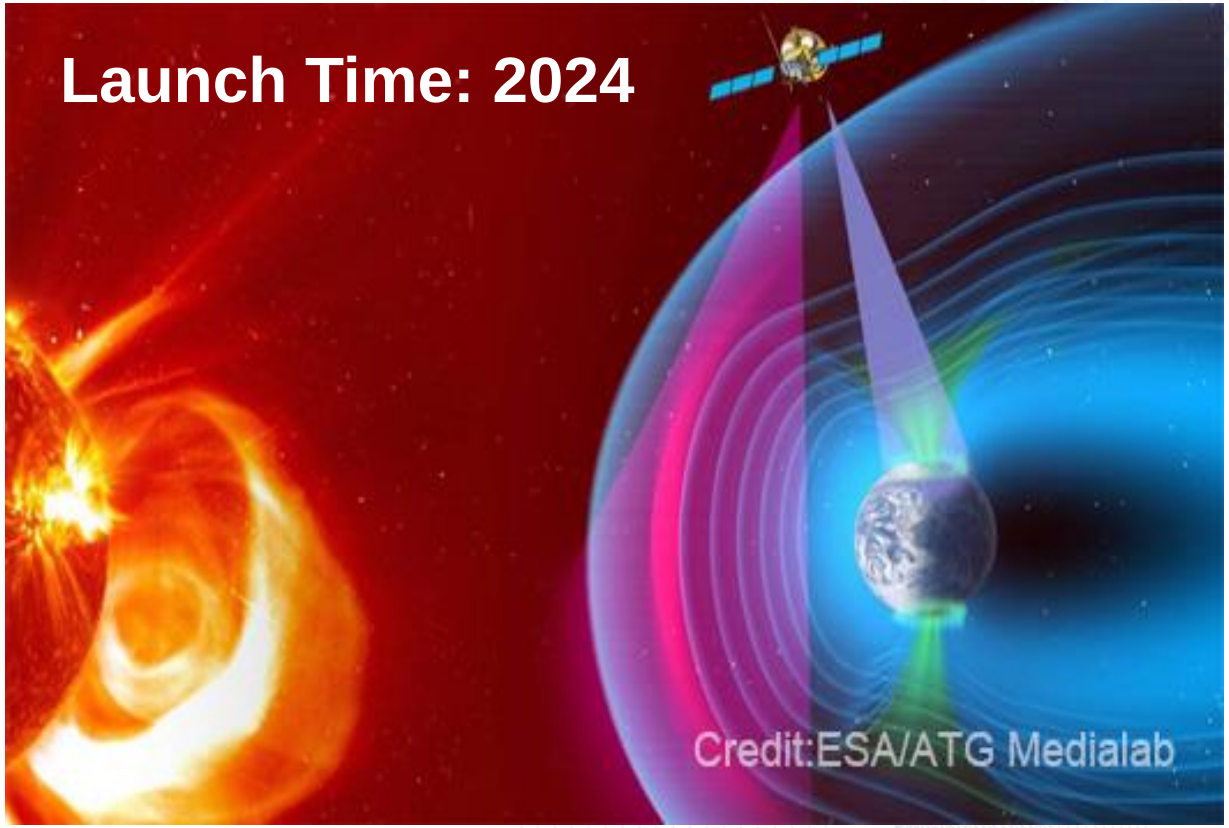
- Integrate ground-based observatories along the 120° E and 60° W Great Meridian Circle
- Take mass and energy inputs from the Sun and Earth as a whole, providing a global picture about how these inputs couple to give rise dynamic variability in Earth's space weather, climate and weathers.

2. Space Weather Satellites

Advanced Space-based Solar Observatory (ASO-S)

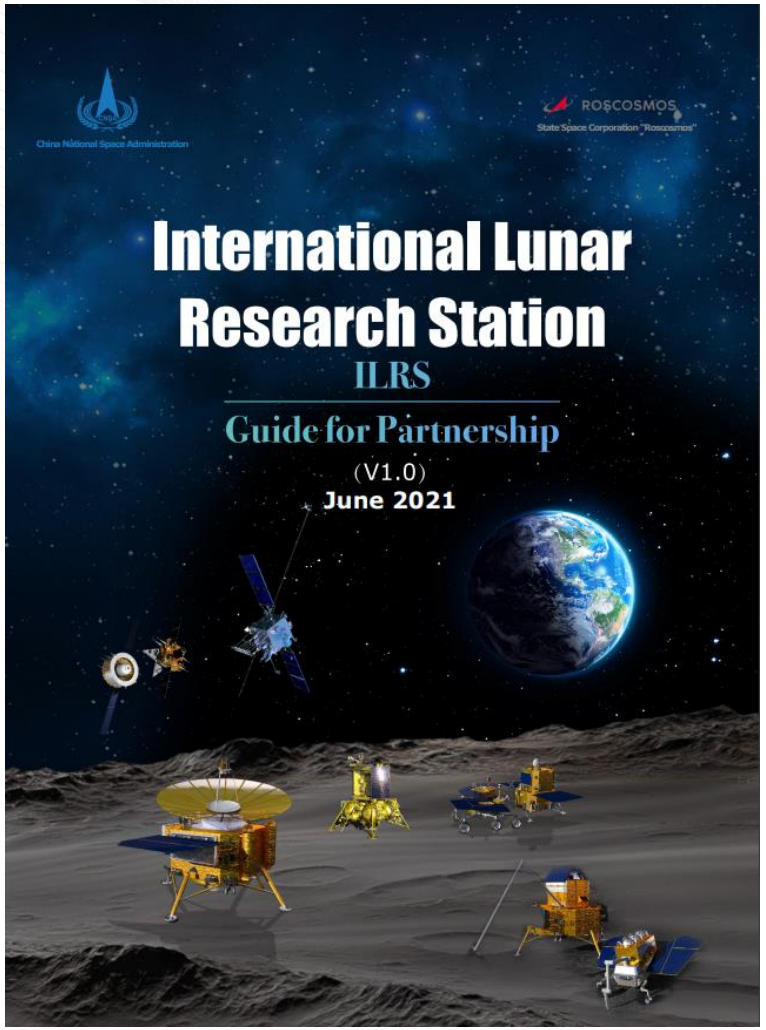
To reveal connections among the solar magnetic field, solar flares, and CMEs.

Solar wind Magnetosphere Ionosphere Link Explorer(SMILE, China-ESA)



To study the interaction between the solar wind and Earth's magnetosphere

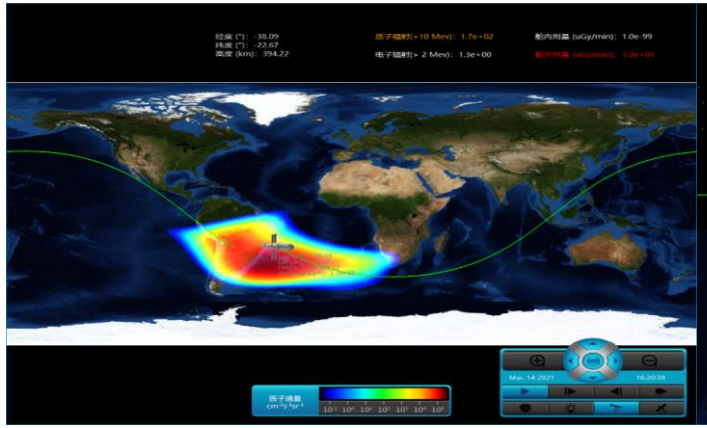
3. International Lunar Research Station – Earth-moon Space Environment Detection



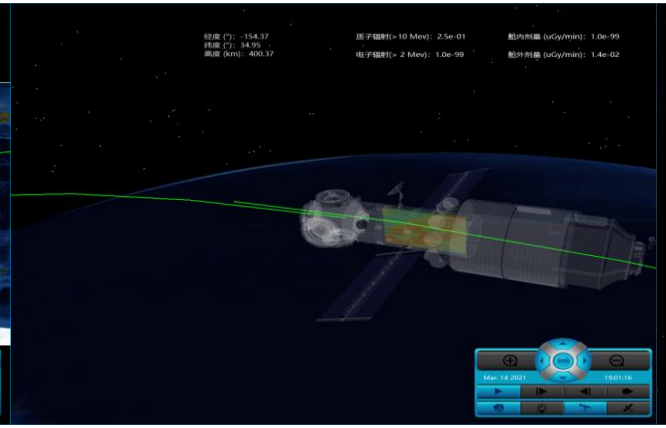
China and Russia signed the "Memorandum of Understanding between the Government of the People's Republic of China and the Government of the Russian Federation on Cooperation in the Construction of an International Lunar Research Station"

4. Space Weather Services for China Space Station(CSS)

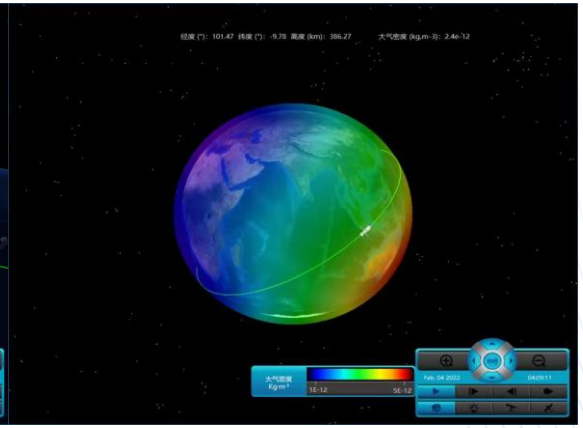
- Space weather services covering the whole process of CSS construction: long-term SEE numeric evaluation during design period, Mid-term and short-term forecast for launch window, daily nowcast and forecast for in-orbit period.
- Analyze the space radiation conditions on the orbit and evaluate the radiation dose inside/outside the space station core module Tianhe.
- Space weather forecast for astronauts spacewalk: space weather event prediction, time periods and energy spectrum flux prediction when CSS crosses the SAA.
- Atmosphere density forecast for orbit prediction.
- On-orbit monitoring data processing and evaluation: high energetic particles, X-ray, atmosphere density



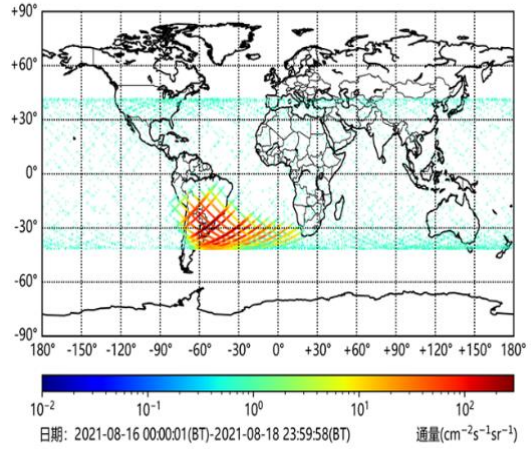
CSS crossing SAA



CSS inside radiation conditions evaluation



Atomosphere density prediction



On-orbit high energetic proton monitoring (>9MeV)