

6TH ASIA-OCEANIA GROUP ON EARTH OBSERVATIONS (AO GEO) WORKSHOP

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Development, Sharing and Applications of JLS-5M Datasets from CGSTL's Medium-high-resolution Multispectral Satellites

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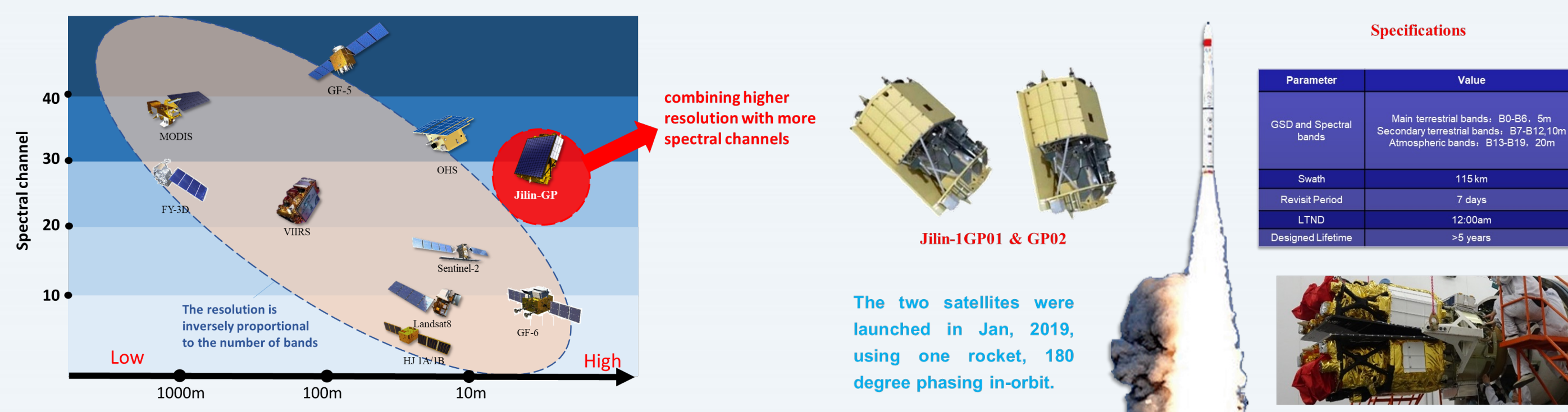
Chang Guang Satellite Technology Co., Ltd



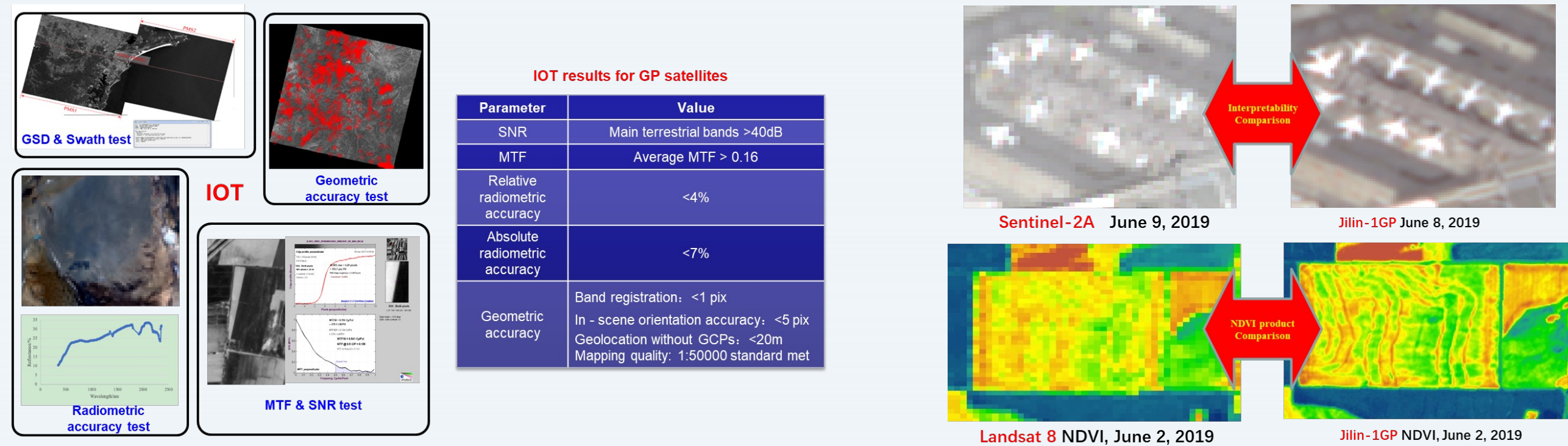
JLS-5M Dataset Introduction

- Developed by CGSTL leading team
- Will be the world's first 5-meter wide-coverage broadband dataset
- Will be provided to all communities through ChinaGEOSS
- Trial version already online

Data Collection Satellites——Jilin-1 GP Satellites



Advantages of Jilin-1 GP Satellites



Specification of JLS-5M Dataset

- Twice coverage, coverage rate >90% (Belt and Road region)
- GSD of the 6 main spectral segments of the image is better than 5m, and the total number of bands is 20
- Geolocation without GCPs is better than 20m
- Absolute radiometric accuracy is better than 7%
- Relative radiometric accuracy is better than 4%
- Surface reflectance inversion accuracy is better than 7%
- Including >36,000 scenes, L2, total volume>80TB

Coverage area of JLS-5M dataset

	Period	Scene	Coverage (km ²) (Cloud Ratio ≤20%)	Proportion of Collection
Phase I	2020.1-2021.6	28718	33,060,800	91.04%
Phase 2	2021.7-2022.10	24454	34,526,300	95.72%



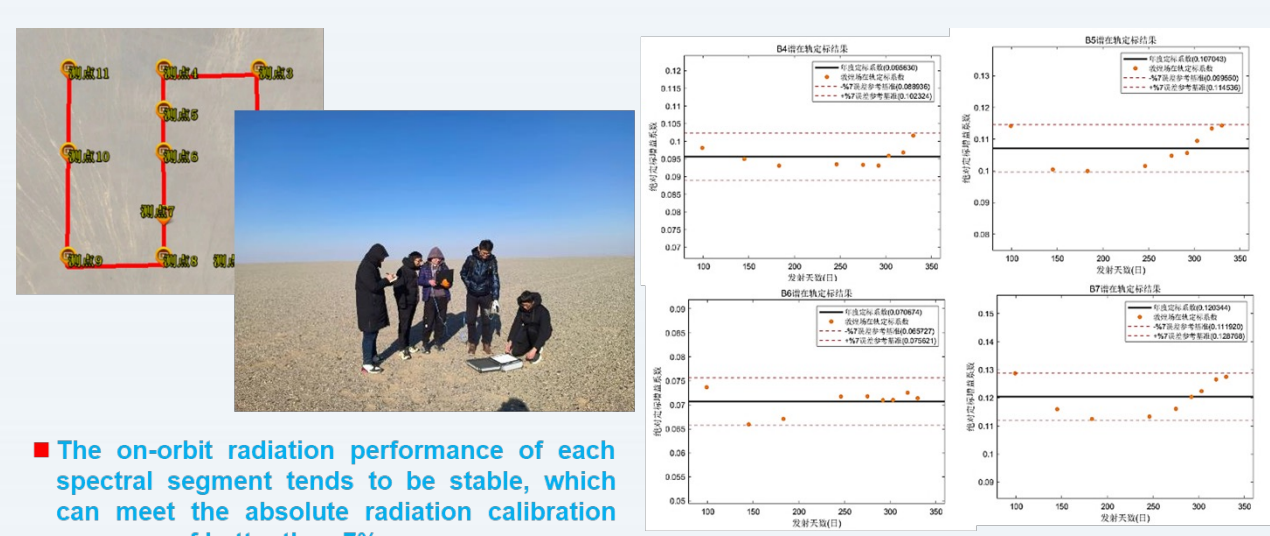
Phase 1



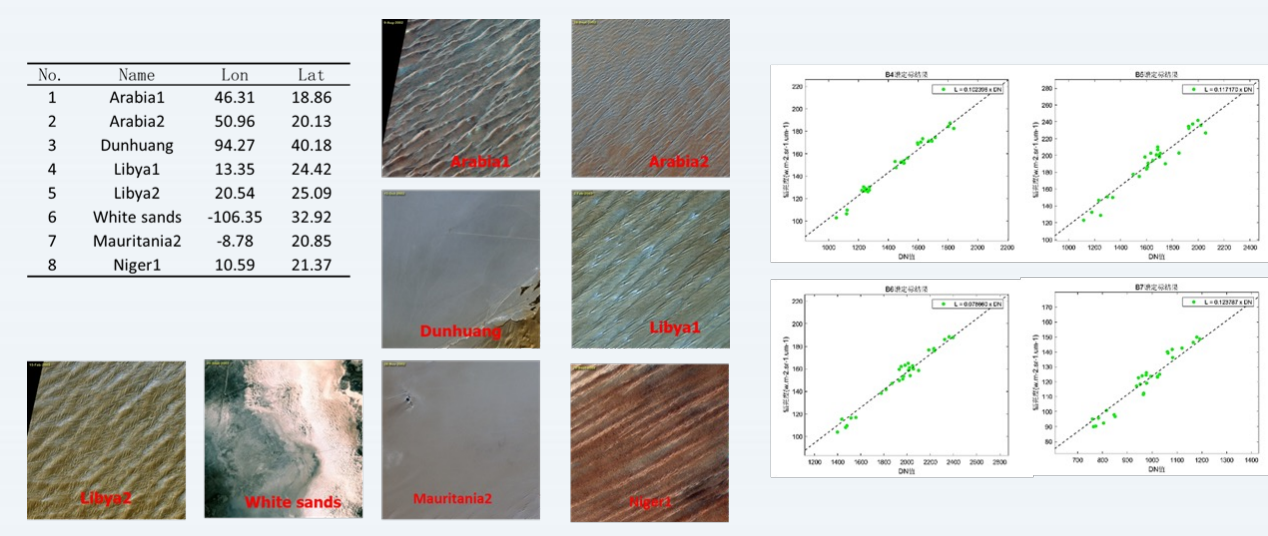
Phase 2

Quality Control

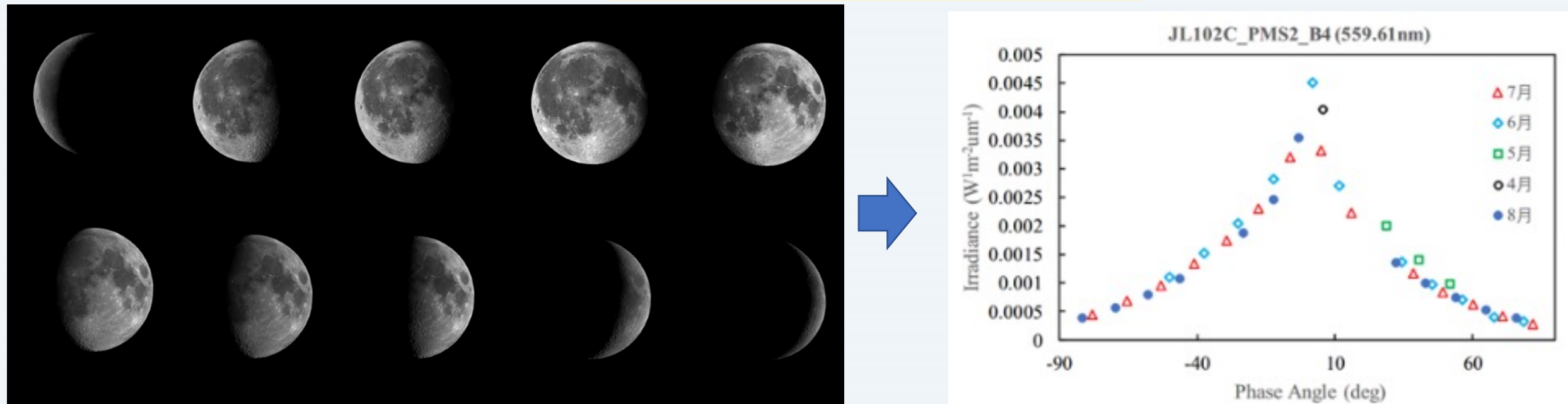
Site Calibration



Uniform Stable Field Calibration

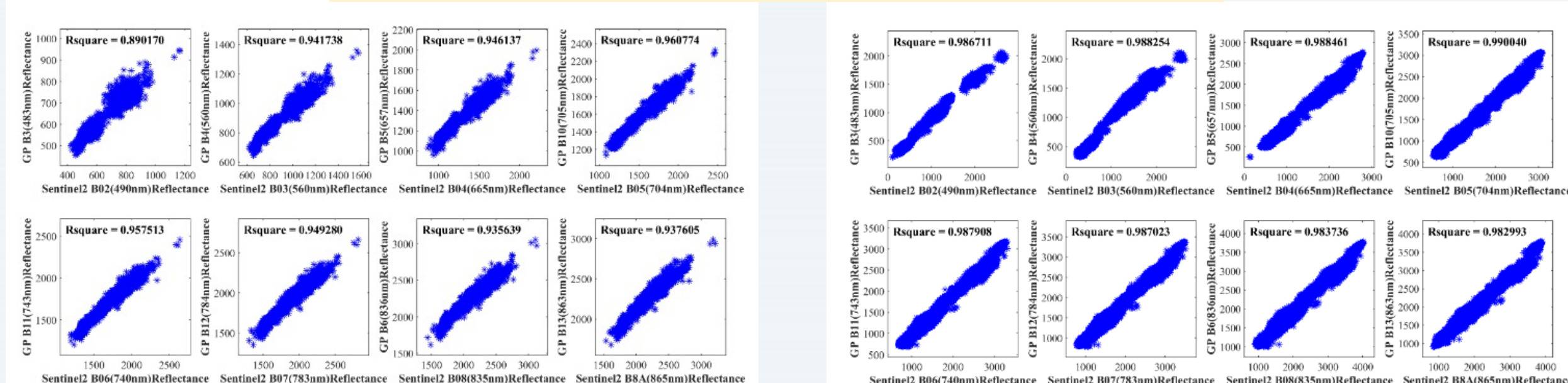


Moon Monitoring



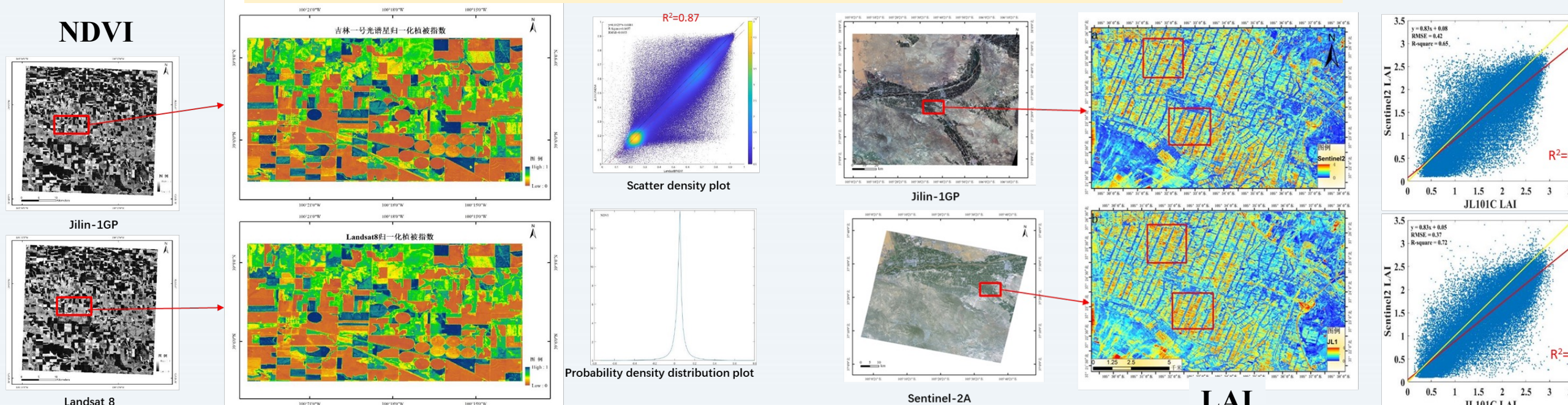
Compared with established lunar model, we can know the payloads stability are very well.

Cross Validation of Reflectance



The determination coefficient R^2 between the reflectivity of the dataset and the reflectivity data of Sentinel-2 is greater than 0.9, and the relative difference is less than 7%.

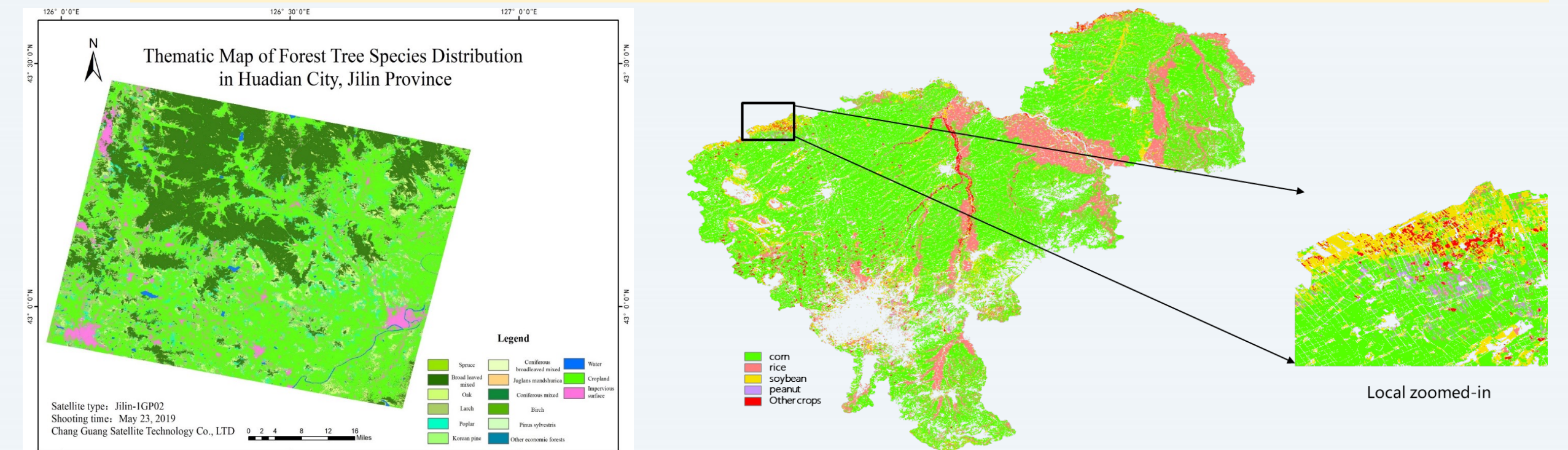
Comparison of Quantitative Parameters



The comparison with Landsat Sentinel-2 quantitative products shows that the JLS-5M dataset has a good performance in quantitative applications.

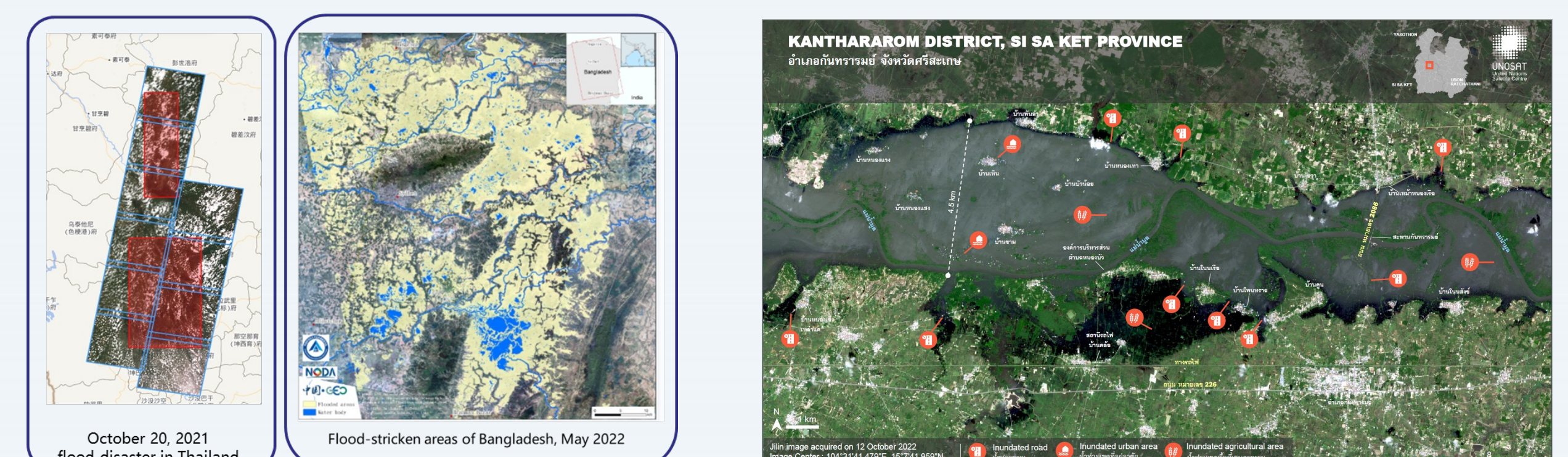
Dataset Application

Forest And Crop Type Identification And Mapping



Because of its rich bands and high resolution, JLS-5M has been widely used in the field of agriculture and forestry.

International Emergency Services



The data set has provided disaster emergency monitoring data to Fiji, Bangladesh, Thailand and other countries through China GEO, which has been highly recognized by the international community.

Dataset Service System



JLS-5M dataset for countries in the Belt and Road region are now available online. The dataset has been downloaded and used by more than 20 institutions from Tsinghua University, Wuhan University, Beijing Normal University, China Agricultural University, Sun Yat-Sen University, Chinese Academy of Sciences, etc.

Welcome to register to download! <https://www.chinageoss.cn/datasharing/theme/viewThemeById?id=JLS5M>

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