



INTERNATIONAL ASTRONAUTICAL FEDERATION

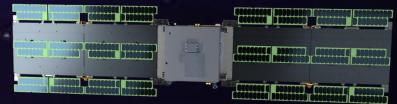
Space Sustainability Case Study

www.spacety.com

Spacety

- A fast growing private new space company
- A world leader in cubesats and smallsats
- Launched 21 satellites since founded in 2016
- 90 employees globally, 70% are engineers and scientists
- Three locations in China: Changsha, Beijing, Mianyang
- International headquarters: Luxembourg
- Mass manufacturing capabilities of low cost nano/micro/small satellites for global market, especially for satellite constellations
- Providing fast, flexible, low-cost Satellite-as-a-Service, including payload hosting, and IOD/IOV
- Becoming a global satellite data provider with its SAR constellation being developed and deployed





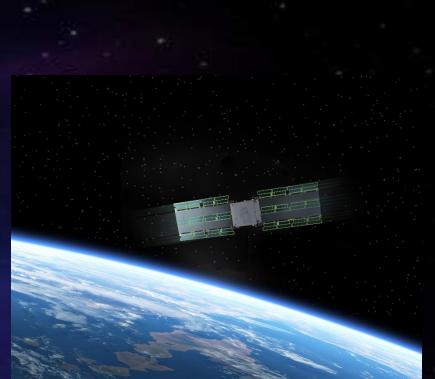
Our Space Missions

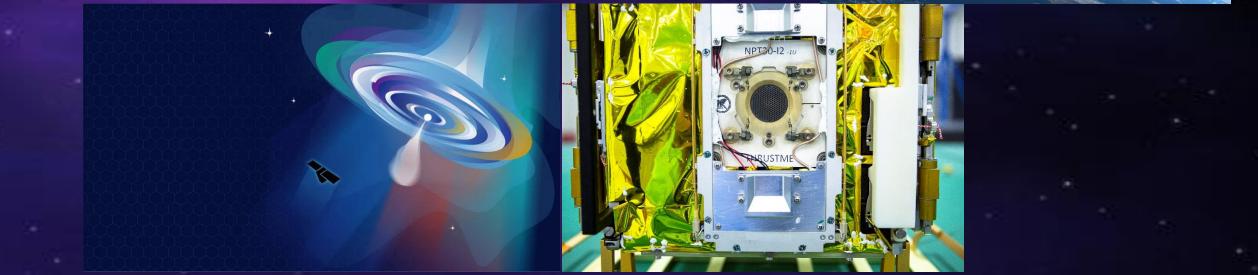
- Since founded in 2016, Spacety has developed, launched, and operated 21 satellites with 12 launches
- Satellite fleet: 3U, 6U, 12U, Smallsat (185 kg)
- Missions: science, technology demonstration, EO



Our Major Achievements

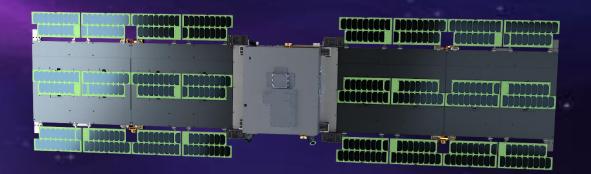
- Grid Research Program Astronomical soft X-ray polarization detection with excellent results published Nature Astronomy on May 11, 2020 with GRID and Spacety's satellite on the cover page
- Flew world's first lodine electric thruster
- Built, launched, and operated world's first miniaturized C-band SAR satellite with a phasedarray antenna





Our Satellites





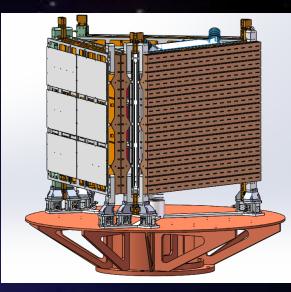
12U

TY-MINISAR

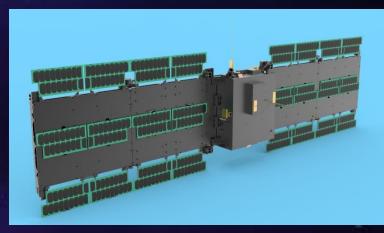
Our TY-SAR Satellite

- World first smallsat SAR with a phasedarray antenna
- C-band, 5.4 GHz, 60-300Mz
- Total mass of 185 kg
- Spatial resolution up to 1 m in spotlight mode
- SAR, InSAR and 3D imagery
- Launched on December 22, 2020 on board CZ-8 in Wenchang, China

Launch Configuration

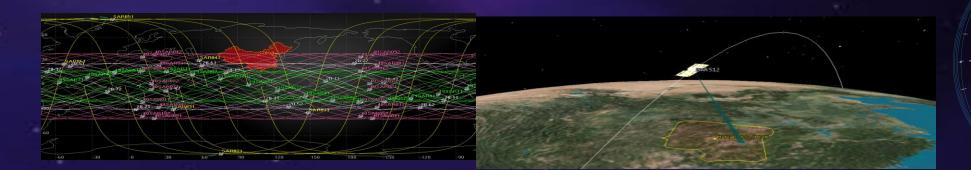


In-orbit Configuration



Spacety SAR Constellation

- 300+ satellites with C-band and X-band SAR planned
- Advanced 200 kg small satellite with phased-array antenna
- To provide SAR, inSAR, and 3D imagery of any point on Earth, day and night, rain or shine
- High resolution up to 0.5m, high reliability, low cost, and short revisit time up to 30 minutes
- Better resolution, much smaller and lighter, and much cheaper than a big SAR satellite such as ESA' s Satinel-1
- Unique dual-band SAR capability with many new applications

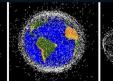


Space Sustainability

- Space sustainability is critical to our business and services
- We are aware of this issue from day one since Spacety was founded
- Space debris and radio frequency spectrum are two big issues affecting Spacety
- We have embedded measures into our satellites to take care issues related to space sustainability

SPACE DEBRIS







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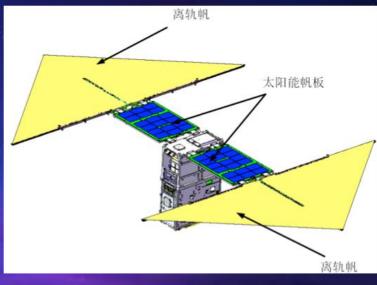
2018 2030??

Courtecy to NASA



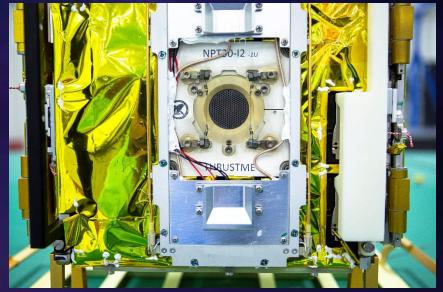
Courtecy to INSIDER

Space Debris









Laser Communication

