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Improvement of satellite-based land surface temperature estimation

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Land surface temperature is crucial in many field of study, such as Earth's surface water cycle, energy balances, energy exchange of ecosystem and global climate change. As the role of LST is important, it should be accurately obtained on a global scale. However, it is still difficult to calculate LST from satellite because there are constraints of Atmospheric correction, cloud effect, verification representatively. Therefore, the goal is to improve and optimize the accuracy of LST estimates in satellite-based measurement by mixing various data such as multi-spectral thermal infrared image, hyperspectral thermal infrared image, microwave satellite image, etc., or comparing and applying many LST calculation methods and algorithms.