Science Target of the Solar-C_EUVST

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Solar-C_EUVST (EUV High-Throughput Spectroscopic Telescope) is designed to comprehensively understand the energy and mass transfer from the solar surface to the solar corona and interplanetary space, and to investigate the elementary processes that take place universally in cosmic plasmas. The proposed mission is a fundamental step for answering how the plasma universe is created and evolves, and how the Sun influences the Earth and other planets in our solar system. The two primary science objectives for Solar-C_EUVST are: I) Understand how fundamental processes lead to the formation of the solar atmosphere and the solar wind, II) Understand how the solar atmosphere becomes unstable, releasing the energy that drives solar flares and eruptions. Solar-C_EUVST will, A) seamlessly observe all the temperature regimes of the solar atmosphere from the chromosphere to the corona at the same time, B) resolve elemental structures of the solar atmosphere with high spatial resolution and cadence to track their evolution, and C) obtain spectroscopic information on the dynamics of elementary processes taking place in the solar atmosphere. In this talk, we will first discuss the science target of the Solar-C_EUVST, and discuss the science topic associated flare in detail.

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