

# Science and Instrument Design of 1.5-m Aperture Solar Optical Telescope for the SOLAR-C Mission

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We present science cases and a design of one of major instruments for SOLAR-C mission; 1.5-m-class aperture solar ultra-violet visible and near IR observing Telescope (SUVIT). The SOLAR-C mission aims at fully understanding dynamism and magnetic nature of the solar atmosphere by observing small-scale plasma processes and structures. The SUVIT is designed to provide high-angular-resolution investigation of lower atmosphere from the photosphere to the uppermost chromosphere with enhanced spectroscopic and spectro-polarimetric capability covering a wide wavelength region from 280 nm (Mg II h&k) to 1100 nm (He I 1083 nm), using focal plane instruments: wide-band and narrow-band filter-graphs and a spectrograph for high-precision spectro-polarimetry in the solar photospheric and chromospheric lines. We will discuss about instrument design to realize the science cases.