The Coronal Solar Magnetism Observatory

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Measurements of coronal and chromospheric magnetic fields are arguably the most important observables required to advance our understanding of the emergence of magnetic flux into the solar atmosphere and the processes responsible for the production of solar activity, coronal heating and coronal dynamics. The Coronal Solar Magnetism Observatory (COSMO) is a proposed ground-based suite of instruments designed for routine study of coronal and chromospheric magnetic fields and their environment. The central instrument in this suite is a 1.5-m aperture coronagraph. Additional instruments include a K-Coronagraph and a Chromospheric Magnetometer (ChroMag). We will present an overview of the COSMO project and give an update on the status, including: joint US/China engineering development of the 1.5 m coronagraph and its post-focus instrumentation; ongoing construction of the K-Coronagraph; development of a prototype filter/polarimeter for ChroMag; and recent progress in coronal field measurement with the prototype Coronal Multi-channel Polarimeter instrument.