

Bio - Dr. Wenda Cao

Dr. Wenda Cao is a Professor in the Center for Solar-Terrestrial Research of the Physics Department at the New Jersey Institute of Technology. He is the Director of the Big Bear Solar Observatory (BBSO), which operates the 1.6-meter clear aperture, off-axis Goode Solar Telescope (GST) at Big Bear Lake, California. Dr. Cao studies the solar small-scale physical processes in the photosphere and chromosphere using high-resolution imaging spectroscopy and polarimetry in the visible and near-infrared. His research interests involve the investigation of fine structures in solar sunspots and granulation, dynamics of small-scale magnetic fields and jets, flares and filament eruptions, and coronal heating. Dr. Cao is also engaged in the development of next-generation instruments and data analysis tools for high-resolution solar observations, such as imaging spectrometers and polarimeters, adaptive optics, and cryogenic infrared spectrographs. Dr. Cao has actively advanced GST campaign observations with other ground-based solar optical/radio telescopes and NASA solar space missions. He is also advancing international collaboration between large ground-based solar telescopes, with an emphasis on instrumentation development and sharing technology.