

CURRICULUM VITAE

Wenda Cao

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Education

Ph.D., Astrophysics and Astronomical Instrument, August 2001
National Astronomical Observatories, Chinese Academy of Sciences, China
M.S., Solar Radio Physics, August 1992
Yunnan Astronomical Observatory, Chinese Academy of Sciences, China
B.S., Physics, July 1989
University of National Science and Technology, China

Positions Held

2007-present	Assistant Professor, New Jersey Institute of Technology, Newark, NJ
2006-2007	Assistant Research Professor, New Jersey Institute of Technology, Newark, NJ
2003-2005	Post-Doctoral Fellow, New Jersey Institute of Technology, Newark, NJ
2002	Visiting Scientist, National Solar Observatory, Tucson, AZ
1998-2002	Associate Astronomer, National Astronomical Observatories, Chinese Academy of Sciences
1995-1998	Assistant Astronomer, Yunnan Astronomical Observatory, Chinese Academy of Sciences

Selected Recent Publications

- [1] Cao, W., Jing, J., Ma, J., Xu, Y., Wang, H., Goode, P. R.: *Diffraction-limited Polarimetry from the Infrared Imaging Magnetograph at Big Bear Solar Observatory*, *Publ. Astron. Soc. Pacific* 118, 838, 2007
- [2] Cao, W., Hartkorn, K., Ma, J., Xu, Y., Spirock, T., Wang, H., Goode, P. R.: *First Light of the Near-Infrared Narrow-Band Tunable Birefringent Filter at the Big Bear Solar Observatory*, *Solar Phys.* 238, 207, 2006
- [3] Xu, Y., Cao, W., Liu, C., Yang, G., Jing, J., Denker, C., Emslie, A. G., Wang, H.: *High-Resolution Observations of Multiwavelength Emissions during Two X-Class White-Light Flares*, *Astrophys. J.* 641, 1210, 2006
- [4] Cao, W., Xu, Y., Denkes, C., Wang, H.: *1024×1024 HgCdTe CMOS Camera for Infrared Imaging Magnetograph at the Big Bear Solar Observatory*, *Proc. SPIE* 5881, 245, 2005
- [5] Xu, Y., Cao, W., Ma, J., Hartkorn, K., Jing, J., Denker, C., Wang, H.: *Properties of Small Dark Features Observed in the Pure Near-Infrared and Visible Continua*, *Astrophys. J.* 628, L167, 2005
- [6] Cao, W., Denker, C., Wang, H., Ma, J., Qu, M., Wang, J., Goode, P. R.: *Characteristic Evaluation of a Near-Infrared Fabry-Perot Filter for Infrared Imaging Magnetograph (IRIM)*, *Proc. SPIE* 5171, 307, 2004
- [7] Xu, Y., Cao, W., Liu, C., Yang, G., Qiu, J., Jing, J., Denker, C., Wang, H.: *Near-Infrared Observations at 1.56 microns of the 2003 October 29 X10 White-Light Flare*, *Astrophys. J.* 607, L131, 2004

- [8] Yang, G., Xu, Y., Cao, W., Wang, H., Denker, C., Rimmele, T. R.: *Photospheric Shear Flows along the Magnetic Neutral Line of Active Region 10486 prior to an X10 Flare*, *Astrophys. J.* 617, L151, 2004
- [9] Matt, P. J., Cao, W., Walton, S., Chapman, G. and Livingston, W.: *Ti I 2231 nm Zeeman Splitting in a Sunspot*, *Solar Phys.* 213, 55, 2003
- [10] Matt, P. J., Cao, W., Walton, S., Chapman, G. and Livingston, W.: *Weak Infrared Molecular Lines Reveal Rapid Outflow in Cool Magnetic Sunspot Penumbra Fibrils*, *Astrophys. J.* 590, L119, 2003

Research Interests

Astronomical Instruments: Fabry-Pérot interferometer, birefringent Lyot filter, infrared and visible detectors, infrared and visible polarimeter, adaptive optics.

Observation and Research: two-dimensional spectroscopy and polarimetry, infrared high resolution observations, temporal evolution of solar active regions, dynamics of small-scale magnetic fields, flares and filament eruptions.

Postdoctoral Advisor and Thesis Advisor

Philip R. Goode, Haimin Wang, and Binxun Ye

Collaborators

Matt Penn, William Livingston, Thomas Rimmele, Steven Tomczyk, Dale Gary, and Jiong Qiu

Memberships in Professional Societies

Solar Physics Division of the American Astronomical Society

International Astronomical Union

International Society for Optical Engineering

Research Activities

- Co-Principal Investigator, *High Resolution Studies of Solar Activity with New Solar Telescope*, sponsored by National Science Foundation (PI, P. R. Goode)
- Key Investigator, *Infrared Imaging Magnetograph at Big Bear Solar Observatory* (PI, P. R. Goode)
- Key Investigator, *Adaptive Optics System for the 1.6 Meter Solar Telescope in Big Bear* (PI, H. Wang)
- Principal Investigator, *Study of the Solar Observational Technology and Method in Infrared*, Sponsored by the National Natural Science Foundation of China
- Principal Investigator, *Astronomical Infrared Detector Laboratory*, Sponsored by the National Large Astronomical Instrument Manufacture Project of China
- Principal Investigator, *Research on Infrared Focal Plane Array Camera for Solar Observation*, Sponsored by the Natural Science Foundation of Yunnan Province
- Co-Principal Investigator, *1 Meter Infrared Solar Telescope*, Sponsored by National Large Project Foundation 973 Plan of China (PI, G. Ai)