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## BIOGRAPHICAL SKETCH: Thomas R. Ayres

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Position: Fellow, CASA; Research Professor, Astrophysical & Planetary Sciences

Center for Astrophysics and Space Astronomy  
University of Colorado at Boulder  
389 UCB, Boulder, Colorado 80309-0389, USA

Email: Thomas.Ayres@Colorado.edu

Research Interests: SOLAR/STELLAR PHYSICS, SPACE ASTRONOMY

Synopsis: Thomas Ayres (AB 1971, Harvard College; PhD 1975, University of Colorado) specializes in observations and analysis of IR, UV, and X-ray spectra of the Sun and other late-type stars; numerical modeling of stellar atmospheric structure and radiative transfer; and image processing and visualization techniques. After graduating from the Astrophysics program in the Physics Department at Colorado, he was a CfA postdoctoral fellow in the early years of the Center for Astrophysics (1975–77), before returning to Boulder to take research positions in two of the University's institutes: JILA (1977–80) and LASP (1980–85). In 1985, he was a founding member of the Center for Astrophysics and Space Astronomy; and has served as CASA associate director from 1996–2000, and 2003–present. In 1990, he was appointed a Research Professor in the Astrophysical & Planetary Sciences Department, where he teaches a biennial graduate course in “Stellar Exteriors” (<http://origins.colorado.edu/~ayres/astr5730>). He has participated on a number of Astronomy-related working groups and committees, including as chair of the National Solar Observatory Users Committee (1997–2005), chair of the Multimission Archive at Space Telescope (MAST) Users Group (2001–2004), councilor of the American Astronomical Society (2001–2004), member of the Solar Physics Division governance committee (2004–2006), and a member of the National Science Foundation's AST division “Senior Review” of astronomical facilities (2005–2006). He currently serves as vice-chair of AURA's Solar Observatory Council (2006–present), which oversees the operations of the National Solar Observatory.

Professional Associations: American Astronomical Society; International Astronomical Union; Astronomical Society of the Pacific; American Geophysical Union.

Recent Publications (2006–present: refereed journals, only):

“Chandra's Darkest Bright Star: not so Dark after All?” AJ, 136, 1810 (2008), T.R. Ayres

“Solar Forbidden Oxygen, Revisited,” ApJ, 686, 731 (2008), T.R. Ayres

“The Photospheric Solar Oxygen Project. I. Analysis of Atomic Lines and Influence of Atmospheric Models,” A&A, 488, 1031 (2008), E. Caffau, H. Ludwig, M. Steffen, T. Ayres, P. Bonifacio, R. Cayrel, B. Freytag, B. Plez

“The Deep Lamp Project: An Investigation of the Precision and Accuracy of the Echelle Wavelength Scales of Space Telescope Imaging Spectrograph,” ApJS, 177, 626 (2008), T.R. Ayres

“The Fainting of  $\alpha$  Centauri A, Resolved,” ApJ, 678, L121 (2008), T.R. Ayres, P.G. Judge, S.H. Saar, J.H.M.M. Schmitt

"X-ray and Ultraviolet Spectroscopy of Intermediate Mass, First Crossing Giants," ApJS, 171, 304 (2007), T.R. Ayres, E. Hodges-Kluck, A. Brown

" $\alpha$  TrA Junior," ApJ, 658, L107 (2007), T.R. Ayres, A. Brown, G.M. Harper

"The Coronae of  $\gamma$  Draconis," ApJ, 651, 1126 (2006), T.R. Ayres, A. Brown, G.M. Harper

"Solar Carbon Monoxide, Thermal Profiling, and the Abundances of C, O, and Their Isotopes," ApJS, 165, 618 (2006), T.R. Ayres, C. Plymate, C.U. Keller

"The Remarkable Far-Ultraviolet Spectrum of FK Comae Berenices: King of Spin," ApJ, 644, 464 (2006), T.R. Ayres, G.M. Harper, A. Brown, H. Korhonen, I.V. Ilyin, S. Redfield, B.E. Wood

Synergistic Activities: development of scale model solar systems for undergraduate teaching and public outreach; high school student astronomy research mentoring program; Denver Museum of Nature and Science space exhibit; University of Colorado Heritage Center space exhibit; "Spectra for the People!" E/PO project at CU's Fiske Planetarium.

Major Collaborators within Past Four Years (including PhD advisor, and former PhD students)

Bennett, J. (self-employed science author) PhD student

Brown, A. (CASA, University of Colorado)

Caffau, E. (Paris Observatory [Meudon], France)

DeForest, C. (Southwest Research Institute, Boulder)

Harper, G. (CASA, University of Colorado)

Hassler, D. (Southwest Research Institute, Boulder)

Hodges-Kluck, E. (University of Maryland [grad student]) undergrad research assistant

Judge, P. (High Altitude Observatory)

Keller, C. (University of Utrecht, Netherlands)

Korhonen, H. (ESO, Germany)

Linsky, J. (JILA, University of Colorado) **thesis advisor** (and post-doctoral mentor)

Osten, R. (Space Telescope Science Institute) PhD student

Plymate, C. (National Solar Observatory)

Redfield, S. (Wesleyan University)

Saar, S. (Center for Astrophysics)

Schmitt, J. (University of Hamburg, Germany)

Wood, B. (Naval Research Laboratory)