

PHILIP GORDON JUDGE

CURRICULUM VITAE

March 2015

SUMMARY INFORMATION

Occupation NCAR Senior Scientist (equivalent to Full Professor)

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EDUCATION

Degrees

B.A. (Physics) Oxford University, 1981

D. Phil. (Astrophysics) Oxford University, 1985

Title of D. Phil. Thesis

Ultraviolet Spectroscopy of Late-type Giant and Supergiant Stars

POST-DEGREE APPOINTMENTS

2012 September-2013 August	Sabbatical leave as Visiting Professor, Physics Department, Montana State University, Bozeman MT
2012 July & August	Visiting Professor, National Astronomical Observatory of Japan, Mitaka, Japan
2009-2010	NCAR Science Advisor, serving on NCAR's Executive Committee
2004-present	Senior Scientist, High Altitude Observatory, NCAR.
2000 - 2001	Lecturer, Monash University.
1999 - 2004	Scientist III, High Altitude Observatory, NCAR.
1995 - 1999	Scientist II, High Altitude Observatory, NCAR.
1994 - 1996	Adjunct Professor APAS Department, University of Colorado, Boulder.
1992	Research Fellow, Norwegian Research Council for Science and the Humanities.
1991 - 1994	Scientist I, High Altitude Observatory, NCAR.
Jan-Sep 1991	Visiting Scientist, High Altitude Observatory, NCAR.
1988-1990	Research Associate, JILA, University of Colorado, Boulder.
1985-1988	Research Assistant, Department of Theoretical Physics, Oxford University.

PROFESSIONAL SERVICE

- 2013-2014 Organizer, 2014 HAO Solar-Stellar Variability workshop
(Prompted new NSF and NASA community funding channels)
- 2012 Proposal review panel member for NASA's LWS TR&T program
- 2011 Member, SOC "From Atoms to Stars: the impact of Spectroscopy on Astrophysics"
July 2011, Oxford, UK
- 2011 Convener, SHINE meeting session "What IS a coronal hole?"
- 2011-present Member, Advanced Technology Solar Telescope Science Working Group
- 2010 Author "*Measuring magnetic free energy in the solar atmosphere*", white paper
for the Decadal Strategy for Solar and Space Physics, National Academy of Sciences,
co-author of two others (COSMO, ACCEHS)
- 2010 Chair, AGU session SH31A. Comparing MHD Models to Observations in the Sun
- 2010 Convener and chair of the "*Eddy Cross-disciplinary Symposium on
Sun-Climate Research*", October 22-24 2010
- 2010 Local chair, solar working group member, ACCEHS meeting, August 16-18 2010
"*Advanced Computational Capabilities for Advances in Heliophysical Science*"
- 2010 Member, Scientific Organizing Committee, Sixth International Workshop on
"*Solar Polarization*", Maui, Hawaii, 31 May-4 Jun 2010
- 2010 Reviewer of proposals for NASA's LWS TR&T program
- 2009-2010 Member, NASA LWS TR&T steering committee
- 2010-present Member, ATST Science Working Group.
- 2009 Panel member, proposal review for NASA's Heliophysics Guest Investigator program
- 2009 Reviewer of proposals submitted to the (country of) Georgia
National Science Foundation
- 2009 Co-author of three white papers for the Decadal Survey of
Astronomy for the National Academy of Sciences
- 2008 Reviewer of NSF ATM-GEO/ATM proposals.
- 2002-2005 Member, National Solar Observatory Users Committee.

PROFESSIONAL SERVICE (continued)

- 2002-2005 Member, ATST Science Working Group.
- 2001 Organizer, session on “*The Sun as a Guide to the Stars*”, Twelfth Cambridge Workshop on Cool Stars, Stellar Systems and the Sun, Boulder CO.
- 2001-2002 Member, Scientific Organizing Committee, IAU colloquium “*Magnetic coupling of the solar atmosphere*”, Santorini, Greece, 11-15 June 2002.
- 2001-2002 Member, Scientific Organizing Committee, Third International Workshop on “*Solar Polarization*”, Puerto de la Cruz, Tenerife, Spain, 30 Sep- 4 Oct 2002.
- 1999 Reviewer for NSF’s Stellar Astronomy and Astrophysics program.
- 1999 Reviewer for NASA’s SR&T Sun-Earth Connection program.
- 1998-1999 Joint Convener (with A. Gabriel), 1999 COSPAR Colloquium on Coronal Heating.
- 1998 External Reviewer for NSF’s Solar Terrestrial Research Program.
- 1997,1998 External Reviewer for NASA’s SOHO Guest Investigator Program.
- 1995-1998 External Reviewer for PPARC (UK).
- 1994 Member, NASA’s solar theory SR&T proposal review panel.
- 1993 External Reviewer, NSF Solar Terrestrial Research Proposals.
- 1993 - 1996 Member, Steering Committee, Front Range branch of the AGU.
- 1992 - 1996 Member, NASA EUVE User’s Group.
- 1990 Member, NASA IUE Proposal Review Panel.
- 1986-1988 Committee Member, Collaborative Computational Project No. 7: The Analysis of Astronomical Spectra.
- 1986-present Reviewer of papers for *The Astrophysical Journal*, *The Astronomical Journal*, *Monthly Notices of the Royal Astronomical Society*, *EOS*, *Geophysical Research Letters*, *Space Science Reviews*, *Astronomy and Astrophysics*, *Journal of Geophysical Research*, *Annales Geophysicae*.

INTERNAL MANAGEMENT ACTIVITIES

2013-2016	Member, NCAR Appointments Review Group (NCAR's "tenure" review committee)
2013 Sept- present	Chair, HAO appointments committee
2013 Dec- present	Member, HAO visitors committee
2010-Sept 2012	Chair, HAO appointments committee
2010-present	Member, HAO Science Advisory Committee
2009-2010	NCAR Science Advisor
2009	Member, HAO Director Search Committee
2009-2010	Chair, NCAR Appointments Review Group
2007-2010	Member, NCAR Appointments Review Group (co-chair 2008/9)
2007	Member, COSMO Science Advisory Committee
2007	Reviewer, NCAR opportunity fund proposals
2003-present	Member, HAO Appointments Committee
Mar 2002-2004	HAO representative, NCAR Scientists Assembly.
Aug-Dec 2002	Member, NCAR-wide Scientist I search committee.
2002	Member, NCAR Publications and Significant Achievement awards panel.
Oct 2000-Mar 2003	Deputy Head, SAH section of HAO.
Nov 2000-Mar 2003	Chair, HAO Visitors Committee.

INTERNAL MANAGEMENT ACTIVITIES (continued)

- Jul - Oct 2000 Organizer, "From Khartoum to Solar B: Changing Views of the Dynamic Solar Atmosphere", science meeting to celebrate HAO's 60th Anniversary, Oct 9 2000.
- 1998-2000 Member, HAO Visitors Committee.
- 1997 Member, HAO Scientist I-II Search Committee.
- 1996-1998 Co-chair, HAO colloquium Committee.
- 1991-1994 Member, HAO Visitors Committee.

EDUCATIONAL ACTIVITIES

- 2013 November Invited lecturer on “Solar magnetic fields”, XXV Canary Islands Winter School of Astrophysics on “Cosmic magnetic fields”.
Lecture notes are to be published as a book chapter (item 3.2 below)
- 2013-present PhD advisor, Ricky Egeland (Montana State University)
- 2013-present Mentor, postdoc Lucas Tarr, HAO
- 2013 Advisor, master’s student Erica Lastufka (Montana State University)
- 2013 Mentor, REU summer student Isabel Lipartito (Smith College)
- 2012 Instructor, PHSX515 “Transport processes in plasmas”,
Montana State University
- 2013 Instructor, PHSX515 “plasma spectroscopy”,
Montana State University
- 2012 July Invited tutorial lectures, “A guide to the electrodynamic coupling through the Sun’s atmosphere”, National Astronomical Observatory of Japan
- 2012 June Invited lecturer, “Physics of the solar chromosphere”,
2012 Heliophysics Summer School, NCAR, Boulder CO
- 2011-2013 Initiator, convener, “Elementary Conversations”
educational program at HAO, NCAR
- 2011 November Invited lecture series, “Surprises in solar physics”,
Arcetri Astrophysical Observatory, Florence, Italy
- 2011-2012 Mentor/advisor, HAO post doctoral fellow L. Kleint
- 2010 Convener, “Eddy Cross-disciplinary Symposium on Sun-Climate Research”,
October 22-24 2010. This special meeting was geared towards
attracting young blood into the science, journalism and politics
of climate and solar science. We hosted 30 students from junior year up.
- 2009-present Ph. D. co-advisor, K. Olluri (Oslo University)
- 2002-2004 Ph. D. Thesis principal advisor, A. Pietarila (Oslo University).
Ph. D. Thesis co-advisor, S. Bloomfield (Queens U., Belfast).
- 2002 Jun-Jul Supervisor, summer students Noah Heller and Angelia Bertsch (Evergreen College).
- 2002 Jan-Sep Master’s Thesis advisor, A. Pietarila (Lund University).

EDUCATIONAL ACTIVITIES (continued)

- 2001 Lecturer / examiner, Monash University Astrophysics Honors Class M4111:
Radiative Transfer in Stellar Atmospheres, Apr-Jun 2001.
- 2000-2001 Thesis co-advisor: I. Roussev (Queen's University, Belfast).
- 1999 Invited lecturer at the 1999 Oslo Summer School
"Radiative Transfer and Radiation Hydrodynamics".
- 1999-2003 Science presentations at Niwot elementary school, e.g.
"Newton's Laws and Rockets", "Constellations and things in them"
"Jupiter's mini solar system", "Newton, Einstein and gravity"
- 1997-1999 Mentor, Post-Doc. H. Peter (ASP/HAO).
- 1996-1998 Thesis co-advisor: S. MacIntosh (University of Glasgow).
- 1996 Lecturer, Graduate Astrophysics Class, Oslo University.
- 1995-1998 Thesis co-advisor: Ø. Wikstøl (Oslo University).
- 1995 Invited lecturer at the 1995 Oslo Summer School
"Radiative Transfer and Radiation Hydrodynamics".
- 1995-1997 Mentor, Post-Doc. T.A. Sigut (HAO).
- 1994 External examiner of Ph. D. Thesis of T.A. Sigut (University of Toronto).
- 1994 Advisor of HAO Summer Student V. Hubeny.
- 1994 Co-instructor for Graduate Course APAS 7500-3,
"Topics in Solar Physics", University of Colorado, Boulder.
- 1994-1997 Thesis co-advisor: J. Worden (University of Colorado, Boulder).
- 1993-1997 Thesis co-advisor: M. Snow (University of Colorado, Boulder).
- 1993-1995 Mentor, Post-Doc. F. Paletou (HAO).
- 1992 Advisor of HAO Summer Student, R. Lu.

HONORS

- 2013 OGLI (Outstanding graduate level instructor) award, Physics Department, Montana State University
- 2011 Award for outstanding service to the NCAR director as Science Advisor
- 2010 NCAR Outstanding Publication award, for the paper “Alfvén Waves in the Solar Corona”, *Science* **317**, 1192 (2007), (4th of 7 authors)
- 1998 Honorable mention, NCAR Outstanding Publication award, for the paper “On inferring the properties of dynamic plasmas from their emitted spectra: the case of the solar transition region”, *Astrophys. J.*, **501**, 895-910, 1998.

RESEARCH AWARDS (2000-onwards)

2015-2017	NSF	Pathfinder and science observations of the infrared solar corona during the 21st August 2017 total eclipse “Eclipse17” (PI- proposal for aircraft not funding)	\$0K
2012-2016	NASA LWS Targeted Research and Technology program	Spectropolarimetry of flaring plasma (PI)	\$80K p.a.
2010-2013	NASA LWS Targeted Research and Technology program	Thermal and magnetic models for ion-neutral chromospheric studies (PI)	\$80K p.a.
2003-2005	NCAR Opportunities Fund fund	“Coronal Magnetic Field Initiative” with S. Tomczyk (HAO), co-PI.	\$200K p.a.
2002-2004	NASA SOHO GI Program	“Radiation hydrodynamic synthesis of chromospheric data” (PI)	\$190K
2002	NCAR Opportunities Fund	“A near infrared coronal spectropolarimeter and coronal magnetic field initiative”	\$70K
2001	NCAR Opportunities Fund	“A near infrared coronal spectropolarimeter and coronal magnetic field initiative”	\$70K

I have been involved with many other successful proposals as co-investigator, from laboratory investigations of atomic cross sections, new instrument development, to theoretical investigations of radiation transport in novae and supergiant stellar atmospheres.

Publication List

Section 1. Theses

D. Phil. Thesis

Title: *Ultraviolet Spectroscopy of Late-type Giant and Supergiant Stars*
 Date: March 1985
 Institution: Oxford University
 Supervisor: C. Jordan

Section 2. Refereed Journal Articles

REFERENCES

- 2.1 Jordan, C. and **Judge**, P.: 1984, “Radiative processes in cool star chromospheres.”, *Phys. Scrip.* **8**, 43–48
- 2.2 Ayres, T. R., **Judge**, P., Jordan, C., Brown, A., and Linsky, J. L.: 1986, “High-dispersion observations of alpha Bootis (K1 III) with the International Ultraviolet Explorer”, *ApJ* **311**, 947–959
- 2.3 **Judge**, P. G.: 1986c, “Empirical constraints on the outer atmospheres of late-type giant stars with IUE”, *Irish Astronomical Journal* **17**, 300–307
- 2.4 **Judge**, P. G.: 1986a, “Constraints on the outer atmospheric structure of late-type giant stars with IUE - Methods and application to Arcturus (Alpha Boo K2III)”, *MNRAS* **221**, 119–153
- 2.5 **Judge**, P. G.: 1986b, “Constraints on the Outer Atmospheric Structure of Late Type Giant Stars with IUE Application to Alpha-Tauri K5III and Beta-Gruis M5III”, *MNRAS* **223**, 239–+
- 2.6 **Judge**, P. G., Jordan, C., and Rowan-Robinson, M.: 1987, “Delta Andromedae (K3 III) - an IRAS source with an unusual ultraviolet spectrum”, *MNRAS* **224**, 93–106
- 2.7 Jordan, C. and **Judge**, P. G.: 1988, “Understanding the ultraviolet spectra of cool stars.”, *Comments on Atomic and Molecular Physics* **21**, 97–106
- 2.8 **Judge**, P. G.: 1988, “The excitation of S I emission lines in chromospheres of late-type giant stars”, *MNRAS* **231**, 419–444
- 2.9 **Judge**, P. G.: 1990, “On the interpretation of chromospheric emission lines”, *ApJ* **348**, 279–296
- 2.10 Brown, A., Veale, A., **Judge**, P., Bookbinder, J. A., and Hubeny, I.: 1990, “Stringent limits on the ionized mass loss from A and F dwarfs”, *ApJ* **361**, 220–224
- 2.11 Drake, S. A., Linsky, J. L., **Judge**, P. G., and Elitzur, M.: 1991, “Radio-continuum observations of a variety of cool stars”, *AJ* **101**, 230–236
- 2.12 **Judge**, P. G. and Stencel, R. E.: 1991, “Evolution of the chromospheres and winds of low- and intermediate-mass giant stars”, *ApJ* **371**, 357–379
- 2.13 **Judge**, P. G. and Jordan, C.: 1991, “Fe II emission lines. I - Chromospheric spectra of red giants”, *ApJS* **77**, 75–95
- 2.14 **Judge**, P. G., Carpenter, K. G., and Harper, G. M.: 1991, “SI II emission line diagnostics”, *MNRAS* **253**, 123–128
- 2.15 **Judge**, P. G., Jordan, C., and Feldman, U.: 1992, “Fe II emission lines. II - Excitation mechanisms in cool stars”, *ApJ* **384**, 613–623

- 2.16 Clayton, G. C., Whitney, B. A., Stanford, S. A., Drilling, J. S., and **Judge**, P. G.: 1992, “The unusual ultraviolet chromospheric spectrum of the R Coronae Borealis star, V854 Centauri (NSV 6708), at minimum light”, *ApJ* **384**, L19–L23
- 2.17 **Judge**, P. G., Luttermoser, D. G., Neff, D. H., Cuntz, M., and Stencel, R. E.: 1993, “Line profile variations in M giants - Clues to mass-loss and chromospheric heating mechanisms”, *AJ* **105**, 1973–1986
- 2.18 Carlsson, M. and **Judge**, P. G.: 1993, “O I lines in the sun and stars. I - Understanding the resonance lines”, *ApJ* **402**, 344–357
- 2.19 **Judge**, P. G. and Cuntz, M.: 1993, “Chromospheric heating by acoustic shocks - A confrontation of GHRS observations of Alpha Tauri (K5 III) with ab initio calculations”, *ApJ* **409**, 776–781
- 2.20 **Judge**, P. G.: 1994, “The ‘monochromatic density diagnostic’ technique: First detection of multiple density components in the chromosphere of alpha Tauri”, *ApJ* **430**, 351–359
- 2.21 Athay, R. G. and **Judge**, P. G.: 1995, “Excitation of O I lines in the solar chromosphere”, *ApJ* **438**, 491–499
- 2.22 Linsky, J. L., Wood, B. E., **Judge**, P., Brown, A., Andrusis, C., and Ayres, T. R.: 1995, “The transition regions of Capella”, *ApJ* **442**, 381–400
- 2.23 Johnson, H. R., Ensmann, L. M., Alexander, D. R., Avrett, E. H., Brown, A., Carpenter, K. G., Eriksson, K., Gustafsson, B., Jorgensen, U. G., **Judge**, P. D., Linsky, J. L., Luttermoser, D. G., Querci, F., Querci, M., Robinson, R. D., and Wing, R. F.: 1995, “Outer layers of a carbon star: The view from the Hubble Space Telescope”, *ApJ* **443**, 281–294
- 2.24 Carpenter, K. G., Robinson, R. D., and **Judge**, P. G.: 1995, “GHRS observations of cool, low-gravity star. 2: Flow and turbulent velocities in the outer atmosphere of gamma CRU CIS (M3.4 III)”, *ApJ* **444**, 424–437
- 2.25 Brage, T., Fischer, C. F., and **Judge**, P. G.: 1995, “Transition probabilities for the UV0.01 multiplet in N III”, *ApJ* **445**, 457–464
- 2.26 Hubeny, V. and **Judge**, P. G.: 1995, “Solution to the Bivariate Integral Inversion Problem: The Determination of Emission Measures Differential in Temperature and Density”, *ApJ* **448**, L61+
- 2.27 **Judge**, P. G., Woods, T. N., Brekke, P., and Rottman, G. J.: 1995, “On the Failure of Standard Emission Measure Analysis for Solar Extreme-Ultraviolet and Ultraviolet Irradiance Spectra”, *ApJ* **455**, L85+
- 2.28 Brage, T., **Judge**, P. G., and Brekke, P.: 1996, “Intercombinations and Allowed Transitions in O IV”, *ApJ* **464**, 1030–+
- 2.29 Brekke, P., Rottman, G. J., Fontenla, J., and **Judge**, P. G.: 1996, “The Ultraviolet Spectrum of a 3B Class Flare Observed with SOLSTICE”, *ApJ* **468**, 418–+
- 2.30 Wikstøl, Ø., **Judge**, P. G., and Hansteen, V. H.: 1997, “Observational signatures of nanoflare heated solar stellar coronae”, *Advances in Space Research* **20**, 2289–2292
- 2.31 **Judge**, P. G., Hubeny, V., and Brown, J. C.: 1997b, “Fundamental Limitations of Emission-Line Spectra as Diagnostics of Plasma Temperature and Density Structure”, *ApJ* **475**, 275–+
- 2.32 Wikstøl, O., **Judge**, P. G., and Hansteen, V. H.: 1997, “Signatures of Acoustic and Magnetic Waves in Solar and Stellar Coronae”, *ApJ* **483**, 972–+
- 2.33 Carlsson, M., **Judge**, P. G., and Wilhelm, K.: 1997, “SUMER Observations Confirm the Dynamic Nature of the Quiet Solar Outer Atmosphere: The Internetwork Chromosphere”, *ApJ* **486**, L63+

- 2.34 **Judge**, P., Carlsson, M., and Wilhelm, K.: 1997a, “SUMER Observations of the Quiet Solar Atmosphere: The Network Chromosphere and Lower Transition Region”, *ApJ* **490**, L195+
- 2.35 McIntosh, S. W., Brown, J. C., and **Judge**, P. G.: 1998a, “The relation between line ratio and emission measure analyses”, *A&A* **333**, 333–337
- 2.36 McIntosh, S. W., Diver, D. A., **Judge**, P. G., Charbonneau, P., Ireland, J., and Brown, J. C.: 1998b, “Spectral decomposition by genetic forward modelling”, *A&A Suppl.* **132**, 145–153
- 2.37 **Judge**, P. G. and Carpenter, K. G.: 1998, “On Chromospheric Heating Mechanisms of “Basal Flux” Stars”, *ApJ* **494**, 828–+
- 2.38 Brage, T., **Judge**, P. G., Aboussaid, A., Godefroid, M. R., Joensson, P., Ynnerman, A., Fischer, C. F., and Leckrone, D. S.: 1998, “Hyperfine Induced Transitions as Diagnostics of Isotopic Composition and Densities of Low-Density Plasmas”, *ApJ* **500**, 507–+
- 2.39 **Judge**, P. G.: 1998, “Spectral Lines for Polarization Measurements of the Coronal Magnetic Field. I. Theoretical Intensities”, *ApJ* **500**, 1009–+
- 2.40 Wikstol, O., **Judge**, P. G., and Hansteen, V.: 1998, “On Inferring the Properties of Dynamic Plasmas from Their Emitted Spectra: The Case of the Solar Transition Region”, *ApJ* **501**, 895–+
- 2.41 **Judge**, P. G., Hansteen, V., Wikstol, O., Wilhelm, K., Schuehle, U., and Moran, T.: 1998, “Evidence in Support of the “Nanoflare” Picture of Coronal Heating from SUMER Data”, *ApJ* **502**, 981–+
- 2.42 **Judge**, P. G. and Peter, H.: 1998, “The Structure of the Chromosphere Properties Pertaining to Element Fractionation”, *Space Science Reviews* **85**, 187–202
- 2.43 Kuhn, J. R., MacQueen, R. M., Streete, J., Tansey, G., Mann, I., Hillebrand, P., Coulter, R., Lin, H., Edmunds, D., and **Judge**, P.: 1999, “Probable Detection of a Bright Infrared Coronal Emission Line of Si IX near 3.93 Microns”, *ApJ* **521**, 478–482
- 2.44 Casini, R. and **Judge**, P. G.: 1999, “Spectral Lines for Polarization Measurements of the Coronal Magnetic Field. II. Consistent Treatment of the Stokes Vector for Magnetic-Dipole Transitions”, *ApJ* **522**, 524–539
- 2.45 Peter, H. and **Judge**, P. G.: 1999, “On the Doppler Shifts of Solar Ultraviolet Emission Lines”, *ApJ* **522**, 1148–1166
- 2.46 Harper, G. M., Jordan, C., **Judge**, P. G., Robinson, R. D., Carpenter, K. G., and Brage, T.: 1999, “Lines of OIV and SIV in the Goddard High-Resolution Spectrograph spectrum of RR Tel: constraints on atomic data”, *MNRAS* **303**, L41–L46
- 2.47 **Judge**, P. G. and McIntosh, S. W.: 1999, “Non-Uniqueness of Atmospheric Modeling”, *Solar Phys.* **190**, 331–350
- 2.48 **Judge**, P. G.: 2000, “On Spectroscopic Filling Factors and the Solar Transition Region”, *ApJ* **531**, 585–590
- 2.49 Wikstøl, Ø., Hansteen, V. H., Carlsson, M., and **Judge**, P. G.: 2000, “Chromospheric and Transition Region Internetwork Oscillations: A Signature of Upward-propagating Waves”, *ApJ* **531**, 1150–1160
- 2.50 Brage, T., **Judge**, P. G., Jönsson, P., and Edwards, D. P.: 2000, “Spectral Lines for Polarization Measurements of the Coronal Magnetic Field. III. Atomic Data for Si IX”, *ApJ* **540**, 1114–1118
- 2.51 McIntosh, S. W., Bogdan, T. J., Cally, P. S., Carlsson, M., Hansteen, V. H., **Judge**, P. G., Lites, B. W., Peter, H., Rosenthal, C. S., and Tarbell, T. D.: 2001, “An Observational Manifestation of Magnetoatmospheric Waves in Internetwork Regions of the Chromosphere and Transition Region”, *ApJ* **548**, L237–L241

- 2.52 **Judge**, P. G., Tarbell, T. D., and Wilhelm, K.: 2001b, “A Study of Chromospheric Oscillations Using the SOHO and TRACE Spacecraft”, *ApJ* **554**, 424–444
- 2.53 McIntosh, S. W. and **Judge**, P. G.: 2001, “On the Nature of Magnetic Shadows in the Solar Chromosphere”, *ApJ* **561**, 420–426
- 2.54 **Judge**, P. G., Casini, R., Tomczyk, S., Edwards, D. P., and Francis, E.: 2001a, “Coronal Magnetometry: A Feasibility Study”, *NASA STI/Recon Technical Report N* **2**, 27999–+
- 2.55 Roussev, I., Galsgaard, K., and **Judge**, P. G.: 2002, “Physical consequences of the inclusion of anomalous resistivity in the dynamics of 2D magnetic reconnection”, *A&A* **382**, 639–649
- 2.56 **Judge**, P. G., Tomczyk, S., Livingston, W. C., Keller, C. U., and Penn, M. J.: 2002, “Spectroscopic Detection of the 3.934 Micron Line of Si IX in the Solar Corona”, *ApJ* **576**, L157–L160
- 2.57 Brage, T., **Judge**, P. G., and Proffitt, C. R.: 2002, “Determination of Hyperfine-Induced Transition Rates from Observations of a Planetary Nebula”, *Physical Review Letters* **89**, B1101+
- 2.58 McIntosh, S. W., Fleck, B., and **Judge**, P. G.: 2003, “Investigating the role of plasma topography on chromospheric oscillations observed by TRACE”, *A&A* **405**, 769–777
- 2.59 **Judge**, P. G., Solomon, S. C., and Ayres, T. R.: 2003b, “An Estimate of the Sun’s ROSAT-PSPC X-Ray Luminosities Using SNOE-SXP Measurements”, *ApJ* **593**, 534–548
- 2.60 **Judge**, P. G., Carlsson, M., and Stein, R. F.: 2003a, “On the Origin of the Basal Emission from Stellar Atmospheres: Analysis of Solar C II Lines”, *ApJ* **597**, 1158–1177
- 2.61 Pietarila, A. and **Judge**, P. G.: 2004, “On the Formation of the Resonance Lines of Helium in the Sun”, *ApJ* **606**, 1239–1257
- 2.62 **Judge**, P. G. and Pietarila, A.: 2004, “On the Formation of Extreme-Ultraviolet Helium Lines in the Sun: Analysis of SOHO Data”, *ApJ* **606**, 1258–1275
- 2.63 **Judge**, P. G., Saar, S. H., Carlsson, M., and Ayres, T. R.: 2004b, “A Comparison of the Outer Atmosphere of the “Flat Activity” Star τ Ceti (G8 V) with the Sun (G2 V) and α Centauri A (G2 V)”, *ApJ* **609**, 392–406
- 2.64 Bloomfield, D. S., McAteer, R. T. J., Lites, B. W., **Judge**, P. G., Mathioudakis, M., and Keenan, F. P.: 2004, “Wavelet Phase Coherence Analysis: Application to a Quiet-Sun Magnetic Element”, *ApJ* **617**, 623–632
- 2.65 **Judge**, P. G., Elmore, D. F., Lites, B. W., Keller, C. U., and Rimmele, T.: 2004a, “Evaluation of Seeing-Induced Cross Talk in Tip-Tilt-Corrected Solar Polarimetry”, *Appl. Opt.* **43**, 3817–3828
- 2.66 Penn, M. J., Lin, H., Tomczyk, S., Elmore, D., and **Judge**, P.: 2004, “Background-Induced Measurement Errors of the Coronal Intensity, Density, Velocity, and Magnetic Field”, *Solar Phys.* **222**, 61–78
- 2.67 **Judge**, P. G.: 2005, “Understanding the time dependence of atomic level populations in evolving plasmas”, *Journal of Quantitative Spectroscopy and Radiative Transfer* **92**, 479–510
- 2.68 **Judge**, P. G., Low, B. C., and Casini, R.: 2006, “Spectral Lines for Polarization Measurements of the Coronal Magnetic Field. IV. Stokes Signals in Current-carrying Fields”, *ApJ* **651**, 1229–1237
- 2.69 Bogdan, T. J. and **Judge**, P. G.: 2006, “Observational aspects of sunspot oscillations”, *Royal Society of London Philosophical Transactions Series A* **364**, 313–331
- 2.70 **Judge**, P. G.: 2007, “Spectral Lines for Polarization Measurements of the Coronal Magnetic Field. V. Information Content of Magnetic Dipole Lines”, *ApJ* **662**, 677–690
- 2.71 **Judge**, P. G. and Saar, S. H.: 2007, “The Outer Solar Atmosphere during the Maunder Minimum: A Stellar Perspective”, *ApJ* **663**, 643–656
- 2.72 Metcalfe, T. S., Dziembowski, W. A., **Judge**, P. G., and Snow, M.: 2007, “Asteroseismic signatures of stellar magnetic activity cycles”, *MNRAS* **379**, L16–L20

- 2.73 Tomczyk, S., McIntosh, S. W., Keil, S. L., **Judge**, P. G., Schad, T., Seeley, D. H., and Edmondson, J.: 2007, “Alfvén Waves in the Solar Corona”, *Science* **317**, 1192–
- 2.74 Ayres, T. R., **Judge**, P. G., Saar, S. H., and Schmitt, J. H. M. M.: 2008, “The Fainting of α Centauri A, Resolved”, *ApJ* **678**, L121–L124
- 2.75 **Judge**, P.: 2008, “An Explanation of the Solar Transition Region”, *ApJ* **683**, L87–L90
- 2.76 **Judge**, P. and Centeno, R.: 2008, “On the Magnetic Structure of the Solar Transition Region”, *ApJ* **687**, 1388–1397
- 2.77 Tomczyk, S., Card, G. L., Darnell, T., Elmore, D. F., Lull, R., Nelson, P. G., Strender, K. V., Burkepile, J., Casini, R., and **Judge**, P. G.: 2008, “An Instrument to Measure Coronal Emission Line Polarization”, *Solar Phys.* **247**, 411–428
- 2.78 **Judge**, P. G.: 2009, “On magnetic field “reconstruction””, *A&A* **493**, 1121–1123
- 2.79 **Judge**, P. G.: 2010a, “Coronal Emission Lines as Thermometers”, *ApJ* **708**, 1238–1240
- 2.80 **Judge**, P. G., Tritschler, A., Uitenbroek, H., Reardon, K., Cauzzi, G., and de Wijn, A.: 2010b, “Fabry-Pérot Versus Slit Spectropolarimetry of Pores and Active Network: Analysis of IBIS and Hinode Data”, *ApJ* **710**, 1486–1497
- 2.81 **Judge**, P. G. and Carlsson, M.: 2010, “On the Solar Chromosphere Observed at the LIMB with Hinode”, *ApJ* **719**, 469–473
- 2.82 **Judge**, P., Knölker, M., Schmidt, W., and Steiner, O.: 2010a, “A Chromospheric Conundrum?”, *ApJ* **720**, 776–785
- 2.83 Metcalfe, T. S., Basu, S., Henry, T. J., Soderblom, D. R., **Judge**, P. G., Knölker, M., Mathur, S., and Rempel, M.: 2010, “Discovery of a 1.6 Year Magnetic Activity Cycle in the Exoplanet Host Star ι Horologii”, *ApJ* **723**, L213–L217
- 2.84 **Judge**, P. G.: 2010b, “The chromosphere: gateway to the corona? ...Or the purgatory of solar physics?”, *Memorie della Societa Astronomica Italiana/* **81**, 543–+
- 2.86 **Judge**, P. G., Tritschler, A., and Chye Low, B.: 2011, “Thermal Fine Structure and Magnetic Fields in the Solar Atmosphere: Spicules and Fibrils”, *ApJ* **730**, L4+
- 2.87 Dove, J. B., Gibson, S. E., Rachmeler, L. A., Tomczyk, S., and **Judge**, P.: 2011, “A Ring of Polarized Light: Evidence for Twisted Coronal Magnetism in Cavities”, *ApJ* **731**, L1+
- 2.88 **Judge**, P. G., Lockwood, G. W., Radick, R. R., Henry, G. W., Shapiro, A. I., Schmutz, W., and Lindsey, C.: 2012b, “Confronting a solar irradiance reconstruction with solar and stellar data”, *A&A* **544**, A88
- 2.89 **Judge**, P. G., de Pontieu, B., McIntosh, S. W., and Olluri, K.: 2012a, “The Connection of Type II Spicules to the Corona”, *ApJ* **746**, 158
- 2.90 Goodman, M. L. and **Judge**, P. G.: 2012, “Radiating Current Sheets in the Solar Chromosphere”, *ApJ* **751**, 75
- 2.91 **Judge**, P. G., Reardon, K., and Cauzzi, G.: 2012c, “Evidence for Sheet-like Elementary Structures in the Sun’s Atmosphere?”, *ApJ* **755**, L11
- 2.92 Casini, R., **Judge**, P. G., and Schad, T. A.: 2012a, “Removal of Spectro-polarimetric Fringes by Two-dimensional Pattern Recognition”, *ApJ* **756**, 194
- 2.93 Casini, R., de Wijn, A. G., and **Judge**, P. G.: 2012b, “Analysis of Seeing-induced Polarization Cross-talk and Modulation Scheme Performance”, *ApJ* **757**, 45
- 2.94 **Judge**, P. G., Habbal, S., and Landi, E.: 2013, “From Forbidden Coronal Lines to Meaningful Coronal Magnetic Fields”, *Solar Phys.* **288**, 467–480
- 2.95 Lipartito, I., **Judge**, P., Reardon, K., and Cauzzi, G.: 2014, “The Solar Chromosphere Observed at 1 Hz and 0.”² Resolution”, *ApJ* **785**, 109

- 2.96 Kleint, L., Antolin, P., Tian, H., **Judge**, P., Testa, P., De Pontieu, B., Martínez-Sykora, J., Reeves, K. K., Wuelser, J. P., McKillop, S., Saar, S., Carlsson, M., Boerner, P., Hurlburt, N., Lemen, J., Tarbell, T. D., Title, A., Golub, L., Hansteen, V., Jaeggli, S., and Kankelborg, C.: 2014, “Detection of Supersonic Downflows and Associated Heating Events in the Transition Region above Sunspots”, *ApJ* **789**, L42
- 2.97 Zeng, Z., Qiu, J., Cao, W., and **Judge**, P. G.: 2014, “A Flare Observed in Coronal, Transition Region, and Helium I 10830 Å Emissions”, *ApJ* **793**, 87
- 2.98 **Judge**, P. G., Kleint, L., Donea, A., Sainz Dalda, A., and Fletcher, L.: 2014, “On the Origin of a Sunquake during the 2014 March 29 X1 Flare”, *ApJ* **796**, 85
- 2.99 **Judge**, P. G. and Egeland, R.: 2015, “Century-long monitoring of solar irradiance and Earth’s albedo using a stable scattering target in space”, *MNRAS* **448**, L90–L93
- 2.100 **Judge**, P. G., Kleint, L., Uitenbroek, H., Rempel, M., Suematsu, Y., and Tsuneta, S.: 2015, “Photon Mean Free Paths, Scattering, and Ever-Increasing Telescope Resolution”, *Solar Phys.* **290**, 979–996
- 2.101 **Judge**, P. G., 2015 “UV spectra, bombs, and the solar atmosphere”, *ApJ* **808**, 116-120

Section 3. Other External Refereed Articles

- 3.1 **Judge**, P. G.: 2011, “*Students, scientists and family commemorate the life and diverse works of Jack Eddy, pioneer in connecting sunspot variations to Earth’s climate.*” Meeting report on the “Eddy Cross-Disciplinary Symposium on Sun- Climate Research”, Aspen, Colorado, USA, 22-24 October 2010, *EOS Transactions* **92**, 56–56
- 3.2 **Judge**, P. G.: 2014, “*Solar magnetic fields. History, tragedy, comedy?*”, to be published by CUP as a chapter of the book “Cosmic Magnetic Fields” as part of the “Canary Islands Winter Schools of Astrophysics Series”

Section 4. Papers Submitted to Refereed Journals/In Preparation

- 4.1 **Judge**, P., Kleint L., Casini, R. “On the origin of helium line polarization during the 29 March 2014 X1 flare”, *ApJ*, under final revision
- 4.2 **Judge**, Kleint, Casini, Schad 2015. “Magnetic Field Measurements Above a Limb Active Region”, in preparation for *ApJ*
- 4.3 **Judge**, P., Malanushenko, A, 2015. “On the role of heat conduction in the solar transition region”, in preparation for *ApJ*
- 4.4 **Judge**, P., Jaeggli, S., Jordan C., “A study of IRIS and synthetic spectra of molecular hydrogen from the solar atmosphere”, in preparation for *ApJ*

Section 5. Internally Refereed Publications

- 5.1 Judge, P., Casini, R., Tomczyk, S., Edwards, D. P., and Francis, E.: 2001, *Coronal Magnetometry: a feasibility study*, Technical Report NCAR/TN-446-STR, National Center for Atmospheric Research

- 5.2 Judge, P., 2007 *The HAO Spectral Diagnostic Package for Emitted Radiation (HAOS-DIPER) Reference Guide (Version 1.0)*, Technical Report NCAR/TN-473-STR, National Center for Atmospheric Research

Section 6. Non-Refereed Articles

- 6.1 **Judge**, P. G.: 1984, “Sulphur I Emission Lines in the EUV Spectrum of β Gru (M3 II)”, in S. L. Baliunas & L. Hartmann (Ed.), *Cool Stars, Stellar Systems, and the Sun*, Vol. 193 of *Lecture Notes in Physics*, Berlin Springer Verlag, 353–+
- 6.2 Linsky, J. L., Ayres, T. R., Brown, A., Carpenter, K. G., Jordon, C., **Judge**, P., Gustafsson, B., Eriksson, E., Saxner, M., and Engvold, O.: 1984, “A progress report on the analysis of long exposure SWP high resolution spectra of cool stars”, in J. M. Mead, R. D. Chapman, & Y. Kondo (Ed.), *NASA Conference Publication*, Vol. 2349 of *NASA Conference Publication*, 445–449
- 6.3 Ayres, T. R., Engvold, O., Moe, D. K., Simon, T., Jordan, C., **Judge**, P., Brown, A., and Linsky, J. L.: 1984, “Precise measurements of radial velocities of emission lines in the far-ultraviolet spectra of late-type stars”, in J. M. Mead, R. D. Chapman, & Y. Kondo (Ed.), *NASA Conference Publication*, Vol. 2349 of *NASA Conference Publication*, 468–471
- 6.4 Jordan, C., **Judge**, P., and Johansson, S.: 1984b, “Ultraviolet Spectroscopy of Cool Stars from IUE (invited Paper)”, in G. A. Doschek (Ed.), *IAU Colloq. 86: Eighth International Colloquium on UV and X-Ray Spectroscopy of Astrophysical and Laboratory Plasmas*, 51–+
- 6.5 Jordan, C., **Judge**, P., and Johansson, S.: 1984a, “Ultraviolet spectroscopy of cool stars from IUE.”, in *Ultraviolet and X-ray Spectroscopy of Astrophysical and Laboratory Plasmas*, 51–58
- 6.6 **Judge**, P. G.: 1986, “The outer atmospheres of late-type giant stars”, in E. J. Rolfe (Ed.), *New Insights in Astrophysics. Eight Years of UV Astronomy with IUE*, Vol. 263 of *ESA Special Publication*, 189–192
- 6.7 Jordan, C., **Judge**, P. G., and Rowan-Robinson, M.: 1987a, “ δ Andromedae (K3 III): a hybrid giant in an extended dust shell.”, in I. Appenzeller & C. Jordan (Ed.), *Circumstellar Matter*, Vol. 122 of *IAU Symposium*, 321–322
- 6.8 **Judge**, P. G.: 1987b, “Modelling the outer atmospheres and winds of K giant stars.”, in I. Appenzeller & C. Jordan (Ed.), *Circumstellar Matter*, Vol. 122 of *IAU Symposium*, 323–324
- 6.9 **Judge**, P. G.: 1987c, “Re-examining the ”Corona-Wind Dividing Line” Diagnostics of ”Non-Coronal” Atmospheres (Invited review)”, in J. L. Linsky & R. E. Stencel (Ed.), *Cool Stars, Stellar Systems and the Sun*, Vol. 291 of *Lecture Notes in Physics*, Berlin Springer Verlag, 294–+
- 6.10 **Judge**, P. G. (Ed.): 1987a, *A re-examination of the corona-wind dividing line: Diagnostics of non-coronal atmospheres*
- 6.11 Jordan, C., Montesinos, B., and **Judge**, P. G. (Eds.): 1987b, *Relations between chromospheric and coronal structure, flux-flux correlations and convective zone properties*
- 6.12 Harper, G. M. and **Judge**, P. G. (Eds.): 1987, *IUE observations of the hybrid K3 II star IOTA Aurigae and constraints on the outer atmospheric structure*
- 6.13 Stencel, R. E., Carpenter, K. G., Pesce, J. E., Skinner, S., Brown, A., and **Judge**, P.: 1988, “Direct UV observations of the circumstellar envelope of alpha Orionis”, in *ESA Special Publication*, Vol. 281 of *ESA Special Publication*, 249–252
- 6.14 **Judge**, P. G.: 1988, “Spectroscopy of Cool Stars from IUE Data”, in G. Cayrel de Strobel & M. Spite (Ed.), *The Impact of Very High S/N Spectroscopy on Stellar Physics*, Vol. 132 of *IAU Symposium*, 163–+

- 6.15 **Judge**, P. G.: 1989, “Chromospheres of chemically peculiar giant stars”, in H. R. Johnson & B. Zuckerman (Ed.), *IAU Colloq. 106: Evolution of Peculiar Red Giant Stars*, 303–320
- Judge**, P. G. and Neff, D. H.: 1990, “Radiative Cooling Functions Below $2 \times 10^4 \text{K}$ ”, in G. Wallerstein (Ed.), *Cool Stars, Stellar Systems, and the Sun*, Vol. 9 of *Astronomical Society of the Pacific Conference Series*, 57–+
- 6.17 Cuntz, M. and **Judge**, P. G.: 1990, “How Consistent are Ab-Initio Models of Giant Star Chromospheres with Observations”, in G. Wallerstein (Ed.), *Cool Stars, Stellar Systems, and the Sun*, Vol. 9 of *Astronomical Society of the Pacific Conference Series*, 61–+
- 6.18 Brown, A., Veale, A., **Judge**, P., Bookbinder, J., and Hubeny, I.: 1990, “Mass loss upper limits for A and F dwarfs”, in G. Wallerstein (Ed.), *Cool Stars, Stellar Systems, and the Sun*, Vol. 9 of *Astronomical Society of the Pacific Conference Series*, 183–185
- 6.19 **Judge**, P. G. and Stencel, R. E.: 1990, “The Evolution of Chromospheres and Winds of Low and Intermediate Mass Giant Stars”, in G. Wallerstein (Ed.), *Cool Stars, Stellar Systems, and the Sun*, Vol. 9 of *Astronomical Society of the Pacific Conference Series*, 411–+
- 6.20 Stencel, R. E., **Judge**, P. G., and Carpenter, K. G.: 1990, “Toward mapping the UV circumstellar shells of late-type stars”, in G. Wallerstein (Ed.), *Cool Stars, Stellar Systems, and the Sun*, Vol. 9 of *Astronomical Society of the Pacific Conference Series*, 467–470
- 6.21 **Judge**, P. G., Linsky, J. L., and Stencel, R. E.: 1990, “The near-stellar environment of cool, evolved stars.”, in G. D. Watt & A. S. Webster (Ed.), *Submillimetre Astronomy*, Vol. 158 of *Astrophysics and Space Science Library*, 179–180
- 6.22 Carpenter, K. G., Norman, D., Robinson, R., Fernandez-Villacanas, J. L., Jordan, C., and **Judge**, P.: 1990, “On the disappearance of OI in some high-luminosity cool stars”, in E. Rolfe (Ed.), *ESA Special Publication*, Vol. 310 of *ESA Special Publication*, 307–+
- 6.23 **Judge**, P.: 1991, “FeII Emission Line Diagnostics of the Sun and Stars”, in *NATO ASIC Proc. 341: Stellar Atmospheres - Beyond Classical Models*, 291–+
- 6.24 **Judge**, P. G.: 1992, “Energetics of Stellar Winds (Invited Review)”, in M. S. Giampapa & J. A. Bookbinder (Ed.), *Cool Stars, Stellar Systems, and the Sun*, Vol. 26 of *Astronomical Society of the Pacific Conference Series*, 403–+
- 6.25 Carpenter, K. G., Robinson, R. D., **Judge**, P. G., Ebbets, D. C., and Brandt, J. C.: 1994, “GHRS Observations and Analysis of the 0 I and C I Resonance Lines in the UV Spectrum of alpha ORI (M2 Iab)”, in J.-P. Caillault (Ed.), *Cool Stars, Stellar Systems, and the Sun*, Vol. 64 of *Astronomical Society of the Pacific Conference Series*, 56–+
- 6.26 Linsky, J. L., Wood, B. E., Brown, A., Andrusis, C., **Judge**, P., and Ayres, T. R.: 1994, “The Transition Regions of Capella”, in J.-P. Caillault (Ed.), *Cool Stars, Stellar Systems, and the Sun*, Vol. 64 of *Astronomical Society of the Pacific Conference Series*, 62–+
- 6.27 **Judge**, P. G. and Brekke, P.: 1994, “Structures in Transition Region Plasma of Active Regions”, in K. S. Balasubramaniam & G. W. Simon (Ed.), *Solar Active Region Evolution: Comparing Models with Observations*, Vol. 68 of *Astronomical Society of the Pacific Conference Series*, 321–+
- 6.28 **Judge**, P. G. and Meisner, R. W.: 1994, “The ‘HAO spectral diagnostics package’ (HAOS-Diaper)”, in J. J. Hunt (Ed.), *Solar Dynamic Phenomena and Solar Wind Consequences, the Third SOHO Workshop*, Vol. 373 of *ESA Special Publication*, 67–+
- 6.29 Brekke, P., Rottman, G. J., Fontenla, J., and **Judge**, P. G.: 1996b, “The UV ”sun as a star” flare spectrum observed with SOLSTICE”, in R. Pallavicini & A. K. Dupree (Ed.), *Cool Stars, Stellar Systems, and the Sun*, Vol. 109 of *Astronomical Society of the Pacific Conference Series*, 111–+

- 6.30 Brekke, P., Rottman, C. J., Fontenla, J., and **Judge**, P. G.: 1996a, “Ultraviolet (1200 to 1800 Angstroms) Emission during the Impulsive Phase of a Class 3B-X3 Solar Flare Observed with SOLSTICE”, in Y. Uchida, T. Kosugi, & H. S. Hudson (Ed.), *IAU Colloq. 153: Magnetodynamic Phenomena in the Solar Atmosphere - Prototypes of Stellar Magnetic Activity*, 213–+
- 6.31 **Judge**, P. G.: 1997, “Working Group 1: Non-Stationary Processes”, in A. Wilson (Ed.), *Fifth SOHO Workshop: The Corona and Solar Wind Near Minimum Activity*, Vol. 404 of *ESA Special Publication*, 125–+
- 6.32 Wiskstøl, Ø., **Judge**, P. G., Hansteen, V., Wilhelm, K., Schühle, U., and Moran, T.: 1997, “SUMER Observations Detecting Downward Propagating Waves in the Solar Transition Region”, in A. Wilson (Ed.), *Fifth SOHO Workshop: The Corona and Solar Wind Near Minimum Activity*, Vol. 404 of *ESA Special Publication*, 731–+
- 6.33 **Judge**, P., Wikstol, O., and Hansteen, V.: 1997, “Evidence in Support of the “Nanoflare Picture” of Coronal Heating from SUMER Data”, in *Bulletin of the American Astronomical Society*, Vol. 29 of *Bulletin of the American Astronomical Society*, 909–+
- 6.34 **Judge**, P. G. and Peter, H.: 1998, “The Structure of the Chromosphere”, in C. Fröhlich, M. C. E. Huber, S. K. Solanki, & R. von Steiger (Ed.), *Solar Composition and Its Evolution – From Core to Corona*, 187–+
- 6.35 Hansteen, V. H., Wisktol, O., Carlsson, M., and **Judge**, P. G.: 1999, “Transition Region Oscillations”, in J.-C. Vial & B. Kaldeich-Schü (Ed.), *8th SOHO Workshop: Plasma Dynamics and Diagnostics in the Solar Transition Region and Corona*, Vol. 446 of *ESA Special Publication*, 351–+
- 6.36 **Judge**, P. G. and Casini, R.: 2001, “A Synthesis Code for Forbidden Coronal Lines”, in M. Sigwarth (Ed.), *Advanced Solar Polarimetry – Theory, Observation, and Instrumentation*, Vol. 236 of *Astronomical Society of the Pacific Conference Series*, 503–+
- 6.37 **Judge**, P. G. and Charbonneau, P.: 2001, “Towards a Global Picture: Observable Effects Induced by or Related to Magnetic Fields”, in G. Mathys, S. K. Solanki, & D. T. Wickramasinghe (Ed.), *Magnetic Fields Across the Hertzsprung-Russell Diagram*, Vol. 248 of *Astronomical Society of the Pacific Conference Series*, 659–+
- 6.38 **Judge**, P.: 2002, “Observational and Interpretational Challenges”, in F. Favata & J. J. Drake (Ed.), *Stellar Coronae in the Chandra and XMM-NEWTON Era*, Vol. 277 of *Astronomical Society of the Pacific Conference Series*, 45–+
- 6.39 **Judge**, P. G.: 2003b, “Towards the Measurement of Coronal Magnetic Fields”, in J. Trujillo-Bueno & J. Sanchez Almeida (Ed.), *Astronomical Society of the Pacific Conference Series*, Vol. 307 of *Astronomical Society of the Pacific Conference Series*, 437–+
- 6.40 **Judge**, P.: 2003a, “The Sun As A Guide To The Stars”, in A. Brown, G. M. Harper, & T. R. Ayres (Ed.), *The Future of Cool-Star Astrophysics: 12th Cambridge Workshop on Cool Stars, Stellar Systems, and the Sun (2001 July 30 - August 3)*, eds. A. Brown, G.M. Harper, and T.R. Ayres, (University of Colorado), 2003, p. 158-183., Vol. 12, 158–183
- 6.41 Bloomfield, D. S., McAteer, R. T. J., Lites, B. W., **Judge**, P. G., Mathioudakis, M., and Keenan, F. P.: 2004, “Oscillatory Signatures above Quiet Sun Magnetic Elements”, in H. Lacoste (Ed.), *SOHO 13 Waves, Oscillations and Small-Scale Transients Events in the Solar Atmosphere: Joint View from SOHO and TRACE*, Vol. 547 of *ESA Special Publication*, 51–+
- 6.42 **Judge**, P.: 2006, “Observations of the Solar Chromosphere”, in J. Leibacher, R. F. Stein, & H. Uitenbroek (Ed.), *Solar MHD Theory and Observations: A High Spatial Resolution Perspective*, Vol. 354 of *Astronomical Society of the Pacific Conference Series*, 259–+

- 6.43 Metcalfe, T. S., **Judge**, P. G., Basu, S., Henry, T. J., Soderblom, D. R., Knoelker, M., and Rempel, M.: 2009, “Activity Cycles of Southern Asteroseismic Targets”, *ArXiv e-prints*
- 6.44 **Judge**, P. G.: 2010b, “The chromosphere: gateway to the corona, or the purgatory of solar physics?”, *ArXiv e-prints*
- 6.45 **Judge**, P. G., Burkepile, J., de Toma, G., and Druckmueller, M.: 2010a, “Historical eclipses and the recent solar minimum corona”, *ArXiv e-prints*
- 6.46 Kleint, L. and **Judge**, P.: 2011, “Spectropolarimetry Of The Footpoints Of A C-class Flare In The Chromosphere”, in *AAS/Solar Physics Division Abstracts #42*, 308–+
- 6.47 **Judge**, P. G. and Thompson, M. J.: 2012, “Solar and stellar activity: diagnostics and indices”, in C. H. Mandrini and D. F. Webb (Eds.), *IAU Symposium*, Vol. 286 of *IAU Symposium*, 15–26

Invited Talks at Meetings

1. “A Re-examination of the Corona-Wind Dividing Line: Diagnostics of Non-Coronal Stars”, presented at “The Fifth Cambridge Workshop on Cool Stars, Stellar Systems and the Sun”, Boulder CO October 1987.
2. “Spectroscopy of Cool Stars From *IUE* data”, presented at Proc. IAU Colloq. No. 132, “The Impact of Very High S/N Spectroscopy on Stellar Physics”, Paris, France, September 1987.
3. . “Chromospheres of Peculiar Giant Stars”, presented at “The Evolution of Peculiar Red Giant Stars”, IAU Colloquium 106, Bloomington Indiana, 1988.
4. “Coronal Heating: results from IUE” invited review at the XXth IAU General Assembly, Baltimore, USA, August 2-11, 1988
5. “The Energetics of Stellar Winds”, presented at “The Seventh Cambridge Workshop on Cool Stars, Stellar Systems and the Sun”, Tucson AZ, 1992.
6. “Inversion of emission line intensities from astronomical sources”, European Geophysical inversion group meeting, Copenhagen, Denmark. Mar 21 1996.
7. “Fundamental Limitations of Emission Line Spectra as Diagnostics of Plasma Temperature and Density Structure”, SUMER-CDS Joint Science meeting, I.A.S. (Orsay, France) 7th November 1996.
8. “Non-Stationary Processes” , a presentation as working group leader, at “The Fifth Soho Workshop, The Corona and Solar Wind Near Minimum Activity”, Oslo, Norway, June 1997.
9. “The Structure of the Chromosphere”, invited review at ”Solar Composition and its Evolution - from Core to Corona”, International Space Science Institute, Bern, Switzerland 26-30 January 1998.
10. “Chromospheric Structure”, invited review at COSPAR, Nagoya, Japan, July 1998.
11. “Observational Signatures of Coronal Heating Mechanisms”, invited review at the mini-Conference on Space Physics, APS Division of Plasma Physics Annual Meeting, New Orleans, Louisiana, Nov. 1998.
12. “Non-uniqueness of atmospheric modeling”, invited review, at the meeting “Physics of the Solar Corona and Transition Region”, Monterey CA, 1999
13. “ Towards a global picture: observable effects induced by or related to magnetic fields”, Invited Summary talk, International Inter-Institutional Workshop on Magnetic Fields Across the Hertzsprung-Russell Diagram, Santiago Chile, 19 January 2001.
14. “Observational and Interpretational Challenges”, invited talk, ESTEC symposium on “Stellar Coronae in the Chandra and XMM-Newton Era”, Noordwijk, the Netherlands, 25 June 2001.
15. “The Sun as a guide to the Stars”, invited talk, “Twelfth Cambridge Workshop on Cool Stars, Stellar Systems and the Sun”, Boulder Colorado, 1 August 2001.

16. “An Initiative to Measure Coronal Magnetic Fields”, invited talk, GOES-R IAU meeting, Boulder Colorado, 23 October 2001.
17. “Challenges of measuring coronal magnetic fields”, invited talk, Albuquerque AAS meeting, June 2002
18. “Towards the Measurement of Coronal Magnetic Fields”, invited talk, Third Workshop on Solar Polarization, Tenerife, October 2002
19. “Observations of the solar chromosphere”, presented at the 2005 Sac Peak Summer Workshop on “Solar MHD: Theory and Observations - a High Spatial Resolution Perspective”. 20 July 2005.
20. Invited keynote talk, “New perspectives on the chromosphere/corona interface”, second Hinode Science meeting, Boulder CO, 29 Sep 2009
21. “The chromosphere/corona interface”, invited talk at “Solar Activity during the onset of solar cycle 24”, Napa, California, 10 Dec 2008.
22. “The chromosphere/corona interface”, invited talk session SH08 of the AGU Fall meeting, 2008.
23. Invited keynote talk, “The chromosphere: gateway to the corona, or the purgatory of solar physics?”, 25th NSO Workshop “Chromospheric Structure and Dynamics”,
24. “Professor Dame Carole Jordan DBE, FRS, FInstP, ... a remarkable career” Invited keynote address, From Atoms to Stars: the impact of Spectroscopy on Astrophysics, Oxford, UK July 26 2011
25. Invited review, “Solar and stellar activity: diagnostics and indices” with and presented by M. J. Thompson, at IAU Symposium 286, Argentina, September 2011
26. Invited talk, “Energy transport from chromosphere to corona”, Solar C meeting at the Hinode 5th Science Workshop, Cambridge MA. 15 October 2011,
27. Invited talk “Keystones or tombstones in the bridge from photosphere to corona?”, Joint SDO/Hinode/IRIS meeting, Monterey CA 13 March 2012
28. Invited keynote talk “Forbidden Coronal Lines and Magnetic Fields: Misconceptions, Myths, Remedies”, Workshop on Coronal Magnetism- Connecting Models to Data and the Corona to the Earth Boulder, Colorado, May 21-23, 2012
29. Invited talk, “Using large telescopes to answer the question: why must the Sun have a chromosphere and corona?”, special session on Science with Large Solar Telescopes, IAU General Assembly, Beijing, China, August 23 2012
30. “The ATST Critical Science Plan”, presented to the ATST Science Working Group, LASP, Boulder CO, 26 Nov 2012

Invited Colloquia and Seminars, 2000-present (18 presentations prior to 2000)

19. “Non-uniqueness of atmospheric modeling”, Colloquium, Dept. Appl. Maths., Monash University, April 2000.
20. “Chromospheric Oscillations”, HAO/NCAR colloquium, 27 Sept 2000.
21. “Do we remotely understand the solar corona?” Physics colloquium, University of Iowa, April 2002.
22. “A tale of tau Ceti”, HAO colloquium, March 2004.
23. “Signatures of electric currents in forbidden coronal emission lines”, NSO/Sac Peak colloquium, 23 March 2006
24. “Coronal waves”, NSO/Sac Peak colloquium, May 16 2008
25. “The chromosphere: why should anyone care?”, Harvard-Smithsonian Center for Astrophysics seminar, Sept 29 2009
26. “The chromosphere: why should anyone care?”, Seminar, Dept. of Physics and Astronomy, George Mason University, October 5 2009.
27. “What are the mechanical energy needs of the chromosphere? “, NSO/Sacramento Peak Observatory colloquium, November 19, 2010.
28. “This is the dawning of the age of the chromosphere “, High Altitude Observatory colloquium, February 16 2011
29. “On: a new approach to the long-term reconstruction of solar irradiance leads to large historical solar forcing”, seminar, National Solar Observatory, Sunspot NM, 23 Sept. 2011
30. “Physics between stellar photospheres and coronae”, Seminar, Arcetri Astrophysical Observatory, October 27 2011
31. “Physics between stellar photospheres and coronae”, seminar, NAOJ, Mitaka, Japan, July 17 2012
32. “Spectropolarimetry of a Limb Active Region and its Cool Coronal Structures”, seminar, Kyoto, Japan, July 26 2012
33. “Spectropolarimetry of a Limb Active Region and its Cool Coronal Structures”, seminar, JAXA/ISAS, Tokyo, Japan, August 2 2012
34. “Evidence for Sheet-like Elementary Structures in the Sun’s Atmosphere?”, seminar, Nobeyama, Japan, August 16 2012
35. “Surprises in solar physics”, Colloquium, Physics Department, Montana State University, 5 Oct 2012