

# Curriculum Vitae

Dr. Theo ten Brummelaar

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## Home

XXXXXXXXXXXXXXXXXXXX  
Altadena, CA 91001  
U.S.A.

Ph: (XXX)-XXX-XXXX

## Work

The CHARA Array of  
Georgia State University  
PO Box 48  
Mount Wilson, CA 91023, U.S.A.  
Ph: (626)-796-8607  
FAX: (626)-796-6717  
email: theo@chara-array.org  
WWW: <http://www.chara.gsu.edu/~theo>

**Date of Birth:** Second of May, 1962.

**Citizenship:** Australian.

## **Employment History:**

- Center for High Angular Resolution Astronomy (Georgia State University):
  - March 2001 - present: Associate Director, Center for High Angular
  - May 1996 - February 2001 : Research Scientist II.
  - April 1993 - April 1996 : Postdoctoral Research Fellow.

I am an expatriate Australian physicist working in southern California as Associate director of the Center for High Angular Resolution Astronomy. In this capacity, I am chief technical architect of the CHARA-Array, the most powerful and versatile high resolution imaging observatory of its kind in the northern hemisphere. In addition to ultimate responsibility for all aspects of optical, mechanical, electronic and software design for the array, I also manage a team of ten scientists and engineers devoted to the support of observatory operations and maintenance, as well as working directly with graduate students on their observational programs.

The CHARA-Array currently has the largest operational baselines (the separation between the telescopes) of any instrument of its type, a feature which enables it to resolve detail on stellar targets which is unobtainable by any other instrument. The array consists of six 1-metre telescopes optically linked to form a stellar interferometer on the grounds of the Mount Wilson Observatory in the mountains near Los Angeles. Access to such unique observational parameter space has resulted in a burgeoning demand for CHARA's capabilities, and there are now active and ongoing collaborations with researchers from institutions around the world including Australia,

France, Germany and the USA. More detail on this project can be found on the department Web pages listed above.

Apart from my work on the CHARA Array I continue my research in atmospheric turbulence theory and binary stars. This includes being co-investigator and principle investigator of successful proposals to win observing time at the Starfire Optical Range in New Mexico, at the Mount Wilson Institute Adaptive Optics System , and at the AEOS facility in Hawaii. Other research areas include optical problems in stellar interferometry and the use of Zernike polynomials to model active optical systems. I have also been responsible for several graduate students in the department, working on technical and scientific aspects of the CHARA Array.

- Partner in CHIP software company: January 1989 - January 1993. Clients included:
  - University of New South Wales: Civil Engineering Department, Road illumination simulation software.
  - University of Sydney: Music Department, MIDI Music/Studio control software.
  - Commonwealth Scientific and Industrial Research Organisation: Non-destructive test group, FTI a large gear testing instrument.
- Lamplight Theatre: 1990. Actor.
- Continuing Education Programme (Sydney University) : March 1989 - 1991.

Lecturer in a basic Astronomy course for adults entitled 'Introduction to Astronomy'.
- Special Broadcasting Service : April 1980 - December 1992.

Part-time Radio Broadcast Operator, Producer and Sound Engineer.
- Commonwealth Scientific and Industrial Research Organisation (CSIRO), Division of Applied Physics : Experimental Scientist December 1985 - November 1988.

Working on the development of a new 3-D ultrasonic scanning and imaging system for the metal and airline industries.
- University of Sydney : 1985 and 1989

Laboratory demonstrator for physics ID.
- Anglo-Australian Observatory : A summer vacation job 1984/85.

Development of a software package for the reduction of spectropolarimetry data on a VAX 11/780 running VMS.
- Free-lance programmer : January 1982 - January 1984.

Clients included:

  - Merc Sharpe and Dome : Developing a graphics program for promotional purposes.

- E.T.P. SEMRA/OXFORD : Developing the software for their C.A.R.D. scanning electron microscope composition analysis system.
- University of New South Wales : Producing ‘Road View’, a road design and perspective package for the Civil Engineering Department.

### Memberships:

- American Institute of Physics
- American Astronomical Society
- Astronomical Society of Australia
- Sydney Association for Astrophysics

### Invited Presentations:

- Chair of United States Interferometry Consortium (USIC) splinter session at the American Astronomical Society General Meeting, Austin, January 2008
- Invited talk at CSIRO Department of Radio Physics November 2007
- Invited talk and discussion panel member at NOAO Interferometry Work Group meeting, Tucson, November 2006.
- Two invited talks at the IAU General Assembly, Prague, August 2006.
- AEOS science review, Hawaii, June 2004.
- Lecturer, Michelson Interferometry Summer School, Pasadena CA, June 2003.
- Invited talk and discussion panel member at SPIE meeting 4838, Hawaii, August 2002.
- Lecturer, Michelson Interferometry Summer School, Harvard MA, June 2002.
- IAU working group meeting on Optical/IR interferometry, Observatoire de Haute Provence, France, August 2001.
- Lecturer, Michelson Interferometry Summer School, Berkeley CA, August 2000.
- NSF workshop on Optical Interferometric Imaging, Socorro NM, June 2000.
- Lecturer, Michelson Interferometry Summer School, Pasadena CA, August 1999.
- Astronomical Society of the Pacific meeting on Adaptive Optics and Stellar Interferometry **Catching the Perfect Wave**, New Mexico, June 1998.
- European Southern Observatory meeting on science with the VLTI, Garching Germany, June 1996.
- Symposium on Optical/Infrared and Adaptive Optics in honor of Charles H. Townes, Berkeley CA, 1996.
- Optical Society of America Annual General Meeting, Portland OR, 1995

- Astronomical Society of the Pacific Annual general meeting, Flagstaff AZ, 1993

### **Current Research Grant Income**

- Pending - First Science with the CHARA Fringe Tracker: Imaging Planet-forming Disks around Young Stars - National Science Foundation - \$512,607USD
- Pending - Enabling Infrared and Visible Interferometric Imaging at the CHARA Array - National Science Foundation - \$673,541USD
- 2007 - First Imaging of Rapid Rotators and Be Stars with Long-Baseline Interferometry - National Science Foundation - \$287,537USD
- 2007 - Multiplicity of Star and Planet Formation with the PAVO Instrument - Australian Research Council - \$503,000AUD
- 2006 - Fundamental Stellar Properties from the CHARA Array - National Science Foundation - \$824,635USD
- 2005 - The Instruments of Exoplanetary Science: A new Exhibit at the American Museum of Natural History, Michelson Science Center, \$136,000USD
- 2004 - Infrared Fringe Tracking with the CHARA Interferometer: Imaging YSO Disks and Faint Companions - National Science Foundation - \$830,000USD
- 2004 - Fundamental Stellar Parameters from the CHARA Array - National Science Foundation - \$728,000USD
- 2003 - Precision Imaging with Adaptive Optics Non-Redundant Masking Interferometry - National Science Foundation/AFOSR - \$140,000USD
- 2003 - US-France Cooperative Research: An Integrated Optics Beam Combiner for the CHARA Array - National Science Foundation - \$20,000USD
- 2002 - Atmospheric Turbulence studies using the AEOS adaptive Optics System - AFOSR - \$200,000USD
- 2000 - O Star faint companion search using the AEOS Adaptive Optics System - National Science Foundation/AFOSR - \$140,000USD
- 2000 - Spectrographic capability for the CHARA Array - National Science Foundation - \$200,000USD
- 1996 - Binary star observations at the Starfire Optical Range - National Science Foundation - \$80,000USD
- 1995 - Longitudinal dispersion correction for the CHARA Array - National Science Foundation - \$140,000USD
- 1994 - Construction of the CHARA Array - National Science Foundation - \$5.6M with matching funds from Georgia State University.

### **Referee Experience:**

I have served as a referee for papers and proposals for the following organizations and journals:

- Journal of Applied Optics.
- Journal of Astronomy and Astrophysics
- Journal of the Optical Society of America.
- The Astronomical Journal
- Phillips Laboratory: Imaging Group, Kirtland Air force Base, NM.
- Smithsonian Institution.
- JPL/NASA
- National Science Foundation.
- Keck Interferometer
- Space Interferometry Mission/NASA

### **Teaching Experience:**

Since I am located on the observatory grounds in California and not on campus in Georgia I no longer do any direct teaching of GSU students. When I was on campus I lectured in adaptive optics and optical interferometry in the third year physics optics courses. While in Sydney I gave an adult education course on basic astronomy for two years running, until I moved to the United States.

I have given, and continue to give, numerous talks and presentations to various amateur, and professional, groups on astronomy and optical interferometry.

### **Graduate Students:**

Despite being located in California, some 2500 miles from campus, I have been, and continue to be, directly involved in the supervision of graduate students and their research. The following students were supervised by me and have since graduated:

- John Hilderbrand 1996. John constructed a detector system for the CHARA Array adaptive optics system. He is now working in the telecommunications industry.
- Nils Turner 1997. Nils built the prototype beam combiner for the CHARA Array and is currently a research associate here at the CHARA Array.
- Lewis Roberts 1998. Lewis did a study of various techniques for finding and measuring faint companions to nearby stars. He is currently working for Boeing as an astronomer at the AEOS 4m telescope adaptive optics facility in Hawaii.
- David Berger 2003. David designed and built the longitudinal dispersion corrector for the CHARA Array.
- Chad Ogden 2005. Chad designed and built the prototype optical light beam combiner for the CHARA Array.

## **Tertiary Education:**

### **Ph.D. Thesis:**

‘Taking the Twinkle Out of the Stars: An Adaptive Wavefront Tilt Correction Servo and Preliminary Seeing Study for SUSI.’

Submitted in November 1992, accepted August 1993, awarded Feb 1994.

### **Honors Project:**

‘A Microthermal array for measuring local contributions to seeing conditions.’

Awarded a Bachelor of Science with First Class Honors in March 1986.

### **Undergraduate:**

University of N.S.W. Faculty of Electrical Engineering	1980
Chemistry 1A	High Distinction
Higher Physics I	High Distinction
Higher Mathematics I	High Distinction
Engineering C (Included course on Pascal)	High Distinction
Engineering A (Included course on Eng. drawing)	High Distinction
Electrical Engineering I	High Distinction
Music in Drama	Distinction
University of N.S.W. Faculty of Science	1981
Mechanics and thermal physics	High Distinction
Electromagnetism and modern physics	High Distinction
Measurement and measurement control systems	High Distinction
Laboratory	High Distinction
Multi-variable Calculus	Distinction
Complex Analysis	High Distinction
Vector Analysis	High Distinction
Mathematical methods for Differential Equations	High Distinction
Statistics SS	High Distinction
Hydrodynamics	Distinction
University of Sydney Faculty of Science	1984
Physics IIID	High Distinction
Applied Mathematics IIIH	Distinction
Philosophy of Science and Technology	Distinction
University of Sydney Department of Physics	1985
Honors year in Physics (Astronomy)	Honors I

### **Secondary Education:**

School : Heathcote High School, N.S.W. Australia.

Subjects : Maths, English, Physics, Chemistry and Engineering Science.

Aggregate : 473 (out of 500)

### **Academic Awards:**

- Astronomical Society of the Pacific Muhlmann Award (in conjunction with CHARA team) 2007
- University of Sydney Denison Distinguished Visitor Award 2007
- New South Wales Expatriate Scientist Award 2003.

- Sydney University Henry Chamberlain Russell Prize 1993.
- Commonwealth Postgraduate Research Award 1988, 1989, 1990 and 1991.
- The Science Foundation for Physics scholarship No. 3 1984.
- Equal top of Physics II at the University of N.S.W. 1981.
- Dux of school (Valedictorian), Heathcote High school 1979.

### **Computer Experience:**

I have extensive experience with software development and real time control systems. Apart from my commercial work as part of the CHIP software company, and later as a private consultant, I have been involved in the development of the real-time control systems for both the Sydney University Stellar Interferometer in Australia and the Center for High Angular Resolution Astronomy Array here in the United States.

The CHARA Array control systems is based on Real Time Linux, a version of the free Linux operating system that allows real time control of hardware devices. The CHARA Array control system is a distributed system involving more than 20 CPUs with many servo systems being spread across several of these. On the mountain we also run two independent network systems, both protected by a fire-wall, with a mixture of Mac, Linux and Windows PCs.

### **Personal:**

Outside of my academic work I have been involved in a number of non-profit organizations. I was a member of the General Assembly of Greenpeace Australia for over ten years. This is the body of some 60 people who elect board members and establish long term policy for the Australasian division of Greenpeace. I was the treasurer for Lamplight Theatre Inc. Assoc., a 'Theatre in Education' company that produced plays for primary and secondary schools. Lamplight ran for five years and employed four actors full time. In my copious free time I like to play piano, guitar and drums (although not at the same time) and I also enjoy surfing and role playing games.

## Publications in Refereed Journals:

- “Angular Diameters of the G Subdwarf  $\mu$  Cassiopeiae A and the K Dwarfs  $\delta$  Draconis and HD 10780 from Interferometric Measurements with the CHARA Array”, Boyajian T.S, McAlister H.A, Baines E.K., Farrington C., Gies D.R., Henry T.J., Jao W.J., O’Brien D., Raghavan D., Touhami Y., **ten Brummelaar T.A.**, Goldfinger P.J., Sturmman L., Sturmman J., and Turner N.H., *Ap.J.*, Submitted November 2007
- “The Kilo-Kelvin Gas-Disk in Young Stellar Objects”, Tannirkulam A., Monnier J., Millan-Gabet R., Harries T.J., Pedretti E., **ten Brummelaar T.A.**, McAlister H. , Turner N., Sturmman J., and Sturmman L., */sl Science*, Submitted October 2007
- “Imaging the Surface of Altair”, Monnier J., Zhao M, Pedretti E. , Thureau N., Ireland M., Tannirkulam A. , Muirhead P., Berger J.-P., Millan-Gabet R., Van Belle G. , **ten Brummelaar T.A.**, McAlister H., Ridgway S., Turner N., Sturmman L., Sturmman J. and Berger D., 2007, *Science*, **317**, 2007
- “A near-IR interferometric survey of debris-disk stars I: Probing the hot dust content around Epsilon Eri and Tau Ceti with CHARA/FLUOR”, Absil O., Augereau J.-C., Mérand A., Coudé du Foresto V., Thévenin F., Defrère D., Kervella P., **ten Brummelaar T.A.**, McAlister H.A., Ridgway S.T., Sturmman J., Sturmman L. and Turner N.H., 2007, *A&A*, **475**, 243.
- “Direct Measurement of the Radius and Density of the Transiting Exoplanet HD 189733B with the CHARA Array” Baines E.K., van Belle G.T. **ten Brummelaar T.A.**, McAlister H.A., Swain M., Turner N.H., Sturmman L. and Sturmman J., 2007, *Ap.J.*, **661**, L195
- “Extended Envelopes around Galactic Cepheids III. Y Oph and alpha Per from Near-Infrared Interferometry with CHARA/FLUOR” Mérand A., Aufdenberg J.P., Kervella P., Coudé du Foresto V., **ten Brummelaar T.A.**, McAlister H.A., Sturmman L., Sturmman J., and Turner N.H., 2007, *Ap.J.*, **664**, 1093
- “The Angular Diameter of  $\lambda$  Boötis” David R. Ciardi D.R., van Belle G.T., Boden A.F., **ten Brummelaar T.A.**, McAlister H.A., Bagnuolo W.G. Jr., Goldfinger P.J., Sturmman J., Sturmman L., Turner N.H., Berger D.H., Thompson R.R. and Ridgway S.T. 2007, *Ap.J.*, **659**, 1623
- “Adaptive Optics Photometry and Astrometry of Binary Stars. II. A Multiplicity Survey of B Stars” Roberts L.C. Jr., Turner N.H. and **ten Brummelaar T.A.** 2007, *A.J.*, **133**, 545-552
- “CHARA Array K'-Band Measurements of the Angular Dimensions of Be Star Disks” Gies D.R., Bagnuolo W.G. Jr., Baines E.K., **ten Brummelaar T.A.**, Farrington C.D., Goldfinger P.J., Grundstrom E.D., Huang W., McAlister H.A., Mérand A., Sturmman J., Sturmman L., Touhami Y., Turner N.H., Wingert D.W., Berger D.H., McSwain M.V., Aufdenberg J.P., Ridgway S.T., Cochran A.L., Lester D.F., Sterling N.C., Bjorkman J.E., Bjorkman K.S., and Koubsk P. 2007, *Ap.J.*, **654**, 527-543

- “First Results from the CHARA Array. VII. Long-Baseline Interferometric Measurements of Vega Consistent with a Pole-On, Rapidly Rotating Star” Aufdenberg J.P., Mérand A., Coudé du Foresto V., Absil O., Di Folco E., Kervella P., Ridgway S.T., Berger D.H., **ten Brummelaar T.A.**, McAlister H.A., Sturmman J., Sturmman L., Turner N.H. 2006, *Ap.J.*, bf 645, 664-675
- “Extended envelopes around Galactic Cepheids. II. Polaris and Cephei from near-infrared interferometry with CHARA/FLUOR” Mérand A., Kervella P., Coudé du Foresto V., Perrin G., Ridgway S.T., Aufdenberg J.P., **ten Brummelaar T.A.**, McAlister H.A., Sturmman L., Sturmman J., Turner N.H., Berger D.H. 2006 *A&A*, **453**, 155-162
- “First Results from the CHARA Array. V. Binary Star Astrometry: The Case of 12 Persei” Bagnuolo W.G. Jr., Taylor S.F., McAlister H.A., **ten Brummelaar T.A.**, Gies D.R., Ridgway S.T., Sturmman J., Sturmman L., Turner N.H., Berger D.H., Gudehus D., 2006 *A.J.*, **131**, 2695-2699
- “First Results from the CHARA Array. IV. The Interferometric Radii of Low-Mass Stars” Berger D.H., Gies D.R., McAlister H.A., **ten Brummelaar T.A.**, Henry T.J., Sturmman J., Sturmman L., Turner N.H., Ridgway S.T., Aufdenberg J.P., Mérand A., 2006 *Ap.J.*, **644**, 475-483
- “Circumstellar material in the Vega inner system revealed by CHARA/FLUOR” Absil O., di Folco E., Mérand A., Augereau J.-C., Coudé Du Foresto V., Aufdenberg J.P., Kervella P., Ridgway S.T., Berger D.H., **ten Brummelaar T.A.**, Sturmman J., Sturmman L., Turner N.H., McAlister H.A. 2006 *A&A*, **452**, 237-244
- “First Results from the CHARA Array. III. Oblateness, Rotational Velocity, and Gravity Darkening of Alderamin” van Belle G.T., Ciardi D.R., **ten Brummelaar T.A.**, McAlister H.A., Ridgway S.T., Berger D.H., Goldfinger P.J., Sturmman J., Sturmman L., Turner N.H., Boden A.F., Thompson R.R., and Coyne J., 2006 *Ap.J.*, **637**, 494-505
- “Adaptive Optics Photometry and Astrometry of Binary Stars” Roberts L.C. Jr., Turner N.H., Bradford L.W, **ten Brummelaar T.A.**, Oppenheimer B.R., Kuhn J.R., Whitman K, Perrin M.D., Graham J.R. 2005 *A.J.*, **130**, 2262-2271
- “First Results from the CHARA Array. II. A Description of the Instrument” **ten Brummelaar T.A.**, McAlister H.A., Ridgway S.T., Bagnuolo W.G. Jr., Turner N.H., Sturmman L., Sturmman J., Berger D.H., Ogden C.E., Cadman R., Hartkopf W.I., Hopper C.H., Shure M.A. 2005 *Ap.J.*, **628**, 453-465
- “First Results from the CHARA Array. I. An Interferometric and Spectroscopic Study of the Fast Rotator Leonis (Regulus)” McAlister H.A., **ten Brummelaar T.A.**, Gies D.R., Huang W., Bagnuolo W.G. Jr., Shure M.A., Sturmman J., Sturmman L., Turner N.H., Taylor S.F., Berger D.H., Baines E.K., Grundstrom E., Ogden C., Ridgway S.T., van Belle G. 2005 *Ap.J.*, **628** 439-452
- “The projection factor of Cephei. A calibration of the Baade-Wesselink method using the CHARA Array” Mérand A., Kervella P., Coudé Du Foresto V., Ridgway S.T., Aufdenberg J.P., **ten Brummelaar T.A.**, Berger D.H., Sturmman J., Sturmman L., Turner N.H., McAlister H.A. 2005 *A.&A.*, **438**, L9-L12

- “Search for Faint Companions to Nearby Solar-like Stars using the Adaptive Optics System at Mount Wilson Observatory”, Turner N.H., **ten Brummelaar T.A.**, McAlister H.A., Mason B.D., Hartkopf W.I., and Roberts L.C. Jr. *A.J.*, 2001, **121**, 3254-3258
- “Binary Star Differential Photometry Using the Adaptive Optics System at Mount Wilson Observatory”  
**ten Brummelaar T.A.**, Mason B.D., McAlister H.A., Roberts L.C. Jr., Turner N.H., Hartkopf W.I., Bagnuolo W.G. Jr. 2000 *A.J.*, **119**, 2403
- Hartkopf W.I., Mason B.D., McAlister H.A., Roberts L.C. Jr., Turner N.H., **ten Brummelaar T.A.**, Prieto C.M., Ling J.F., and Franz O.G., “ICCD Speckle Observations of Binary Stars. XXIII. Measurements during 1982-1997 from Six Telescopes, with 14 New Orbits”, *A.J.*, 2000 **119**, 3084
- “ICCD Speckle Observations of Binary Stars. XXII. A Survey of Wolf-Rayet Stars for Close Visual Companions”, Hartkopf W.I., Mason B.D., Douglass G.G., **ten Brummelaar T.A.**, McAlister H.A., Moffat A.F.J., Shara M.M., and Wallace D.J., *A.J.*, 1999, **118**, 509-514
- Davis J., W.J. Tango, Booth A.J., Minard R.A., and **ten Brummelaar T.A.**, “The Sydney University Stellar Interferometer I: The Instrument”, *MNRAS*, 1999, **303**, 773-791
- “Adaptive Optics Observations of Arcturus using the Mount Wilson 100-inch Telescope”, Turner N.H., **ten Brummelaar T.A.**, and Mason B.D., 1999, *PASP*, **111**, 556-558
- “Speckle Interferometry of New and Problem Hipparcos Binaries”, Mason B.D., Hartkopf W.I., Barry D.J., Germain M.E., Douglass G.G., Worley C.E., Wyoff G.L., **ten Brummelaar T.A.**, and Franz O.G., *A.J.*, 1999, **117**, 1890-1904
- “A Multiplicity Survey of Chromospherically Active and Inactive Stars”, Mason B.D., Henry T.J., Hartkopf W.I., **ten Brummelaar T.A.**, and Soderblom D.R., 1998, *Ap.J.*, **116**, 2975-2983
- “ICCD Speckle Observations of Binary Stars. XIX – an astrometric/spectroscopic survey of O stars”  
Mason B.D., Gies D.R., Hartkopf W.I., Bagnuolo W.G., **ten Brummelaar T.A.**, McAlister H.A. 1997 *A.J.*, **115**, 821
- “ICCD Speckle Observations of Binary Stars. XVIII. An Investigation of Be Stars”, Mason B.D., **ten Brummelaar T.A.**, Gies D.R., Hartkopf W.I., and Thaller M.L., *Ap.J.*, 1997, **114**, 2112-2116
- “ICCD Speckle Observation of Binary Stars. XVII. Measurements During 1993-1995 from the Mount Wilson 2.5-m Telescope”, Hartkopf W.I., McAlister H.A., Mason B.D., **ten Brummelaar T.A.**, Roberts Jr. L.C., Turner N.H. and Wilson J.W., *Ap.J.*, 1997, **114**, 1639-1656
- “Correlation measurement and group delay tracking in optical stellar interferometry with a noisy detector”  
**ten Brummelaar T.A.** 1997 *MNRAS*, **285**, 135

- “Modeling atmospheric wave aberrations and astronomical instrumentation using the polynomials of Zernike”, **ten Brummelaar T.A.**, *Opt.Comm.*, **132**, 329-342
- “Differential Binary Star Photometry Using the Adaptive Optics System at Starfire Optical Range”  
**ten Brummelaar T.A.**, Mason B.D., Bagnuolo W.G. Jr., Hartkopf W.I., McAlister H.A., Turner N.H. 1996 *A.J.*, **112**, 1180
- “The contribution of high order Zernike modes to wave front tilt”, **ten Brummelaar T.A.**, 1995, *Opt.Comm.*, **115**, 417-424
- “Differential path considerations in optical stellar interferometry”  
**ten Brummelaar T.A.**, 1995 *App.Opt.*, **34**, 2214
- “Strehl ratio and coherence loss in long baseline stellar interferometry”, **ten Brummelaar T.A.**, Ridgway S.T., and Bagnuolo Jr. W.G., 1995, *Opt.Let.*, **20**, 521-523
- “Taking the twinkle out of the stars: An adaptive wave front tilt correction servo and preliminary seeing study for SUSI”, **ten Brummelaar, T.A.**, 1995, *P.A.S.P.*, **106**, 915-915. and 1994, *P.A.S.A.*, **12**, 275-275
- “A wave front tilt correction servo for the Sydney University Stellar Interferometer”, **ten Brummelaar T.A.**, and Tango W.J., 1994, *Exp.Ast.*, **4**, 297-315

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- J.P. Aufdenberg, M.J. Ireland M.J., A. Mérand, V. Coud Du Foresto, O. Absil, E. Di Folco, P. Kervella, W.G. Bagnuolo Jr., D.R. Gies, S.T. Ridgway, D.H. Berger, T.A. ten Brummelaar, H.A. McAlister, J. Sturmann, L. Sturmann, N.H. Turner, and A.P. Jacob, **Interferometric Constraints on Gravity Darkening with Application to the Modeling of Spica A & B**, Proceedings I.A.U. Symposium No. 240, Prague (2007)
- T.A. ten Brummelaar, **Reducing Binary Star Data from Long-Baseline Interferometers**, Proceedings I.A.U. Symposium No. 240, Prague (2007)
- H.A. McAlister, R. Akeson, T. Armstrong, E. Bakker, A. Boden, T.A. ten Brummelaar, M. Creech-Eakman, D. Hutter, D., **Science Highlights from Ground-Based O/IR Interferometers**, American Astronomical Society, Honolulu, 82.09 (2007)
- D.R. Gies, E.K. Baines, D.H. Berger, C. Farrington, E.D. Grundstrom, W. Huang, H.A. McAlister, T.A. ten Brummelaar, and M.V. McSwain, **CHARA Array Observations of Be Stars and Regulus**, ASP Conf. Series 361, Sapporo (2007)
- E.K. Baines, G.T. van Belle, H.A. McAlister, T.A. ten Brummelaar, D.H. Berger, N.H. Turner, and P.J. Goldfinger, **Interferometric Observations of the Transiting Planet HD 189733 with the CHARA Array**, American Astronomical Society, Washington, 163.01 (2006)
- P. Tuthill, J. Lloyd, M. Ireland, F. Martinache, J. Monnier, H. Woodruff, T.A. ten Brummelaar, N.H. Turner, C. Townes, **Sparse-aperture adaptive optics**, SPIE [6272-3A] (2006)

- E.K. Baines, H.A. McAlister, T.A. ten Brummelaar, J. Sturmann, L. Sturmann, N.H. Turner, **A survey and characterization of extrasolar planetary systems host stars using the CHARA Array**, SPIE [6268-45] (2006)
- L. Sturmann, J. Sturmann, T.A. ten Brummelaar, H.A. McAlister, **Nine-channel tip/tilt detector at the CHARA Array**, SPIE [6268-83T] (2006)
- D. Mourard, D. Bonneau, J.M. Clausse, F. Hnault, A. Marcotto, A. Blazit, S. Bosio, Y. Bresson, T.A. ten Brummelaar, P. Kervella, S. Lagarde, H.A. McAlister, A. Mérand, G. Merlin, N. Nardetto, R. Petrov, A. Roussel, K. Rousset-Perraut, P. Stee, J. Sturmann, L. Sturmann, I. Tallon-Bosc, **VEGA: a visible spectrograph and polarimeter for CHARA**, SPIE [6268-3Q] (2006)
- D.H. Berger, J.D. Monnier, R. Millan-Gabet, T.A. ten Brummelaar, P. Muirhead, E. Pedretti, N. Thureau, **CHARA Michigan phase-tracker (CHAMP): design and fabrication** SPIE [6268-83K] (2006)
- W.G. Bagnuolo Jr., T.A. ten Brummelaar, H.A. McAlister, D.R. Gies, S.T. Ridgway, **The star 12 Persei and separated fringe packet binaries (SFPB)** SPIE [6268-82T] (2006)
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