

Harland W. Epps
Astronomer/Professor of Astronomy and Astrophysics
University of California Observatories/Lick Observatory

INTERESTS AND EXPERTISE

Astronomical optics and instrumentation

ACADEMIC HISTORY

1959 B.A. (Astronomy) Pomona College, Claremont, California
1961 M.S. (Astronomy) University of Wisconsin, Madison, Wisconsin
1964 Ph.D. (Astronomy) University of Wisconsin, Madison, Wisconsin

POSITIONS HELD

1955–58 Optician; Optical Technician, Davidson Optronics, Inc., West Covina, California
1959 Graduate Assistant, Summer Science Program, Thacher School, Ojai, California
1959–64 Research and Teaching Assistant, University of Wisconsin, Madison
1961 Graduate Assistant, Summer Science Program, Thacher School, Ojai, California
1964–65 Assistant Academic Director, Summer Science Program, Thacher School, Ojai, California
1964–65 Assistant Professor of Astronomy, San Diego State College, San Diego, California
1965–70 Assistant Professor of Astronomy, University of California, Los Angeles
1966 Academic Director, Summer Science Program, Thacher School, Ojai, California
1968–70 Guest Lecturer, Summer Science Program, Thacher School, Ojai, California
1969– Consultant in Optical Design
1970–76 Associate Professor of Astronomy, University of California, Los Angeles
1973–74 Visiting Professor of Astronomy, University of Arizona, Tucson, Arizona
1976–90 Professor of Astronomy, University of California, Los Angeles
1984–89 System-Wide Staff Member, UCO/Lick Observatory, University of California, Santa Cruz
1988–89 Visiting Scientist, Carnegie Institution, Mount Wilson and Las Campanas Observatories, Pasadena, California
1989– Astronomer and Professor of Astronomy and Astrophysics, UCO/Lick Observatory, University of California, Santa Cruz

HONORS AND AWARDS (selected)

1983– Q-Clearance through Los Alamos National Laboratory (D.O.E., active)
1985 Ranked 9th Among "Twenty Most Recommended Professors at University of California, Los Angeles" (UCLA Daily Bruin Independent Survey)
1988– Top Secret/SCI Clearance through The Pentagon (D.O.D., active)
1989–93 Member, Scientific Advisory Board of the United States Airforce (SAB). Civilian equivalent rank: Lieutenant General (3-star)
2001 Biography listed in Marquis "Who's Who in America"
2003 Shared Astronomical Society of the Pacific Muhlmann Award to the NICMOS Instrument Definition Team (IDT)

EXTERNAL RESEARCH SUPPORT (\$20,000 and over)

2005–09	CARA Research Grant (PI), "MOSFIRE: Multi-Object Spectrometer for Infra-Red Exploration"	\$1,000,500
2004–05	CARA Research Grant (PI), "NIR_MOS (MOSFIRE) Preliminary Optical Design Study"	\$25,000
1995–03	NICMOS Grant (PI), "Observations, Data Reduction, Analysis and Interpretation with the NICMOS Instrument on Hubble Space Telescope"	\$948,955

RECENT PUBLICATIONS (selected)

Optics for a Volume Holographic Grating Spectrograph for the Southern Astrophysical Research (SOAR) Telescope, J.C. Clemens, H.W. Epps, and S. Seagroves. *S.P.I.E. Proceedings: Optical and IR Telescope Instrumentation and Detectors*, **4008**, 1423–1435, 2000.

The Location of the Nucleus and the Morphology of Emission-Line Regions in NGC 1068, R.I. Thompson, R-R. Chary, M.R. Corbin, and H.W. Epps. *Ap.J. Letters*, **558**, L97–L100, 2001.

A New Observational Upper Limit to the Low Redshift Ionizing Background Radiation, R.J. Weymann, S.N. Vogel, S. Veilleux, and H.W. Epps. *Ap.J.*, **561**, 559–572, 2001.

Astronomical Optics: Back Then... Right Now... Soon to Follow, H.W. Epps. *ASP Conference Series: Astronomical Instrumentation and the Birth and Growth of Astrophysics*, **270**, 102–122, 2002.

ESI, a New Keck Observatory Echellette Spectrograph and Imager, A.I. Sheinis, M. Bolte, H.W. Epps, R.I. Kibrick, J.S. Miller, M.V. Radovan, B.C. Bigelow, and B.M. Sutin, *P.A.S.P.*, **114**, 851–865, 2002.

Athermalizing Refractive Optics with Fluid Lenses, H.W. Epps, and D.G. Fabricant. *P.A.S.P.*, **114**, 1252–1259, 2002.

Optically-Athermalized Construction Optical Design for the IMACS Short Camera, H.W. Epps, and B.M. Sutin. *S.P.I.E. Proceedings: Instrument Design and Performance for Optical/Infrared Ground-based Telescopes*, **4841**, 612–621, 2003.

The Development of Binospec and its Optics, D.G. Fabricant, H.W. Epps, W. Brown, R. Fata, and M. Mueller. *S.P.I.E. Proceedings: Instrument Design and Performance for Optical/Infrared Ground-based Telescopes*, **4841**, 1134–1144, 2003.

The Cryogenic Refractive Indices of S-FTM16, a Unique Optical Glass for Near-Infrared Instruments, W.R. Brown, H.W. Epps and D.G. Fabricant. *P.A.S.P.*, **116**, 833–841, 2004.

Hectospec, the MMT's 300 Optical Fiber-Fed Spectrograph, D. Fabricant, R. Fata, J. Roll, E. Hertz, N. Caldwell, T. Gauron, J. Geary, B. McLeod, A. Szentgyorgyi, J. Zajac, M. Kurtz, J. Barberis, H. Bergner, W. Brown, M. Conroy, R. Eng, M. Geller, R. Goddard, M. Honsa, M. Mueller, D. Mink, M. Ordway, S. Tokarz, D. Woods, W. Wyatt, H. Epps and I. Dell'Antonio. *P.A.S.P.*, **117**, 1411–1434, 2005.

UNIVERSITY SERVICE (selected)

Administrative appointments

2003– Astronomy & Astrophysics Department Flash Committee (Chair)
2003 Ad Hoc Review Committee (Member)
2000–01 Astronomy & Astrophysics Department Colloquium Committee
2000 Astronomy & Astrophysics Department Graduate Admissions Committee

Other university service

2004– In charge of optical design of MOSFIRE for the Keck 1 Telescope

PROFESSIONAL ACTIVITIES (selected)

Consultative or other service to civic, state, or national governmental agencies

2006 Invited reviewer, Dark Energy Survey, Fermi National Laboratory
2005 Invited reviewer, LSST Program, NOAO
2004– Member of TSIP proposal team for MOSFIRE
2004 Invited reviewer, KIRMOS, California Institute of Technology
2001 Invited reviewer, Gran Telescopio Canarias (Spain) ELMER and OSIRIS

Five major presentations

2006 Invited lecture/optics demonstration at Gateway School, Santa Cruz, CA
2005 Invited lecture/optics demonstration at Gateway School, Santa Cruz, CA
2001 Co-authored paper at Carnegie Symposium: *Extragalactic Gas at Low Redshift*
2000 Gave invited paper at U Texas Symposium: *Astronomical Instrumentation and the Birth and Growth of Astrophysics*

Service to the staff or editorial board of scholarly journals, or other publications

2003– Associate Editor for Instrumentation, *Publication of the Astronomical Society of the Pacific (PASP)*
1970– Reviewer for: National Science Foundation (NSF); California Space Institute; Microelectronics Innovation and Computer Research Opportunities; National Optical Astronomy Observatories (NOAO); Natural Sciences and

Engineering Research Council of Canada; Saunders College Publishing; *Astrophysical Journal (ApJ)*; *Astronomical Journal (AJ)*; *Publications of the Astronomical Society of the Pacific (PASP)*; *Applied Optics (AO)*

STUDENTS AND FELLOWS SUPERVISED (lifetime)

Ph.D. Advisees

Philip James Peters
Bruce Edward Bohannon
Jerry Waxmann
Peter Jarecke
Andrew Sheinis

Postdoctoral Fellows

Brian Sutin
Nadine Dinshaw
Ranga-Ram Chary