

Dr. Sahar Allam

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RESEARCH INTERESTS	Observational Cosmology: Photometric calibrations, gravitational lensing, high- <i>z</i> galaxies, galaxy clusters, compact groups, interacting & merging galaxies, isolated galaxies, star formation, NIR & FIR photometry, standard star, stars clusters	
ACADEMIC APPOINTMENTS	Visiting Scientist, Fermilab Fermi National Accelerator Laboratory Guest Scientist Fermi National Accelerator Laboratory Researcher, University of Wyoming University of Wyoming Adjunct Professor Cairo University, Egypt Scientist Visitor Northwestern University Postdoctoral Researcher University of Wyoming Postdoctoral Fellow New Mexico State University Postdoctoral Researcher National Research Institute of Astronomy and Geophysics (NRIAG) Ph.D. position, BAT IIa Leibniz-Institut fr Astrophysik Potsdam(AIP) Ph.D. student, AIP Leibniz-Institut fr Astrophysik Potsdam Lecture Assistant NRIAG Research Assistant NRIAG	Oct 1998 – present Dec 2007 – April 2012 May 2006 – present Nov 2007– present May 2007 – Jun 2007 May 2005 – Oct 2005 Jun 2003 – July 2004 Aug 1998 – Sep 2002 Dec 1997 – May 1998 Dec 1993 – Nov 1997 Mar 1992 – Dec 1993 Feb 1987 – Jan 1992
EDUCATION	The University of Potsdam, Potsdam, Germany Ph.D., IRAS study of interacting galaxies, May, 1998 <ul style="list-style-type: none">• Adviser: Professor Günther Hasinger, Dr. Rob Assendorp, (AIP), Dr. habil. Gotthard Richter, AIP Cairo University, Cairo, Egypt M.S., Cairo University, Astronomy, Nov. 1998 <ul style="list-style-type: none">• Adviser: Professor Al-Shalapy, Cairo University, Issa A. Issa, NRIAG B.S., Cairo University, Astronomy, May 1996	
PRESS RELEASES:	“Gravity helps SDSS-II reveal a brilliant jewel of the early universe”, SDSS press release, November 7, 2006	

RESEARCH
GRANTS:

- Co-PI on NSF grant 2012, TBD, Dr. Susana Deustua, PI.
- PI on HST Cycle 16-Supplemental., 2009, \$419,851, "High-resolution imaging for 9 very bright, spectroscopically confirmed, group-scale lenses"
- PI on HST Cycle 17, 2008, \$150,485, "High-resolution imaging of three new UV-bright lensed arcs"
- PI on Spitzer/Cycle 5, 2008, \$152,652, "Beyond the 8 O'Clock Arc and the Clone – Five New Bright Lensed LBGs" (Total \$381,631)
- PI on HST/Cycle 16, 2007, \$113,612, "A Unique High Resolution Window to two Strongly Lensed Lyman Break Galaxies"
- PI on Spitzer/Cycle 4, 2007, \$75,215, "Spitzer Observation of the Brightest Lensed LBGs"
- PI on NVO Research Initiatives Grant 2006, \$25,000.
- Recipient of Deutsche Akademische Austausch Dienst (DAAD) Fellowship, May 1993 - Dec 1997, Full Scholarship, Grant #562, DM120,000 (~\$80,000)
- Recipient of National Academy of Sciences grant to attend the IAU International School for Young Astronomers, 10 – 28 Sep 1990

ORGANIZING
CONFERENCES,
MEETINGS &
WORKSHOPS:

- Conference Co-organizer of the "Calibration and Standardization of Large Surveys and Missions in Astronomy and Astrophysics", to be hosted by Fermilab (April 16-19, 2012)
- Workshop Co-organizer of the "Searching For Strong Lenses In Large Imaging Surveys," hosted by the Fermilab Center for Particle Astrophysics (June 14-15, 2007)
- SDSS Collaboration Meeting Co-organizer, hosted by Fermilab (November 1-4, 2007)
- SDSS Collaboration Meeting Co-organizer, hosted by NMSU (March 15-18, 2004)

CITIZENSHIP USA

PROFESSIONAL
MEMBERSHIPS:

- American Astronomical Society
- Egyptian Astronomical Society

COLLABORATION
MEMBERSHIPS:

- The Dark Energy Survey (DES) Participant
- The Sloan Digital Sky Survey (SDSS) I&II Member
- The Supernova/Acceleration Probe (SNAP) Team Member
- The Blanco Cosmology Survey (BCS) Team Member

CITATIONS:

As of April 1, 2012 the total citations for Allam publications are 5888. All citation are available at: ADS (5930), and Google Scholar Citations (6760).

- [1] Wiesner, M. et al. "The Sloan Bright Arcs Survey: Ten Strong Gravitational Lensing Clusters Showing Evidence of Overconcentration", 2012. Submitted.
- [2] Desai, S. et al. The Blanco Cosmology Survey: Data Acquisition, Processing, Calibration, Quality Diagnostics and Data Release, 2012. Submitted ApJ, astro-ph-1204.1210.
- [3] West, A. et al. The Sloan Bright Arcs Survey: Modeling of Four Strong Gravitational Lens Systems with $z > 2$, 2012, Submitted.
- [4] Guennou, L., et al. 2012 'Intracluster light in clusters of galaxies at redshifts $0.4 < z < 0.8$ ' 2012, A&A, 537, 64
- [5] Buckley-Geer, E.J., et al. 2011 'The Serendipitous Observation of a Gravitationally Lensed Galaxy at $z = 0.9057$ from the Blanco Cosmology Survey: The Elliot Arc' ApJ, 742, 48
- [6] Zenteno, A., et al. 2011, 'A Multiband Study of the Galaxy Populations of the First Four Sunyaev-Zel'dovich Effect Selected Galaxy Clusters' ApJ, 734, 3
- [7] Kubo, J., et al. 2010, 'The Sloan Bright Arcs Survey: Discovery of Seven New Strongly Lensed Galaxies from $z = 0.66-2.94$ ', ApJ, 724, L137
- [8] High, F., et al. 2010, 'Optical Redshift and Richness Estimates for Galaxy Clusters Selected with the Sunyaev-Zel'dovich Effect from 2008 South Pole Telescope Observations' ApJ, 723, 1736
- [9] Fadely, R., et al. 2010, 'Mid-infrared Spectroscopy of Two Lensed Star-forming Galaxies', ApJ, 723, 729
- [10] Guennou, L., et al. 2010, 'The DAFT/FADA survey. I. Photometric redshifts along lines of sight to clusters in the $z = [0.4, 0.9]$ interval', A&A, 523, 21
- [11] Diehl, H.T., et al. 2009, 'The Sloan Bright Arcs Survey: Four Strongly Lensed Galaxies with Redshift > 2 ', ApJ, 707, 686
- [12] Hainline, K., et al. 2009, 'Rest-Frame Optical Spectra of Three Strongly Lensed Galaxies at $z \sim 2$ ', ApJ, 701, 52
- [13] Ulmer, M., et al. 2009, 'Cluster and cluster galaxy evolution history from IR to X-ray observations of the young cluster RX J1257.2+4738 at $z=0.866$ ' A&A, in press
- [14] Lin, H., et al. 2009, 'Discovery of a Very Bright, Strongly Lensed $z = 2$ Galaxy in the SDSS DR5', ApJ, 699, L1242
- [15] Abazajian, K.N., et al. 2009, 'The Seventh Data Release of the Sloan Digital Sky Survey', ApJS, 182, 543
- [16] Kubo, J., et al. 2009, 'The Sloan Bright Arcs Survey : Six Strongly Lensed Galaxies at $z = 0.4 - 1.4$ ', ApJ, 696, L61
- [17] Yanny, B., et al. 2009, 'SEGUE: A Spectroscopic Survey of 240,000 Stars with $g = 14-20$ ', AJ, 137, 4377
- [18] Adelman-McCarthy, J. K. et al. 2008, 'The Sixth Data Release of the Sloan Digital Sky Survey', ApJS, 175, 297
- [19] Adelman-McCarthy, J. K. et al. 2007, 'The Fifth Data Release of the Sloan Digital Sky Survey' ApJS, 172, 634

- [20] **Allam, S.S.**, et al. 2007 ‘A Serendipitous Discovery of a Strongly Lensed Lyman Break Galaxy in the SDSS DR4 Imaging Data: The 8 o’clock Arc’ *ApJ*, 662, L51
- [21] Estrada, J., et al. 2007 ‘A Systematic Search for High Surface Brightness Giant Arcs in a Sloan Digital Sky Survey Cluster Sample’, *ApJ*, 660, 1176
- [22] Fornal, B., et al. 2007, ‘A Survey of Southern Hemisphere Open Clusters in the $u'g'r'i'z'$ Filter System: III. Results for NGC 188’, *AJ*, 133, 1409
- [23] Adelman-McCarthy, J. K., et al. 2006, ‘The Fourth Data Release of the Sloan Digital Sky Survey’ *ApJS*, 162, 38
- [24] Moore, C., et al. 2006, ‘A Survey of Southern Hemisphere Open Clusters in the $u'g'r'i'z'$ Filter System: II. Results for NGC 6134 and Hogg 19’, *AJ*
- [25] Tucker, D.L., et al. 2006, ‘The Sloan Digital Sky Survey Monitor Telescope Pipeline,’ *Astronomische Nachrichten*, 327, 821.
- [26] Abazajian, et al. 2005, ‘The Third Data Release of the Sloan Digital Sky Survey’ *AJ*, 129, 1755
- [27] **Allam, S.S.**, et al. 2005, ‘Isolated Galaxies in the SDSS DR1 Data Release’, *AJ*, 129, 2062, (astro-ph 10172)
- [28] Doroshkevich, A., Tucker, D.L., **Allam, S.S.**, 2004, ‘Large Scale Structure in the SDSS Galaxy Survey’, *A&A*, 418, 7
- [29] **Allam, S.S.**, et al. 2004, ‘Merging Galaxy Pairs in the SDSS Early Data Release,’ *ApJ*, 127, 1883
- [30] Abazajian et al. 2004, ‘The Second Data Release of the Sloan Digital Sky Survey’, *AJ*, 128, 502
- [31] Lee B., **Allam, S.S.**, Tucker D.L., et al. 2004, ‘Compact Groups in the SDSS Early Data Release,’ *ApJ*, 127, 1811
- [32] Rider C., et al. 2004, ‘A Survey of Southern Hemisphere Open Clusters in the $u'g'r'i'z'$ Filter System: I. Results for NGC2548 (M48)’, *ApJ*, 127, 2227
- [33] Finkbeiner, D.P., et al. 2004, ‘Sloan Digital Sky Survey Imaging of Low Galactic Latitude Fields: Technical Summary and Data Release’, *AJ*, 128, 2577
- [34] Abazajian, K., et al. 2003, ‘The First Data Release of the Sloan Digital Sky Survey’ *AJ*, 127, 2081
- [35] Einasto, J., et al. 2003, ‘Clusters and superclusters in the Sloan Digital Sky Survey’ *A&A*, 405, 425
- [36] Einasto, J., et al. 2003, ‘Clusters and Superclusters in the Las Campanas Redshift Survey’ *A&A*, 410, 425
- [37] Smith J. A., Tucker D.L., **Allam, S.S.**, Rodgers, C., 2003, ‘Local $u'g'r'i'z'$ Standard Stars in the Chandra Deep Field–South’, 2003, *ApJ*, 126, 2037
- [38] Tucker D.L., et al. 2000, ‘Loose Groups of Galaxies in the Las Campanas Redshift Survey,’ *ApJS*, 130, 237
- [39] **Allam, S.S.**, Tucker D.L., 2000, ‘Compact Groups in the Las Campanas Redshift Survey,’ *Astr. Nachr.*, 321, 101
- [40] **Allam, S.S.**, Tucker D.L., Lin H., Hashimoto Y., 1999, ‘Star Formation in Las Campanas Compact Groups,’ *ApJL*, 522, 89

CONFERENCE
PUBLICATIONS

- [41] **Allam, S.S.**, Assendorp R., Longo G., Braun M., Richter G., 1996, ‘Far Infrared Properties of Hickson Compact Groups of Galaxies. I. High Resolution IRAS Maps and Fluxes,’ *A&AS*, 117, 39
- [42] **Allam, S.S.**, Assendorp R., Longo G., Richter G., 1995, ‘The Far-IR Emission from Compact Groups of galaxies,’ *P&SS*, 43, 1371
- [43] Issa A., **Allam, S.S.**, Al-Shalapy M., 1992, ‘Absorption Gradient in Some Galaxies IV,’ *Ap&SS*, 189, 123
- [44] Issa A., **Allam, S.S.**, 1992, ‘Absorption Gradient in Galaxies V,’ *Ap&SS*, 190, 57
- [45] Issa A., **Allam, S.S.**, 1991, ‘Surface Distribution of Dark Clouds in M31 II,’ *Ap&SS*, 176, 275
- [46] Wiesner, M., et al. 2012, ‘Are Low-Mass Galaxy Clusters Overconcentrated?’, *BAAS, 219th Meeting of the AAS*, #338.05
- [47] Wiesner, M., et al. 2011, ‘Clusters and Lenses: Ten Galaxy Clusters Exhibiting Strong Lensing Found in the Sloan Digital Sky Survey’, *BAAS, 217th Meeting of the AAS*, #347.02
- [48] Lin, H., et al. 2011 ‘SBAS: The Sloan Bright Arcs Survey’, *BAAS, 217th Meeting of the AAS*, #347.01
- [49] Fadely, R., et al. 2011, ‘Spitzer Spectroscopy of Two Lensed Star-forming Galaxies’, *BAAS, 217th Meeting of the AAS*, #245.12
- [50] **Allam, S.S.**, et al. 2011, ‘WFC3 and WFPC2 Follow Up of Strong Gravitational Lenses’, *BAAS, 217th Meeting of the AAS* #347.03
- [51] Clowe, D., 2010, ‘Photometric Redshifts of Weak Lensing Tomography of Galaxy Clusters’, *NOAO Proposal ID #2010B-0318*
- [52] Ulmer, M. P. et al. 2010, ‘Observations of a z 0.9 cluster of galaxies’, *X-Ray Astronomy 2009; Present Status, Multi-Wavelength Approach and Future Perspectives: Proceedings of the International Conference. AIP Conference Proceedings, Volume 1248, pp. 302-303 (2010).*
- [53] Drabek, E., et al. 2010, ‘Spectroscopy Of Two Strong Lensing Clusters’, *BAAS, 216th Meeting of the AAS* , #418.04
- [54] Tucker, D.L., et al. 2010, ‘Calibration and Characterization of Stars, Galaxies, and Quasars in the Dark Energy Survey (DES) grizy Filter System’, *CTIO, NOAO Proposal ID #2010A-0307*
- [55] Tucker, D.L., et al. 2010, ‘The Photometric Calibration of the Dark Energy Survey’, *BAAS, 215th Meeting of the AAS*, #470.09
- [56] Allyn J.A., et al. 2010, ‘Spectrophotometric Standard Stars for the Dark Energy Survey’, *BAAS, 215th Meeting of the AAS*, #470.08
- [57] **Allam, S.S.**, et al. 2010, ‘WFPC2 Follow Up of Strong Gravitational Lenses’, *BAAS, 215th Meeting of the AAS* #406.01
- [58] Baker, A., et al. 2010, ‘Spatially Resolved Molecular Gas Kinematics in a Lensed UV-Selected Galaxy at z = 2.26’, *BAAS, 215th Meeting of the AAS*, #341.07
- [59] Allyn J.A., **Allam, S.S.**, Tucker, D. L., 2009, ‘IRTF Observations of Lensed Star-Forming Galaxies Identified in the SDSS Imaging Data’, *BAAS, 213th Meeting of the AAS*, #610.01

- [60] Tucker, D.L., **Allam, S.S.**, et al. 2009, ‘Hubble and Spitzer Follow-up for Two Strongly Lensed LBGs:(I) Optical-to-Mid-IR Photometry and Mid-IR Spectroscopy’, BAAS, *213th Meeting of the AAS*, #412.02
- [61] **Allam, S.S.**, et al. 2009, ‘Hubble and Spitzer Follow-up for Two Strongly Lensed LBGs: (II) Lens Potential Reconstruction and Analysis’ American Astronomical Society, BAAS, *214th Meeting of the AAS*, #412.01
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- [65] **Allam, S.S.**, Tucker, D.L., for the SDSS Bright Arcs Search Team, 2009, ‘Hubble and Spitzer Follow-up for Two Strongly Lensed LBGs: (II) Lens Potential Reconstruction and Analysis’ BAAS, *214th Meeting of the AAS*
- [66] Tucker, D.L., **Allam, S.S.**, for the SDSS Bright Arcs Search Team, 2009, ‘Hubble and Spitzer Follow-up for Two Strongly Lensed LBGs: (I) Optical-to-Mid-IR Photometry and Mid-IR Spectroscopy’, BAAS, *214th Meeting of the AAS*
- [67] **Allam, S.S.**, et al. 2009, ‘High-resolution imaging for 9 very bright, spectroscopically confirmed, group-scale lenses’ HST Proposal Cycle 16 Sup GO #11974
- [68] Buckley-Geer, E., Lin, H., for the BCS Collaboration, 2009, ‘Observation of a Nearly Complete Einstein Ring at $z=0.9$ from the Blanco Cosmology Survey’ BAAS, *213th Meeting of the AAS*, #47801
- [69] **Lin, H.**, for the SDSS Bright Arcs Search Team, 2009, ‘A Search for Bright, Strongly Lensed, High Redshift Galaxies in The SDSS’ BAAS, *213th Meeting of the AAS*, #47802
- [70] Hainline, K., et al. 2009, ‘Optical Spectra For Three Strongly Lensed Galaxies At $z \approx 2$ ’ BAAS, *213th Meeting of the AAS*, #42421
- [71] **Allam S.S.** et al. 2008, ‘SDSS Giant Arcs’ Semester 2008B Gemini North, GN-2008B-Q-79
- [72] **Allam, S.S.**, et al. 2008, ‘Beyond the 8 O’Clock Arc and the Clone – Five New Bright Lensed LBGs’ Spitzer Cycle 5, ID #50086
- [73] **Allam, S.S.**, et al. 2008, ‘High-resolution imaging of three new UV-bright lensed arcs’ HST Proposal Cycle 17 GO #11602
- [74] Ulmer, M.P., et al. 2008, ‘Observations of a $z = 0.9$ cluster of galaxies’, SF2A-2008: Proceedings of the Annual meeting of the French Society of Astronomy and Astrophysics Eds.: C. Charbonnel, F. Combes and R. Samadi. Available online at <http://proc.sf2a.asso.fr>, p.385
- [75] **Allam, S.S.**, et al. 2007, ‘Spitzer Observations of the Brightest Lensed LBGs’ Spitzer Proposal Cycle 4, ID #40430

- [76] **Allam, S.S.**, et al. 2007, 'A Unique High Resolution Window to Two Strongly Lensed Lyman Break Galaxies' HST Proposal Cycle 16, GO #11167.
- [77] **Allam, S.S.**, et al. 2007, 'SNAP Candidate Standard Stars', in *The Future of Photometric, Spectrophotometric, and Polarimetric Standardization*, Editor Sterken, C., ASP, Vol. 364, p283
- [78] **Allam, S.S.**, et al. 2007, 'Beyond The 8 O'Clock Arc: A New Set of Brightly Lensed Lyman Break Galaxies' BAAS, *211th Meeting of the AAS*, #9902
- [79] Tucker, D.L., et al. 2007, The Photometric Calibration of the Dark Energy Survey BAAS, *211th Meeting of the AAS*, #13227
- [80] Smith, J.A., et al. 2007 Extension of the u'g'r'i'z' Northern Hemisphere Standard Star System BAAS, *211th Meeting of the AAS*, #13214
- [81] Smith J.A., et al. 2006, 'Historical View of the u'g'r'i'z' Standard System' in *The Future of Photometric, Spectrophotometric, and Polarimetric Standardization*, Editor Sterken, C., ASP, Vol. 364, p91
- [82] Tucker D.L., et al. 2006, 'The Photometric Calibration of the Dark Energy Survey', in *The Future of Photometric, Spectrophotometric, and Polarimetric Standardization*, Editor Sterken, C., ASP, Vol. 364, p187
- [83] **Allam, S.S.**, et al. 2006, 'The 8 O'Clock Arc: Current and future follow-up plans', BAAS, *209th Meeting of the AAS*, #25603
- [84] Buckley-Geer, E.J., et al. 2006, 'Application of Gravitational Lensing Models to the Brightest Strongly Lensed Lyman Break Galaxy the '8 o'clock arc' , BAAS, *209th Meeting of the AAS*, #2105
- [85] Ngeow, C.C., et al. 2006, 'Application of the Dark Energy Survey Data Management System to the Blanco Cosmology Survey Data' , BAAS, *209th Meeting of the AAS*, #2206
- [86] Mufson, S., et al. 2006, 'A Monochromatic Illumination and Cryogenic Calibration System for SNAP Calibration Studies' , BAAS, *209th Meeting of the AAS*, #9811
- [87] Mostek, N.J., et al. 2006, 'Calibration of Interference Filter Transmission using Light Emitting Diodes', BAAS, *209th Meeting of the AAS*, #9816
- [88] Smith J.A., et al. 2006, 'Development of Spectrophotometric Standards to Support the SNAP', BAAS, *209th Meeting of the AAS*, #9818
- [89] Scarpine, V., et al. 2006, 'A Systematic Search for High Surface Brightness Giant Arcs in a Sloan Digital Sky Survey Cluster Sample', BAAS, *209th Meeting of the AAS*, #21507
- [90] Deustua, S.E., et al. 2006, 'Dark Energy Science Constraints on Calibration: Design of the SNAP Calibration System', BAAS, *209th Meeting of the AAS*, #9819
- [91] **Allam, S.S.**, et al. 2005, 'Finding & Exploring Merging Pairs of Galaxies in 2MASS using the NVO', BAAS, *207th Meeting of the AAS*, #2504
- [92] Smith J.A., et al. 2005, 'The u'g'r'i'z' Southern Hemisphere Standard Star Network', BAAS, *207th Meeting of the AAS*, #13111
- [93] Deustua, S.E., et al. 2005, 'Calibrating SNAP: a JDEM experiment', BAAS, *207th Meeting of the AAS*, #7301

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- [95] Tucker, D.L., et al. 2005, ‘The SEGUE Open Cluster Survey’, BAAS, *207th Meeting of the AAS*, #14706
- [96] Stute, J.L., et al. 2004, ‘Photometric Standard Stars in the Southern E-Regions, u’g’r’i’z’’, BAAS, *205th Meeting of the AAS*, #9106
- [97] **Allam, S.S.**, et al. 2004, ‘Exposure Time Calculations for Calibrating of Vega and G191-B2B in the Optical and Near-Infrared: Ground-based, Airborne, Balloon-based, and Rocket-borne Experiments’, BAAS, *205th Meeting of the AAS*, #6707
- [98] Mufson, S.L. , et al. 2004, ‘LEDs as Precision Irradiance Sources for Calibration of the SNAP Focal Plane’, BAAS, *205th Meeting of the AAS*, #6706
- [99] Richmond, M.W., et al. 2004, ‘Flatfielding the SNAP focal plane’, BAAS, *205th Meeting of the AAS*, #6705
- [100] **Allam, S.S.**, Tucker, D.L., SDSS Collaboration, 2004, ‘SDSS DR2 Merging pairs’ BAAS, *204th Meeting of the AAS*, #4312
- [101] Tucker, D.L., **Allam, S.S.**, SDSS Collaboration, 2004, ‘Properties of Isolated Galaxies in the SDSS DR2’ BAAS, *204th Meeting of the AAS*, #4313
- [102] Smith, J.A., et al., 2004, ‘The SDSS-II SEGUE Cluster Project’, BAAS, *205th Meeting of the AAS*, #6409
- [103] Kent, S., et al. 2004, ‘ Absolute Astrometric Calibration of the SNAP Focal Plane’, BAAS, *205th Meeting of the AAS*, #6701
- [104] Bohlin, R.C., et al. 2004, ‘Precision Spectrophotometry from HST’, BAAS, *205th Meeting of the AAS*, #6702
- [105] Mostek, N., et al. 2004, ‘A Search for Stable Calibration Stars in the SNAP North Field’, BAAS, *205th Meeting of the AAS*, #6703
- [106] Tucker, D.L., et al. 2004, ‘ARC3.5m Optical/NIR Spectroscopy of Candidate SNAP Standard Stars’, BAAS, *205th Meeting of the AAS*, #6704
- [107] Smith, J.A., et al. 2003, ‘Calibration of the Snap Program’ IAUS, 216, 102
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- [109] Cantrell, K.A., et al., 2003, ‘Study of NGC 1647 in the u’g’r’i’z’ Filter System’ BAAS, *203rd Meeting of the AAS*, #1409
- [110] Rodgers, C.T., et al., 2003, ‘The Open Cluster NGC 2588 in the u’g’r’i’z’ Filter System’ BAAS, *203rd Meeting of the AAS*, #1419
- [111] Deustua, S.E., et al. 2003, ‘Calilbration Program for SNAP’ BAAS, *203rd Meeting of the AAS*, #8221
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- [113] Smith, J.A., et al. 2003 ‘The SNAP Standard Star Program’ BAAS, *203rd Meeting of the AAS*, #8222
- [114] Kent, S., et al. 2003, ‘Observations of Candidate Faint Spectrophotometric Standards in the SNAP-North Field’ BAAS, *203rd Meeting of the AAS*, #8223

- [115] Tucker, D.L., **Allam, S.S.** ‘Isolated Galaxies in the SDSS DR1’ 2003 BAAS, *203rd Meeting of the AAS*, #9101
- [116] **Allam, S.S.**, Tucker, D.L., 2003, ‘SDSS DR1 Merging Galaxies’ BAAS, *203rd Meeting of the AAS*, #12209
- [117] **Allam, S.S.**, Tucker D.L., Smith J.A., 2002, ‘Properties of Merging Pairs in the SDSS EDR’ BAAS, *201th Meeting of the AAS*, #52.09
- [118] Smith, J.A., Tucker D.L., **Allam, S.S.**, Jorgensen A., 2002, ‘Southern Standard Stars for the u’g’r’i’z’ System’ IAUS, 216, 102
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- [123] **Allam, S.S.**, Tucker D.L., ‘Interacting/merging pairs in the SDSS EDR’ BAAS, *200th Meeting of the AAS*, #40.12
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- [126] Doroshkevich A., Tucker D.L., Vanden Berk D., **Allam, S.S.**, ‘Spatial Distribution of Quasars in the 2QZ 10K Release and the SDSS Early Data Release,’ in *Lighthouses of the Universe*, eds. A.J. Banday et al., (Springer Verlag), p524
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- [130] **Allam, S.S.**, 1999 ‘FIR Properties of Hickson Compact Groups of Galaxies,’ *Sixth General Scientific Meeting of NRIAG*, Nov. 9-12, 1999
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- [132] **Allam, S.S.**, 1997, ‘High Resolution Study of Interacting Galaxies,’ *Astronomische Gesellschaft Tagung*, Berlin, Nov. 18-19, 1997
- [133] **Allam, S.S.**, Assendorp R., Longo G., Richter G. 1994, ‘Far Infrared Catalogue for Hickson Compact Groups,’ *Astronomische Gesellschaft Tagung*, Potsdam, Sep. 26-30, 1994
- [134] **Allam, S.S.**, Issa A., 1992, ‘Surface Distribution of Dark Clouds in M31: Absorption Gradient along the Minor Axis and in the R and θ Direction II,’ *Fourth Scientific General Meeting of NRIAG*, Nov. 23-28, 1992
- [135] Issa A., **Allam, S.S.**, Al-Shalapy M., 1992, ‘Absorption Gradient in Some Galaxies IV,’ *Fourth Scientific General Meeting of NRIAG*, Nov. 23-28, 1992
- [136] Issa A., **Allam S.S.**, 1992, ‘Absorption Gradient in Galaxies V,’ *Fourth Scientific General Meeting of NRIAG*, Nov. 23-28, 1992

STUDENT
ADVISING

Gary Wang, Amber Betzold IMSA/SIR students for the year (2010/2011) worked on strong lens modeling with the HST data. Results were presented and published. Wang et al. 2011, "Using GALFIT and Lenstool to Analyze Gravitational Lenses", and in Betzold, et al. 2011, "Modeling the Strong Gravitational Lensing System, Clone, Using Data from the Hubble Space Telescope"

Liana Nicklaus Quarknet student 2010. Modeling strong gravitational lensing systems in group and cluster environments with the goal of determining the total mass of the lensing systems

Deshpreet Bedi. Graduate student, Fermilab Summer Interns 2010, Program: SULI. Modeling strong gravitational lensing systems and constraints on the slopes of the inner dark matter profiles in these systems.

Vandana Thakur, John Myrda, Kelly Barnett, Sean Mills, Megan Hager, Quarknet Research Projects: A physics teacher and four high school students with no previous experience or astronomy knowledge worked with me for seven weeks during the summer of 2007 as part of the Fermi Quarknet Outreach program. Under my supervision and guidance the group worked on one of my research projects, "SDSS merging pairs of galaxies". They learned how to use linux machines, how to work with the SDSS database, how to inspect and analysis the data, and how to use some Java programs. They also learned some basic astrophysics, like how galaxy shapes are influenced by gravitational interaction.

Ashraf Shaker NRIAG, 1990-1992. Currently, Dr. Shaker is Assistant Prof. at NRIAG

Fatma Reda NRIAG, 1990-1992. Currently, Dr. Reda is Researcher at NRIAG

TEACHING
EXPERIENCE

Public Outreach **2007**

- Volunteered for public outreach astronomy talks to the 4th, 5th, and 6th grade classes at Hibbard School, Chicago.

Training for Teaching **2006**

- Participated in the NASA Center for Astronomy Education (CAE) Teaching Excellence in Introductory Astronomy Workshop, January 7-8, 2006. This workshop focused on dilemmas college astronomy instructors face and developed practical solutions for troubling issues in curriculum, instruction, and assessment.

Instructor for Astronomy Graduate & MSc Student Design Project **1998 to 2000**

- Taught Far Infrared Astronomy, IRAS data.
- Taught FIR image reconstruction.
- Taught Dust in galaxies, space and ground.
- Taught Galaxies and Environment.
- Taught How to using Optical and FIR data.

Instructor

1992 to 1993

- Taught Introductory Astronomy & Laboratory
- Taught Introductory Astrophysics
- Taught Stars and Stellar Evolution
- Taught Observational Techniques

Laboratory/Telescope

1986 to 1991

- Taught Imaging and Spectroscopic observation techniques using the Kottamia 74 in. telescope, Egypt

PROFESSIONAL
SERVICE

Referee Service

- *The Astrophysical Journal*
- *The Astronomical Journal*
- *Publications of the Astronomical Society of Australia*
- *Central European Journal of Physics*

PROFESSIONAL
EXPERIENCE

SDSS

- studied strong lens system in the SDSS imaging data, performed and analyzed, and follow-up imaging and spectroscopic observations, from the ground base imaging and spectroscopy and requested and obtained, and analyzed space base imaging and spectroscopic (HST& Spitzer).
- Developed a pipeline (mostly python) for HST image process and analyze.
- Developed a pipeline (mostly python) for Spitzer image process and analyze.
- Developed a pipeline (mostly python) for Spitzer spectra process and analyze.
- Developed a different codes (mostly python) for APO imaging/spectra reduction.
- Developed a pipeline (mostly tcl/UNIX shell scripting), for selecting merging pairs, isolated galaxies, compact groups, for the SDSS EDR – DR7 imaging data, which were then used to select high redshift strong lensing galaxies.
- Created mySQL data bases for selected merging pairs and isolated galaxies.
- Reduced and analyzed data for the SDSS PT.
- Tested the DR1-DR7 CAS at Fermilab.
- Help set up the interface for DR1 DAS.
- Tested the DR1/DR2 DAS.

DES Calibration

- Co-wrote a pipeline (mostly in python) to process and analyze PreCam Survey data (2010-present).
- Wrote software (python) for noise analysis and removal from PreCam data.
- Wrote software for optical alignment of Curtis-Schmidt Telescope (mostly UNIX shell scripting) during the PreCam engineering run, which was further implemented within PreCam-SISPI frame work for focusing the telescope during the nightly observations.

- Provided technical support help for PreCam observers, and
- Observed for 7 nights of the PreCam Survey (2010-2011).

SNAP Calibration

- Co-wrote an Exposure Time Calculator to investigate different options (ground-based, airborne, and space-based missions) for obtaining and calibrating a set of optical/NIR spectrophotometric standard stars for the SNAP mission (2004).
- Helped write a chapter on the SNAP Calibration Pipeline for the SNAP Calibration Volume.
- Helped prepare observing proposals, and observed candidate SNAP photometric standard stars with the APO ARC-3.5m telescope. (2002-2004).

Southern Standard Star Calibration

- Observed, processed, analyzed the data and created MySQL data bases for the *u'g'r'i'z'* Southern Hemisphere Standard Star Network, and prepared a web interface for extracting the data. (2002-2007)

NVO

- Wrote a tcl/java codes to extract merging pairs in 2mass data, and created using the NVO tools MySQL data base for the sample. Fermilab/UWYO Oct 2005 – 2006

Las Campanas Redshift Survey

- created a catalog of compact groups in the Las Campanas Redshift Survey, and study its properties.

IRAS FIR Image Processing

- Performed high resolution FIR image processing using Maximum Entropy Techniques. AIP Dec 1993 – May 1998, &NRIAG Apr 2000 – Dec 2000

OBSERVING EXPERIENCE

- Certified as a remote observer on the APO3.5m telescope; 7 years of observing experience on the Kottamia 74-in, and observing experience on the APO3.5m, USNO 1.0m, NASA IRTF 3m, Curtis-Schmidt, and the CTIO 0.9m&4.0m telescopes; and data analysis experience with data from HST, Spitzer, and IRAS.

COMPUTING SKILLS

Operating Systems:

- Linux, Apple OS X, Microsoft Windows.

Computer Programming:

- python, java, Tcl, SQL, MySQL, UNIX shell scripting, FORTRAN, C, C++, php, Perl.

Astronomical Software:

- IRAF/pyraf, IDL, Virtual Observatory tools, astrottools, mtpipe, sdssQT, GAIA, SExtractor, Swarp, PSFEx, EyE, MOPEX, SPICE, IRSCLEAN, coadd, STSDAS, Tiny TIM, SpeX, Starburst99, Gipsy, MaxEnt, Galfit, Gravlens, Lensview, Lenstool, and others.

OTHER SERVICE

- I volunteered for Arabic translation for the AAS.

ACADEMIC AWARDS

- First prize for the project NVO School, summer 2005 "Finding Merging Pairs of Galaxies with the NVO".

REFERENCES
AVAILABLE TO
CONTACT

Prof. Joshua A Frieman

- ◇ The University of Chicago, The Department of Astronomy and Astrophysics, 5640 S. Ellis Ave, Chicago, IL 60637 or +1-773-702-7971
- ◇ Fermi National Accelerator Laboratory, P.O. Box 500 MS 127, Batavia, IL 60510
- e-mail: frieman@fnal.gov; phone: +1-630-840-2226
- ★ *Prof. Frieman is currently serves as Director of the Dark Energy Survey*

Prof. Richard Kron

- ◇ The University of Chicago, The Department of Astronomy and Astrophysics, 5640 S. Ellis Ave, Chicago, IL 60637
- ◇ Fermi National Accelerator Laboratory, P.O. Box 500 MS 127, Batavia, IL 60510
- e-mail: rich@uchicago.edu; phone: +1-630-840-4310 or +1-773-702-3335
- ★ *Prof. Kron is currently serves as Deputy Director of the Dark Energy Survey, also he served as Director of the SDSSII*

Dr. John Peoples, Jr.

- ◇ Fermi National Accelerator Laboratory, P.O. Box 500 MS 127, Batavia, IL 60510
- e-mail: peop@fnal.gov; phone: +1-630-840-4085
- ★ *Dr. Peoples is a co-PI on the PreCam Survey, and he served as the Director of DES, the Director of SDSS, and the Director of Fermilab.*

Dr. Susana Deustua

- ◇ Hubble Space Telescope, Space Telescope Science Institute, 3700 San Martin Drive, Baltimore, MD 21218
- e-mail: deustua@stsci.edu; phone: +1-410-338-4832
- ★ *Dr. Deustua is the PI on the NSF grant that will help funding the the Calibration and Standardization of Large Surveys and Missions in Astronomy and Astrophysics Conference. I worked with Dr. Deustua on SNAP Calibration.*

Prof. Melville P. Ulmer

- ◇ Dept. of Physics & Astronomy, Dearborn Observatory, 2131 Tech Drive, Northwestern University, Evanston, IL 60208-2900
- e-mail: m-ulmer2@northwestern.edu; phone: +1-847-491-5633
- ★ *Prof. Ulmer is the Head of the Dept. of Physics and Astronomy at Northwestern Univ. I worked with Prof. Ulmer on Spitzer data for galaxy clusters.*

Prof. J. Allyn Smith

- ◇ Dept. of Physics & Astronomy, Austin Peay State University, Clarksville, TN 37044
- e-mail: smithj@apsu.edu; phone: +1-931-221-610
- ★ *Prof. Smith is member Physics & Astronomy at APSU. I worked with Prof. Smith on several projects including SNAP calibration, SDSS, DES, PreCam, and the u'g'r'i'z' Southern Hemisphere Standard Stars.*

Prof. Steve Kent

- ◇ Fermi National Accelerator Laboratory, P.O. Box 500 MS 127, Batavia, IL 60510
- e-mail: skent@fnal.gov; phone: +1-630-840-8264
- ★ *Prof. Kent head of EAG/Fermilab. I worked with Prof. Kent on SDSS, SNAP&DES.*

Dr. Chris Stoughton

- ◇ Fermi National Accelerator Laboratory, P.O. Box 500 MS 127, Batavia, IL 60510
- e-mail: stoughto@fnal.gov; phone: +1-630-840-2440
- ★ *I worked with Dr. Stoughton in worked under his supervision on setting up the interface for the SDSS DR1 DAS.*

Prof. Rene Walterbos

- ◇ Fermi National Accelerator Laboratory, P.O. Box 500 MS 127, Batavia, IL 60510
- e-mail: rwalterb@nmsu.edu; phone: +1-575-646-5990
- ★ *Prof. Walterbos was my direct supervisor at NMSU (2003–2004).*

Dr. Mike Syphers

- ◇ Fermi National Accelerator Laboratory, P.O. Box 500 MS 127, Batavia, IL 60510
- e-mail: syphers@fnal.gov; phone: +1-630-840-8863
- ★ *Dr. Syphers was my contact for the Fermi Quarknet.*

MORE INFORMATION

More information about

- The Dark Energy Survey can be found at <http://www.darkenergysurvey.org/>.
- The Blanco Cluster Survey can be found at <http://cosmology.uiuc.edu/BCS/>.
- The Sloan Digital Sky Survey can be found at <http://www.sdss.org/>
- Southern u'g'r'i'z' Standards can be found at http://www-star.fnal.gov/Southern_ugriz/index.html