

Shantanu Desai

Department of Astronomy and NCSA
1002 W. Green Street
University of Illinois
Urbana, IL 61801

e-mail: shantanu@illinois.edu
<http://cosmology.illinois.edu/~desai>
Phone: 814-777-4359
Fax: 217-244-7638

EDUCATION and EMPLOYMENT

University of Illinois	Research Associate , Astronomy	Aug 2008 onwards
Penn. State University	Research Associate , CGWP	Aug 2004 - July 2008
Boston University	Research Associate , Physics	Feb - July 2004
Boston University	Ph.D. , Physics	1999-2003
Boston University	M.A. , Astronomy	1995-1998
Indian Institute of Technology	B.Tech. , Engg. Physics	1991-1995

RESEARCH

Dark Energy Survey (2008-present)

- Development and testing of image detrending pipeline to reduce and analyze simulated data from Dark Energy Survey and real data from Blanco Mosaic 4m telescope. Also working on extending DESDM system to analyze data from other telescopes.
- Observing runs on Blanco CTIO 4 m telescope to observe optical counterparts of SZ detected clusters from South Pole Telescope, including PI of an observing run in July 2011.

LIGO Experiment (2004-2008)

- Near-realtime searches for gravitational wave bursts : With the help of colleagues at Penn State, set up a pipeline which analyzes LIGO data (with about one day latency) to search for unmodeled gravitational wave bursts and provide other diagnostic information about the detectors.
- Glitch and veto investigations of LIGO data : Maintained and upgraded an existing event display diagnostic tool which gives a snapshot of various LIGO interferometric and environmental channels at a given time. Helped pin down causes of many outlier events (called glitches) and identify intervals of bad data for the purposes of analysis.
- Searches for gravitational wave bursts from GRBs and other external triggers, using coherent network analysis with other LIGO colleagues. Led searches for gravitational waves from blazars.
- Exploring consequences of modified gravity models in the ultra-weak field regime for externally triggered gravitational wave searches. This work is done in collaboration with colleagues from University of Florida.

Super-Kamiokande Experiment (1999-present)

- Maintained and upgraded upward going muon data reduction to select upward and horizontal muons (about 20/day) from about a million cosmic ray muons/day (total data size of about 1 T-Byte/day) and to calculate the livetime. Also set up the reduction for Super-K-II to run in realtime.
- Looked for space-time coincidences between upward going muons from steady-state and transient point sources such as GRBs and SGRs. Primary author of ApJ papers on searches for neutrinos from gamma ray bursts and full paper on neutrino astronomy.
- Did WIMP searches with upward going muon events by looking for excess of events from the direction of Sun, Earth and Galactic Center. Obtained muon flux limits competitive with other upward muon based searches . Also obtained limits on WIMP-proton scalar as well as axial-vector cross-section using limits from the Earth and the Sun. Primary author of this paper published in Phys. Rev. D. This paper selected among top 15 hep-ex cited articles in 2009
- Developed the technique to select from all upward through-going muon sample, muons which lose energy through radiative processes like Bremsstrahlung. These “upward showering muons” constitute the highest energy neutrinos seen in Super-K with mean neutrino energy of about 1 TeV. Primary author of this paper published in Astroparticle Physics

Boston University

1999-2004

Super-Kamiokande Experiment, Research Assistant with Professor Lawrence Sulak and Ed Kearns

Thesis: High Energy Neutrino Astrophysics with Super-Kamiokande

Other Research Experience (Summer 1999)

- Helped in the development of a prototype quartz fiber calorimeter which will ultimately be used in the CMS detector at LHC. Did the cleaving of about 100 fibers. Tested the cleaving with a laser-based setup.

TEACHING AND MENTORING

- Teaching Fellow for AS101 (Solar System), AS102 (Astronomical Universe) and AS109 (Cosmology), Fall 1995-Spring 1998
Taught both daytime and nighttime laboratory exercises in each of the above freshman Astronomy courses at Boston University.
- Teaching Fellow for PY106 (Electricity and Magnetism) Spring 1999 at Boston University.
Taught the laboratory component of the Course
- Taught one lecture of undergraduate cosmology course at University of Illinois (for Professor Joseph Mohr)

Student Supervision

- Mentored K. McConnel in her senior B.S. thesis at M.I.T., May 2002 on *A Search for Ultra-high Energy Neutrinos from extragalactic sources*.
- Primary supervisor of undergraduate students at University of Illinois : George Mossessian and Salem Cherenet working on various aspects of Dark Energy Survey Data Management System

SERVICE, MEMBERSHIP, and OUTREACH

- Member of American Physical Society
- Member of American Astronomical Society
- Member, Super-Kamiokande Collaboration, 1999-2008
- Member, LIGO Scientific Collaboration, 2004-2009
- Member, Dark Energy Survey, 2008-present
- Member, South Pole Telescope Collaboration, 2009-present
- Refereed manuscripts for journals such as *Astroparticle Physics*, *Physical Review D.*, *Classical and Quantum Gravity*, *Physical Review Letters* and *New Journal of Physics*
- Made numerous contributions to *hepnames* database of SLAC
- Organizer of DES Algorithms meeting at Munich, May 2010

AWARDS

- Awarded Kavli-CERCA fellowship to attend the Kavli-CERCA Conference on the Future of Cosmology, Case Western Reserve University, Cleveland, OH, October 2003

PUBLICATIONS WITH PRIMARY AUTHORSHIP

- [1] “Search for Dark Matter WIMPs using Upward Through-Going Muons in Super-Kamiokande”, S. Desai *et al*, Phys Rev. **D70**, 083523 (2004).
- [2] “Reduced time delay for gravitational waves with dark matter emulators ”, S. Desai, E.O. Kahya, R.P. Woodard, Phys. Rev. **D77**, 124041, arXiv: 0804.3804 (2008)
- [3] “A Multiband Study of the Galaxy Populations of the first four SunyaevZeldovich effect selected galaxy clusters” A. Zenteno et al, Submitted to ApJ (2010)
- [4] “XMM-Newton detection of two clusters of galaxies with strong SPT Sunyaev-Zel’dovich effect signatures” R. Suhada et al, A&A **514**, L3 (2010)
- [5] “LSC Glitch Group : Monitoring Noise Transients during the fifth LIGO Science Run”, L. Blackburn *et al*, CQG, **25**, 184004, arXiv:0804.0800 (2008)
- [6] “Proposed searches for gravitational waves from PKS 2155-304 and other blazar flares”, S. Desai *et al*, CQG, **25**, 184024 (2008)
- [7] “Study of TeV Neutrinos with upward showering muons in Super-Kamiokande ”, S. Desai *et al*, Astroparticle Physics **29**, 42 (2008)
- [8] “Search for gravitational waves associated with pulsar glitches using a coherent network algorithm” K. Hayama, S. Desai, *et al*, CQG, **25**, 184016 (2008)
- [9] “Source Tracking for Sco-X1” K. Hayama, S.D. Mohanty, S. Desai, *et al*, CQG, **25**, 184021 (2008)
- [10] “Determining the angular momentum distribution of supernovae through gravitational wave observations” K. Hayama, S. Desai, *et al*, CQG **25**, 184022 (2008)
- [11] “Coherent Network Analysis for Triggered Gravitational Wave Burst Searches”, K. Hayama, S.D. Mohanty, M. Rakhmanov, S. Desai, CQG **24**, S681 (2007)
- [12] “Upward showering muons in Super-Kamiokande”, S. Desai for the Super-Kamiokande Collaboration, AIP Conf. Proc. **870**, 178 (2006)
- [13] “High energy neutrino astronomy using upward-going muons in Super-Kamiokande-I”, K. Abe *et al*, ApJ **652**, 198 (2006)
- [14] “A Measurement of Atmospheric Neutrino Oscillation Parameters by Super-Kamiokande I ”, Y. Ashie *et al*, Phys. Rev. **D71**, 112005 (2005)
- [15] “Study of Upward Showering Muons in Super-Kamiokande”, S. Desai *for the Super-K Collaboration* in Proceedings of 28th International Cosmic Ray Conference, Tsukuba, Japan (2003).
- [16] “Search for Diffuse Astrophysical Neutrino Flux Using Ultra-High Energy Upward-Going Muons in Super-Kamiokande I ”, M. Swanson *et al*, *Astrophysical J.* **652**, 206 (2006)
- [17] “Search for Dark Matter WIMPs using Upward Going Muons in Super-Kamiokande”, S. Desai *for the Super-K Collaboration*, in “ Sources and Detection of Dark Matter and Dark energy in the Universe ” edited by D.Cline (2001).
- [18] “Methods for Reducing False Alarms in Searches for Compact Binary Coalescences in LIGO Data”, J. Slutsky *et al*, CQG **27**, 165023 (2010)
- [19] “Indirect WIMP Searches Using Upward Through-going Muons in Super-Kamiokande”, S. Desai *for the Super-K Collaboration*, in Proceedings of 4th International Workshop on Identification of Dark Matter, edited by N.J.C. Spooner and V. Kudryavstev (2003).
- [20] “Evidence for an oscillatory signature in atmospheric neutrino oscillation”, Y. Ashie *et al*, Phys. Rev. Lett. **93**, 101801 (2004)

- [21] “Search for neutrinos from Gamma-Ray Bursts using Super-Kamiokande”, S. Fukuda *et al*, ApJ **578**, 317 (2002)
- [22] “Study of showering muons in Super-Kamiokande”, S. Desai *for the Super-K Collaboration* Proceedings of 29th ICRC, Pune India (2006)
- [23] “Astrophysically Triggered Searches for Gravitational Waves: Status and Prospects”, B. Abbott *et al*, CQG, 25, 114051, arXiv:0802.4320 (2008)
- [24] “Monitoring Sco X-1 for the Detection of Gravitational Waves with Networks of Gravitational Wave Detectors”, K. Hayama, S. Mohanty, M. Rakhmanov, S. Desai T. Summerscales, Journal of Physics: Conference Series, **120**, 032009 (2008)
- [25] “The Dark Energy Survey Data Management System: The Processing Framework”, M. Gower *et al*, ADASS XVII Processings (2009)
- [26] “The Dark Energy Survey Data Management System: The Coaddition Pipeline and PSF Homogenization”, T. Darnell *et al*, ADASS XVII Processings (2009)

OTHER PUBLICATIONS

- [27] “An SZ-selected sample of the most massive galaxy clusters in the 2500-square-degree South Pole Telescope survey” R. Williamson *et al*, Submitted to ApJ (2011)
- [28] “Discovery and Cosmological Implications of SPT-CL J2106-5844, the Most Massive Known Cluster at $z > 1$ ” R. Foley, *et al*, Submitted to ApJ (2011)
- [29] “SPT-CLJ0546-5345: A Massive $z > 1$ Galaxy Cluster Selected Via the Sunyaev-Zeldovich Effect with the South Pole Telescope” M. Brodwin *et al*, ApJ **721**, 90 (2010)
- [30] “X-ray Properties of the First SZE-selected Galaxy Cluster Sample from the South Pole Telescope” K. Andersson *et al*, ApJ (in press) (2010)
- [31] “Optical Redshift and Richness Estimates for Galaxy Clusters Selected with the Sunyaev-Zel’dovich Effect from 2008 South Pole Telescope Observations” F.W.High *et al*, ApJ **723**, 1736 (2010)
- [32] “Galaxy Clusters Selected with the Sunyaev-Zel’dovich Effect from 2008 South Pole Telescope Observations” K. Vanderlinde *et al*, ApJ **722**, 1180 (2010)
- [33] “First LIGO search for gravitational wave bursts from cosmic (super)strings” B. Abbott *et al*, PRD, **80**, 062002
- [34] “Search for gravitational wave ringdowns from perturbed black holes in LIGO S4 data” B. Abbott *et al*, PRD, **80**, 062001
- [35] “Searches for gravitational waves from known pulsars with S5 LIGO data” B. Abbott *et al*, ApJ (2009)
- [36] “Search for gravitational-wave bursts associated with gamma-ray bursts using data from LIGO Science Run 5 and Virgo Science Run 1” B. Abbott *et al*, ApJ **715**, 1438 (2010)
- [37] “Search for Matter-Dependent Atmospheric Neutrino Oscillations in Super-Kamiokande” Super-Kamiokande Collaboration, K. Abe *et al*, Phys. Rev. **D77**, 052001 (2008)
- [38] “Solar neutrino measurements in Super-Kamiokande-II”, K. Abe *et al*, Phys. Rev. **D78**, 032002 arXiv: 0803.4312 (2008)
- [39] “Search for Gravitational Waves from Low Mass Binary Coalescences in the First Year of LIGO’s S5 Data”, B. Abbott *et al*, Submitted to Phys. Rev. D., arXiv: 0901.0302 (2009)
- [40] “Search for gravitational waves from low mass compact binary coalescence in 186 days of LIGO’s fifth science run” B. Abbott *et al*, **80**, 7101

- [41] “First joint search for gravitational-wave bursts in LIGO and GEO600 data”, B. Abbott *et al*, **25**, 245008, (2008)
- [42] “All-sky LIGO Search for Periodic Gravitational Waves in the Early S5 Data”, B. Abbott *et al*, Phys. Rev. Lett. **102**, 111102 (2009)
- [43] “Search for Gravitational Wave Bursts from Soft Gamma Repeaters” B. Abbott *et al*, S. Barthelmy, N. Gehrels, K. C. Hurley, D. Palmer, Phys. Rev. Lett. **101**, 211102 [2008]
- [44] “Beating the spin-down limit on gravitational wave emission from the Crab pulsar”, B. Abbott *et al*, ApJ, **683L**, 45, (2008)
- [45] “The EinsteinHome search for periodic gravitational waves in LIGO S4 data” B. Abbott *et al*, Phys.Rev.**D79**, 022001 (2009)
- [46] “A Joint Search for Gravitational Wave Bursts with AURIGA and LIGO” L. Baggio *et al*, CQG **25**, 095004 (2008)
- [47] “Search of S3 LIGO data for gravitational wave signals from spinning black hole and neutron star binary inspirals” LIGO Scientific Collaboration: B. Abbott *et al*, Phys. Rev. **D78**, 042002 (2007)
- [48] “LIGO: The Laser Interferometer Gravitational-Wave Observatory” The LIGO Scientific Collaboration: B. Abbott *et al*, Rept. Prog. in Phys. (2007)
- [49] “Implications for the Origin of GRB 070201 from LIGO Observations” B. Abbott *et al*, ApJ, **681**, 1419 (2007)
- [50] “Three flavor neutrino oscillation analysis of atmospheric neutrinos in Super-Kamiokande I”, K. Abe *et al*, Phys Rev. **D74**, 032002 (2006)
- [51] “Search for Gravitational Waves Associated with 39 Gamma-Ray Bursts Using Data from the Second, Third, and Fourth LIGO Runs”, B. Abbott *et al*, Phys. Rev. **D77**, 062004 (2008)
- [52] “Search for gravitational-wave bursts in LIGO data from the fourth science run” B. Abbott *et al*, Class. Quant. Grav., **24**, 5343 (2007)
- [53] “Search for gravitational wave radiation associated with the pulsating tail of the SGR 1806-20 hyperflare of 27 December 2004 using LIGO ” B. Abbott *et al*, (2007), Phys. Rev. **D76**, 062003 astro-ph/0703419,
- [54] “Coherent searches for periodic gravitational waves from unknown isolated sources and Scorpius X-1”, B. Abbott *et al*, Phys. Rev. D, **D76**, 082001, gr-qc/0605028 (2006)
- [55] “Joint LIGO and TAMA300 Search for Gravitational Waves from Inspiralling Neutron Star Binaries”, B. Abbott *et al*, Phys. Rev. **D73**, 102002 gr-qc/0605028 (2006)
- [56] “Search for gravitational wave bursts in LIGO’s third science run”, B. Abbott *et al*, Class. Quant. Grav. **23**, S29 (2006)
- [57] “Search for gravitational waves from binary black hole inspirals in LIGO data”, B. Abbott *et al*, Phys. Rev. **D73**, 062001 (2006)
- [58] “First Cross-Correlation Analysis of Interferometric and Resonant-Bar Gravitational-Wave Data for Stochastic Backgrounds” B. Abbott *et al*, Phys. Rev. **D76**, 022001 (2007)
- [59] “Upper limit map of a background of gravitational waves” B. Abbott, *et al*, Phys. Rev. **D76**, 082003 (2007)
- [60] “Searching for Stochastic Background of Gravitational Waves with LIGO” B. Abbott *et al*, ApJ **659**, 918 (2007)
- [61] “Upper limits on gravitational wave emission from 78 radio pulsars” B. Abbott *et al*, Phys. Rev. **D76**, 082001 D (2007)

- [62] “Search for gravitational waves from binary inspirals in S3 and S4 LIGO data” B. Abbott *et al*, Submitted to Phys. Rev. D (2007)
- [63] “All-sky search for periodic gravitational waves in LIGO S4 data” B. Abbott *et al*, Phys. Rev. **D77**, 022001 (2008)
- [64] “Search for Supernova Neutrino Bursts at Super-Kamiokande” M. Ikeda, et al, Super-Kamiokande Collaboration, ApJ **669**, 519 (2007)
- [65] “Search for Neutral Q-balls in Super-Kamiokande II”, Y. Takenaga *et al*, Phys. Lett. **B467**, (2006)
- [66] “A Measurement of Atmospheric Neutrino Flux Consistent with Tau Neutrino Appearance”, K. Abe *et al*, Phys. Rev. Lett **97**, 171801 (2006)
- [67] “First all-sky upper limits from LIGO on the strength of periodic gravitational waves using the Hough transform”, B. Abbott *et al*, Phys. Rev. **D72**, 102004 (2005)
- [68] “Upper Limits on a Stochastic Background of Gravitational Waves”, B. Abbott *et al*, Phys. Rev. Lett. **95**, 221101 (2005)
- [69] “Upper limits from the LIGO and TAMA detectors on the rate of gravitational-wave bursts”, B. Abbott *et al*, Phys. Rev. **D72**, 122004 (2005)
- [70] “Upper Limits on gravitational wave bursts in LIGO’s second science run”, B. Abbott *et al*, Phys. Rev. **D72**, 062001 (2005)
- [71] “Observation of the Anisotropy of 10 TeV Primary Cosmic Ray Nuclei Flux with the Super-Kamiokande-I Detector”, G. Guillian *et al*, Phys. Rev. **D75**, 062003 (2007)
- [72] “Search for nucleon decay via modes favored by supersymmetric grand unification models in Super-Kamiokande-I”, K. Kobayashi *et al*, Phys. Rev. **D72**, 052007 (2005)
- [73] “Solar neutrino measurements in Super-Kamiokande-I” Y. Ashie *et al*, Phys. Rev. **D73**, 112001 (2006)
- [74] “Precise Measurement of the Solar Neutrino Day/Night and Seasonal Variation in Super-Kamiokande-I”, M. Smy *et al*, Phys. Rev. **D69**, 011104 (2004).
- [75] “Limit On the Neutrino Magnetic Moment Using 1496 Days of Super-Kamiokande-I Solar Neutrino Data”, D. Liu *et al*, Phys. Rev. Lett. **93**, 021802 (2004).
- [76] “Search for Supernova Relic Neutrinos at Super-Kamiokande”, M. Malek *et al*, Phys. Rev. Lett **90**, 061101 (2003).
- [77] “Search for anti-electron-neutrinos from the Sun at Super-Kamiokande-I”, Y. Gando *et al*, Phys. Rev. Lett **90**, 171302 (2003).
- [78] “A search for periodic modulations of the solar neutrino flux in Super-Kamiokande-I”, J. Yoo *et al*, Phys. Rev. **D68**, 092002 (2003).
- [79] “Determination of Solar Neutrino Oscillation Parameters using 1496 Days of Super-Kamiokande-I Data”, S. Fukuda *et al*, Phys. Lett. **B539**, 179 (2002).
- [80] “ The Super-Kamiokande Detector ”, S.Fukuda *et al*, NIM **205**, 418 (2003).
- [81] “Solar 8B and *hep* Neutrino Measurements from 1258 Days of Super-Kamiokande Data”, S. Fukuda *et al*, Phys. Rev. Lett. **86**, 5651 (2001).
- [82] “Constraints on Neutrino Oscillations Using 1258 Days of Super-Kamiokande Solar Neutrino Data”, S. Fukuda *et al*, Phys. Rev. Lett. **86**, 5656 (2001).

PRESENTATIONS

Indirect searches for dark matter with upward muons, Super-Kamiokande Collaboration meeting, Osawano, Japan, December 1999

Indirect Dark Matter Searches in Super-Kamiokande, 4th International Symposium on Sources and Detection of Dark Matter in the Universe, Marina del Rey, CA, February 23-25, 2000.

Update on WIMP searches and comparison with DAMA, Super-Kamiokande Collaboration meeting, Osawano, Japan, June 2000

Update on WIMP searches, Super-Kamiokande Collaboration meeting, Osawano, Japan, December 2000

WIMP Searches with Super-Kamiokande, in Frontiers In Contemporary Physics II, Lecture and Workshop Series at Vanderbilt University March 5-10 2001.

Changes to upmu reduction, Super-Kamiokande Collaboration meeting, Osawano, Japan, June 2001

GRB searches with upward muons, Super-Kamiokande Collaboration meeting, Osawano, Japan, June 2001

Updates to upmu reduction, Super-Kamiokande Collaboration meeting, Maui, Hawaii, October 2001

Limits on WIMP spin-dependent cross-section with Super-Kamiokande, Super-Kamiokande Collaboration meeting, Maui, Hawaii, October 2001

Dark side of the Universe: Results from Super-Kamiokande, Seminar , Boston University, Aug. 9, 2002.

Indirect searches for WIMPs with Super-Kamiokande, in 4th International Workshop on the Identification of Dark Matter at St Williams College, York Minister, York, UK, September 2-6 2002.

Showering upmus, Super-Kamiokande Collaboration meeting, Osawano, Japan, November 2002

Poster titled *Physics and Astronomy with the highest energy neutrinos in Super-Kamiokande*, Graduate Student Science and Technology Day, Boston University, March 25 2003.

Showering upward muons, Super-Kamiokande Collaboration meeting, Osawano, Japan, June 2003

Upmu analysis, Super-Kamiokande Collaboration meeting, Osawano, Japan, November 2003

Upward showering muons in Super-Kamiokande, Final Ph.D thesis defence presentation, Boston University, 4th December 2003

Upward Showering Muons in Super-Kamiokande, 28th International Cosmic Ray Conference Tsukuba, Japan July 31- August 7 2003.

Block-Normal based veto analysis, LIGO Scientific Collaboration meeting, Livingston, LA, March 2005.

Poster on *Vetoed for Gravitational Wave Bursts*, NSF review of Penn State Center For Gravitational Wave Physics, April 4 2005.

Seminar on *Upward going muons in Super-Kamiokande*, Santa-Cruz Institute of Particle Physics, May 2005.

Update on Block-Normal based veto analysis, LIGO Scientific collaboration meeting, Hanford, WA, August 2005.

Poster on *Vetoed for Gravitational Wave Bursts in fourth LIGO science run*, NSF site visit of Penn State Center for Gravitational Wave Physics, November 2005.

The Event display tool and loudest Block-Normal events, LIGO scientific collaboration meeting, Hanford, WA, March 2006

Upward Showering Muons in Super-Kamiokande, CIPANP 2006, San Juan PR, May 2006

Block-Normal, Q-scan and Event Display based glitch and veto analysis, LIGO scientific collaboration meeting, Louisiana State University, Baton Rouge, August 2006

The Event Display tool, Scientific Monitoring Camp, Livingston, LA, August 2006

New glitches seen in Block-Normal, LIGO scientific collaboration, Baton Rouge, LA, March 2007

Noise Transients and Veto studies for Gravitational Wave Bursts in LIGO, APS meeting, Jacksonville, FL, April 2007

Searches for Gravitational Wave Bursts with LIGO, 30th international Cosmic ray Conference, Merida, Mexico, July 2007

New glitches seen in Block-Normal since March meeting, LIGO Scientific Collaboration meeting, MIT, Cambridge, MA, July 2007

Poster on *Proposed Searches for gravitational waves from PKS 2155-304*, 12th Gravitational Wave Data Analysis Workshop, Cambridge, MA, December 2007

Poster on *Highlights of LSC glitch group activities during S5*, 12th Gravitational Wave Data Analysis Workshop, Cambridge, MA, December 2007

Seminar on *Searches for gravitational wave bursts in LIGO : Challenges and prospects*, Department of Astronomy, Penn State University, January 2008

Poster on *Activities of the LSC glitch group during the fifth LIGO Science Run*, CGWP Poster Session, Penn State University, April 2008

Testing modified gravity theories with externally triggered gravitational wave searches, 11th Eastern Gravity Meeting, Penn State University, May 12-13 2008

Seminar on *Searches for Gravitational Wave bursts : Methods and Challenges*, LIGO Laboratory, MIT, Cambridge, MA July 2008

Astronomy Colloquium on *Searches for Gravitational Wave Bursts: Methods and Challenges*, University of Illinois, Urbana-Champaign, Sept. 2008

Dark Energy Survey Data Management System and its Applications, Poster at January 2010 AAS meeting, Washington DC, Jan 2010

Astronomical Image Masking, DES Algorithms meeting, Munich, Germany, May 2010

DC5 Processing Overview, Joint DOE-NSF review of Dark Energy Survey, Fermilab, Batavia, IL, June 2010

Dark Energy Data Management System, Computational Astrostatistics Meeting, Cambridge, MA, August 2010

Results from DESDM Pipeline on Blanco Cosmology Survey Data, AAS meeting, Seattle, WA, Jan 2011