### David L. Nidever

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# **Curriculum Vitae**

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### **ACADEMIC EMPLOYMENT HISTORY**

- Associate Scientist, National Optical Astronomy Observatory (NOAO), August 2016 present
- LSST Data Management Survey Science Lead / Assistant Astronomer, LSST/Steward Observatory, August 2015 - July 2016
- Dean B. McLaughlin Fellow, University of Michigan, August 2012 July 2015
- APOGEE Research Associate, The University of Virginia, January 2010 July 2012
- Graduate Research Assistant, The University of Virginia, August 2004 December 2009
- Undergraduate Research Assistant, San Francisco State University, January 1999 November 2001

# **EDUCATION**

- The University of Virginia, Charlottesville, VA, September 2004 December 2009
  - Ph.D in Astronomy, December 2009
  - M.S. in Astronomy, May 2006
- San Francisco State University, San Francisco, CA, September 1998 May 2001
  - B.A. in Philosophy, August 2000
  - B.S. in Physics with Concentration in Astrophysics, May 2000

#### RESEARCH INTERESTS

- Near-field cosmology, galaxy formation and evolution
- · Large sky surveys, optical/IR imaging and spectroscopy
- Milky Way structure and chemical evolution
- Stellar populations, structure and assembly history of the Magellanic Clouds
- The origin of the Magellanic Stream and high velocity clouds
- Software development
- Local Group dwarf galaxies

# HONORS, AWARDS AND GRANTS (Total \$815,919)

- PI of SMASH NSF Astronomy & Astrophysics Research Grant (\$454,419)
- Dean B. McLaughlin Prize Fellowship, University of Michigan, 2012-2015 (\$205,000)
- Achievement Rewards for College Scientists, The University of Virginia, 2005-2009 (\$60,000)
- Award for Excellence in Scholarship in the Sciences & Engineering, The University of Virginia, 2008+2009 (\$10,000)
- President's Fellowship, The University of Virginia, 2004-2008 (\$38,500)
- Virginia Space Grant Consortium Fellowship, The University of Virginia, 2005-2008 (\$15,000)
- Green Bank Telescope Student Support, The University of Virginia, 2006-2007 (\$19,000)
- Sigma Xi Grants-in-Aid of Research Awards, The University of Virginia, 2007 (\$8,000)
- Department of Defense Scholarship, San Francisco State University, 1999-2000 (\$6,000)

### LEADERSHIP AND TEAM MEMBERSHIP ROLES

- PI: Survey of the MAgellanic Stellar History (SMASH), ~50 nights on CTIO+DECam
- LSST Data Management Survey Science Lead, responsible for scientific verification of the LSST software pipeline and scientific lead of the LSST DM Science Quality and Reliability Engineering (SQuaRE) group in Tucson, 2015-2016

- Reduction pipeline team leader for SDSS-IV/APOGEE-2, 2014-2015
- Core team member and Architect of the SDSS-III Apache Point Observatory Galactic Evolution Experiment (APOGEE)
- PI: The MAgellanic Periphery Survey (MAPS), 40 nights on 4-6m class telescopes
- **PI:** GBT Survey of the tip of the Magellanic Stream (435 hours)
- co-PI: Large Area Survey of the SMC Stellar Outskirts (LASSO)
- Member of the Galactic Australia SKA Pathfinder (GASKAP) Spectral Line survey

### PROFESSIONAL AND UNIVERSITY SERVICE

- Co-chair of the conference "Local Group Astrostatistics: Bridging Simulations and Observations" held at the University of Michigan, Ann Arbor, June 1-4, 2015
- NOAO Time Allocation Committee member (Galactic) for semesters 2015A-2015B
- Served as HST Cycle 22 Review Panel member (Stellar Populations)
- Referee for multiple manuscripts in the Astrophysical Journal and Astronomy & Astrophysics
- Served on graduate student panel that met with representatives of the research consultancy Washington Advisory Group which conducted a review of UVA's research enterprise
- Served on graduate student committee to interview candidates for the position of UVA Dean of the College and Graduate School of Arts & Sciences

### **MENTORING**

- Postdoctoral researcher Dr. Yumi Choi, NOAO, Sep 2016-present
- Graduate student Colin Slater, University of Michigan, 2014-2016
- Graduate student Nick Troup, University of Virginia, 2014-2016

### PRINCIPAL INVESTIGATOR OBSERVING PROPOSALS

- "Exploring the LMC Stellar Halo with SMASH and M2FS"
  Awarded 2 nights on 6.5-meter Magellan telescope with M2FS
- "The Shanghai Michigan Bulge (ShaMBu) Survey"
   Awarded 1 night on 6.5-meter Magellan telescope with M2FS
- "Survey of the MAgellanic Stellar History (SMASH)" Approved NOAO DECam survey. Awarded 30 nights on the 4-m and 28 nights on the 0.9-m telescopes at the Cerro Tololo Inter-American Observatory, Chile.
- "Exploring the Kinematical and Chemical Properties of the LMC Stellar Periphery" Awarded 8.5 nights on the 6.5-meter Magellan telescope, Chile.
- "DECam Search for the Stellar Component of the Magellanic Leading Arm"
  Awarded 4 nights on the 4-m telescope at the Cerro Tololo Inter-American Observatory, Chile.
- "RV Confirmation of APOGEE RV Variables"
  Awarded 2 half-nights of Director's discretionary time on the Apache Point Observatory 3.5-meter telescope.
- "DECam Magellanic Clouds Survey Pilot Project"
  Awarded 2 nights on the 4-m telescope at the Cerro Tololo Inter-American Observatory, Chile.
- "Probing the Southern Bulge for High-Velocity Bar Stars"
  Awarded 5 nights on the 6.5-meter Magellan telescope, Chile.
- "A Large Archaeological Survey of the Small Magellanic Cloud"
  Awarded 3 nights on the 4-m telescope at the Cerro Tololo Inter-American Observatory, Chile.

- "Exploring the Nature of the Extended Population of the Large Magellanic Cloud" Awarded 3 nights on the 6.5-meter Magellan telescope, Chile.
- "Exploring the Periphery of the Large Magellanic Cloud" Awarded 4 nights on the 6.5-meter Magellan telescope, Chile.
- "Constraining the Milky Way Mass with the Magellanic Stream"
  Awarded 435 hours over 2 years on the 100-meter Green Bank radio Telescope, West Virginia.
- "A New Component of the Large Magellanic Cloud: Stellar Halo or Tidal Debris?"
  Awarded 10 nights on the 4-m telescope at the Cerro Tololo Inter-American Observatory, Chile.
- "Are There Young Stars in the Magellanic Stream"
  Awarded 3 nights on the 1.5-m telescope at the Cerro Tololo Inter-American Observatory, Chile.
- "A New Component of the Large Magellanic Cloud: Stellar Halo or Tidal Debris?" Awarded 5 nights on the 4-m telescope at the Cerro Tololo Inter-American Observatory, Chile.
- "HI Mapping of the Extended Magellanic Stream"
  Awarded 102 hours on the Green Bank Telescope, West Virginia.
- "Reaching the edge of the Large Magellanic Cloud"

  Awarded 8 nights on the 4-m telescope at the Cerro Tololo Inter-American Observatory, Chile.

# CO-INVESTIGATOR OBSERVING PROPOSALS

- "A Spectroscopic Reconnaissance of Newly-Discovered Dwarf Galaxies in the Southern Sky" PI: Mario Mateo, Awarded 6 nights on the 6.5-meter Magellan telescope with M2FS.
- "The Lowest Mass Galaxies with Extended Star Forming Histories: A Cosmological Challenge" PI: Carme Gallart, Awarded 13 orbits on the Hubble Space Telescope with ACS/WFC3.
- "The Stellar Halos and Dwarf Satellites of M82+/-1"
  PI: Eric Bell, Awarded 2 nights on Subaru with Hyper Suprime-Cam.
- "Verification and Characterization of Hot Jupiter Candidates Discovered by SDSS-III APOGEE-1" PI: Nicholas Troup, Awarded 1 night on 3.5-meter WIYN telescope and DSSI.
- "Washington Photometry For High Fidelity APOGEE-2 Targeting of Magellanic Cloud Giants" PI: Douglas Geisler, Awarded 9 nights on ESO 2.2-meter telescope and WFI.
- "An Abridged Tail: Mapping the Palomar 5 Tidal Stream with DECam" PI: Marla Geha, Awarded 2 nights on CTIO 4-meter telescope and DECam.
- "Does Infalling Gas Survive the Galactic Halo? A Case Study of Complex A" PI: Kat Barger, Awarded 72 hours on the Green Bank Telescope.
- "The Carnegie RR Lyrae Program"
  - PI: Wendy Freedman, Awarded 779 hours on the Spitzer Space telescope.
- "Diagnosing the Agents of Aging on the Magellanic Stream"

  Pl: Lou Nigra, Awarded 75 hours on the Green Bank Telescor
  - PI: Lou Nigra, Awarded 75 hours on the Green Bank Telescope.
- "GASKAP: The Galactic Australian SKA Pathfinder Spectral Line Survey" PI: John Dickey, Approved by CSIRO as an ASKAP survey project (9,000 hours).
- "Probing the Ionized Gas in the Magellanic Stream"
  - PI: Christopher Thom, Awarded 14 orbits on the Hubble Space Telescope with COS.
- "Galactic Structure and Star Formation in Vela-Carina"
   PI: Steven Majewski, Awarded 119 hours on the Spitzer Space Telescope.

### SOFTWARE PACKAGES DEVELOPED

- APOGEE Data Reduction Pipeline Fully-automated pipeline to reduce the raw up-the-ramp APOGEE spectroscopic data consisting of 300 fiber spectra per observation (in IDL, ~20,000 lines of code). Described in Nidever et al. (2015) and available at http://www.sdss3.org/svn/repo/apogee/apogeereduce/.
- *PHOTRED* Fully-automated, generic, photometric reduction package based on DAOPHOT/ ALLSTAR/ALLFRAME. Any flat images can be input and final, calibrated, PSF photometry (with accurate astrometry) plus diagnostic webpages with plots are output (in IDL, ~40,000 lines of code). Publicy available online at https://github.com/dnidever/PHOTRED.
- SPECFIT Fully-automated software to fit synthetic spectra to observed spectra in order to obtain stellar parameters Teff, logg, [M/H],  $[\alpha/Fe]$ , RV and  $v\sin i$  (in IDL,  $\sim$ 7,700 lines of code).
- Gaussian Decomposition software Fully-automated software to Gaussian decompose spectra in an HI datacube. (in IDL, ~4,600 lines of code). Described in Nidever, Majewski & Burton (2008).
- *ISOFIT* Fully-automated software to fit theoretical isochrones to observed color-magnitude diagrams and solve for distance, reddening, age and metallicity. (in IDL, ~800 lines of code).
- EZ\_SPAM Easy Stellar Parameters And Metallicites. Stellar parameters (Teff, logg) and metallicities are obtained for observed stellar spectra using calculated Lick indices and fitting functions (with J.Carlin, in IDL, ~2,000 lines of code).
- *GALSAT* N-body (and restricted N-body) code for modeling galactic satellites in the MW potential (based on the N-body code by Piet Hut and Jun Makino). Includes a program to automatically find the best-matching MW satellite orbit (or MW satellite tidal tails) to observed data using a genetic algorithm to search the orbital parameter space (in C++ with IDL interface, ~1,800 lines of code).

### RESEARCH HIGHLIGHTS

• Galactic Structure and Chemical Evolution with APOGEE:

Used the APOGEE catalog of Milky Way giant stars, reduced with the custom software that I developed, to study the chemistry and kinematics of our galaxy. Utilized the APOGEE red clump catalog to study the  $\alpha$ -element abundances across the Milky Way and discovered that the early evolution of the MW disk was characterized by stars that shared a similar star formation history and were formed in a well-mixed, turbulent, and molecular-dominated environment. Also used the accurate APOGEE measurements of stellar motions to discover a new population of high-velocity stars in the Milky Way bar. See Nidever et al. (2012b, 2014, 2015a).

• Probing the Assembly of Dwarf Galaxies with the Magellanic Clouds:

Used large-aperture optical telescopes to measure motions and compositions of stars in the outskirts of the Magellanic Clouds, dwarf satellite galaxies of the Milky Way. Discovered a new, extended, halo-like stellar population of the Large Magellanic Cloud and an extended stellar periphery around the Small Magellanic Cloud. PI of the Survey of the MAgellanic Stellar History (SMASH), a 40 night NOAO DECam survey of the extended stellar components of the LMC/SMC. See Majewski, Nidever et al. (2009) and Nidever et al. (2011, 2015b).

• The Origin and Structure of the Magellanic Stream:

Used the Leiden-Argentine-Bonn all-sky radio survey and the 100-meter Green Bank Telescope to map out the morphology and velocity of the Magellanic Stream, a giant neutral hydrogen gas structure

orbiting our Milky Way galaxy. Used new analysis techniques to discover the origin of the Stream in the Large Magellanic Cloud and developed a new formation mechanism via stellar feedback. See Nidever et al. (2008, 2010).

• The Fine-Scale Dust Structure of the Milky Way Galaxy:

Used observations at infrared wavelengths from the Two Micron All Sky Survey and the *Spitzer Space Telescope*, as well as novel techniques, to map out the dust structure in our Milky Way galaxy. See Majewski, Zasowski & Nidever (2010) and Nidever et al. (2012a).

• Accurate Absolute Radial Velocities of ~900 Stars:

Developed software to measure highly-accurate absolute line-of-sight velocities for ~900 stars using ~15,000 digital stellar spectra from the Keck 10-m and Lick 3-m telescopes previously obtained by the California & Carnegie Planet Search Project. These measurements are often used by members of the community as radial velocity standards. See Nidever et al. (2002).

# Press & Media

- "Milky Way's baby brother caught copying its star shredding habit", New Scientist, Sep. 29, 2016
- SDSS press release "An Oasis in the Brown Dwarf Desert Astronomers Surprised, Relieved" (March 2016).
- NOAO press release "NOAO: Smashing Results About Our Nearby Galactic Neighbors" (Jan 2015). Widely covered in online press such as Astronomy Magazine, Space Daily, PhysOrg.
- Press conference panelist, American Astronomical Society Meeting: "First Results of the Survey of the Magellanic Stellar History SMASH" (Jan 2015)
- "Smashing results about our nearby galactic neighbors", Astronomy Magazine, January, 2015
- Commented in "Star Birth Sparked at the Galaxy's Edge", Scientific American, April 4, 2014
- Research mentioned in "The Galaxy Collision Next Door", Scientific American, Nov. 22, 2013
- "Giant band of galactic gas likely has dual origin", Nature News, May 21, 2013
- Research mentioned in "Star Performers: The Magellanic Clouds", Scientific American, March 20, 2013
- Magellanic Stream image on Astronomy Picture Of the Day (APOD) January 25, 2010 and August 15, 2013; in the *HST* press release "*Hubble finds source of Magellanic Stream*", August 8, 2013; and in the book "Space", Dorling Kindersley, 2010.
- Sloan Digital Sky Survey-III press release "So These Stars Orbit in a Bar ..." (Dec 2012).
- Sloan Digital Sky Survey-III blog post "APOGEE Confirms Its First Known Exoplanet!" (Jun 2012).
- SDSS-III press release "New Instrument Peers Through the Heart of the Milky Way" (Jan 2012).
- National Radio Astronomy Observatory press release "*Giant Intergalactic Gas Stream Longer than Thought*" (Jan 2010). Widely covered in online press such as National Geographic News, Science Daily, Astronomy Now, PhysOrg, and 40+ others.

### **SELECTION OF RECENT PRESENTATIONS**

- Invited colloquium, Caltech, Pasadena, California, April 2016.
- Invited talk, Lorentz Workshop on Globular Clusters and Galaxy Halos, Leiden, Netherlands, Feb 2016.
- Invited colloquium, University of Virginia/NRAO, Charlottesville, Virginia, December 2015.
- Contributed talk, Local Group Astrostatistics conference, Ann Arbor, Michigan, June 2015.
- Invited talk, AAS APOGEE Special Session, January 2015.

- Invited colloquium, University of Cambridge Institute for Astrophysics colloquium, November 2014.
- Invited colloquium, New Mexico State University Department of Astronomy colloquium, Oct 2014.
- Invited talk, "Tracing chemical evolution over the extent of the Milky Way's Disk with APOGEE Red Clump Stars", SDSS-IV Collaboration Meeting, Salt Lake City, July 2014.
- Contributed talk, "Disk Destruction and (Re)-Creation in the Magellanic Clouds", Structure and Dynamics of Disk Galaxies, Petit Jean Mountain, Arkansas, August 2013.
- Invited talk, "The Outer Limits of the Milky Way" meeting-in-a-meeting at the 222nd meeting of the American Astronomical Society, Indianapolis, IN, June 2013.
- Invited colloquium, University of Wisconsin Madison Department of Astronomy colloquium, Madison, WI, April 2013.
- Invited colloquium, Michigan State University Astronomy seminar, East Lansing, MI, February 2013.
- Invited colloquium, University of Notre Dame Astronomy seminar, Notre Dame, IL, November 2012
- Invited colloquium, NYU Center for Cosmology and Particle Physics seminar, New York, NY, Nov. 2012.
- Invited colloquium, UIUC Department of Astronomy colloquium, Urbana, Illinois, October 2012.
- Invited talk, "The Magellanic System: In Perspective", Perth, Australia, September 2012.
- Invited colloquium, Penn State University Center for Exoplanets and Habitable Worlds seminar, State College, PA, February 2012.
- Invited plenary talk, SDSS-III Collaboration Meeting, Vanderbilt University, Nashville, August 2011.
- Invited colloquium, Center for Astrophysics, Boston, MA, September 2010.
- Invited talk, Magellanic Clouds splinter meeting of the conference "Zooming in: The Cosmos at High Resolution", Bonn, Germany, September 2010.

# **TEACHING EXPERIENCE**

- *Instructor*, San Francisco State University, Summer 2000, Fall 2000, Summer 2001. Primary instructor for "General Physics Laboratory" and "Introduction to Astronomy Laboratory." Gave lectures, helped students with lab assignments, prepared tests, and assigned grades.
- *Mathematics Teacher*, AACE Upward Bound, San Francisco, Summer 2001. Developed curriculum for "Advanced Algebra & Trigonometry" and "Precalculus." Taught classes to high school students.
- *Science Teacher*, Johns Hopkins University Center for Talented Youth, Summer 2002. Developed curriculum for "Inventions" and "Science & Engineering" and taught classes to elementary and middle school students.
- *Private Math Tutor*, March 2002 June 2002. Mathematics tutor for students in middle and high school.
- English as a Second Language Teacher, Berlitz Budapest and Seven Sisters Austria, September 2002
   July 2003. English as a Second Language teacher for middle and high school aged children in classroom setting. Also taught private and group classes for adults.

### **PUBLICATION METRICS**

87 papers in refereed journals (11 first author).

Publications cited 6050/781 times (Any author/First author) through 3/2017

H-indices: 35/10 (Any author/First author)

# FIRST AUTHOR REFEREED PUBLICATIONS

- 11. Nidever, D. L., Olsen, K., et al. "SMASH Survey of the Magellanic Stellar History", 2017, AJ, submitted
- 10. Nidever, D. L., Holtzman, J., et al. "The Data Reduction Pipeline for the Apache Point Observatory Galactic Evolution Experiment", 2015, AJ, 150, 173
- 9. Nidever, D. L., Bovy, J., et al. "Tracing chemical evolution over the extent of the Milky Way's Disk with APOGEE Red Clump Stars", 2014, ApJ, 796, 38
- 8. Nidever, D. L., Ashley, T., et al. "Evidence for an Interaction in the Nearest Starbursting Dwarf Irregular Galaxy IC 10", 2013, ApJL, Vol. 779, ID L15
- 7. Nidever, D. L., Monachesi, A., et al. "An Old Stellar Component of the Tidally-Stripped Magellanic Bridge", 2013, ApJ, Vol. 779, ID 145
- 6. Nidever, D. L., Zasowski, G., Majewski, S.R., et al. "The Apache Point Observatory Galactic Evolution Experiment: First Detection of High-velocity Milky Way Bar Stars", 2012, ApJL, Vol. 755, Issue 2, Article ID L25
- 5. Nidever, D. L., Zasowski, G., & Majewski, S. R. "Lifting the Dusty Veil with Near- and Mid-Infrared Photometry. III. Two-Dimensional Extinction Maps of the Galactic Midplane Using the Rayleigh-Jeans Color Excess Method", 2012, ApJS, Vol 201, Issue 2, Article ID 35
- 4. Nidever, D. L., Majewski, S. R., Muñoz, R. R., Beaton, R. L., Patterson, R. J., & Kunkel W. E. "Discovery of a Large Stellar Periphery Around the Small Magellanic Cloud", 2010, ApJL, Vol 733, Issue 1, Article ID L10
- 3. Nidever, D. L., Majewski, S. R., & Burton, W. B. "The 200 Degree-Long Magellanic Stream System", 2010, ApJ, Vol 723, Issue 2, pp. 1618-1631
- 2. Nidever, D. L., Majewski, S. R., & Burton, W. B. "The Origin of the Magellanic Stream and Its Leading Arm", 2008, ApJ, Vol 679, Issue 1, pp. 432-459
- 1. Nidever, D. L., Marcy, G. W., Butler, R. P., Fischer, D. A., & Vogt, S. S. "Radial Velocities for 889 Late-type Stars", 2002, ApJS, Vol 141, Issue 2, pp. 503-522 (319 citations to date)

### SECOND/THIRD AUTHOR REFEREED PUBLICATIONS

- 10. Slater, C., **Nidever, D. L.**, et al. "The Stellar Density Profile of the Distant Galactic Halo", 2016, ApJ, 832, 206
- 9. Martin, N., Jungbluth, V, **Nidever, D. L.**, et al. "SMASH 1: a very faint globular cluster disrupting in the outer reaches of the LMC?", 2016, ApJL, 830, 10
- 8. Troup, N. W., **Nidever, D. L.**, et al. "Companions to APOGEE Stars I: A Milky Way-Spanning Catalog of Stellar and Substellar Companion Candidates and their Diverse Hosts", 2016, AJ, 151, 85
- 7. Loebman, S. R., Debattista, V. P., **Nidever, D. L.**, et al. "Imprints of Radial Migration on the Milky Way's Metallicity Distribution Functions", 2016, ApJL, 818, 6
- 6. Martin, N., **Nidever, D. L.**, et al. "Hydra II: A Faint and Compact Milky Way Dwarf Galaxy Found in the Survey of the Magellanic Stellar History", 2015, ApJ Letters, 804, L5
- 5. Bovy, J., **Nidever, D. L.** et al. "The APOGEE Red Clump Catalog: Precise Distances, Velocities, and High-Resolution Elemental Abundances Over A Large Area of the Milky Way's Disk", 2014, ApJ, 790, 127
- Majewski, S. R., Nidever, D. L., Smith, V. V., Damke, G. J., Kunkel, W. E., Patterson, R. J. & Bizyaev, D. "Exploring Halo Substructure with Giant Stars: Substructure in the Local Halo as seen in the Grid Giant Star Survey Including Extended Tidal Debris from ω Centauri", 2012, ApJ, Vol 747, Issue 2, Article ID L37
- 3. Majewski, S. R., Zasowski, G. & **Nidever, D. L.** "Lifting the Dusty Veil with Near- and Mid-Infrared Photometry. I. Description and Applications of the Rayleigh-Jeans Color Excess Method", 2010, ApJ, Vol 739, Issue 1, Article ID 25
- 2. Reines, A. E., **Nidever, D. L.**, Whelan, D. G., & Johnson, K. E. "The Importance of Nebular Continuum and Line Emission in Observations of Young Massive Star Clusters", 2010, ApJ, Vol 708, Issue 1, pp. 26-37
- 1. Pourbaix, D., **Nidever, D.**, et al. "Constraining the difference of convective blueshift between the components of alpha Cen with precise radial velocities", 2002, A&A, Vol 386, pp. 280-285

### ADDITIONAL REFEREED PUBLICATIONS

- 66. Mackereth, J. T., et al. "The age-metallicity structure of the Milky Way disk", MNRAS, submitted
- 65. Cunha, K. et al. "Adding the s-Process Element Cerium to the APOGEE Survey: Identification and Characterization of Ce II Lines in the H-band Spectral Window", AAS, submitted

- 64. Pieres, A., et al. "A stellar over-density associated with the Small Magellanic Cloud", MNRAS, submitted
- 63. Garcia-Perez, A., et al., "The Bulge Metallicity Distribution from the APOGEE Survey", AJ, submitted
- 62. Majewski, S. R. et al. "The Apache Point Observatory Galactic Evolution Experiment (APOGEE)", AJ, submitted
- 61. SDSS Collaboration, Albareti, F., et al. "The Thirteenth Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the SDSS-IV Survey MApping Nearby Galaxies at Apache Point Observatory", ApJS, submitted
- 60. Souto, D., et al. "Chemical Abundances of M-dwarfs from the APOGEE Survey. I. The Exoplanet Hosting Stars Kepler-138 and Kepler-186", 2017, ApJ, 835, 239
- 59. Drlica-Wagner, A., et al. "An Ultra-Faint Galaxy Candidate Discovered in Early Data from the Magellanic Satellites Survey", 2016, ApJL, 833, L5
- 58. Schiavon, R. R., et al. "Chemical tagging with APOGEE: Discovery of a large population of field bulge stars with likely globular cluster origin", MNRAS, 465, 501
- 57. Martell, S., et al., "Chemical tagging in the SDSS-III/APOGEE survey: new identifications of halo stars with globular cluster origins", 2016, ApJ, 825, 146
- 56. Anders, F. et al. "Galactic Archaeology with asteroseismology and spectroscopy: Red giants observed by CoRoT and APOGEE", 2017, A&A, 597, A30
- 55. Cunha, K., et al. "Chemical abundance gradients from open clusters in the Milky Way disk: results from the APOGEE survey", 2016, AN, 337, 922
- 54. Garcia Perez, A. E. et al. "ASPCAP: The Apogee Stellar Parameter and Chemical Abundances Pipeline", 2016, AJ, 151, 144
- 53. Bovy, J., Rix, H-W, Schlafly, E. F., **Nidever, D. L.**, et al. "The stellar population structure of the Galactic disk", 2016, ApJ, 823, 30
- 52. Vivas, A. K, et al. "Variable stars in the field of the Hydra II ultra-faint dwarf galaxy", 2016, AJ, 151, 118
- 51. Bertran de Lis, S., et al. "Cosmic Variance in [O/Fe] in the Galactic Disk", 2016, A&A, 590, 74
- 50. Walker, M. G. et al. "Magellan/M2FS Spectroscopy of Tucana 2 and Grus 1", 2016, ApJ, 819, 53
- 49. Ness, M. et al. "APOGEE Kinematics I: Overview of the Kinematics of the Galactic Bulge as mapped by APOGEE", 2016, ApJ, 819, 2

- 48. Roederer, I., et al. "Detailed Chemical Abundances in the r-Process-Rich Ultra-Faint Dwarf Galaxy Reticulum 2", 2016, AJ, 151, 85
- 47. Da Rio, N., et al. "IN-SYNC IV The Young Stellar Population in the Orion A Molecular Clouds", 2016, ApJ, 818, 59
- 46. Feuillet, D. et al. "Determining Ages of APOGEE Giants with Known Distances", ApJ, 817, 40
- 45. Holtzman, J., et al. "Abundances, Stellar Parameters, and Spectra from the SDSS-III/APOGE Survey", 2015, AJ, 150, 148
- 44. Martig, M. et al. "Young  $\alpha$ -enriched giant stars in the solar neighbourhood", 2015, MNRAS, 451, 2230
- 43. Hayden, M. et al. "Chemical Cartography with APOGEE: Metallicity Distribution Functions and the Chemical Structure of the Milky Way Disk", 2015, ApJ, 808, 132
- 42. Alam et al. "The Eleventh and Twelfth Data Releases of the Sloan Digital Sky Survey: Final Data from SDSS-III", 2015, ApJS, 219, 12
- 41. Tayer, J. et al. "Rapid Rotation of Low-Mass Red Giants Using APOKASC: A Measure of Interaction Rates on the Post-main-sequence", 2015, ApJ, 807, 82
- 40. Cottaar, M., et al. "IN-SYNC III: The Dynamical State of IC 348 Super-Virial Velocity Dispersion and a Puzzling Sign of Convergence", 2015, ApJ, 807, 27
- 39. Meszaros, Sz. et al. "Exploring Anticorrelations and Light Element Variations in Northern Globular Clusters Observed by the APOGEE Survey", 2015, AJ, 149, 153
- 38. Fleming, S. W., et al. "The APOGEE Spectroscopic Survey of Kepler Planet Hosts: Feasibility, Efficiency, and First Results", 2015, AJ, 149, 143
- 37. Chiappini, C. et al. "Young [α/Fe]-enhanced stars discovered by CoRoT and APOGEE: What is their origin?", 2015, A&A, 576, L12
- 36. Carlberg, J. et al. "The Puzzling Li-Rich Red Giant Associated with NGC 6819", 2015, ApJ, 802, 7
- 35. Bovy, J. et al., "The power spectrum of the Milky Way: Velocity fluctuations in the Galactic disk", 2015, ApJ, 800, 83
- 34. Foster, J., et al. "IN-SYNC II: Virial Stars from Sub-virial Cores the Velocity Dispersion of Embedded Pre-main-sequence Stars in NGC 1333", 2015, ApJ, 799, 136
- 33. Cunha, K. et al., "Sodium and Oxygen Abundances in the Open Cluster NGC 6791 from APOGEE H-Band Spectroscopy", 2015, ApJL, 798, L41
- 32. Zasowski, G., et al. "Mapping the Interstellar Medium with Near-Infrared Diffuse Interstellar Bands", 2015, ApJ, 798, 35

- 31. Chojnowski, S. D., et al. "High-resolution, H band Spectroscopy of Be Stars with SDSS-III/APOGEE: I. New Be Stars, Line Identifications, and Line Profiles", 2015, AJ, 149, 7
- 30. Rodrigues, T. S., et al. "Bayesian distances and extinctions for giants observed by Kepler and APOGEE", MNRAS, 445, 2758
- 29. Pinsonneault, M. H., et al., "The APOKASC Catalog: An Asteroseismic and Spectroscopic Joint Survey of Targets in the Kepler Fields", 2014, ApJS, 215, 19
- 28. Ashley, T., et al., "The HI Chronicles of LITTLE THINGS BCDs II: The Origin of IC 10's HI Structure", 2014, AJ, 148, 130
- 27. Cottaar, et al. "IN-SYNC I: Homogeneous Stellar Parameters from High Resolution APOGEE Spectra for Thousands of Pre-main Sequence Star", 2014, ApJ, 794, 125
- 26. Schultheis, M. et al. "Extinction Maps towards the Milky Way Bulge: 2D and 3D Tests with APOGEE", 2014, AJ, 148, 24
- 25. Halverson, S. et al. "Development of Fiber Fabry-Perot Interferometers as Stable Near-infrared Calibration Sources for High Resolution Spectrographs", 2014, PASP, 126, 445
- 24. Hayden, M. et al. "Chemical Cartography with APOGEE: Large-scale Mean Metallicity Maps of the Milky Way", 2014, AJ 147, 116
- 23. Anders, F. et al. "Chemo-dynamics with the first year of APOGEE data", 2014, A&A, 564, A115
- 22. Epstein, C. R. et al. "Testing the Asteroseismic Mass Scale Using Metal-Poor Stars Characterized with APOGEE and Kepler", 2014, ApJL, 785, L28
- 21. Eikenberry, S. et al. "Discovery of Two Rare Highly-Magnetized B Stars in the APOGEE Survey", 2014, ApJL, 784, L30
- 20. Terrien, R. et al. "New Red Jewels in Coma Berenices", 2014, ApJ, 782, 61
- 19. Majewski, S. R. et al. "Discovery of a Dynamical Cold Point in the Heart of the Sagittarius dSph Galaxy with Observations from the APOGEE Project", 2013, ApJL, 777, L13
- 18. Zasowski, G. et al. "Target Selection for the Apache Point Observatory Galactic Evolution Experiment (APOGEE)", 2013, AJ, Vol. 146, Issue 4, ID 81
- 17. Meszaros, S. et al. "Calibrations of Atmospheric Parameters Obtained from the First Year of SDSS-III APOGEE Observations", 2013, AJ, Vol. 146, Issue 5, ID 133
- 16. Frinchaboy, P. et al. "The Open Cluster Chemical Analysis and Mapping Survey: Local Galactic Metallicity Gradient with APOGEE using SDSS DR10", 2013, ApJL, 777, L1
- 15. Deshpande, R. et al. "The SDSS-III APOGEE Radial Velocity Survey of M dwarfs I: Description of Survey and Science Goals", 2013, AJ, Vol. 146, ID 156

- 14. SDSS-III Collaboration, Ahn, C. P. et al. "The Tenth Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the SDSS-III Apache Point Observatory Galactic Evolution Experiment", 2014, ApJS, 211, 17
- 13. Garcia Perez, A. E. et al. "Very Metal-poor Stars in the Outer Galactic Bulge Found by the APOGEE Survey", 2013, ApJ, Vol. 767, ID 9
- 12. Balbinot, E. et al. "A New Milky Way Halo Star Cluster in the Southern Galactic Sky", 2013, ApJ, Vol. 767, ID 101
- 11. Dickey, J. M. et al. "GASKAP -- The Galactic ASKAP Survey", 2013, PASA, Vol. 30, ID 3
- 10. SDSS-III Collaboration, Ahn, C. P. et al. "The Ninth Data Release of the Sloan Digital Sky Survey: First Spectroscopic Data from the SDSS-III Baryon Oscillation Spectroscopic Survey", 2012, ApJS, Vol. 203, ID 21
- 9. Nigra, L, et al. "Probing the Structure and Kinematics of the transition Layer between the Magellanic Stream and the Halo in HI", 2012, ApJ, Vol. 760, ID 48
- 8. Bovy, J. et al. "The Milky Way's circular velocity curve between 4 and 14 kpc from APOGEE data", 2012, ApJ, Vol. 759, ID 131
- 7. Lokas, E. et al. "The Shapes of Milky Way Satellites: Looking for Signatures of Tidal Stirring", 2012, ApJ, Vol 751, Issue 1, Article ID 61
- 6. Eisenstein, D. J. et al. "SDSS-III: Massive Spectroscopic Surveys of the Distant Universe, the Milky Way, and Extra-Solar Planetary Systems", 2011, AJ, 142, 72
- Zasowski, G., Majewski, S. R., Indebetouw, R., Meade, M. R., Nidever, D. L., Patterson, R. J., Babler, B., Skrutskie, M. F., Watson, C., Whitney, B. A., & Churchwell, E. "Lifting the Dusty Veil with Near- and Mid-Infrared Photometry. II. A Large-Scale Study of the Galactic Infrared Extinction Law", 2009, ApJ, 707, 510
- 4. Carlin, J. L., Grillmair, C. J., Muñoz, R. R., **Nidever, D. L.**, Majewski, S. R. "Kinematics and Metallicities in the Boötes III Stellar Overdensity: A Disrupted Dwarf Galaxy?", 2009, ApJL, 702, L9
- 3. Siegel, M. H., Dotter, A., Majewski, S. R., Sarajedini, A., Chaboyer, B., **Nidever, D. L.**, et al. "The ACS Survey of Galactic Globular Clusters: M54 and Young Populations in the Sagittarius Dwarf Spheroidal Galaxy", 2007, ApJ, Vol 667, Issue 1, pp. 57-60
- 2. Muñoz, R. R., Carlin, J. L., Frinchaboy, P. M., **Nidever, D. L.**, Majewski, S. R., & Patterson, R. J. "Exploring Halo Substructure with Giant Stars: The Dynamics and Metallicity of the Dwarf Spheroidal in Bootes", 2006, ApJ Letters, Vol 650, Issue 1, pp. 51-54
- 1. Muñoz, R. R., Majewski, S. R., Zaggia, S., Kunkel, W. E., Frinchaboy, P. M., **Nidever, D.** L., et al. "Exploring Halo Substructure with Giant Stars. XI. The Tidal Tail of the Carina Dwarf Spheroidal Galaxy and the Discovery of Magellanic Cloud Stars in the Carina Foreground", 2006, ApJ, Vol 649, Issue 1, pp. 201-223

# PAPERS IN PREPARATION

- 2. Muñoz, R. R., **Nidever, D. L.**, et al. "Searching for the Edge of the Large Magellanic Cloud"
- 1. **Nidever, D. L,** et al., "Discovery of Very Extended Stellar Populations of the Large Magellanic Cloud in the SMASH Survey"

# NON-REFEREED PUBLICATIONS

- 9. Juric, M. et al. "The LSST Data Management System", 2015, ADASS XXV
- 8. Elmegreen, B. G. et al. "Gas accretion from halos to disks: observations, curiosities, and problems", 2015, IAU General Assembly, Meeting #29
- 7. **Nidever, D. L.** "Disk Destruction and (Re)-Creation in the Magellanic Clouds", 2013, Structure and Dynamics of Disk Galaxies (ASP Conference Series)
- 6. Wilson, J. C. et al. "Performance of the Apache Point Observatory Galactic Evolution Experiment (APOGEE) high-resolution near-infrared multi-object fiber spectrograph", 2012, Proceedings of the SPIE, Vol. 8446, ID 84460H
- 5. Zasowski, G., Majewski, S. R., **Nidever. D. L.**, & Indebetouw, R. "Exploring Extinction and Structure in the Milky Way Disk With 2MASS and Spitzer", 2010, Highlights of Astronomy (International Astronomical Union), Vol 15, pg. 783
- 4. Nigra, L., Stanimirovic, S., Gallagher, J. S., III, Lockman, F. J., **Nidever, D. L.**, & Majewski, S. R. "*The Magellanic Stream to Halo Interface: Processes that Shape our Nearest Gaseous Halo Stream*", 2010, Galaxy Wars: Stellar Populations and Star Formation in Interacting Galaxies (Astronomical Society of the Pacific Conference Series), Vol 423, pg. 38
- 3. Majewski, S. R., **Nidever, D. L.**, Muñoz, R. R., Patterson, R. J., Kunkel, W. E., & Carlin, J. C. "Discovery of an Extended, Halo-like Stellar Population Around the Large Magellanic Cloud", 2009, The Magellanic System: Stars, Gas and Galaxies (Proceedings IAU Symposium), No. 256, 2008, J. van Loon & J. Oliveira, eds., pp. 51-56
- 2. Siegel, M. H., Sarajedini, A., Chaboyer, B., Dotter, A., Majewski, S. R., & **Nidever, D. L.** "*The HST/ACS Survey of Galactic Globular Clusters: First Results*", 2008, New Horizons in Astronomy (Astronomical Society of the Pacific Conference Series), Vol 393, pg. 271
- 1. **Nidever, D. L.**, Majewski, S. R., & Burton, W. B. "The Origin of the Magellanic Stream and Its Leading Arm", 2008, Proceedings of the Galaxies in the Local Volume symposium, B.S. Koribalski & H. Jerjen, eds., pp. 243-248