

KEVIN R. COVEY

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Education	<p>PH.D, ASTRONOMY, UNIVERSITY OF WASHINGTON Thesis: “Dynamical Properties of Embedded Protostars and the Luminosity Function of the Galactic Disk” Advisors: Suzanne L. Hawley & Thomas P. Greene</p> <p>B.A, PHYSICS, CARLETON COLLEGE <i>(magna cum laude)</i></p>	<p>Aug. 2006</p> <p>Jun. 2000</p>
Honors	<p>Award for Distinguished Personal Initiative on Diversity in Astronomy, 2007 Spitzer Fellow (5 fellows selected from 85 applicants), 2006-Present NASA Graduate Student Research Program Fellow, 2003-2006 Distinction in the Major – Physics, 2000 Elected to Sigma Xi, 2000</p>	
Research Interests	<p>Formation and evolution of low-mass stars, with particular focus on:</p> <ul style="list-style-type: none"> • protostellar mass accretion, circumstellar structure and evolutionary status • stellar rotation, angular momentum content and evolution • the stellar initial mass function • stellar magnetic activity (chromospheric & coronal) • stellar variability 	
Grants Obtained	<p>THE SPITZER SPECTROSCOPIC STAR FORMATION SURVEY Spitzer Fellowship Program, \$235K over 3 years</p> <p>A PROPOSAL TO INCREASE UNDERREPRESENTED STUDENT PARTICIPATION IN ASTRONOMY: THE PRE-MAJOR IN ASTRONOMY PROGRAM (PRE-MAP) President’s Diversity Appraisal Implementation Fund, U. Washington, \$21K</p> <p>DETERMINING THE PHYSICAL PROPERTIES OF HIGHLY EMBEDDED ACTIVELY ACCRETING PROTOSTARS AND PROTO-BROWN DWARFS NASA Graduate Student Researchers Program, \$75K</p> <p>CO-I: INVESTIGATION OF THE FIELD STELLAR/SUBSTELLAR LUMINOSITY AND MASS FUNCTIONS P-I: Suzanne L. Hawley, NASA Astrophysics Data Program, \$100K</p> <p>PROFESSIONAL GROWTH FOR ASTRONOMY GRADUATE STUDENTS UW Student Technology Fee Fund, \$17K</p>	<p>Sep. 2006</p> <p>Mar. 2005</p> <p>Feb. 2003</p> <p>Jul. 2002</p> <p>Feb. 2002</p>

Teaching Experience	INSTRUCTOR, ASTRO 101U, U. WASHINGTON Instructor for Introductory Astronomy class with 50 students.	Spring 2003
	TEACHING ASSISTANT, U. WASHINGTON Led 4 night observing runs at the UW 30" for undergraduate research projects.	Summer 2002, 2005
	TEACHING ASSISTANT, U. WASHINGTON Conducted discussion sections for introductory Astronomy and Solar System courses.	9 courses, 2000 – 2005
Students Supervised	KACEY ABARAOHA, HARVARD SENIOR ASTRONOMY THESIS Analyzed time series photometry and optical spectroscopy to identify a previously unknown member of the Taurus star forming region; Awarded Goldberg Prize by the Harvard Astronomy Department for excellence in astronomical research.	Nov-May 2008
	ANGIE WOLFGANG, SMITHSONIAN SUMMER INTERN Co-mentored with Paul Green. Analyzed x-ray photometry and optical spectroscopy for magnetically active field stars, measuring correlation between chromospheric and coronal emission.	Jun.-Aug. 2008
	GREG MOSBY, SMITHSONIAN SUMMER INTERN Co-mentored with Lori Allen. Analyzed optical spectroscopy of young stars in L1641; reconstructed the star formation history of L1641 and investigated the evolution of disk accretion as a function of stellar age.	Jun.-Aug. 2008
	ERIC BAXTER, SMITHSONIAN SUMMER INTERN Co-mentored with August Muench; analyzed periods and rotation velocities of cluster members to measure the distance to NGC 2264. Awarded honorable mention for AAS Chambliss medal recognizing exemplary student research.	Jun.-Aug. 2007
	THOMPSON LE BLANC, VISITING GRADUATE STUDENT Fit disk models to spectral energy distributions of IC 348 cluster members to test if inner hole sizes are consistent with theories of disk locking.	Jul.-Aug. 2007
	JIM DAVENPORT, UNIVERSITY OF WASHINGTON UNDERGRADUATE Co-mentored with Andrew West and Suzanne Hawley; determined photometric parallax relations and color transformations for red stars in SDSS.	2005–2006
Service & Outreach	PANELIST, CYCLE 17 PEER REVIEW Reviewed, evaluated, and gave feedback on Hubble Space Telescope observing proposals.	2008
	LEAD ORGANIZER, CFA STAR FORMATION JOURNAL CLUB Organized weekly seminar presenting reviews of recent star formation literature	2006 – present
	CO-ORGANIZER, FIRST ANNUAL CFA POSTDOC SYMPOSIUM Coordinated speakers and logistical support for inaugural CfA Postdoc Symposium	2007
	CO-ORGANIZER, NSBP ASTROPHYSICS SESSIONS Recruited and coordinated speakers for Astrophysics sessions of the annual meeting of the National Society of Black/Hispanic Physicists.	2007 – present
	SCIENTIFIC REFEREE Provided independent scientific evaluation of research articles (<i>Astrophysical Journal</i> ,	2003 – present

Astronomical Journal), observing proposals (*Gemini Time Allocation Committee*), and grant proposals (*U.S. Civilian Research and Development Foundation*).

PARTICIPANT, AMERICAN ASTRONOMICAL SOCIETY 2007
CONGRESSIONAL VISITS DAY

Visited offices of Congressmen and Senators to discuss US Astronomy policy

SENATOR, GRADUATE AND PROFESSIONAL STUDENT SENATE 2002 – 2005
Represented Astronomy graduate students in shared governance body.

PROJECT ASTRO VOLUNTEER, VILLA ACADEMY 2002 – 2004
Made monthly visits to three middle school science classes.

ADVISORY COMMITTEE ON LICENSING, GPSS REPRESENTATIVE 2002 – 2004
Monitored conduct of suppliers of products carrying University of Washington marks.

TO FEED, TO FIX: DIVERSITY AND THE ASTRONOMY PIPELINE 2002 – 2003
AT THE U.W.

Co-wrote diversity plan for the U. Washington Department of Astronomy.
http://www.astro.washington.edu/grad/Diversity_plan.pdf

Invited Talks

PROBING ANGULAR MOMENTUM TRANSFER IN YOUNG STARS WITH INFRARED AND OPTICAL SPECTROSCOPY
Spitzer Symposium, Spitzer Science Center, Pasadena CA May 2008

SURVEYING THE SCENE: STUDYING LOW-MASS STARS WITH SDSS/2MASS
Astronomy Department Seminar, Dartmouth College, Hanover NH Nov. 2007

MAGNETOSPHERIC ACCRETION AND THE ANGULAR MOMENTUM EVOLUTION OF YOUNG STARS
Physics Department Seminar, Reed College, Portland OR Sep. 2007

SURVEYING THE SCENE: STUDYING LOW-MASS STAR FORMATION WITH LARGE PHOTOMETRIC AND SPECTROSCOPIC DATASETS
Spitzer Symposium, Spitzer Science Center, Pasadena CA Mar. 2007

SURVEYING LOW-MASS STAR FORMATION
Astronomy Department Colloquium, University of Florida, Gainesville FL Nov. 2006

SEARCHING FOR BROWN DWARFS WITH SDSS
IAU Symposium 211: Brown Dwarfs, Waikoloa, HI May 2002

Observing Experience

- Near-Infrared Imaging & Spectroscopy: Keck II (*NIRSPEC* & *NIRC2 w/ Adaptive Optics*), InfraRed Telescope Facility (*SPEX*), Apache Point Observatory (*NIC-FPS*)
- Optical Spectroscopy: Apache Point Observatory (*DIS*), MMT (*Hectochelle*)
- Survey Data Extraction: Sloan Digital Sky Survey, 2 Micron All Sky Survey, Spitzer Cores 2 Disks Legacy Project, Chandra Multi-wavelength Project, Guide Star Catalog
- Radio Spectroscopy & Interferometry: Sumbillimeter Array, Haystack Observatory, Five College Radio Astronomy Observatory 14-m

References PROFESSOR SUZANNE L. HAWLEY
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DR. CHARLES J. LADA
Smithsonian Astrophysical Observatory
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- Refereed Publications** THE LUMINOSITY AND MASS FUNCTIONS OF LOW-MASS STARS IN THE GALACTIC DISK: I. THE CALIBRATION REGION
Covey, K. R., Hawley, S. L., Bochanski, J. J., West, A. A., Reid, I. N., Golimowski, D. A., Davenport, J. R. A., Henry, T., Uomoto, A., 2008, *AJ*, 136, 1778
- THE CHAMP EXTENDED STELLAR SURVEY (ChESS): PHOTOMETRIC AND SPECTROSCOPIC PROPERTIES OF SERENDIPITOUSLY DETECTED STELLAR X-RAY SOURCES
Covey, K. R., Agüeros, M. A., Green P. J., Haggard, D., Barkhouse, W. A., Drake, J., Evans, N., Kashyap, V., Kim, D.-W. Mossman, A., Pease, D. O., Silverman, J. D., 2008, *ApJS*, 178, 339
- THE MILKY WAY TOMOGRAPHY WITH SDSS: II. STELLAR METALLICITY
Ivezic, Z., [20 co-authors], **Covey, K. R.**, [31 co-authors], 2008, *ApJ*, 684, 287
- THE SEGUE STELLAR PARAMETER PIPELINE. I. DESCRIPTION AND INITIAL VALIDATION TESTS
Lee, Y. S., Beers, T. C., Sivarani, T., Allende Prieto, C., Koesterke, L., Wilhelm, R., Norris, J. E., Bailer-Jones, C. A. L., Re Fiorentin, P., Rockosi, C. M., Yanny, B., Newberg, H., **Covey, K. R.**, accepted, *AJ*, arXiv:0710.5645
- TWO-MICRON ALL SKY SURVEY J01542930+0053266: A NEW ECLIPSING M DWARF BINARY SYSTEM
Becker, A. C., [10 co-authors], **Covey, K. R.**, [12 co-authors], 2008, *MNRAS*, 386, 416.
- THE SIXTH DATA RELEASE OF THE SLOAN DIGITAL SKY SURVEY
Adelman-McCarthy, J. K., [28 co-authors], **Covey, K. R.**, [133 co-authors], 2008, *ApJS*, 175, 297.
- CONSTRaining THE AGE-ACTIVITY RELATION FOR COOL STARS: THE SLOAN DIGITAL SKY SURVEY DATA RELEASE 5 LOW-MASS STAR SPECTROSCOPIC SAMPLE
West, A. A., Hawley, S. L., Bochanski, J. J., **Covey, K. R.**, Reid, I. N., Dhital, S., Hilton, E., Masuda, M., 2008, *AJ*, 135, 785.
- STELLAR SEDS FROM 0.3–2.5 MICRONS: TRACING THE STELLAR LOCUS AND SEARCHING FOR COLOR OUTLIERS IN SDSS AND 2MASS
Covey, K. R., Ivezić, Ž., Schlegel, D. J., Finkbeiner, D. P., Padmanabhan, N., Lupton, R. H., Agüeros, M., Bochanski, J. J., Hawley, S. L., West, A. A., Seth, A. C., Kimball, A. E., Gogarten, S. M., Claire, M., Haggard, D., Kaib, N. A., Schneider, D. P., Sesar, B., 2007, *AJ*, 134, 2398.
- EXPLORING THE LOCAL MILKY WAY: M DWARFS AS TRACERS OF GALACTIC POPULATIONS
Bochanski, J. J., Munn, J. A., Hawley, S. L., West, A. A., **Covey, K. R.**, Schneider, D. P., 2007, *AJ*, 134, 2418.
- IMPROVED PHOTOMETRIC CALIBRATIONS FOR RED STARS OBSERVED WITH THE SDSS PHOTOMETRIC TELESCOPE
Davenport, J. R., Bochanski, J. J., **Covey, K. R.**, Hawley, S. L., West, A. A., Schneider, D. P., 2007, *AJ*, 134, 2430.
- LOW-MASS DWARF TEMPLATE SPECTRA FROM THE SLOAN DIGITAL SKY SURVEY
Bochanski, J. J., West, A. A., Hawley, S. L., **Covey, K. R.**, 2007, *AJ*, 133, 531.

MEETING THE COOL NEIGHBORS IX: THE LUMINOSITY FUNCTION OF M7-L8
ULTRACOOL DWARFS IN THE FIELD

Cruz, K. L., Reid, I. N., Kirkpatrick, J. D., Burgasser, A. J., Liebert, J., Solomon, A., Schmidt, S. J., Allen, P. R., Hawley, S. L., **Covey, K. R.**, 2007, *AJ*, 133, 439.

STELLAR PROPERTIES OF EMBEDDED PROTOSTARS

White, R. J., Greene, T. P., Doppmann, G. W., **Covey, K. R.**, Hillenbrand, L. A., 2007, *Protostars & Planets V*, p. 117–132.

USING THE GALACTIC DYNAMICS OF M7 DWARFS TO INFER THE EVOLUTION OF
THEIR MAGNETIC ACTIVITY

West, A. A., Bochanski, J. J., Hawley, S. L., Cruz, K. L., **Covey, K. R.**, Silvestri, N. M., Reid, I. N., Liebert, J., 2006, *AJ*, 132, 2507.

SDSS J103913.70+533029.7: A SUPER STAR CLUSTER IN THE OUTSKIRTS OF A
GALAXY MERGER

Knapp, G. R., [11 authors], **Covey, K. R.**, [18 authors], 2006 *AJ*, 131, 859.

THE RADIAL VELOCITY DISTRIBUTION OF CLASS I AND FLAT-SPECTRUM
PROTOSTARS

Covey, K. R., Greene, T. P., Doppmann, G. W., Lada, C. J., 2006 *AJ*, 131, 512.

SPECTROSCOPIC SURVEY OF M DWARFS WITHIN 100 PARSECS OF THE SUN

Hawley, S. L., Bochanski, J. J., Reid, I. N., **Covey, K. R.**, West, A. A., Munn, J. A., Tinney, C. G., & Gizis, J. E., 2005, *AJ*, 130, 1871.

THE PHYSICAL NATURES OF CLASS I AND FLAT-SPECTRUM PROTOSTELLAR
PHOTOSPHERES: A NEAR-INFRARED SPECTROSCOPIC STUDY

Doppmann, G. W., Greene, T. P., **Covey, K. R.**, Lada, C. J., 2005, *AJ*, 130, 1145.

THE UV, OPTICAL, AND IR PROPERTIES OF SDSS SOURCES DETECTED BY GALEX
Agüeros, M., Ivezić, Ž., **Covey, K. R.**, [18 authors], 2005, *AJ*, 130, 1022.

THE ANGULAR MOMENTUM CONTENT AND EVOLUTION OF CLASS I/FLAT SPECTRUM
PROTOSTARS

Covey, K. R., Greene, T. P., Doppmann, G. W., Lada, C. J., 2005 *AJ*, 129, 2765.

THE THIRD DATA RELEASE OF THE SLOAN DIGITAL SKY SURVEY

Abazajian, K., [22 authors], **Covey, K. R.**, [130 authors], 2005 *AJ*, 129, 1755.

SLOAN DIGITAL SKY SURVEY IMAGING OF LOW GALACTIC LATITUDE FIELDS:
TECHNICAL SUMMARY AND DATA RELEASE

Finkbeiner, D. P., [31 authors], **Covey, K. R.**, [46 authors], 2004 *AJ*, 128, 2577.

CATAclysmic VARIABLES FROM THE SLOAN DIGITAL SKY SURVEY. III. THE THIRD
YEAR

Szkody, P., [13 authors], **Covey, K. R.**, [5 authors], 2004, *AJ* 128, 1882.

MEETING THE COOL NEIGHBORS. VIII. A PRELIMINARY 20 PARSEC CENSUS FROM
THE NLTT CATALOGUE

Reid, I. N., Cruz, K. L., Allen, P., Mungall, F., Kilkenny, D., Liebert, J., Hawley, S. L.,

Fraser, O. J., **Covey, K. R.**, Lowrance, P., Kirkpatrick, J. D., Burgasser, A.J. 2004 *AJ*, 128, 463.

SPECTROSCOPIC PROPERTIES OF COOL STARS IN THE SDSS: AN ANALYSIS OF
MAGNETIC ACTIVITY AND A SEARCH FOR SUBDWARFS

West, A. A., Hawley, S. L., Walkowicz, L. M., **Covey, K. R.**, Silvestri, N. M., Raymond, S. R., Harris, H. C., Munn, J. A., McGehee, P. M., Ivezić, Ž., & Brinkmann, J., 2004, *AJ*, 128, 426.

MEETING THE COOL NEIGHBORS. VII. SPECTROSCOPY OF FAINT RED NLTT DWARFS

Reid, I. N., Cruz, K. L., Allen, P., Mungall, F., Kilkenny, D., Liebert, J., Hawley, S. L., Fraser, O. J., **Covey, K. R.**, Lowrance, P., 2003 *AJ*, 126, 3007.

THE FIRST DATA RELEASE OF THE SLOAN DIGITAL SKY SURVEY

Abazajian, K., [25 authors], **Covey, K. R.**, [162 authors], 2003 *AJ*, 126, 2081.

CATAclysmic VARIABLES FROM THE SLOAN DIGITAL SKY SURVEY. II. THE SECOND
YEAR

Szkody, P., [11 authors], **Covey, K. R.**, [8 authors], 2003, *AJ* 126, 1499.

A REINVESTIGATION OF THE POSSIBLE METALLICITY SPREAD IN NGC 3201

Covey, K. R., Wallerstein, G., Gonzalez, G., Vanture, A. D., Suntzeff, N. B., 2003, *PASP* 115, 819.

DISCOVERY OF A NEW NEARBY STAR

Teegarden, B. J., Pravdo, S. H., Hicks, M., Lawrence, K., Shaklan, S. B., **Covey, K. R.**, Fraser, O., Hawley, S. L., McGlynn, T., Reid, I. N., 2003, *ApJ* 589, L51.

A FIRST LOOK AT WHITE DWARF-M DWARF PAIRS IN THE SLOAN DIGITAL SKY
SURVEY

Raymond, S. N., Szkody, P., Hawley, S. L., Anderson, S. F., Brinkmann, J., **Covey, K. R.**, McGehee, P. M., Schneider, D. P., West, A. A., York, D. G., 2003, *AJ* 125, 2621.

A SEARCH FOR ${}^6\text{Li}$ IN STARS WITH PLANETS

Reddy, B. E., Lambert, D. L., Laws, C., Gonzalez, G., **Covey, K. R.**, 2002, *MNRAS* 335, 1005.

CHARACTERIZATION OF M, L, AND T DWARFS IN THE SLOAN DIGITAL SKY SURVEY

Hawley, S. L., **Covey, K. R.**, [30 authors], 2002, *AJ* 123, 3409.

PERIODIC PHOTOMETRIC VARIABILITY OF THE BROWN DWARF KELU-1

Clarke, F. J., Tinney, C. G., **Covey, K. R.**, 2002, *MNRAS* 332, 361.

L DWARFS FOUND IN SLOAN DIGITAL SKY SURVEY COMMISSIONING DATA. II.
HOBBY-EBERLY TELESCOPE OBSERVATIONS

Schneider, D. P., Knapp, G. R., Hawley, S. L., **Covey, K. R.** [20 authors], 2002, *AJ* 123, 458.

THERMALLY DOMINATED CARBON MONOXIDE EMISSION IN THE TAURUS MOLECULAR
CLOUD COMPLEX

Ladd, E. F. & **Covey, K. R.** 2000, *ApJ* 536, 380.

**Informal
Articles**

“NOT B”: OUR EXPERIENCE AT THE NATIONAL SOCIETY OF BLACK PHYSICISTS
MEETING

Covey, K. R. & West, A. 2004 *Spectrum, Newsletter of the American Astronomical
Society Committee on the Status of Minorities* , June 2004, p. 1-2, 11,17.