

# STEVEN A. RODNEY

## Biographical Sketch

Department of Physics & Astronomy, University of South Carolina

email: srodney@sc.edu

tel: (803) 777-2599

## Professional Preparation

|   |               |           |             |
|---|---------------|-----------|-------------|
| Case Western Reserve University                         | Cleveland, OH | Physics   | B.S., 2003  |
| Case Western Reserve University                         | Cleveland, OH | Astronomy | B.S., 2003  |
| Institute for Astronomy, University of Hawai'i at Mānoa | Honolulu, HI  | Astronomy | M.S., 2005  |
| Institute for Astronomy, University of Hawai'i at Mānoa | Honolulu, HI  | Astronomy | Ph.D., 2010 |
| Johns Hopkins University                                | Baltimore, MD | Astronomy | 2010–2015   |

## Appointments

|              |   |
|--------------|---|
| 2015–present | Assistant Professor, University of South Carolina             |
| 2012–2015    | Hubble Postdoctoral Research Fellow, Johns Hopkins University |
| 2010–2012    | Assistant Research Scientist, Johns Hopkins University        |

## Products: Publications Related to the Proposed Project

1. *SN Refsdal: Photometry and Time Delay Measurements of the First Einstein Cross Supernova*  
**Rodney**; Strolger, Kelly, Bradac, Brammer, Filippenko, Foley, Graur, Hjorth, Jha, McCully, Molino, Riess, Schmidt, Selsing, Sharon, Treu, Weiner, and Zitrin 2016, ApJ, 820, 50
2. *Deja Vu All Over Again: The Reappearance of Supernova Refsdal*  
Kelly, **Rodney**, Strolger, Foley, Jha, Selsing, Brammer, Bradac, Cenko, Graur, Filippenko, Hjorth, McCully, Molino, Nonino, Riess, Schmidt, Tucker, von der Linden, and Zitrin 2016, ApJ, 819, 8
3. *Illuminating a Dark Lens : A Type Ia Supernova Magnified by the Frontier Fields Galaxy Cluster Abell 2744*  
**Rodney**, Patel, Scolnic, Foley, Molino, Brammer, Jauzac, Bradac, Broadhurst, Coe, Diego, Graur, Hjorth, Hoag, Jha, Johnson, Kelly, Lam, McCully, Medezinski, Meneghetti, Merten, Richard, Riess, Sharon, Strolger, Treu, Wang, Williams, and Zitrin 2015, ApJ, 811, 70;
4. *Multiple Images of a Highly Magnified Supernova Formed by an Early-Type Cluster Galaxy Lens*  
Kelly, **Rodney**, Treu, Foley, Brammer, Schmidt, Zitrin, Sonnenfeld, Strolger, Graur, Filippenko, Jha, Riess, Bradac, Weiner, Scolnic, Malkan, von der Linden, Trenti, Hjorth, Gavazzi, Fontana, Merten, McCully, Jones, Postman, Dressler, Patel, Cenko, Graham, and Tucker 2015, Science, 347, 1123
5. *Three Gravitationally Lensed Supernovae behind CLASH Galaxy Clusters*  
Patel, McCully, Jha, **Rodney**; Jones, Graur, Merten, Zitrin, Riess, Matheson, Sako, Holoien, Postman, Coe, Bartelmann, Balestra, Benitez, Bouwens, Bradley, Broadhurst, Donahue, Filippenko, Ford, Garnavich, Grillo, Infante, Jovel, Kelson, Koekemoer, Lahav, Lemze, Maoz, Medezinski, Melchior, Meneghetti, Molino, Moustakas, Moustakas, Nonino, Rosati, Seitz, Strolger, Umetsu, and Zheng 2014, ApJ, 786, 9

## Products: Other Significant Publications

1. *Two Type Ia Supernovae at  $z \sim 2$ : Improved Classification and Redshift Determination with Medium-band IR Imaging*  
**Rodney**; Riess, Scolnic, Jones, Hemmati, Molino, McCully, Mobasher, Strolger, Graur, Hayden, and Casertano 2015, AJ, 150, 156
2. *Type Ia Supernova Rate Measurements to Redshift 2.5 from CANDELS: Searching for Prompt Explosions in the Early Universe*  
**Rodney**, Riess, Strolger, Dahlen, Graur, Casertano, Dickinson, Ferguson, Garnavich, Hayden, Jha, Jones, Kirshner, Koekemoer, McCully, Mobasher, Patel, Weiner, Cenko, Clubb, Cooper, Filippenko, Frederiksen, Hjorth, Leibundgut, Matheson, Nayyeri, Penner, Trump, Silverman, U, Azalee Bostroem, Rajan, Wolff, Faber, Grogin, and Kocevski 2014, AJ, 148, 13
3. *Type Ia Supernova Rates to Redshift 2.4 from CLASH: the Cluster Lensing and Supernova Survey with Hubble*  
Graur, O.; **Rodney, S. A.**; Maoz, D.; Riess, A. G.; Jha, S. W.; Postman, M.; Dahlen, T.; Holoien, T. W.-S.; McCully, C.; Patel, B.; Strolger, L.-G.; Bentez, N.; Coe, D.; Jouvel, S.; Medezinski, E.; Molino, A.; Nonino, M.; Bradley, L.; Koekemoer, A.; Balestra, I.; Cenko, S. B.; Clubb, K. I.; Dickinson, M. E.; Filippenko, A. V.; Frederiksen, T. F.; Garnavich, P.; Hjorth, J.; Jones, D. O.; Leibundgut, B.; Matheson, T.; Mobasher, B.; Rosati, P.; Silverman, J. M.; U, V.; Jedruszczuk, K.; Li, C.; Lin, K.; Mirmelstein, M.; Neustadt, J.; Ovadia, A.; Rogers, E. H. 2014, ApJ, 783, 28
4. *The Discovery of the Most Distant Known Type Ia Supernova at Redshift 1.914*  
Jones, **Rodney**, Riess, Mobasher, Dahlen, McCully, Frederiksen, Casertano, Hjorth, Keeton, Koekemoer, Strolger, Wiklind, Challis, Graur, Hayden, Patel, Weiner, Filippenko, Garnavich, Jha, Kirshner, Ferguson, Grogin, and Kocevski. 2013, ApJ, 768, 166
5. *A Type Ia Supernova at Redshift 1.55 in the Infrared from the CANDELS Hubble Treasury Program*  
**Rodney, S. A.**; Riess, A. G.; Dahlen, T.; Strolger, L.-G.; Ferguson, H. C.; Hjorth, J.; Frederiksen, T. F.; Weiner, B. J.; Mobasher, B.; Casertano, S.; Jones, D. O.; Challis, P.; Faber, S.; Filippenko, A. V.; Garnavich, P.; Graur, O.; Grogin, N. A.; Hayden, B.; Jha, S. W.; Kirshner, R. P.; Kocevski, D.; Koekemoer, A.; McCully, C.; Patel, B.; Rajan, A.; Scarlata, C. 2012, ApJ, 746, 5

## Synergistic Activities

**Teaching Innovation:** PI for a *Course Transformation Program* grant proposal in 2017 to implement peer guided, team-based learning into introductory astronomy courses at USC. Participant and leader for pedagogical communities of practice at USC through the Center for Teaching Excellence.

**Community Outreach:** Established a new lecture series in physics and astronomy at USC, bringing distinguished speakers to Columbia, SC to deliver science talks to a broad public audience. Spearheading the USC outreach and education efforts for the total solar eclipse of 2017.

**Service to Scientific Community:** Regularly serving as a reviewer for the Hubble Space Telescope Time Allocation Committee, and referee for *The Astrophysical Journal*, *The Astronomical Journal*, and *Astronomy & Astrophysics*.