Curriculum Vitae **Nevin N. Weinberg** January 2010

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Academic Positions

2006 – **TAC Postdoctoral Fellow**, UC Berkeley
2005 – 2006 **KITP Postdoctoral Fellow**, Kavli Institute for Theoretical Physics

Education

2000 – 2005 **California Institute of Technology**, Ph.D. Astrophysics
Advisor: Marc Kamionkowski
1996 – 2000 **University of Chicago**, A.B. Physics (with Honors), S.B. Mathematics
Advisor: Don Q. Lamb

Scientific/Academic Honors and Grants

2009 – Co-PI, "Nonlinear Damping of Tides in Stellar and Planetary Systems", NSF (PI P. Arras, U. of Virginia)
2009 – Co-PI , "Nonlinear Damping of Tides in Stars, Planets and Compact Objects", NASA ATP (PI P. Arras, U. of Virginia)
2008 – Collaborator, "A Laser Guide Star Adaptive Optics Study of Stellar Dynamics at the Galactic Center: A Laboratory for Understanding Interactions with a Central Supermassive Black Holes", NSF (PI A. M. Ghez)
2000 – 2003 NSF Graduate Research Fellowship

Collaborators

Current: Eliot Quataert (UC Berkeley), Phil Arras (U. Va), Lars Bildsten (KITP/UCSB), Andrea Ghez (UCLA), Jean in 't Zand (SRON Netherlands), Duncan Galloway (Monash).

Former: Marc Kamionkowski (Caltech), Miloš Milosavljević (UT Austin), Don Lamb (U. Chicago), Cole Miller (U. Maryland).

Accepted Observing Proposals

2009 – Co-I, "Photospheric radius-expansion bursts at high spectral resolution", Chandra (PI D. Galloway)
2008 – 2009 Co-I, "Spectroscopy of a bright burst from 4U 1812-12", Chandra (PI J. in 't Zand)

Teaching/Public Outreach

As a graduate student I was a teaching assistant for undergraduate courses at Caltech and as a postdoc I have given a few popular astronomy talks on cosmology at a local area high school and a planetarium.

Publications

Articles in preparation

1. **N. N. Weinberg**, E. Quataert, & P. Arras, "Nonlinear Tides in Close Binary Systems"
2. P. Arras, **N. N. Weinberg**, & E. Quataert "Implications of the Orbital Decay of Extrasolar Planets"

Refereed publications

3. J. J. in 't Zand & **N. N. Weinberg**, 2010, "Evidence of heavy-element ashes in thermonuclear X-ray bursts with photospheric superexpansion", submitted to A&A (arXiv:1001.0900)
4. A. L. Piro, P. Chang, & **N. N. Weinberg**, 2010, "Shock Breakout from Type Ia Supernova", ApJ, 708, 598
5. C. L. Fryer, et al., 2009, "Spectra and Light Curves of Failed Supernovae", ApJ, 707, 193
6. H. B. Perets, A. Gal-Yam, et al. 2009, "A new type of stellar explosion", Nature submitted (arXiv:0906.2003)
7. A. M. Ghez, S. Salim, **N. N. Weinberg**, et al., 2008, "Measuring Distance and Properties of the Milky Way's Central Supermassive Black Hole with Stellar Orbits", ApJ, 689, 1044
8. **N. N. Weinberg** & E. Quataert, 2008, "Non-linear saturation of g-modes in proto-neutron stars: quieting the acoustic engine", MNRAS, 387, L64
9. **N. N. Weinberg** & L. Bildsten, 2007, "Carbon Detonation and Shock-Triggered Helium Burning in Neutron Star Superbursts", ApJ, 670, 1291
10. L. Bildsten, K. J. Shen, **N. N. Weinberg**, & G. Nelemans, 2007, "Faint Thermonuclear Supernovae from AM Canum Venaticorum Binaries", ApJ, 662, L95
11. **N. N. Weinberg**, L. Bildsten, & E. F. Brown, 2006, "Hydrodynamic Thermonuclear Runaways in Superbursts", ApJ, 650, L119
12. **N. N. Weinberg**, L. Bildsten, & H. Schatz, 2006, "Exposing the Nuclear Burning Ashes of Radius Expansion Type I X-Ray Bursts", ApJ, 639, 1018
13. **N. N. Weinberg**, M. Milosavljević, & A. M. Ghez, 2005, "Stellar Dynamics at the Galactic Center with an Extremely Large Telescope", ApJ, 622, 878
14. R. R. Caldwell, M. Kamionkowski, & **N. N. Weinberg**, 2003, "Phantom Energy: Dark Energy with $w < -1$ Causes a Cosmic Doomsday", PhRvL, 91, 071301
15. **N. N. Weinberg** & M. Kamionkowski, 2003, "Constraining dark energy from the abundance of weak gravitational lenses", MNRAS, 341, 251
16. P. Schuecker, R. R. Caldwell, H. Böhringer, C. A. Collins, L. Guzzo, & **N. N. Weinberg**, 2003, "Observational constraints on general relativistic energy conditions, cosmic matter density and dark energy from X-ray clusters of galaxies and type-Ia supernovae", A&A, 402, 53
17. **N. N. Weinberg** & M. Kamionkowski, 2002, "Weak gravitational lensing by dark clusters", MNRAS, 337, 1269
18. **N. N. Weinberg**, M. C. Miller, & D. Q. Lamb, 2001, "Oscillation Waveforms and Amplitudes from Hot Spots on Neutron Stars", ApJ, 546, 1098

Selected non-refereed publications

19. A. Ghez, M. Morris, J. Lu, **N. N. Weinberg** et al., 2009, "The Galactic Center: A Laboratory for Fundamental Astrophysics and Galactic Nuclei", Astro2010: Decadal Survey Science White Papers, no. 89 (arXiv:0903.0383)
20. **N. N. Weinberg**, M. Milosavljević, & A. M. Ghez, 2005, "Astrometric Monitoring of Stellar Orbits at the Galactic Center with a Next Generation Large Telescope", ASP Conference Series, 338, 252 (arXiv:astro-ph/0512621)
21. **N. N. Weinberg**, M. C. Miller, & D. Q. Lamb, 2000, "Extracting neutron star properties from X-ray burst oscillations", AIP Conference Proceedings, 522, 371 (arXiv:astro-ph/9912361)

References

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