

Short CV: Orly Gnat

PERSONAL

- ▶ **Orly Gnat**, Racah Institute of Physics, Hebrew University of Jerusalem, Israel, 91904
- ▶ **Office:** +972 (2) 6586851; **E-mail:** orlyg@phys.huji.ac.il
- ▶ **Born:** September 5, 1976, Israel; **Family status:** Married + 2

POSITIONS & EMPLOYMENT

- ▶ **2013 – present:** Senior Lecturer, Racah Institute of Physics, Hebrew University
- ▶ **2011 – 2013:** Postdoctoral Fellow, Racah Institute of Physics, Hebrew University
- ▶ **2008 – 2011:** Chandra Fellow, Theoretical Astrophysics, Caltech
- ▶ **2005 – 2008:** Visiting Graduate Student, California Institute of Technology
- ▶ **2002 – 2005:** Teaching Assistant, Tel Aviv University, School of Physics and Astronomy
- ▶ **1997 – 2002:** Military Service (Operations Research Officer. Rank: Captain)
- ▶ HST AR-12655: \$57,690
“Detectable UV Absorption Signatures from the Missing Baryons: Shock Models for Interpreting COS Observations.”
- ▶ Palomar 200” P17 (Co-I): 2 nights
“A Search for Kuiper Belt Contact Binaries.”
- ▶ CXC PF8-90053: \$312,084 (Chandra Fellowship) “The Observational Signatures of Diffuse Ionized Gas: Equilibrium and Non-equilibrium Processes.”

HONORS AND AWARDS

- ▶ **2010:** Women in Science Prize, for outstanding Israeli PhD Graduates in the Exact and Natural Sciences
- ▶ **2008:** Chandra Fellow
- ▶ **2006:** The John Bahcall Astrophysics Prize for Excellence in Research
- ▶ **2006:** Rector's Award for Excellence in Teaching
- ▶ **2006:** School of Physics and Astronomy Award for Excellence in Teaching
- ▶ **2005:** The Ilan Ramon Scholarship for Outstanding Academic Achievements (A National Israeli Fellowship)
- ▶ **2005:** School of Physics and Astronomy Award for Excellence in Teaching
- ▶ **2005:** Dean's Commendation for Public Outreach Activity
- ▶ **1997:** The Dean's Honor List
- ▶ **1996:** The Dean's Honor List

EDUCATION

- ▶ **2002 – 2008:** Ph.D., School of Physics and Astronomy, Tel-Aviv University, Israel
Advisor: Prof. Amiel Sternberg
- ▶ **1994 – 1997:** B.Sc., Magna Cum Laude, in Physics and Computer Science, Tel Aviv University, Israel

GRANTS & OBSERVING TIME

- ▶ Israeli Science Foundation Grant 857/14, 2014-2018: \$205,000, “Following the Footsteps of the Missing Baryons: A Theoretical Framework for Interpreting UV and X-ray Observations of Intergalactic shocks”
- ▶ Israeli Center for Research Excellence (I-CORE) Young Faculty Grant, 2014-2019: \$230,000, “Galaxy Evolution as Traced by Circumgalactic Mixing: Interacting Thermal Phases in and Around Galaxies”
- ▶ HST GO-12614: \$76,478, 23 orbits, “Are the Ultra-Compact High-Velocity Clouds Minihalos? Constraints from Quasar Absorption Lines.”

LIST OF PUBLICATIONS

REFEREED JOURNALS

17. Ben-Ami, S., Gal-Yam, A., Mazzali, P. A., **Gnat, O.**, et al. (2014), *SN2010mb: Direct Evidence for Supernova Interacting with a Large Amount of Hydrogen-Free Material*, *ApJ*, 785,37.
16. Newman, S. F.; Buschkamp, P.; Genzel, R.; Forster Schreiber, N. M.; Kurk, J.; Sternberg, A.; **Gnat, O.** et al. (2013), *Nebular Excitation in $z\sim 2$ Star-forming Galaxies from the SINS and LUCI Surveys: The Influence of Shocks and AGN*, *ApJ*, 781, 21.
15. Lykins, M. L., Ferland, G. J.; Porter, Ryan L.; van Hoof, Peter A. M.; Williams, R. J. R.; **Gnat, O.**, (2013), *Radiative Cooling in Collisionally Ionized and Photoionized Plasma*, *MNRAS*, 429, 3133.
14. Ofek, E. O., Fox, D., Cenko, S. B., Sullivan, M., **Gnat O.**, et al. (2013), *X-ray Emission from Supernovae in Dense Circumstellar Matter Environments: A Search for Collisionless Shocks*, *ApJ* 763, 42.
13. Ritter J. S., Safranek-Strader, C., **Gnat O.**, et al. (2012), *Confined Population III Enrichment and the Prospects for Prompt Second-Generation Star Formation*, *ApJ*, 761, 56.
12. Dilday, B., Howell, D. A., Cenko, S. B., Silverman, J. M., Nugent, P. E., Sullivan, M., Ben-Ami, S., Bildsten, L., Bolte, M., Endl, M., Filippenko, A. V., **Gnat, O.**, Horesh, A., et al. (2012), *PTF 11kx: A Type Ia Supernova with a Symbiotic Nova Progenitor*, *Science*, 337, 942.
11. Goerdt, T., Dekel, A., Sternberg, A., **Gnat, O.**, Ceverino, D. (2012), *Detectability of Cold Streams into High-Redshift Galaxies by bsorption-Lines*, *MNRAS*, 424, 2292.
10. **Gnat, O.** & Ferland, G. J. (2012), *Ion-by-Ion Cooling Efficiencies*, *ApJS*, 199, 20.
9. **Gnat, O.** (2011), *Partially Cooled Shocks: Detectable Precursors in the Warm/Hot Intergalactic Medium*, *ApJ*, 729, 82.
8. **Gnat, O.**, & Sari, R., (2010), *Equilibrium Configurations of Synchronous Binaries: Numerical Solutions and Application to Kuiper-Belt Binary 2001 QG₂₉₈*, *ApJ* 719, 1602.
7. **Gnat, O.**, Sternberg, A., and McKee, C. F. (2010), *Metal Absorption in Conductively Evaporating Clouds*, *ApJ* 718, 1315.
6. Simon, J. D.; Gal-Yam, A. **Gnat, O.**, et al. (2009), *Variable Sodium Absorption in a Low-extinction Type Ia Supernova*, *ApJ*, 702, 1157
5. **Gnat, O.** & Sternberg, A., (2008), *Metal Absorption Column Densities in Fast Radiative Shocks*, *ApJ*, 693, 1514.
4. Chelouche, D., Ménard, B., Bowen, D. V., **Gnat, O.** (2008), *On the Connection Between Metal Absorbers and Quasar Nebulae*, *ApJ* 683, 55.
3. **Gnat, O.** & Sternberg, A., (2007), *Time-Dependent Ionization in Radiatively Cooling Gas*, *ApJS*, 168, 213.
2. **Gnat, O.** & Sternberg, A., (2004), *Photoionized Gas in Dark Matter Minihalos in the Galactic Halo and Local Group*, *ApJ*, 608, 229.
1. Mazeh, T., Latham, D. W., Goldberg, E., Torres, G., Stefanik, R. P., Henry, T. J., Zucker, S., **Gnat, O.**, Ofek, E. O. (2001), *Studies of multiple stellar systems - IV. The triple-lined spectroscopic system Gliese 644*, *MNRAS*, 325, 343

CONFERENCE PROCEEDING

2. **Gnat, O.** & Sternberg, A., (2007), *Time-Dependent Radiative Cooling*, in AAS Meeting Abstracts, 210, 113.08.
1. **Gnat, O.** & Sternberg, A., (2005), *Photoionized Gas in Dark Matter Minihalos in the Galactic Halo and Local Group*, in APS Conf. Ser. 331: Extra-Planar Gas, 331, 97, Ed. Robert Braun.