

Aleksey Generozov

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Education

- 2012-2018 **PhD, Astronomy (expected)**, *Columbia University*, New York, NY, Adviser: Brian Metzger.
2008-2012 **BS Physics**, *University of California, Santa Barbara*, Santa Barbara, CA.

Research Interests

I study gas and stellar dynamics in the vicinity of supermassive black holes (SMBHs) via analytic and numerical methods. Some of the questions my research touches on are: How do SMBHs grow and evolve over time? What do current radio observations say about the presence of jets/outflows in tidal disruption events (TDEs)? Why is the TDE rate elevated in post-starburst galaxies? What uniquely identifiable high-energy sources (e.g. X-ray binaries) can be produced by collisional stellar dynamics in extreme environments?

Publications

Physical properties of the inner shocks in hot, tilted black hole accretion flows

A. Generozov, O. Blaes, P.C. Fragile, and K.B. Henisey, 2014, *ApJ*, 780, 81

Lyman edges in supermassive black hole binaries

A. Generozov and Z. Haiman, 2014, *MNRAS*, 443, L64

Circumnuclear media of quiescent supermassive black holes

A. Generozov, N.C. Stone and B.D. Metzger, 2015, *MNRAS*, 453, 775

The influence of circumnuclear environment on the radio emission from TDE jets

A. Generozov, P. Mimica, B.D. Metzger, N.C. Stone, D. Giannios, and M.A. Aloy, 2017, *MNRAS*, 464, 2481

The delay time distribution of tidal disruption flares

N.C. Stone, **A. Generozov**, E. Vasiliev, B.D. Metzger, 2017 *submitted to MNRAS*, arXiv:1709.00423

An overabundance of X-ray binaries in the galactic center from tidal captures

A. Generozov, N.C. Stone, B.D. Metzger, J.P. Ostriker, 2017 *submitted to MNRAS*

Talks

Formation of X-ray binaries in the Galactic Center via tidal capture

- *Harvard galaxies and cosmology seminar*, Sep 2017
- *CIERA theory seminar*, Oct 2017
- *IAS coffee talk*, Nov 2017
- *Princeton THUNCH seminar*, Nov 2017
- *MIT brown bag lunch seminar*, Nov 2017
- *UC Berkeley explosive astro seminar*, Dec 2017
- *UCSC FLASH Seminar*, Dec 2017
- *AAS 231*, Jan 2018

Radio emission from TDE jets

- TDE17 workshop, Sep 2017
- MODEST workshop, Sep 2016
- Jerusalem TDE workshop, Nov 2015([watch](#))

Lyman edges in supermassive black hole binaries

- 27th Texas relativistic astrophysics symposium, Dec 2013

Summer schools and workshops

- Jul 2016 **PITP summer school**, *Summer school on astrophysical plasmas*, Princeton, New Jersey.
- Nov 2016 **ISSI workshop on tidal disruption events (invited participant)**, Bern, Switzerland.

Teaching

- Sep 2013 - **Instructor for Intro Astronomy Lab**, Columbia University.
- May 2015

Outreach

- Sep 2013- **Volunteer for Columbia astronomy outreach**, *Roof/lecture volunteer for public outreach nights.*
- Apr 2014 **Volunteer for Saturday Science Starters**, *Showed physics demos to middle-school aged children.*
- Nov 2015 **Volunteer for Girls Science Day**, *Showed physics demos to middle-school aged girls.*
- Dec 2015 **"On the care and feeding of black holes"**, *Lecture for Columbia astronomy outreach.*

Academic service

- Nov 2015- **Student representative on graduate admissions committee**, *Reviewed*
- Apr 2016 *applications and organized visits for prospective students.*