

Sabina Sagynbayeva

Curriculum Vitae



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EDUCATION

- 2021 - PRESENT **MA/PhD:** Physics (Astrophysics)
*Deferred my admission to Spring 2021 due to COVID-19
Stony Brook University, Stony Brook, NY
- 2016 – 2020 **Bachelor of Science:** Physics
Minor: Mathematics, Literature
Nazarbayev University, Astana, Kazakhstan

RESEARCH PROJECTS

Stony Brook University/Flatiron Institute (CCA)

CURRENT, FROM FEB 2023 (FT)

Advisor: Dr. Phil Armitage

Accretion onto circumplanetary disks

Flatiron Institute (CCA)

CURRENT, FROM JUN 2022 (FT)

Advisors: Dr. Rodrigo Luger, Dr. Will Farr

Hierarchical Bayesian Modeling of the Stellar Surface of HAT-P-11

Stony Brook University/Flatiron Institute (CCA)

CURRENT, FROM FEB 2022 (FT)

Advisors: Dr. Phil Armitage, Dr. Saavik Ford, Dr. Barry McKernan

Binary Black Holes Mergers in AGN Disks

Nazarbayev University

JUN 2020 – AUG 2020 (FT)

Advisor: Dr. Daniele Malafarina

Implications of the Departure From Spherical Symmetry for Black Holes and Black Hole Mimickers

University of Cambridge

MAY 2019 – AUG 2019 (FT)

Advisors: Dr. Roman Rafikov, Dr. William Béthune

Self-gravitating Planetary Envelopes and the Core-nucleated Instability

Nazarbayev University

AUG 2018 – DEC 2019 (PT)

Advisors: Dr. Ernazar Abdikamalov, Dr. Dana Alina

Analysis of the Relative Orientation of the Magnetic Field Structure in Monoceros OB1 Region

PUBLICATIONS

Thayne Currie et al. [including **S. Sagynbayeva**]. "Direct Imaging and Astrometric Discovery of a Superjovian Planet Orbiting an Accelerating Star." *Science* (2023).

Daniele Malafarina, **Sabina Sagynbayeva**. "What a difference a quadrupole makes?" *General Relativity and Gravitation* (2021).

D. Alina et al. [including **S. Sagynbayeva**]. "Large-scale magnetic field in the Monoceros OB-1 East molecular cloud." *Astronomy & Astrophysics* (2020).

AWARDS & FELLOWSHIPS

The Other Worlds Laboratory Exoplanet Summer Program

2023

The program that allows to visit UC Santa Cruz for three weeks to work on a project with an UCSC faculty.

2023 – 2024

Frontera Computational Science Fellowship

1-year fellowship for graduate students with an opportunity to compute on Frontera.

2022 – 2024

LSSTC Data Science Fellowship Program

The program that consists of six week-long sessions on data science.

2020

Young Researchers Alliance FRIP program

The stipend awarded to students for research projects. Stipend: \$1,000



2019

Yessenov Foundation Scholarship

Awarded to ten best students from Kazakhstan for a research internship in the US and European universities and laboratories.

Funding: \$7,500

SCIENCE TALKS & POSTERS : POSTER

StanCon 2023, Washington University in St. Louis	Jun 2023
Emerging Researchers in Exoplanet Science, Yale University 	Jun 2023
Origins of Solar Systems, Gordon Research Conference 	Jun 2023
Athena++ workshop, Flatiron Institute (CCA)	May 2023
Gravitational Waves group meeting, Flatiron Institute (CCA)	Oct 2022
Seminar, University of Kansas	May 2022

PUBLIC OUTREACH TALKS : WATCHABLE

The formation of gas giants 	MAR 2023
iTelescope Webinar Series	AUG 2022
Oceans in the Solar System	
Astronomy on Tap, New York City	APR 2021
How do planets form? 	
Astronomy on Tap, Baton Rouge	

TEACHING APPOINTMENTS

	MAR 2022 – APR 2022
Group Project Leader	
Women in Science and Engineering program Stony Brook University	AUG 2021 – DEC 2021
Teaching Assistant	
Courses: Introduction to Planetary Sciences Department of Physics & Astronomy, Stony Brook University	JAN 2017 – JAN 2019
Tutor of Mathematics	
Courses: Calculus I,II,III, Linear Algebra, Ordinary Differential Equations, Real Analysis Department of Mathematics, Nazarbayev University	

DEPARTMENTAL SERVICE

	SEP 2021 – PRESENT
Senator for the Department of Physics & Astronomy, Member of the Graduate DEI Committee	
Graduate Student Organization, Stony Brook University	JUN 2021 – JUN 2022
Underclass person-at-large & Director of External Affairs	
Physics Graduate Student Association, Department of Physics & Astronomy, Stony Brook University	MAR 2021 – SEP 2021
Member of the Diversity Committee	
Department of Physics & Astronomy, Stony Brook University	SEP 2017 – MAY 2020
Physics Department Representative	
Student Council of Nazarbayev University	

SELECTED OUTREACH

	JAN 2021 – PRESENT
Writer for Astrobites.org	
A website where graduate students publish daily summaries of recent papers on astro-ph. I also chaired the Advertising and Undergraduate Committees.	APR 2018 – MAY 2020
President of the Women in Physics Club	

Volunteer at the “Education for all” center

An organization that helps children with mental and physical disabilities.

I organized the first three inclusive musical theatre performances in Kazakhstan

COMPUTATIONAL SKILLS

PROGRAMMING / MARKUP LANGUAGES	Python, C/C++, IDL, SQL, HTML, JavaScript, Mathematica, \LaTeX
HYDRO CODES	Athena++, PLUTO
N-BODY CODES	REBOUND
FRAMEWORKS / TOOLS	git, GitHub, ds9, Slurm
SUPERCOMPUTING CLUSTERS	<i>seawulf</i> at SBU