

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

Briley Lewis et al. [including **S. Sagynbayeva**]. "Exploring the Effects of Astrobites Lesson Plans on Undergraduate Astronomy Students." *Submitted*.

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

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

2023

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

Bay Area Exoplanet Meeting 44, University of California Santa Cruz

Jul 2023

University of California Santa Barbara

Jul 2023

OWL talk, University of California Santa Cruz

Jul 2023

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

iTelescope Webinar Series

MAR 2023

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

Teaching Assistant

Course: Classical Physics Lab

Department of Physics & Astronomy, Stony Brook University

MAY 2023 – JUL 2023

MAR 2022 – APR 2022

Group Project Leader

Women in Science and Engineering program

Stony Brook University

AUG 2021 – DEC 2021

Teaching Assistant

Course: 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

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

SELECTED OUTREACH

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.	JAN 2021 – PRESENT
President of the Women in Physics Club Nazarbayev University	APR 2018 – MAY 2020
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	OCT 2017 – SEP 2020

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