

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)

Advisor: Dr. Phil Armitage

Accretion onto circumplanetary disks

CURRENT, FROM FEB 2023 (FT)

Flatiron Institute (CCA)

Advisors: Dr. Rodrigo Luger, Dr. Will Farr

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

CURRENT, FROM JUN 2022 (FT)

Stony Brook University/Flatiron Institute (CCA)

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

Binary Black Holes Mergers in AGN Disks

CURRENT, FROM FEB 2022 (FT)

Nazarbayev University

Advisor: Dr. Daniele Malafarina

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

JUN 2020 – AUG 2020 (FT)

University of Cambridge

Advisors: Dr. Roman Rafikov, Dr. William Béthune

Self-gravitating Planetary Envelopes and the Core-nucleated Instability

MAY 2019 – AUG 2019 (FT)

Nazarbayev University

Advisors: Dr. Ernazar Abdikamalov, Dr. Dana Alina

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

AUG 2018 – DEC 2019 (PT)

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

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

2023

Frontera Computational Science Fellowship

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

2023 – 2024

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

OCT 2022

Intro to Finite Volume Methods

Gravitational Waves group meeting, Flatiron Institute (CCA)

MAY 2022

AGN accretion disks and black hole binaries

University of Kansas

PUBLIC TALKS : WATCHABLE

MAR 2023

The formation of gas giants

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](https://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

Nazarbayev University

OCT 2017 – SEP 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

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