

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 EXPERIENCE

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

Stony Brook University/Flatiron Institute (CCA)

CURRENT, FROM FEB 2021 (FT)

Advisor: Dr. Phil Armitage

Migration of Planets and Stars in Protoplanetary and AGN Disks

Eureka Scientific

JUL 2021 – AUG 2021 (PT)

Advisor: Dr. Thayne Currie

Direct Imaging and Astrometry of an Extrasolar Planet

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." *Submitted* (2022).

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

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

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 2021

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

OBSERVING EXPERIENCE

OCT 2021

8.2-meter Subaru Telescope (SCEXAO)

Assisted with 2 nights (remotely)

MAR 2021

Meade 14-inch telescope

Assisted with 1 night (Stony Brook, NY)

DEPARTMENTAL SERVICE

JUN 2022 – PRESENT

Director of Marketing

Physics Graduate Student Association, Department of Physics & Astronomy, Stony Brook University

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

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

NOV 2017

Coordinator of the Children’s Development Foundation’s *Warm Winter* project

Coordinated a group of students to help low-income families that cannot afford winter clothes for their kids.

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

LANGUAGES

English (advanced), Russian (native), Spanish (B1)

HOBBIES

SONGWRITING	1 album, 3 singles on all streaming platforms
MUSICAL INSTRUMENTS	drum kit, piano, guitar, ukulele
DANCE STYLES	waacking, house, jazz-funk, vogue
ADDITIONAL INTERESTS	photography, chess