

# 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*, Nur-Sultan, Kazakhstan

### RESEARCH EXPERIENCE

#### *Flatiron Institute (CCA)*

CURRENT, FROM JUN 2022 (FT)

**Research Assistant, 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)

**Research Assistant, 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)

**Research Assistant, Advisor: Dr. Phil Armitage**  
Migration of Planets and Stars in Protoplanetary and AGN Disks

#### *Subaru Telescope/Eureka Scientific*

JUL 2021 – AUG 2021 (PT)

**Research Intern, Advisor: Dr. Thayne Currie**  
Direct Imaging and Astrometry of an Extrasolar Planet

#### *Nazarbayev University*

JUN 2020 – AUG 2020 (FT)

**Research Assistant, 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)

**Research Intern, Advisors: Dr. Roman Rafikov, Dr. William Béthune**  
Self-gravitating Planetary Envelopes and the Core-nucleated Instability

#### *Nazarbayev University*

AUG 2018 – DEC 2019 (PT)

**Research Assistant, 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 an Extrasolar Planet Orbiting a Dusty, Accelerating Star." *In prep.* (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

### LSSTC Data Science Fellowship Program

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

2022 – 2024

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

2018 – 2019

### Dean's List

For achieving a semester GPA higher than 3.75 (out of 4.00)

## INVITED TALKS

AUG 2022

### Oceans in the Solar System

Astronomy on Tap, NYC

MAY 2022

### AGN accretion disks and black hole binaries

University of Kansas

APR 2021

### How do planets form?

Astronomy on Tap, Baton Rouge

## TEACHING APPOINTMENTS

AUG 2022 – DEC 2022

### Teaching Assistant

**Courses:** Introduction to Planetary Sciences

Department of Physics & Astronomy, Stony Brook University

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

## 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 – PRESENT

### 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**, Chair of the Advertising and Undergraduate Committees

A website where graduate students publish daily summaries of recent papers on astro-ph.

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**

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PROGRAMMING LANGUAGES	Python, C/C++, IDL, Julia, SQL
HYDRO CODES	Athena++, PLUTO
N-BODY CODES	REBOUND
OTHER	Mathematica, ds9, L <sup>A</sup> T <sub>E</sub> X

**LANGUAGES**

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

**HOBBIES**

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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