

|  |   |   |
|--|---|---|
| 52 Hillhouse Avenue, New Haven, CT-06511, USA<br>Email: dhruba.duttachowdhury@yale.edu<br>ORCID iD: 0000-0003-0250-3827<br>Nationality: Indian |   |   |
| RESEARCH INTERESTS   | Classical Dwarfs and Ultra Diffuse Galaxies, Globular Clusters, Fuzzy Dark Matter, Galaxy Dynamics  |   |
| EDUCATION  | <b>Yale University, New Haven, CT, USA</b><br>– Ph.D. in Astronomy, Expected May 2022<br>– Advisors: Frank van den Bosch and Pieter van Dokkum<br>– M.S., M.Phil. in Astronomy, May 2018  | 2016-                                       |
|  | <b>Presidency University, Kolkata, India</b><br>– M.Sc. in Physics<br>– CGPA: 8.3/10<br>– Thesis: The Sunyaev-Zel’dovich Signal from Quasar Host Halos<br>– Advisor: Suchetana Chatterjee   | 2013-2015                                   |
|  | <b>Presidency College, University of Calcutta</b><br>– B.Sc (Honors) in Physics<br>– Minor in Mathematics and Chemistry<br>– Divison: First Class   | 2010-2013                                   |
| POSITIONS  | <b>Yale University, Astronomy Department</b><br>– Graduate Research Assistant<br>– Advisors: Frank van den Bosch and Pieter van Dokkum  | 2018-                                       |
|  | <b>Presidency University, Physics Department</b><br>– Project Assistant (Junior Research Fellow)<br>– Project Title: Modeling the 21 cm Signal from the Dark Ages<br>– Advisor: Kanan Kumar Datta   | 2015-2016                                   |
| AWARDS   | – Sheldon Wise Pre-Doctoral Fellowship, Yale University<br>– Department of Science and Technology, Government of India<br>Junior Research Fellowship<br>– Department of Science and Technology, Government of India<br>INSPIRE scholarship<br>– Lilabati Ray Memorial Prize for Best Student Seminar,<br>Presidency University, Kolkata | 2017-2018<br>2015-2016<br>2010-2015<br>2015 |
| PROFESSIONAL ACTIVITIES  | – Referee for ApJ<br>– Yale Astronomy Graduate Student Talks SOC Member<br>– Galaxy Lunch Moderator, Yale Astronomy Department  | 2019-<br>Spring 2019<br>2017-2018           |
| TEACHING EXPERIENCE  | – Teaching Fellow, Planets and Stars, Yale University<br>– Teaching Fellow, Galaxies and the Universe, Yale University  | Spring 2017<br>Fall 2017, 2019              |
| TUTORING EXPERIENCE  | – Private Tutor of High School Physics and Mathematics  | 2014-2016                                   |

**FIRST AUTHOR  
PAPERS**

1. **Dutta Chowdhury, D.**, van den Bosch, F.C., and van Dokkum, P. “On the Evolution of the Globular Cluster System in NGC 1052-DF2: Dynamical Friction, Globular-Globular Interactions, and Galactic Tides” 2020 ApJ, 903, 149
2. **Dutta Chowdhury, D.**, van den Bosch, F.C., and van Dokkum, P. “On the Orbital Decay of Globular Clusters in NGC 1052-DF2: Testing a Baryon Only Mass Model” 2019, ApJ, 877, 133
3. **Dutta Chowdhury, D.** and Chatterjee, S. “Sunyaev-Zel’dovich Signal from Quasar Hosts: Implications for Detection of Quasar Feedback” 2017, ApJ, 839, 34

**CO-AUTHOR  
PAPERS**

1. Ansar, S., Datta, K.K. and **Dutta Chowdhury, D.** “Impact of Inhomogeneous CMB Heating of Gas on the HI 21-cm Signal During Dark Ages” 2018, PhysRevD, 98, 103505

**PAPERS IN  
PREPARATION**

1. **Dutta Chowdhury, D.**, van den Bosch, F.C., Robles, V.H., van Dokkum, P. et al. “On the Random Motion of Nuclear Objects in a Fuzzy Dark Matter Halo”

**CONTRIBUTED  
TALKS**

1. “Imprints of the Recombination History of the Universe on the HI 21-cm Signal from the Dark Ages, Epoch of Reionization Workshop, IIT Kharagpur, India, July 2016
2. “Sunyaev-Zel’dovich Signal from Quasar Hosts: Implications for Quasar Feedback Detection”, Topical Conference on Gravity, Cosmology, Astronomy and Astrophysics, Eastern Region, IISER, Kolkata, India, Sept 2015

**INVITED TALKS**

1. “On the Dynamics of the Globular Cluster System in NGC 1052-DF2: The Galaxy Lacking Dark Matter”, Physics Club Talk, Presidency University, Kolkata, India, June 2019

**POSTER  
PRESENTATIONS**

1. “On the Orbital Decay of Globular Clusters in NGC 1052-DF2: Testing a Baryon Only Mass Model”, Santa Cruz Galaxy Workshop, University of California, Santa Cruz, USA, Aug 2019
2. “On the Orbital Decay of Globular Clusters in NGC 1052-DF2: Testing a Baryon Only Mass Model”, Small Galaxies, Cosmic Questions Conference, Durham University, Durham, UK, July 2019
3. “Sunyaev-Zel’dovich Signal from Quasar Hosts: Implications for Quasar Feedback Detection”, International Conference on Gravitation and Cosmology, IISER Mohali, India, Dec 2015

**COMPUTATIONAL  
SKILLS**

- N-Body simulations with GADGET
- Fuzzy Dark Matter simulations with GAMER (a AMR Code)
- Programming skills in C, C++, FORTRAN 77, and Python
- Familiarity with Yt (data analysis and visualisation package)