List of Publications

1 **Ankita Bhagawati**, Deep. K. Kuri, and Nilakshi Das, "Proton acceleration due to laser plasma interactions from mass-limited spherical targets", *Physics of Plasmas*, 26, 093106 (2019)

2 **Ankita Bhagawati**, and Nilakshi Das, "Laser accelerated protons using density gradients in hydrogen plasma spheres", *Journal of Plasma Physics*, 87, 905870413 (2021)

3 **Ankita Bhagawati** "Role of Laser Pre-pulse and Target Density Modification on the Acceleration of Protons from a Hydrogen Plasma Sphere", S. Sengupta et al. (eds.), Selected Progresses in Modern Physics, *Springer Proceedings in Physics* , 265 (2021)

4 **Ankita Bhagawati**, and Nilakshi Das, "Effect of density gradients on the generation of a highly energetic and strongly collimated proton beam from a laser-irradiated Gaussian shaped hydrogen microsphere", *Physics of Plasmas*, 29, 053107 (2022)

Lists of talks and posters presented in Conferences/Seminars attended

1 **Ankita Bhagawati**, and Nilakshi Das, "Energetic Protons from A Laser Exploded Microsphere with Density Gradients", *36th National Symposium on Plasma Science & Technology (PLASMA 2021)* organized by the Plasma Science Society of India (PSSI) and the Department of Physics, Birla Institute of Technology Mesra, Jaipur Campus India (13-15 December 2021).

2 **Ankita Bhagawati**, and Nilakshi Das, "Laser accelerated energetic protons from a non-uniform density plasma sphere", *47th Conference on Plasma Physics – Satellite Meeting (High Field Laser-Plasma Interaction and Laser-driven Particle and Radiation Sources for Application) (EPS-SM-2021)*, an online conference organized by the European Physical Society-Plasma Physics Division and the Centre for Pulsed Lasers (CLPU), Salamanca, Spain (28-29, June, 2021)

3 **Ankita Bhagawati**, and Nilakshi Das, "Accelerating protons from a non-uniform density plasma source using an ultra-short pulsed laser", *National Conference on Emerging Trends in Physics (NCETP-2021)* held and organized by Department of Physics, Tezpur University, Assam, India (16-17 June, 2021).]

4 **Ankita Bhagawati**, and Nilakshi Das, "Role of laser pre-pulse and target density modification on the acceleration of protons from a hydrogen plasma sphere" *Springer International Conference on Trends in Modern Physics (TiMP-2021)* held at Assam Don Bosco University, Guwahati, Assam, India. Organized by Department of Physics, Assam Don Bosco University in collaboration with Indian Association of Physics Teachers (IAPT) (26-27, February, 2021).

5 **Ankita Bhagawati**, and Nilakshi Das,"Laser acceleration of protons from density-ramped plasma targets: A preliminary study" *5th ELI*

Summer School 2020 (ELISS-2020), a web-school organized by the Extreme Laser Infrastructure- Attosecond Laser Pulse Source (ELI-ALPS) Research Institute in Szeged, Hungary (26-28, August, 2020).

6 **Ankita Bhagawati**, and Nilakshi Das, "Laser accelerated energetic protons from ramped H-plasma slabs", *3rd National Conference on Recent Advances in Science and Technology (NCRAST-2020)* a web-conference organized by Assam Science and Technology University (ASTU), Guwahati, India (17-19. August, 2020).

7 **Ankita Bhagawati**, Deep. K. Kuri, and Nilakshi Das, "Proton Acceleration From Mass Limited Plasma Spheres Using Ultrashort Laser Pulses", *12th International Conference on Plasma Science and Applications (ICPSA-2019)* , University of Lucknow, Lucknow, Uttar Pradesh, India (11-14 November 2019).

8 **Ankita Bhagawati**, Deep. K. Kuri, and Nilakshi Das, "Energetic protons due to effective target heating from a near-critical plasma sphere using an ultra-short intense laser", *4th European Advanced Accelerator Concepts (EAAC-2019)*, Elba, Italy (15-21 September, 2019).

9 **Ankita Bhagawati**, Kartik Patel, and Nilakshi Das, "Density Effect On Ion Acceleration From Over-Dense Mass Limited Targets Using Ultra-Short Lasers", *Recent Trends in Basic Plasma Research (RTBPR-2019)*, CPP-IPR, Guwahati, Assam, India (8th March 2019).

10 **Ankita Bhagawati**, Kartik Patel, and Nilakshi Das, "Ion Acceleration In Interaction Of High Intensity Laser With Mass-Limited Targets", *33rd National Symposium on Plasma Science & Technology (PLASMA 2018)*, University of Delhi, New Delhi, India (04-07 December 2018).