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Development of a new active target TPC for multiple nuclear physics experiments

Active Target Time Projection Chamber (AT-TPC) is one of state-of-the-art particle detectors which allows a precise measurement of nuclear reactions using rare isotope beams. A new Active Target TPC for Multiple nuclear physics eXperiments (AToM-X) is under development at the Center for Exotic Nuclear Studies (CENS). It consists of a highly segmented Time Projection Chamber (TPC) using a Micromegas, a field cage, and solid state detectors. By using the AToM-X, high resolution measurement of the 3-dimensional particle tracks, energy, and position with high detection efficiency can be achieved. Details of the development status and the physics plans will be presented.

Primary author: CHA, Soomi (Center for Exotic Nuclear Studies)

Co-authors: KIM, Aram (Korea University); PARK, Chaeyeon (Ewha Womans University / CENS(IBS)); GU, Gyoungmo (Sungkyunkwan University, Center for Exotic Nuclear Studies); HUH, Jangyong (CENS (Center for Exotic Nuclear Studies), IBS (Institute of Basic Science)); LEE, Jung Woo (Center for Exotic Nuclear Studies, Institute for Basic Science); HAHN, Kevin Insik (Center for Exotic Nuclear Studies, IBS); KIM, Minju (Center for Exotic Nuclear Studies, IBS); DO, Seungkyung (Korea University, Center for Exotic Nuclear Studies); BAE, Sunghan (Center for Nuclear Study, University of Tokyo); Dr AHN, Sunghoon(Tony) (Center for Exotic Nuclear Studies, Institute for Basic Science); PEREIRA-LOPEZ, Xesus (Center for Exotic Nuclear Studies, Institute for Basic Science)

Presenter: CHA, Soomi (Center for Exotic Nuclear Studies)

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