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## MAYA, a gaseous active target

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With the recent improvement in the field of exotic beam, especially with the SPIRAL facility at GANIL, a new area of the nuclear chart is now available for experimentation. Nevertheless the intensity of such beams is still relatively low (few thousands of particles per second), and for some reactions of interest the cross sections are low. Thus it is essential to be able to perform experiments using detectors which cover the larger possible solid angle with the best achievable resolution on any measured parameters. It is also necessary to use thick targets to increase the reaction counting rates, but this should be done without loss of resolution. We developed the MAYA detector to fulfil all these experimental requirements. MAYA is a gaseous active target detector: the gas is used as detection material and also as target. MAYA allows tracking, identification and kinematics measurement for all the participants of binary direct reactions. This detector is able to work at gas pressure of up to 3 atmospheres, as a way to increase the density and thus the thickness of the target. The tracking capability prevents any loss of resolution, especially on the reaction energy that usually occurs in such cases and also allows a very low threshold in energy of reactions. The design of this detector and the rather new electronics which is used will be showed during this presentation. Some recent preliminary results will also be presented in order to show the possibility and the resolutions of the measured kinematics parameters (reaction energy, energy or range and angle for the recoil and scattered particle) of this detector.

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