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An optical chamber for fission

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The interaction between a charge particle and a fissile nucleus might produce a new type of fission resonances below the Coulomb barrier. These resonances are still to be found experimentally.

We propose to use an optical chamber to observe directly the fission products of the interaction between a low-energy proton beam and a U target. The optical chamber works as a gas-filled TPC where the light emitted by the ionised gas is picked up by a comercial CMOS camera and the resulting image is analysed to reconstruct the reaction.

In this talk we will present the physical case as well as the plan to build such optical TPC chamber.

Primary author: Dr CAAMANO, Manuel (Universidade de Santiago de Compostela (Spain))

Co-authors: Dr FERNANDEZ-DOMINGUEZ, Beatriz (USC); Dr GONZALEZ DIAZ, Diego (Universidade de Santiago de Compostela); Dr ALVAREZ POL, Héctor (University of Santiago de Compostela); Dr CABANELAS EIRAS, PABLO (Universidade de Santiago de Compostela)

Presenter: Dr CAAMANO, Manuel (Universidade de Santiago de Compostela (Spain))

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