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Investigation on TNSA (Target Normal Sheath Acceleration) through the measure of Ions energy distribution

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An experimental campaign aiming to investigate the ion acceleration mechanisms through laser-matter interaction in femtosecond domain has been carried out at the ILIL facility with a laser intensity of 2E19 W/cm2. We will show the energy spectra of light-ions depending on structural characteristics of the target and role of surface and target bulk in the acceleration process. In order to obtain these information a Thomson Parabola Spectrometer and CR-39 have been used.