

## $\alpha$ clusters in ultra-relativistic light-ion + Pb collisions at CERN SPS

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We investigate ultra-relativistic collisions of the light nuclei with heavy targets at energies available at CERN SPS and show that the harmonic flow measures based on ratios of cumulant moments are particularly suited to study the intrinsic deformation of the light nuclei wave functions. That way one can probe the expected clusterization in the ground state, which leads to large initial ellipticity or triangularity in the shape of the fireball in the transverse plane. We show that the clusterization effect results in very characteristic behavior of the ratios

of the cumulant moments as functions of the number of participant nucleons, both for the elliptic and triangular deformations. Thus the experimental event-by-event studies of harmonic flow in ultrarelativistic light-heavy collisions may offer a new window to look at the ground-state structure of light nuclei.

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