Contribution ID: 433

Type: Oral

## The Milky Way in a phase and coordinate spaces

The appearance of helical structures in astrophysics and heavy-ion collisions (HIC) physics is discussed and the interplay between these two branches of physics is investigated.

As far as in HIC the data are available in momentum space only, the assumption that the Milky Way has a spiral structure in the velocity space is checked.

We find the spiral structures in phase and coordinate spaces by making godograph starting from the rotation curve of our Galaxy. This curve were derived from fitting sperical model of the Galaxy with recent data and include contribution of different parts of Galaxy, as thin disk, bulge and spherically symmetric Dark Matter Halo (Navarro-Frenk-White density profile).

The helical structures in coordinate and velocity space are found and compared.

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Track Classification: Theoretical Physics