

Flows of geometric parameters of Sasaki-Einstein manifolds $Y_{p,q}$ and $L_{p,q,r}$ through isomonodromy

Wednesday, 26 October 2022 17:05 (15 minutes)

We investigate the equations of motion for a free point string on five-dimensional Sasaki-Einstein manifolds $Y_{p,q}/L_{p,q,r}$. This results in Fuchsian equations with four singularities or a Heun equations. The asymptotic solutions of these equations are obtained through isomonodromic deformation and are related to the sixth Painlevé equation. We derive the flows generated by the coalescence procedure for the hierarchy of Painlevé equations and the effect of these flows on the spectrum of energies. Through this procedure we search for dynamically occurring phase transitions in the spectra on the manifolds.

Primary authors: Dr DIMOV, Hristo (Sofia University "St. Kliment Ohridski" & JINR); Dr RADOMIROV, Miroslav (Sofia University "St. Kliment Ohridski"); Prof. RASHKOV, Radoslav (Sofia University "St. Kliment Ohridski"); Dr VETSOV, Tsvetan (Sofia University "St. Kliment Ohridski"); AVRAMOV, Vasil (Sofia University "St. Kliment Ohridski")

Presenter: AVRAMOV, Vasil (Sofia University "St. Kliment Ohridski")

Session Classification: Theoretical Physics

Track Classification: Theoretical Physics