Journal of High Energy Physics 2016 vol.2016 N10

Non-geometric branes are DFT monopoles

Bakhmatov I., Kleinschmidt A., Musaev E.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

© 2016, The Author(s).The double field theory monopole solution by Berman and Rudolph is shown to reproduce non-geometric backgrounds with non-vanishing Q- and R-flux upon an appropriate choice of physical and dual coordinates. The obtained backgrounds depend non-trivially on dual coordinates and have only trivial monodromies. Upon smearing the solutions along the dual coordinates one reproduces the known 522 solution for the Q-brane and co-dimension 1 solution for the R-brane. The T-duality invariant magnetic charge is explicitly calculated for all these backgrounds and is found to be equal to the magnetic charge of (unsmeared) NS5-brane.

http://dx.doi.org/10.1007/JHEP10(2016)076

Keywords

Solitons Monopoles and Instantons, String Duality, Supergravity Models