

Analytical Kerr-Sen Dilaton-axion Black Hole Lensing in the Weak Deflection Limit

Galin Gyulchev

St.Kliment Ohridski University of Sofia, Sofia, Bulgaria

We investigate analytical gravitational lensing by charged, stationary, axially symmetric Kerr-Sen dilaton-axion black holes in the weak-deflection limit. Approximate solutions to the light-like equations of motion are present up to and including third-order terms of small parameter proportional to the black hole mass, to the black hole angular momentum and to the square of the black hole charge and inverse proportional to the impact parameter of the light ray. We compute the positions of the two weak field images, the corresponding signed and absolute magnifications up to post-Newtonian order. All of the lensing quantities are compared to particular cases as Schwarzschild and Kerr black holes as well as the Gibbons-Maeda-Garfinkle-Horowitz- Strominger black hole.

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