

Pronko, G. P.

Soliton in gravitating gas: Hoag's object. (English) [Zbl 1177.85037](#)

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Summary: We explore the possibility of creating of solitons in gravitating gas. We show that the virial arguments do not create an obstacle to the existence of localized static solutions. The simplest toroidal soliton of gravitating gas could explain the peculiar galaxy named Hoag's Object.

MSC:

[85A15](#) Galactic and stellar structure

Keywords:

soliton; gravitating gas; ring galaxies

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