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Bootstrapped Newtonian gravity: from stars to corpuscular black holes (C)

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In corpuscular gravity black holes are condensates at the critical point, with a large number of bound gravitons and no central singularity. This innovative approach moves away from the semi-classical picture of quantum field theory on curved backgrounds and considers self-gravitating systems as truly quantum. We shall introduce a bootstrapped Newtonian gravitational potential which includes non-linearities inspired by general relativity and test the quantum corpuscular picture within this approach. Application to cosmology will also be briefly reviewed.

Summary

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