

Super-Massive Black Hole Formation from Dark Matter Bose-Einstein Condensate Collapse

ボースアインシュタイン凝縮体による超大質量ブラックホールの形成

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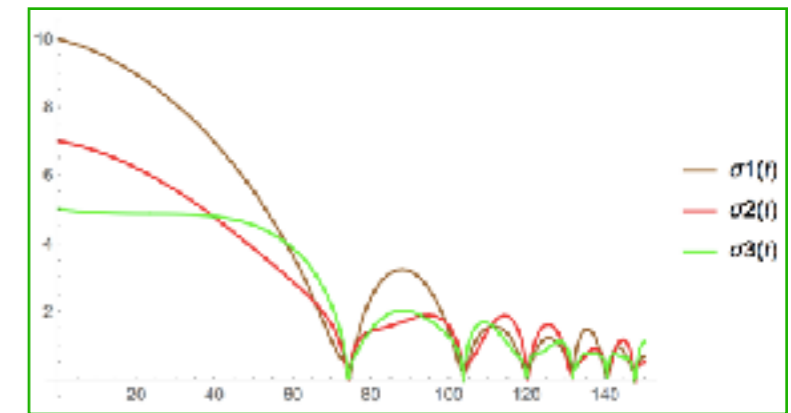
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★SMBH formation from baryon seems to be difficult.

Therefore, We explore formation from DM. **SMBH from BEC**

★If DM is in the form of quantum condensation(BEC),

DM collapse coherently **BEC collapses easier**



★We solve GP equation in the NR Gaussian approximation **We solve ODE**

★Isotropic/anisotropic collapse with dissipation **Shell like structure?**

★Angular momentum J prevents BEC collapse ... We need to go back to the **J requirement stage.**

★SMBH is formed in balance with the increasing density and J ... SMBH forms in the very early stage. ... **SMBH is formed before the galaxy.**