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Phys 343 project

EThermodynamics of Black Holes

A profound insight into the world of quantum gravity - the most undemental theory of nature- was made by Hawking and Beckenstien in the 1970's. Where they have shown that black holes have temperature and entropy. This insight has become the most famous result in gravity in the 20's century right after Einstien's theory of relativity!

In this project, you shall travel to the world of black holes and investigate their thermodynamic properties, summarising your findings in the following points:

1. Review of black holes
2. Hawking radiation
3. Rules of black hole mechanics
4. Implications

You should include the references in your project

- T Jacobson Introductory Lectures on Black Hole Thermodynamics
- RM Wald The Thermodynamics of Black Holes (1999).
- Michael C. LoPresto Some Simple Black Hole Thermodynamics (2003).

Best Regards,

Dr Salwa Alsaleh