General Relativity and Quantum Cosmology

Starships and Spinoza

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We discuss a proposal to make small artificial black holes (ABH's) using a huge laser. Because of Hawking radiation, they would be extremely powerful energy sources. We investigate the technical problems of using them to make power plants and starships. The first suggestion is due to Hawking. Next, we consider what challenges the ABH proposal would pose for a future quantum theory of gravity. The form of a theory which would allow us to compute the necessary corrections to classical theory is considered. It is widely believed that every black hole produces a new baby universe on the other side of its singularity. If this is true, ABH technology will involve future humanity in the creation process of universes. Finally, we ponder the effects that the ABH proposal would have on the culture of a future society, particularly if the baby universe theory is correct. The changes in our economic life and understanding of our role in the cosmos would be so profound as to have a "spiritual" aspect.

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