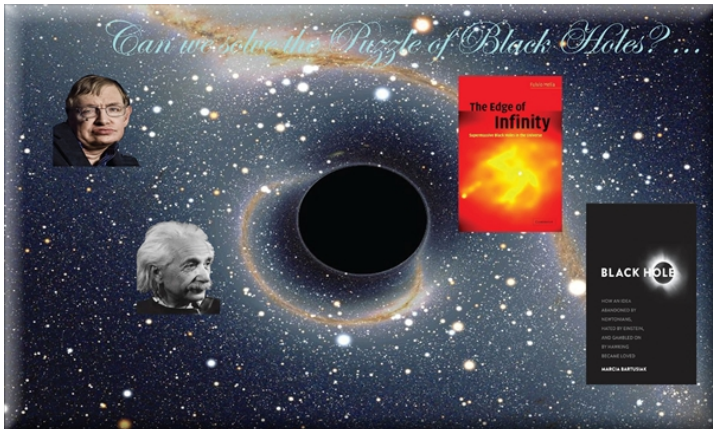


Can we solve the Puzzle of Black Holes? ... by Dr. Giovanni A. Orlando

Written by Administrator

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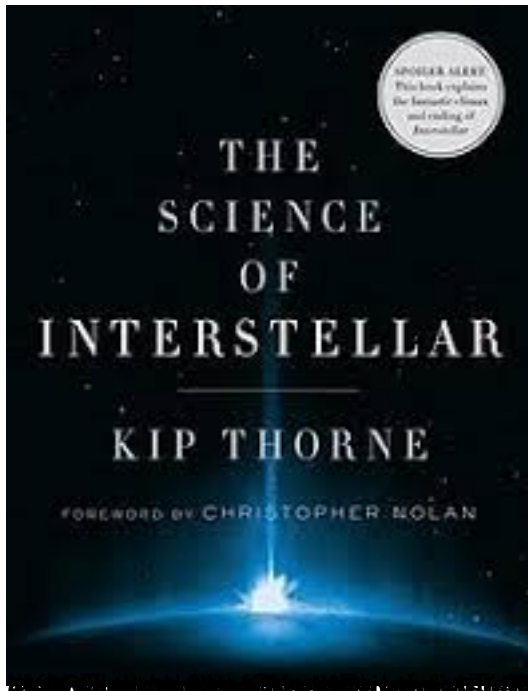


Greetings ... on the Venus day ... the Orange day of Lovers and "The Love in the Family" ...

I hope your "Venus-girl" is in your Mind or your Heart ... If so ... the Time will await ... the meeting ...

And "Time" is the key ... which I will stress until 2023 ... may be also until 2025 ... then I will stress the 5D ... Dimension of Love ... that will feel.

I want to excuse ... if I use words like "The stupid Physics of Hollywood" ... related to ... the "fool" (I excuse again) ... of the Movie "Interstellar"



Are you ready for Space Trek?

Exercise 6.1. A TRIP TO THE GALACTIC NUCLEUS
Compute the proper time required for the occupants of a rocket ship to travel the $\sim 30,000$ light-years from the Earth to the center of the Galaxy. Assume that they maintain an acceleration of one "earth gravity" (10^8 cm/sec²) for half the trip, and then decelerate at one earth gravity for the remaining half.

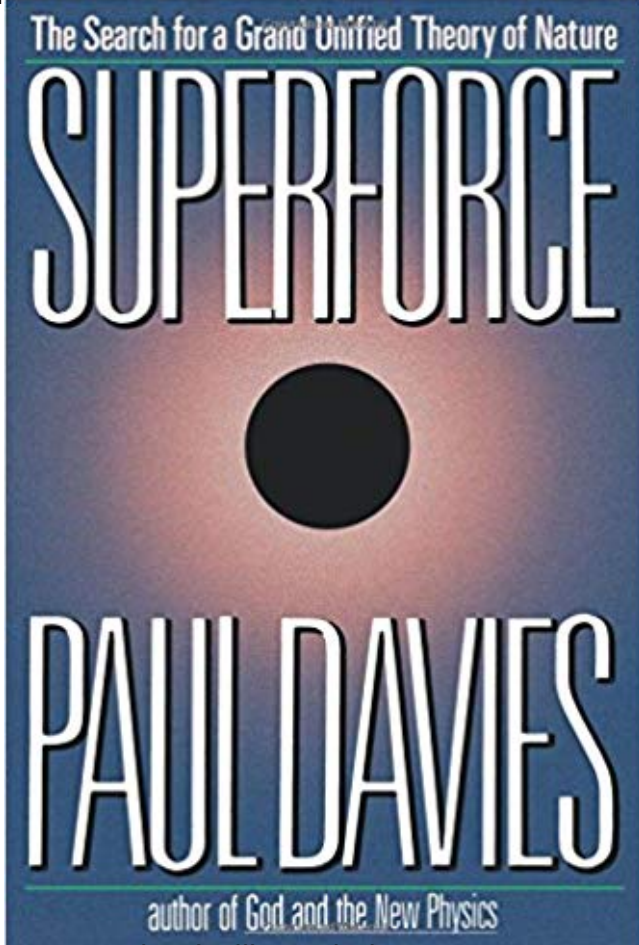
Exercise 6.2. ROCKET PAYLOAD
What fraction of the initial mass of the rocket can be payload for the journey considered in exercise 6.1? Assume an ideal rocket that converts rest mass into radiation and ejects all the radiation out the back of the rocket with 100 per cent efficiency and perfect collimation.

Exercise 6.3. TWIN PARADOX
(a) Show that, of all timelike world lines connecting two events \mathcal{A} and \mathcal{B} , the one with the longest lapse of proper time is the unaccelerated one. (Hint: perform the calculation in the inertial frame of the unaccelerated world line.)
(b) One twin chooses to move from \mathcal{A} to \mathcal{B} along the unaccelerated world line. Show that the other twin, by an appropriate choice of accelerations, can get from \mathcal{A} to \mathcal{B} in arbitrarily small proper time.
(c) If the second twin prefers to ride in comfort, with the acceleration he feels never exceeding one earth gravity, g , what is the shortest proper time-lapse he can achieve between \mathcal{A} and \mathcal{B} ? Express the answer in terms of g and the proper time-lapse $\Delta\tau$ measured by the unaccelerated twin.
(d) Evaluate the answer numerically for several interesting trips.

EXERCISES



IV. ... and do not exist at all ...



We will not control Gravity and we will not control ... until the ... Quantum Mathematics ... will

Error 404:
... Wrong Galaxy.
... Try the Moon is closer ...



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