KNOWLEDGE ABOUT GRAVITATION and GRAVITATION ABOUT KNOWLEDGE

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LECTURE TOPICS

- Knowledge about gravitation
- Wonderland
- Gravitation about knowledge
- Beyond the wonderland
- $\bullet \dots$ and then some \dots

Stuff you can learn in school and at the university:

- Newton's law of gravity, force and potential, parabolic motion...
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- All physics OTHER THAN gravity:

– classical mechanics,	– quantum mechanics,
– classical field theory,	– quantum field theory.

All the nongravitational physics is studied in both nonrelativistic and relativistic formulation, with applications to various physical systems...

In other words, as far as serious gravitational physics is concerned,



... untill you opt for high energy graduate studies, where you learn:

- Gravitation I (general relativity),
- Gravitation II (advanced theories of gravity),
- QFT in curved spacetime (still more advanced),
- and specialized courses (very advanced)...



BUCKLE UP, DOROTHY, 'CAUSE KANSAS IS GOING BYE BYE !!



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NB: NOT EVERY CHAZY IDEA IS A SOUTTON TO A PROPOND



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• the twin paradox can be solved,



A world with an impressive list of properties, in which:

• you can learn about many exotic things: black holes, wormholes, cosmology and the Big Bang, gravitational waves, dark matter, dark energy, ...



GRAVITATION ABOUT KNOWLEDGE

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- gravity can be repulsive,
- the inertial forces are understood,
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- the twin paradox can be solved,
- you can learn about many exotic things: black holes, wormholes, cosmology and the Big Bang, gravitational waves, dark matter, dark energy, ...

A complete rewrite of your intuition about the physical world (acquired in your prior education)

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– How to quantize?	– Which models we have?

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The most prestigious discipline of physics: "We formulate the laws of nature, others are merely applying them."

MUCH TO LEARN YOU STILL HAVE, MY YOUNG PADAWAN...



THANK YOU FOR THE ATTENTION!