



MAP-fis Essay Proposal, 2016-2017

(please write in English)

Supervisor

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Title

Modified Gravitation Theories and their Observational Impact

Area

(Materials, Optics, Condensed Theory, High Energy Theory,.....);

Gravitation and Cosmology

Summary of Proposal

This application has as its driving force two complementary aspects:

A - Focusing on models of modified gravity, relating them to a fundamental principle of General Relativity (GR), and in view of the observational impact of specific aspects of the theory in a wide range of contexts, from the Solar System to astrophysical and cosmological scales.

B - To study a possibility of testing GR and theories of modified gravitation through space missions, focusing on the possibility of inferring observables of interest. The Euclid mission of the European Space Agency (ESA), in which are involved members of CAUP, and the MoonLIGHT-2 experience, developed by the Istituto Nazionale di Fisica Nucleare Italiana (INFN-Frascati), which already include the collaboration of members of CFP, are of particular interest.

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(to allow students first look at topic)

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