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# Solar system analysis of a polynomial class of Palatini f(R) gravity

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It is made a post-Newtonian analysis of a class of Palatini $f(R)$ theories of gravity where the lagrangian density is assumed to be a polynomial function of the Ricci scalar. The resulting metric is not covered by the classical parametrized post-Newtonian formalism (PPN) since new gravitational potentials emerges. I will then discuss post-Newtonian equations of motion of massive bodies and light rays to see whether deviations from general relativity can be used to determine upper bound limits to Palatini $F(R)$ gravity according to tests performed in the solar system.

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