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A seven Parameter Kerr-Newman-like Metric

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In this contribution a new metric with seven parameters is found.
The metric possess the following features: mass, rotation, charge,
magnetic dipole, massive quadrupole, octupole, and hexadecapole.
These spacetime is versatile and realistic for representing compact objects like neutron stars. It has several astrophysical applications, for
example to study the chaotic behavior of geodesics or the gravitational
lens effect. The spacetime was found using the Kerr-Newman metric
as seed metric, the other parameters were included approximately up
to the second order. This metric is a solution to the Einstein-Maxwell
equations by expanding in a Taylor series up to the second order in
the perturbative parameters.

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