Black Holes, Hidden Symmetries and Complete Integrability

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ABSTRACT

Higher dimensional rotating black holes with spherical topology of the horizon possess remarkable properties. The corresponding Kerr-NUT-(A)dS metrics admit a closed conformal Killing-Yano rank 2 tensor, which generates a tower of Killig tensors. As a result geodesic equations are completely integrable and main field equations in this spacetime allow a complete separation of variable.