NEW SOLUTIONS OF EINSTEIN EQUATIONS
REPRESENTING SPINNING MASSES

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Abstract. We found new, stationary axisymmetric, asymptotically flat exact solutions to Einstein's vacuum field equations, which are classified by an integer δ and Kerr metric is the solution of $\delta = 1$. The number of ring singularity on the equatorial plane is δ. The odd δ metrices contain the surfaces of event horizon but the even δ metrices do not. Except the Kerr metric, however, the space-time becomes singular at the poles on these surfaces.

References

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