

1118-53-49

Yakov M Shlapentokh-Rothman* (yshlapen@math.princeton.edu), Fine Hall, Washington Road, Princeton, NJ 08544. *Time-periodic Einstein-Klein-Gordon bifurcations Of Kerr.*

For a positive measure set of Klein-Gordon masses $\mu^2 > 0$, we construct one-parameter families of solutions to the Einstein-Klein-Gordon equations bifurcating off the Kerr solution such that the underlying family of spacetimes are each an asymptotically flat, stationary, axisymmetric, black hole spacetime, and such that the corresponding scalar fields are non-zero and time-periodic. An immediate corollary is that for these Klein-Gordon masses, the Kerr family is not asymptotically stable as a solution to the Einstein-Klein-Gordon equations. This is joint work with Otis Chodosh. (Received January 17, 2016)