Universality in the collapse of rotating gravitational waves TONY
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Choptuik's discovery of critical phenomena in the collapse of a spherically symmetric
massless scalar field has spurred much interest over the years to explore critical
collapse in more general settings. By evolving one-parameter families of initial data,
it was found that spacetimes near the threshold of collapse or dispersion exhibited
type II critical phenomena, with the properties of universality, scaling, and self-
similarity. Shortly afterwards, similar results were obtained by Abrahams and Evans
(and more recently by Sorkin) for the critical collapse of axisymmetric non-rotating
gravitational waves. Despite many investigations into the critical collapse of other
spherically symmetric or axisymmetric configurations, there has been relatively little
headway on studying the critical collapse of non-axisymmetric configurations, which
may carry angular momentum. In this talk, I will report on progress in simulating
the critical collapse of non-axisymmetric rotating gravitational waves, which instead
exhibit signs of type I critical phenomena, and comment on evidence for universality.

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