

# Non-Spherically Symmetric Collapse in Asymptotically AdS Spacetimes

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## ABSTRACT

We numerically simulate gravitational collapse in asymptotically anti-de Sitter spacetimes away from spherical symmetry. Starting from initial data sourced by a massless real scalar field, we solve the Einstein equations with a negative cosmological constant in five spacetime dimensions and obtain a family of non-spherically symmetric solutions, including those that form two distinct black holes on the axis. We find that these configurations collapse faster than spherically symmetric ones of the same mass and radial compactness. Similarly, they require less mass to collapse within a fixed time.