

# Notes on geometric inequalities in spherically symmetric spacetimes

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## ABSTRACT

*ADM mass is usually preferred against quasi-local notions of mass in deriving geometric inequalities. In spherical symmetry there is a highly accepted quasi-local notion of mass: the Misner-Sharp mass. It is closely related to the energy contained within a 2-surface and its null-expansions, which are used to determine if a surface is trapped. My talk is to present some cases where the use of the Misner-Sharp mass is rewarding.*