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An Example of Wang and Yau's Quasilocal Energy for Constant Radial Spacelike 2-Surfaces in a Maximally Rotating Black Hole Spacetime[1] SHANNON RAY, WARNER MILLER, Florida Atlantic University — We present the first non-trivial illustration of Wang and Yau's quasilocal energy (WYQLE) for a maximally rotating Kerr spacetime. The surfaces for which we compute quasilocal energy (QLE) are axisymmetric closed space like 2-surfaces $\mathcal{S}$ with constant radii in Boyer-Lindquist coordinates. There exists a critical radius r^* for which these 2-surfaces are isometrically embeddable in R^3. For surfaces with $r \geq r^*$, the WYQLE trivially becomes the Brown and York QLE (BYQLE). To fully illustrate Wang and Yau's formulation, we compute the WYQLE for surfaces with $r < r^*$ that are not embeddable in R^3.

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