Scattering of massless bosonic fields by Kerr black holes: On-axis incidence

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We study the scattering of monochromatic bosonic plane waves impinging upon a rotating black hole, in the special case that the direction of incidence is aligned with the spin axis. We present accurate numerical results for electromagnetic Kerr scattering cross sections for the first time, and give a unified picture of the Kerr scattering for all massless bosonic fields.