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LETTERS SECTION

Gravitationally Radiated Linear Momentum Flux

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In his recent paper, Dionysiou (1974) claims that in the linearized theory of general relativity the lowest-order flux of gravitationally radiated linear momentum emitted by a system of N radiators is exhibited through the quadrupole-octupole mode, giving a linear momentum flux $0(c^{-7})$. While it is certainly true that an isolated body will not radiate in the quadrupole-quadrupole mode (Bonnor and Rotenberg, 1961, 1965; Papapetrou, 1962; Peres, 1962), it has been demonstrated that quadrupole-quadrupole linear momentum flux is emitted from pairs of radiators as a consequence of their mutual interaction (Cooperstock and Booth, 1969) giving a flux $0(c^{-6})$.

Accordingly, the linear momentum flux derived by Dionysiou is a second-order effect being dominated by a quadrupole-quadrupole flux that is given by the present author (Booth, 1974).

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