



**AN ALGEBRAICALLY SPECIAL EINSTEIN-MAXWELL
SPACETIME INVOLVING A NON-DIVERGING WEYL
EIGENVECTOR OF ZERO TWIST**

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Received July 21, 2015; Revised August 30, 2015

Abstract

An algebraically special solution to the Einstein-Maxwell equations is derived, where the multiple principal null direction of the Weyl tensor is non-diverging with zero twist. The main properties of the spacetime are worked out in reference to a complex null tetrad involving the eigenvector. The 4-current vector is obtained as the source of the Maxwell field and the 4-force calculated. An illustrative example of the solution is given. The main metric is transformed to real coordinates. The spacetime is of Petrov type II.

Keywords and phrases: Einstein-Maxwell, non-diverging, zero twist.

