

SOLUTIONS OF THE EINSTEIN FIELD EQUATIONS FOR A ROTATING PERFECT FLUID. PART 3. A SURVEY OF MODELS OF ROTATING PERFECT FLUID OR DUST

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A short survey of solutions of the Einstein field equations with rotating perfect fluid or dust as a source is given. It has the form of a table exhibiting all the coincidences between solutions found by different authors.

The present survey forms Part 3 of the series of papers [1]. It is made in the form of a table. Each "cell" of the table represents one and the same solution obtained by different authors. A star preceding author's name means that he knew his predecessors and did not

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Confrontation of models of rotating matter (in the state at the end of 1973)

Lanczos 1924 [2] van Stockum 1937 [3] Wright 1965 [6] *Ellis 1967 [10] *Kraśiński 1973 [1]	Gödel 1949 [4] *Wright 1965 [5] *Ozsváth 1965 [7] *Raval-Vaidya 1966 [9] *Ellis 1967 [10] *Wainwright 1970 [13] *Ozsváth 1970 [14] *Bray 1972 [16] *Kraśiński 1973 [1]	Ozsváth-Schücking 1962 [5] *Ozsváth 1965 [7]	Ozsváth 1965 [7]	
Maitra 1966 [8]	Raval-Vaidya 1966 [9] Stewart-Ellis 1968 [11] Wainwright 1970 [13] *Kraśiński 1973 [1]	Ellis 1967 [10] *Wainwright 1970 [13]	Stewart-Ellis 1968 [11] *Wainwright 1970 [13]	
Wahlquist 1968 [12]	Wainwright 1970 [13]	Ozsváth 1970 [14]	Herlt 1972 [15]	Kraśiński 1973 [1]

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expect to be the first inventor of the solution. No approximate solutions are taken into account.

The more extended version of this part, including a short review of approximate solutions and an explicit construction of Plebański's coordinates (1.32) (see [1]) for most of the exact solutions, may be obtained on request from the author, in the form of a mimeographed manuscript.

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