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SOME REMARKS ON THE INTEGRABILITY CONDITIONS FOR ALMOST CONTACT MANIFOLDS WITH B-METRIC

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A classification of the almost contact manifolds with B-metric is given from Ganchev, Mihova, Gribachev and eleven basic classes are obtained. The complex linear continuations of the fundamental tensors in terms of the essential complex components with respect to complex bases, are described. Characterisation of each basic class by the essential complex equations for the fundamental tensors is obtained. A class of partially integrable and a class of integrable almost contact manifolds with B-metric, in the sence of the considerations from M.Hristov for the same conditions for almost contact structures, are given.

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ON THE SEMISIMPLE TWISTED GROUP ALGEBRAS OF CYCLIC 2-GROUPS

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Let K be a field of characteristic different from 2 and $K = K(\varepsilon_2)$, where ε_2 is a fourth primitive root of 1. Denote by $\langle g \rangle$ the cyclic group of order 2^n . Then, as is well known, the twisted group algebra $K_t \langle g \rangle$ is semisimple and it decomposes in a direct sum of fields which are finite-dimensional algebraic extensions of K . In this paper we give this decomposition, up to an isomorphism, precising the type of the fields and the multiplicity of their appearance. We also give a full description of the multiplicative group $U(K_t \langle g \rangle)$ of the algebra $K_t \langle g \rangle$.

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