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On the existence of 2-fields in 8-dimensional vector bundles over 8-complexes

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Abstract: Necessary and sufficient conditions for the existence of two linearly independent sections in an 8-dimensional spin vector bundle over a CW-complex of the same dimension are given in terms of characteristic classes and a certain secondary cohomology operation. In some cases this operation is computed.

Keywords: span of the vector bundle, classifying spaces for spinor groups, characteristic classes, Postnikov tower, secondary cohomology operation
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