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A connection between uniformity and aberration in regular fractions of two-level factorials.

(English) [Zbl 0974.62059](#)

Biometrika 87, No. 1, 193-198 (2000).

Summary: We show a link between the two apparently unrelated areas of uniformity and minimum aberration. With reference to regular fractions of two-level factorials, we derive an expression for the centred L_2 -discrepancy measure for uniformity in terms of the word-length pattern. This result indicates, in particular, excellent behaviour of minimum aberration designs with regard to uniformity and provides further justification for the popular criterion of minimum aberration.

MSC:

[62K15](#) Factorial statistical designs

Cited in **2** Reviews
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Keywords:

centred L_2 -discrepancy; fractional factorial design; uniformity; minimum aberration; word-length pattern

Full Text: [DOI](#)