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Interference fold patterns in regional unidirectional stress fields: A result of local kinematic interactions

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1 **Interference fold patterns in regional unidirectional stress fields: A result**
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7
8 **Abstract**

9 Folds are commonly found in association with ductile shear zones. However,
10 superimposed folding contemporaneous with shearing is rarely reported. Here, we
11 describe a macroscopic fold interference pattern with geometry intermediate between
12 types 1 and 2 related to development of adjacent transcurrent shear zones. The
13 interference fold pattern is located in a compartment bounded, on the eastern side, by an
14 ENE-trending, dextral shear zone that connects with a NE-trending, sinistral shear zone,
15 and, on the western side, by a NE-trending sinistral shear zone. A first folding episode
16 produced NW-trending, SW-verging inclined folds and a later one NE-trending, upright
17 folds. Folds of the first event are attributed to a local contractional strain field induced
18 by the growth of the shear zones with opposed kinematics whereas the later folding
19 episode and nucleation of the western shear zone reflects regional NW-SE contraction.
20 Folding of a macro-scale NW-trending fold by NE-trending folds produced the fold
21 interference structure. In contrast with most cases of types 1 and 2 fold interference
22 patterns, in the present case no change on the orientation of regional stress axes is
23 required.

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