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Late Quaternary Crustal Movement of Dewa Hills Deduced from River Terrace Deformation along the Omono River

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Dewa Hills in Northeast Japan is recognized as tectonic uplifted zone based on the longitudinal profile of the fluvial terraces along the Omono River. This zone has uplifted throughout late Quaternary.

In this study, we attempt to correlate stratigraphy of the terraces based on the detailed tephra/loess analysis. The continuity of the terrace distribution on the profile is taken into account.

The result shows the longitudinal profile is generally distributed in anticlinal fold which uplift rate is as westward as high. However, the uplift rate decreases around Toridame fault and increases toward Kitayuri fault located at the western margin of the Dewa Hills. The uplift property of the Dewa Hills is found to be controlled by the movement of the Kitayuri fault and the Toridame fault.

Keywords: Dewa Hills, crustal movement, late Quaternary, river terrace, Omono River