SPATIAL INTERPOLATION OF DATA USING ZAZA SOFTWARE. A CASE STUDY: RAINFALL DATA MODELING AFTER A NUCLEAR ACCIDENT

Abstract. ZAZA is a software package that solves all surface modeling aspects. The program particularly implements local gridding techniques (weighted average, local polynomial surface fitting) but also trend surface analysis with polynomials. A set of 100 daily rainfall measurement made in Switzerland on the 8th of May 1986, randomly extracted from a dataset of 467 measurements, were used to test the interpolation methods implemented in ZAZA. The rainfalls measured at the remaining 367 locations were estimated. The best results were obtained using an algorithm based on piecewise linear least square. A corrector was applied on calculated values. All negative calculated values were replaced by zero. Computation was made directly at the given locations. Statistics were made using Microsoft Excel.

Keywords: Spatial interpolation, surface modeling, gridding algorithms, contouring, statistics, ZAZA software.

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