



Analysis of relevance between topographic openness and GPS positioning accuracy

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We calculate topographic openness values from digital surface models (DSMs) in study areas, and further analyze the relevance between topographic openness and global positioning system (GPS) positioning accuracy. Two study areas where are a metropolitan landscape area and a hillside area are selected, and the results from the two study areas will be verified each other. We will use an unmanned aerial system (UAS) equipped with a camera or a light detection and ranging (LiDAR) device to obtain the DSM or DEM of each study area. A program providing hot spots for selecting suitable GPS monitoring stations in a study area is being developed. Overall, we hope this study can provide important references for soil and water conservation, disaster prevention, and environmental monitoring.

Keywords: topographic openness, GPS