

Numerical Approach for Analyzing Critical Configurations of Single Photo Resection

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ABSTRACT: Single photo resection for estimating exterior orientation parameters can be achieved by using control points, control lines, or effective control data of other types. However, orientation solution would become largely uncertain or even impossible when faced with poor layout of control data. This study mainly focused on identifying such geometrically weak configurations when employing control points or control lines. The authors utilized rank analysis together with condition number to spatially locate the area of control data that fall into weak or even singular solutions. Consequently, effective observations toward a satisfactory solution can be then arranged.

Suggested topics: 6.GPS & Photogrammetry/Digital Photogrammetry

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