

ON THE GEOMETRIC STABILITY OF LIGHT WEIGHT UAS CAMERA

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Abstract: Unmanned Aerial System (UAS) has attracted intensive interest in recent years. While there are heavy weighted UASs, light weighted systems have been widely applied for small area mapping largely due to its economic value and feasibility. On board these economical type systems, consumer grade camera or camcorders are commonly equipped. This study applied an eBee UAV (Unmanned Aerial Vehicle) with a Cannon IXUS 125HS camera for mapping Kuang-Fu campus of National Chiao Tung University. From the 261 images collected in this experiment, it is found that the interior orientation of the camera has significant change after landing. Relatively, reasonable stability is maintained between flight lines of the same sortie.

KEY WORDS: Unmanned Aerial Vehicle, Interior orientation.