

14th HUMAN EXPLORATION OF THE MOON AND MARS SYMPOSIUM (A5)
Near Term Strategies for Lunar Surface Infrastructure (1)

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A NOVEL GEOMETRIC CORRECTION METHOD OF DISTORTED IMAGE

Abstract

Optical systems with large FOV are important components of lunar exploration device, they are applied and researched widely in lunar exploration project. However, distortion produced by image becomes larger and larger with augment of FOV. A corresponding distortion correction model is put forward by analysis of elementary principium of distortion, and a digital correction method is presented, which is novel, practical and also easy to be realized. The results of experiments to prove the effect of the correction are shown, and the distortion rate corrected becomes about 1% from 27%. This correction method is applied successfully in a certain exploration imaging system.