**Maneuver Image Quality Raising for SJ-9A Satellite**

LIU Yiwei1, LI Fangqi2, HE Hongyan2 Zhao Zhiming1

1. DFH Satellite Co., Ltd, Beijing 100094, China

2. Beijing Institute of Space Mechanics & Electricity, Beijing 100094, China

**Abstract:** It is very important for observation of remote sensing satellite when nature disaster or breaking event takes place. The satellite often adopts maneuver imaging mode.

So maneuver imaging quality is more important, which is affected by factors such as imaging procedure on-board and ground image processing etc. This camera of SJ-9A satellite uses the three-reflector coaxial aspheric optical system, adopts a panchromatic and 4 multispectral integration design, Images can be simultaneously acquired in PA and MS mode at the same point. Its resolution is superior to 2.5m (PA)/10m (MS) and the swath is 30km for nadir viewing conditions with the orbit height 645km. The paper discusses the method research for maneuver image quality when SJ-9A satellite works in maneuver imaging mode or different stability imaging modes. The quantitative analysis has been carried out to analysis of the influence factors for imaging link for in-orbit maneuver imaging test. At final the imaging fusion algorithm is optimized finally to improve panchromatic and multi-spectral imaging processing flow which is matched and corrected by ground application system. The result shows that the multispectral match is more accurate and clear than before. The quality of images has been raised obviously to reach good level.