

# **Progress in On-Orbit Testing of Synchronization Monitoring Atmospheric Corrector (SMAC)**

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Synchronization Monitoring Atmospheric Corrector (SMAC) is a key instrument onboard GFDM spacecraft. SMAC has 8 bands covering 490nm to 2500nm, some of them are polarized bands, to achieve synchronous snapshot atmospheric monitoring for multispectral cameras. On-orbit radiation response evaluation was conducted using Dunhuang test site observation data and ground-based automatic observation equipment and signal to noise ratio (SNR) analysis was conducted using observation data in the Sahara Desert. Results show that SMAC's L1 product is close to the simulated apparent radiance, with an averaged difference of 3.65% (1380nm and 2250nm are not involved because they are respectively affected by water vapor and bad SNR of ground-based equipment). The SNR of SMAC is mostly better than 55 db, except for band 1380nm due to low energy.