Launch of FY-3A, the first satellite in the new series of Chinese polar-orbiting meteorological satellites, is planned for 2007. Development for the final product of the spacecraft is going on. FY-3A will carry 11 instruments, namely, VIRR, IRAS, MWTS, MWHS, MERSI, MWRI, ERM, SIM, SBUS, TOU, SEM. Except for the 10-channel VIRR (visible and infrared radiometer) the rest instruments, whose spectral bands cover violet, visible, near-infrared, infrared, and microwave, are all newly developed and to be mounted on FY-3 for the first time. These instruments will be used to detect clouds, radiation, atmosphere, land and ocean.

The purpose of calibration (CAL) and validation (VAL) of FY-3 instruments and products is twofold: to maintain the best performance and precision of the instruments during the satellite operation; to provide users with the precision range of the satellite’s products after finishing the in-orbit test. They mainly include 1) pre-launch calibration in the laboratory; 2) post-launch validation when satellite is in the orbit. By in-orbit validation we indicate the synchronous measurement on the ground and the inter-calibration between similar instruments on different satellites; and, 3) physical parameters – the products converted from the calibrated measurements onto else geographic location. In order to finish the work above, it’s needed to get supporting algorithms and data-base, and independent methods as well.

The paper gives the characteristics of FY-3A instruments and main products, briefly introduces the instruments’ laboratory calibration and aero-flight test, plan for vicarious calibration and inter-calibration of the instruments in operation.