Hinode-3: 3rd Hinode Science Meeting
Hitotsubashi Memorial Hall, Tokyo
1–4 December, 2009

Time evolution of coronal structure in T-EM diagram examined with calibrated XRT responses

Noriyuki Narukage

National Astronomical Observatory of Japan

Ryouhei Kano

National Astronomical Observatory of Japan

Taro Sakao

ISAS/JAXA

Abstract. The X-Ray Telescope (XRT) on board *Hinode* satellite observes the Sun in X-rays with 9 filters, which have different temperature responses and cover a wide temperature range from less than 1 MK to more than 10 MK. The advantage of XRT is that we can derive the coronal temperature (T) and emission measure (EM) from data sets simultaneously observed with more than two different X-ray analysis filters. In this paper, at first, we fully calibrated the temperature response of XRT including the contamination accumulated on the focal-plane analysis filters and CCD as a function of time. Next, using the such calibrated response, we examined the time evolution of coronal temperature and found that the coronal structure is nicely classified with T-EM diagram. On the basis of time evolution of coronal structure in T-EM diagram, we also found the clue to solve the life cycle of coronal structure.