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Cooler and hotter X-ray bright points from Hinode/XRT observations

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Abstract. We use a 7-hour (17:00 UT - 24:00 UT) time sequence of soft X-ray images observed simultaneously in two filters (Ti_poly and Al_mesh) on April 14, 2007 with X-Ray Telescope (XRT) on-board the Hinode mission to determine the temperature of X-ray bright points (XBPs). A sample of 14 XBPs and 2 background coronal regions have been identified and selected on both the images for detailed analysis. The temperature of XBPs is determined by filter ratio method. We find that the XBPs show temperature fluctuations and the average temperature ranges from 1.2 MK to 2.2 MK which may correspond to different X-ray fluxes. These results suggest the existence of cooler and hotter XBPs and the heating rate of XBPs is highly variable on short time scales. The important role of the photosperic magnetic field on the heating of the XBPs will also be discussed in this talk.