The Feb. 2007 remarkable strain changes and deep low-frequency tremors observed with the deep borehole instruments in Tono, Gifu

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Early February 2007, the deep low-frequency tremors (LFT) generated under the Aichi prefecture were observed by the high sensitivity borehole seismograph in Byobu-san crustal activity observatory (BYB) with depth of 1020 m and other seismograph observatory at Gifu and Aichi prefecture, central Japan (e.g. Suzuki et al, 2007, this session).

During the same period, the remarkable strain changes (10E-8 strain order) were observed by Ishii-type borehole strainmeters which were installed at 1020 m depth in BYB. At the same time, similar strain changes were observed by Ishii-type borehole strainmeters in Shizubora crustal activity observatory (97FT-01) with depths of 167 m which was located approximately 8 km north-northeast of BYB.The patterns of latest strain changes in BYB are identical with the strain changes by the July 2005 short-term slow slip event (SSE) in Tokai area (Hirose and Obara, 2006; Kobayashi et al, 2006; Asai et al, 2005), and the epicenters of the latest LFT are distributed almost the same area of the Tokai LFT in July 2005.

It is considered that the observed latest strain changes and LFT are associated with the SSE which is almost the same scale as the July 2005 Tokai SSE.