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Spatial structure of the MHD instabilities at the relaxation events in the Large Helical Device SATOSHI OHDACHI, KAZUO TOI, FUMITAKE WATANABE, SATORU SAKAKIBARA, KIYOMASA WATANABE, YOSHIRO NARUSHIMA, KAZUMICHI NARIHARA, National Institute for Fusion Science, LHD EXPERIMENTAL GROUP TEAM — In order to realize a helical reactor, achievement of the high beta plasma is a one of the most important issue. However, in the Large Helical Device, the beta value is sometimes restricted by sawtooth-like relaxation events, which localized on the various rational surfaces of which rotational transform 1/q is 1/2, 2/3 and 1/1. The spatial structures of the MHD activities are visualized mainly by the fast-framing tangentially viewing soft X-ray camera system. It is found that the island-like structures evolve slowly (within several ms) during the events, together with much faster (several kHz) oscillations. The dynamics of the MHD events and its effects on the plasma confinements will be discussed.

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