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Three-dimensional observation of the pellet ablation in LHD RYUICHI SAKAMOTO, HIROSHI YAMADA, National Institute for Fusion Science, MITSUYASU HOSHINO, Nagoya University, LHD EXPERIMENTAL GROUP TEAM — Three-dimensional pellet ablation observation, which uses a stereo-scope vision, has been available with fast camera in Large Helical Device (LHD). A pair of the stereo images, which are taken from different location, has been focused onto a single fast camera through a bifurcated imaging fiber to ensure the simultaneity of the both images. It has been confirmed by three-dimensional observations that the pellets penetrate into hot plasmas with maintaining an initial velocity during ablation. At the same time, intermittent breakaway of the pellet ablatant, which surrounds the pellet substance, has been observed. The breakaway plasmoid has the velocity component opposite to the injection direction. It suggests that a part of the pellet mass is lost before it deposits in the target plasma.

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