

Abstract Submitted
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Experimental study on interactions of plasma plumes generated by laser ablation TOSHINORI YABUUCHI, TAKUYA KONO, TATSUYA OISHI, KENSHIRO KIKUYAMA, SEIGO MISAKI, KAZUO A. TANAKA, Osaka University — In fusion reactors, first walls will be exposed with heavy thermal loads and high energy particles. Once the wall is ablated, the dynamics of ablated plasma plumes is a key issue for sustaining the fusion reactions and maintaining the reactors. In our experiments, plasma plumes are created by UV laser ablation from concave targets. Two plumes moving in the perpendicular direction intersect each other in the center of the concave curvature[1]. Particle measurements have indicated that the two plumes collide with each other and the direction of their movement has been changed. Simultaneously, we have observed with the time-resolved 2D imaging system using ICCD camera that the dynamics of plasma plumes changes significantly due to the plume-plume interactions. In the conference, the detailed observation will be presented.

[1] Y. Hirooka et al 2010 J. Phys.: Conf. Ser. 244 032033 (2010)

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