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The compensation of the PC beam of the scattered beam by a foam target with FWM for beam steering NOBUKAZU KAMEYAMA, HIROKI YOSHIDA, Gifu University — It is necessary for the direct IFE to irradiate a target with laser beams. The laser beams have to be steered for accurate laser irradiation since the target is injected at several hundreds meters per second. The method of beam steering with phase conjugate mirrors is one of the candidates. In the method, probe beams whose energies are low enough not to damage it and expanded larger than the target radius are illuminated the target. The scattered beam enters into the phase conjugate mirrors and the phase conjugate beam is generated in the opposite direction of it. The phase conjugate beam retraces the same path for the property and irradiated the target. As the target has moved several hundreds micrometers for the high speed when the phase conjugate beam comes back, it is necessary for the phase conjugate beam to compensate for accurate irradiation. Four wave mixing is used as the compensation way. The interaction of two counter-propagating pump beams and a seed beam generates a phase conjugate beam in four wave mixing. The phase conjugate beam is adjustable by setting the angle between two pump beams. The compensation with a scattered beam by a foam target as a seed beam is reported.

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