

Abstract Submitted
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Ion acceleration by stimulated-Brillouin-scattering-induced ion-acoustic turbulence¹ QING WANG, Department of Electrical and Computer Engineering, University of Alberta, ZHANJUN LIU, CHUNYANG ZHENG, Peking University, JASON MYATT, Department of Electrical and Computer Engineering, University of Alberta, WOJCIECH ROZMUS COLLABORATION, ROBERT FEDOSEJEVS COLLABORATION — A new source of ion-acoustic turbulence is investigated whose origin is the stimulated Brillouin scattering between two counter-propagating laser beams in inhomogeneous, flowing plasmas where the laser intensity is slightly higher than that usually encountered in inertial confinement fusion experiments, $I \sim 10^{15} \text{W/cm}^2$. Densities are $> n_c/4$, $ZT_e/T_i \gg 1$ and the flow scale-length is about $100 \mu\text{m}$. Numerical Vlasov simulation shows that the resulting large-amplitude ion acoustic waves lead to

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