## Abstract Submitted for the DPP11 Meeting of The American Physical Society

Observation of bright spots on x-ray image of imploded core with combination of a spectrally resolved and a temporally gated x-ray imager<sup>1</sup> N. IZUMI, Lawrence Livermore National Lab., B. HAMMMEL, T. MA, M.A. BAR-RIOS, R.L. BENEDETTI, S. GLENN, P. SPRINGER, G.A. KYRALA, LANL, R.P.J. TOWN, S.V. WEBER, D. CALLAHAN, N.B. MEEZAN, S. HAAN, J. ED-WARDS, O.L. LANDEN, J. KILKENNY, S. DIXIT, J. KLINE, LANL, L. SUTER, S. GLENZER, M.H. KEY, A.J. MACKINNON, P.M. BELL, D.K. BRADLEY To measure drive asymmetry, we use surrogate capsules made of plastic resin. However, small bright spots are often observed in the x-ray images of the imploded core. It is believed that those spots are caused by hydrodynamic instabilities initiated by initial perturbations on the capsule. To investigate mechanisms of the spot formation, we observed the core emission with combination of a spectrally resolved imager and a temporally resolved x-ray imager. Comparing those images, we found the spots observed before maximum compression are dominated by germanium line emission. In contrast, spots emerge after maximum compression is dominated by Bremsstrahlung below 9 keV. The observed difference in spectral contents is suggesting different mechanisms of the spot formation. The experimental images and mechanisms of the bright spot formation will be presented.

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