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High intensity pulse formation and plasma dynamics in passive femtosecond enhancement cavities for high harmonic generation DAVID CARLSON, JOHN MONGELLI, EWAN WRIGHT, R.J. JONES, College of Optical Science, University of Arizona — The use of passive femtosecond enhancement cavities to create frequency combs in the vacuum ultraviolet spectral region is complicated by the ionization of the dilute gas target required for high harmonic generation. We numerically simulate the intracavity pulse formation in the presence of the gas and report time resolved experimental results measuring the persistent background plasma level.

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