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White-light supercontinuum generation via filamentation in SF_6 with low threshold and stable pointing[1] HUI CHEN, VINCENT TAGLIAMONTI, GEORGE GIBSON, University of Connecticut — White-light supercontinuum generation via filamentation is discussed in a gaseous medium-SF_6. With a pressure of 1 atm, a filament is formed with 0.35 mJ, 50 fs pulses. The dependence on pressure, input laser energy and laser repetition rate of the filament is discussed. Furthermore, the spatial chirp in the presence of spectral broadening with and without the filament is compared. This is the lowest threshold for broad continuum generation, to our knowledge, and the pointing stability of the filament is similar to that of the original laser beam. The pulse is recompressed by a pair of chirped mirrors and a pulse duration of 14.6 fs is obtained.

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Hui Chen
University of Connecticut

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