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Title:	Spatial shaping of femtosecond beam for controlling attosecond pulse
Authors:	Dahiya, S. (/jspui/browse?type=author&value=Dahiya%2C+S.) Sidhu, M.S. (/jspui/browse?type=author&value=Sidhu%2C+M.S.) Tyagi, Akansha (/jspui/browse?type=author&value=Tyagi%2C+Akansha) Singh, K.P. (/jspui/browse?type=author&value=Singh%2C+K.P.)
Keywords:	Non-linearly interacts Ionizing Matter
Issue Date:	2019
Publisher:	Institute of Electrical and Electronics Engineers
Citation:	2019 URSI Asia-Pacific Radio Science Conference, AP-RASC 2019
Abstract:	When an intense femtosecond (fs) pulse non-linearly interacts with ionizing matter, it leads to the generation of bursts of extreme ultra violet (XUV) coherent irradiations having ultrashort pulse duration in attoseconds. Here, we present systematic experiments to show how the high-order harmonics generation is modulated with a spatially shaped fs-laser beam. The spatial shaping of fs-pulses has been induced with the alteration in hard aperture from 8-25 mm diameter. The experimental parameters such as incident power and gas pressure has been optimized to efficiently generate the harmonics in our system. While changing the aperture size of intense fs-beam, we observed unique space-time coupling effects in the shapes of individual harmonics beam.
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