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Generation and Detection of Terahertz Radiation from Laser-Plasmas

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Abstract

Broadband terahertz (THz) radiation from laser-plasma interaction and a corresponding broadband THz time domain spectroscopy based on optically-air-biased-coherent-detection technique are presented. One of the single-shot detection techniques for THz time domain spectroscopy, the spectral-encoding technique, is also reviewed [1]. Distortions of the signals measured by this technique and the corresponding strategies to reduce them are demonstrated [2].

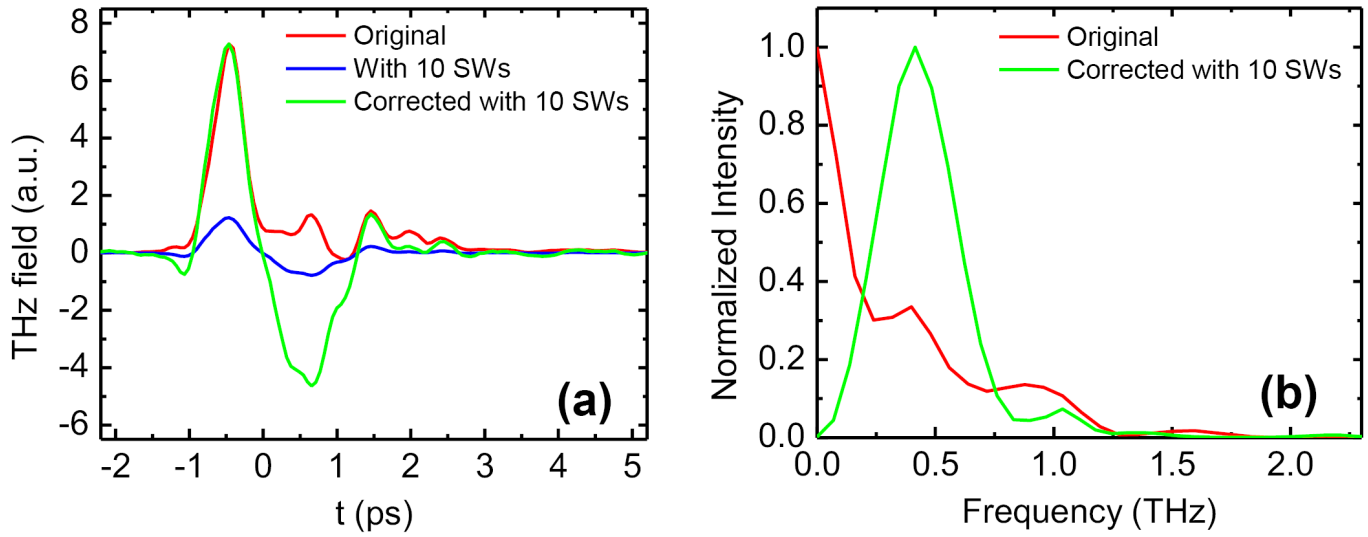

Figure 1. (a) Attenuated and corrected THz waveforms using 10 Si wafers as attenuators vs. the original strong THz signal. (b) THz spectrum of the corrected THz signal with 10 Si wafers vs. that of the original one.

References

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