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## **Self - Thomson backscattering of laser from thin plasma target**

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A scheme is investigated to generate the attosecond pulse train by nonlinear Thomson backscattering of a ultra-intense laser from counter propagating electron sheets. The process is termed as Self- Thomson Backscattering since the counter propagating electron sheets are generated by the laser itself. The radiation pressure acceleration model is considered for the interaction of a super-intense linearly polarized laser pulse with a thin foil in one-dimensional (1D) PIC simulations. At extremely high laser intensities radiation reaction (RR) effects become increasingly important as RR can be the dominant force acting on electrons [1]. The RR force is included in PIC simulation via the Landau-Lifshitz approach [2]. It is found that the reflected attosecond pulse train is intensified twice by inclusion of RR effects.

### **References**

1. L. D. Landau and E. M. Lifshitz, *The Classical Theory of Fields 2<sup>nd</sup> edn* (Oxford: Elsevier, 1975).
2. M. Tamburini, F. Pegoraro, A. Di Piazza, C. H. Keitel and A. Macchi, *New J. Phys.* **12**, 123005 (2010).

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