A real time observation of atomic scale electron dynamics requires attosecond time resolution [1]. A promising source of high intensity pump/probe pulses, which can allow measurements with such resolution, is the harmonic generation from solid surfaces [2]. In order to reach the attosecond pulse duration the harmonic spectrum has to be additionally properly shaped, because a typical harmonic spectrum falls down very quickly with the harmonic number. Moreover, the harmonics have to be phase matched.

We demonstrate a perfect shaping of the harmonic spectrum using 3 to 4 low harmonics as an example. The harmonics were produced in reflection from glass targets. Either single color (800 nm) or two color (800 nm and 400 nm) [2] pump with the duration of about 45 fs have been used. Double slit experiments have demonstrated a high spatial coherence of the harmonic beam.

In Fig. 1 the effect of the spectral shaping is evident both in the frequency domain (a) and in the time domain by recording the field autocorrelation function (b). The measured autocorrelation function is in a good agreement with the calculated one.

The corresponding bandwidth is sufficient for the attosecond pulse production. The mentioned above two color pump with locked phases is suggested as a tool for achieving a proper harmonic phase matching.

![Figure 1](image_url)

**Fig. 1** Spectrum of the 2nd, 3rd and 4th harmonic with the initial (blue) and matched (red) intensities. Experimental CCD image with a calculated time axis (b) corresponding to the field autocorrelation function of the harmonics with the shaped spectrum.

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