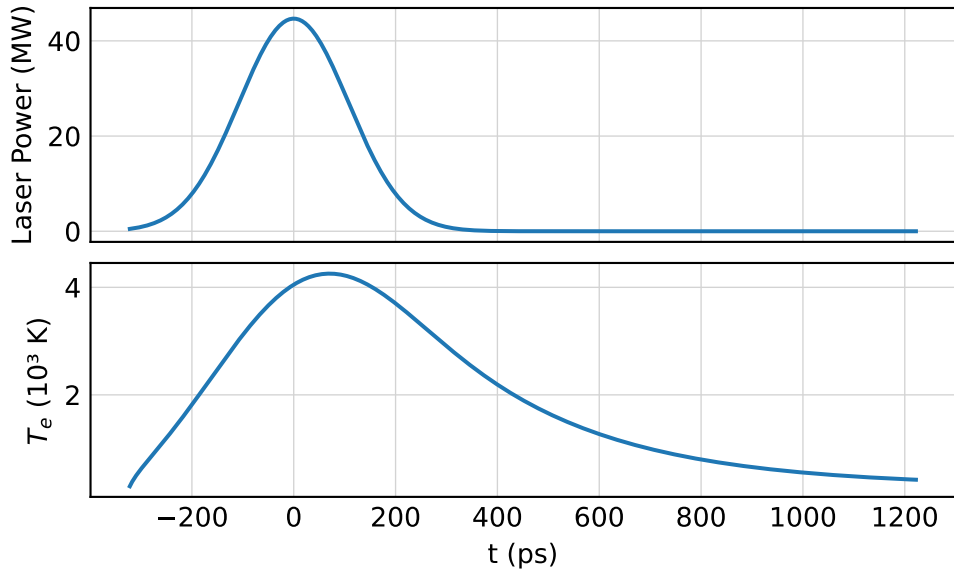
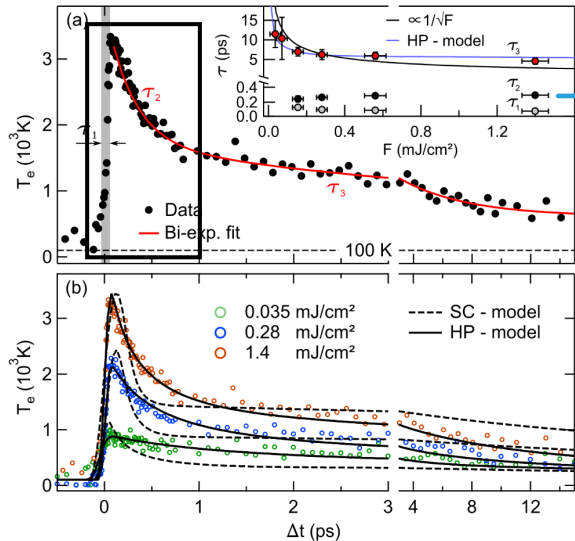
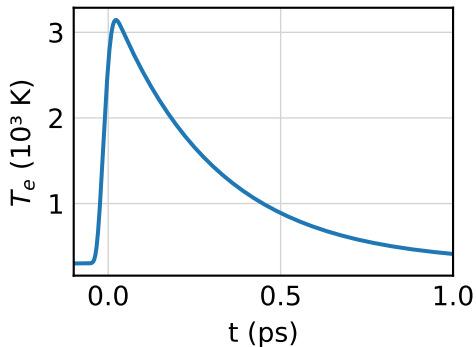


Thermal Radiation of Hot Electrons

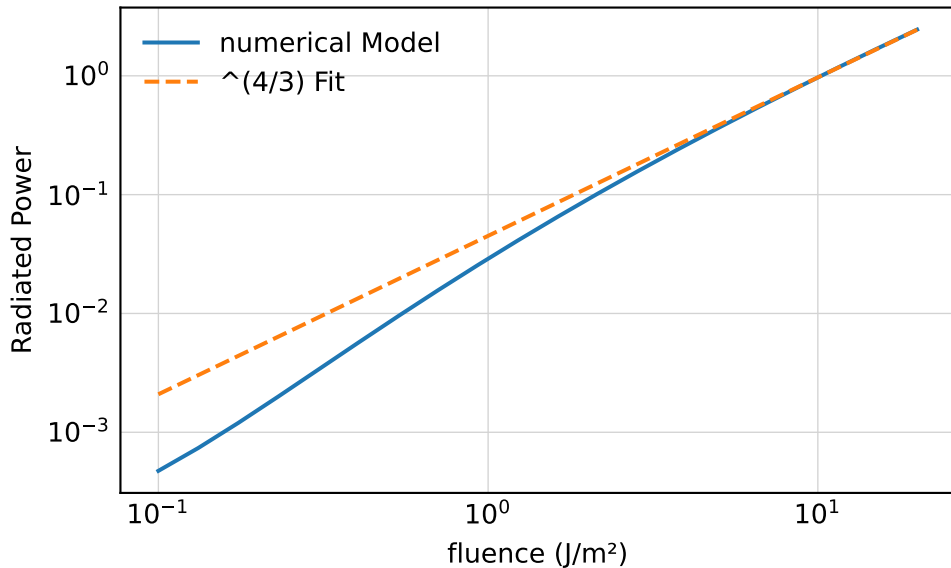
Leon Oleschko
05.05.2025



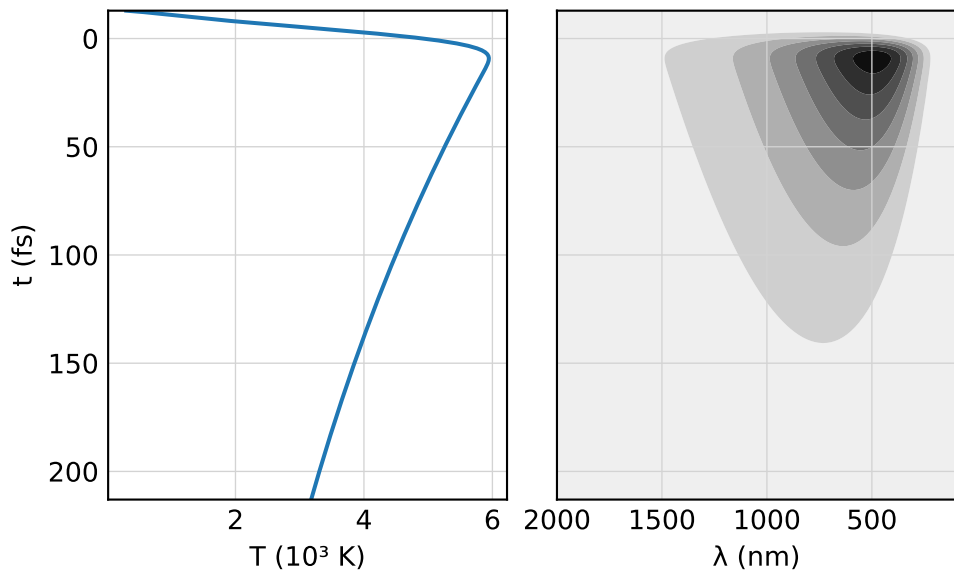
Validation



"Hot electron cooling in graphite", Stange et al. 2015 (Fig. 4)

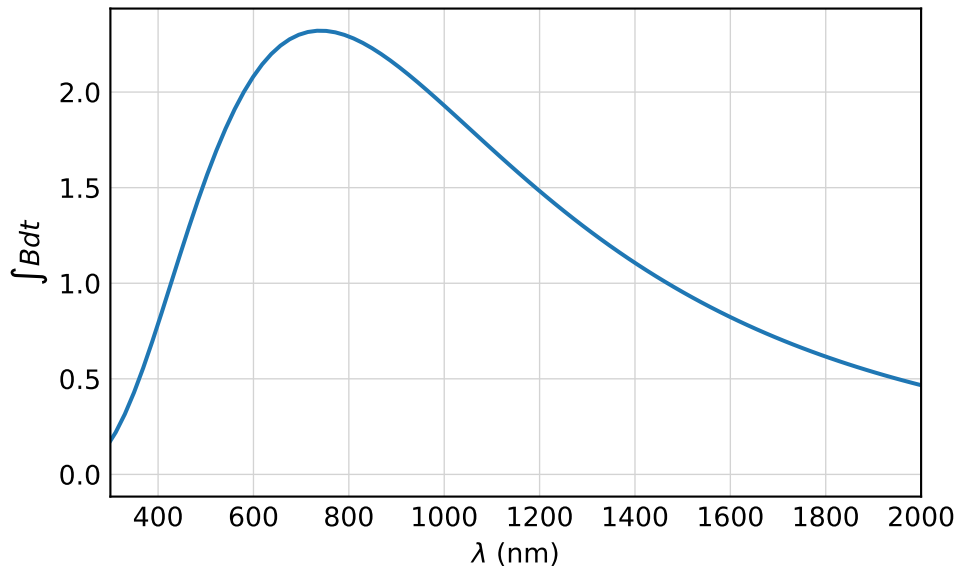


250 fs Laser pulse with different fluence

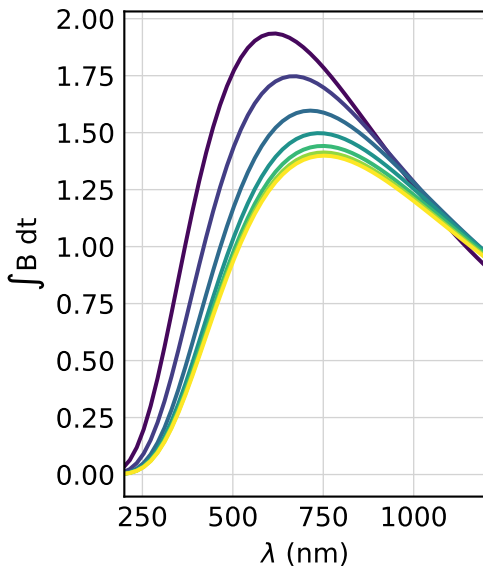
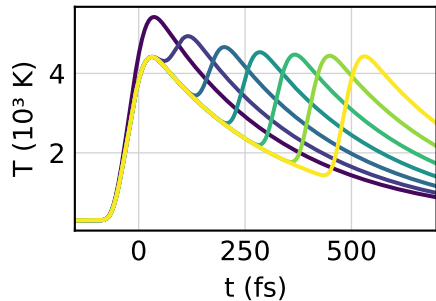
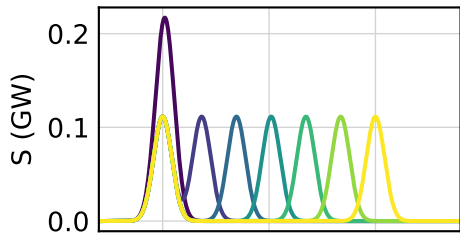


Thermal radiation after 50 fs Laser pulse

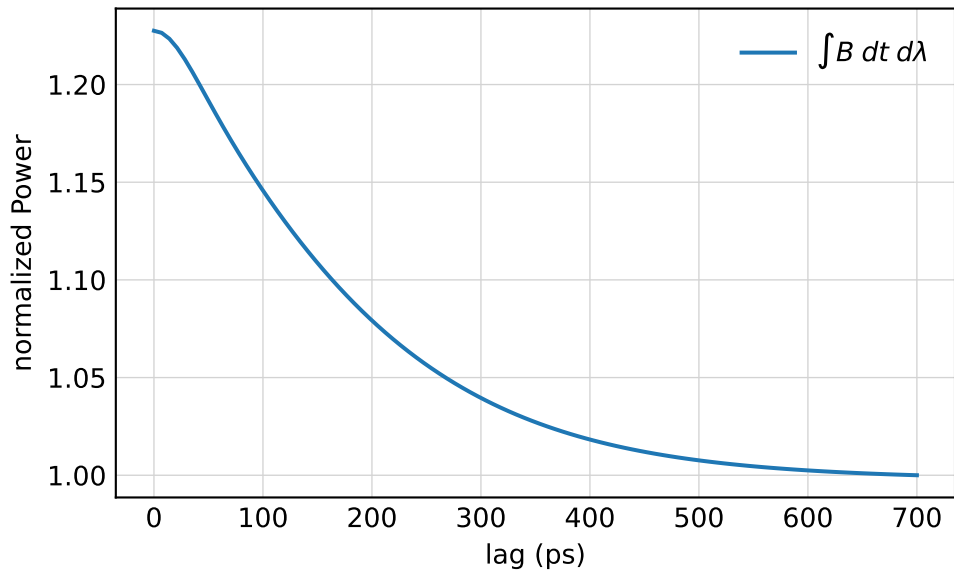
Best Streak Cameras have resolutions of 180 fs. [Wikipedia: Streak Camera]

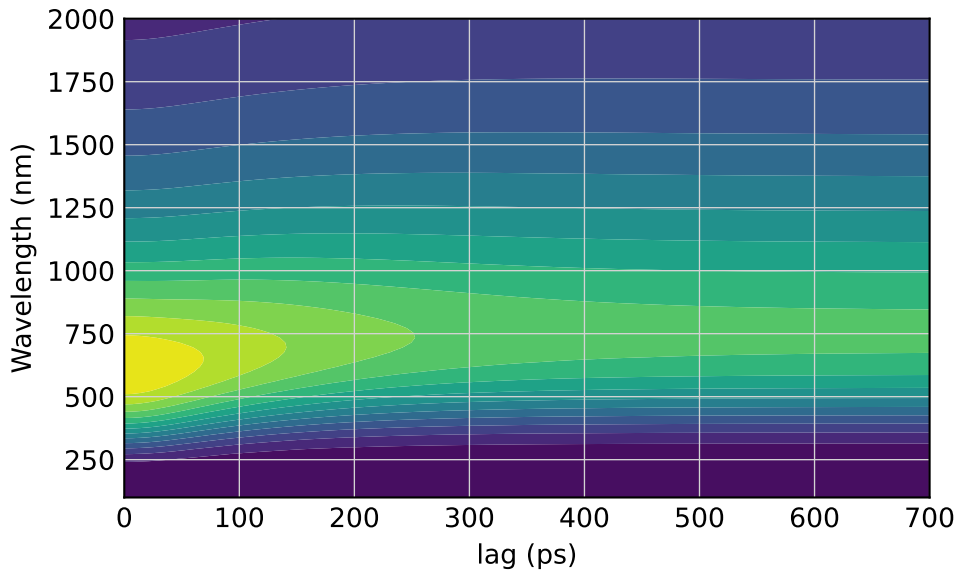


Expected spectrum for 250 fs Laser Pulses

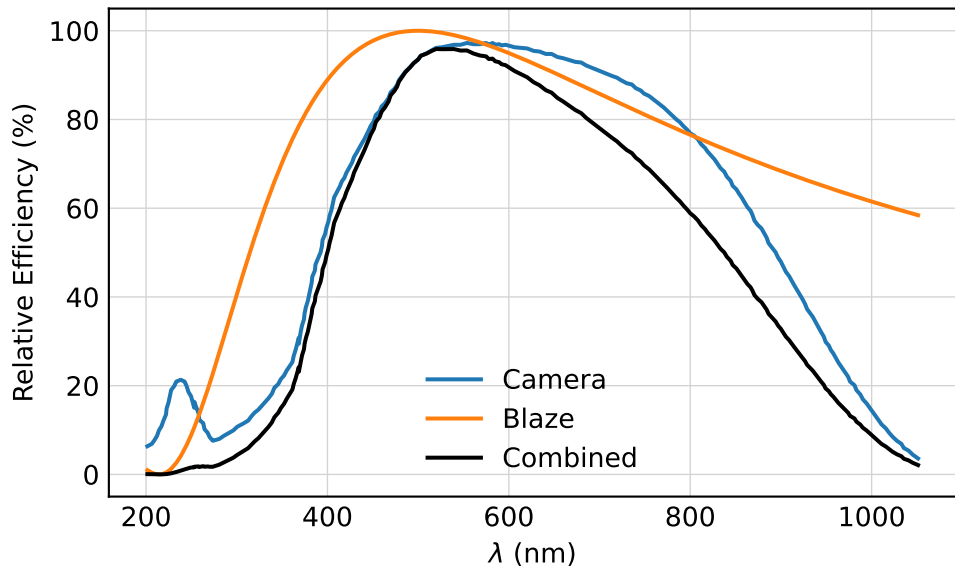


Consecutive 50 fs Laser pulses

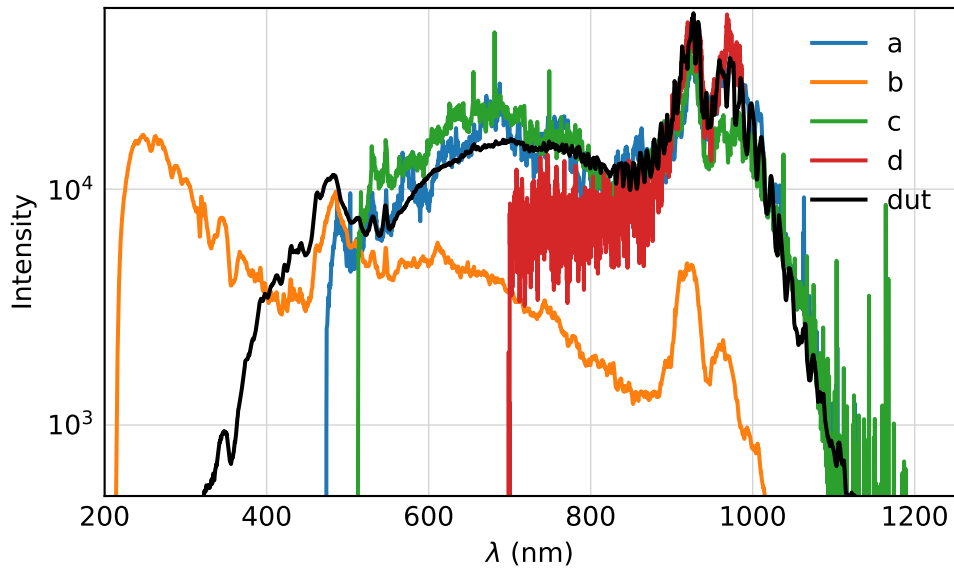




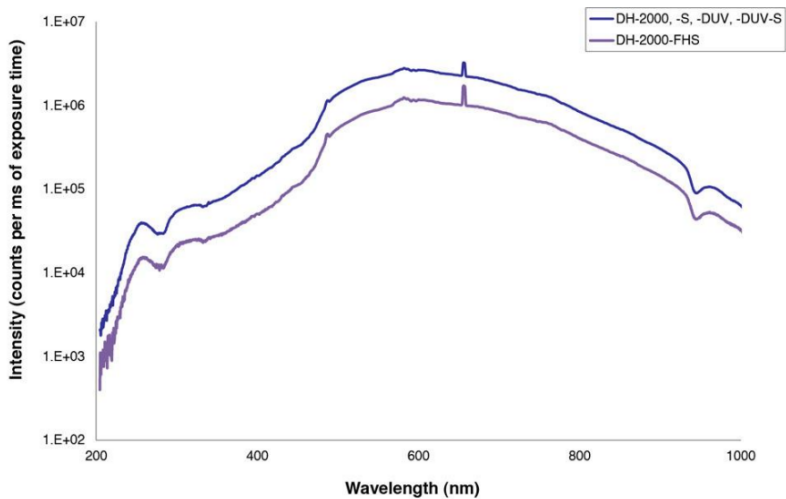
Autocorrelation using 50 fs Laser Pulses

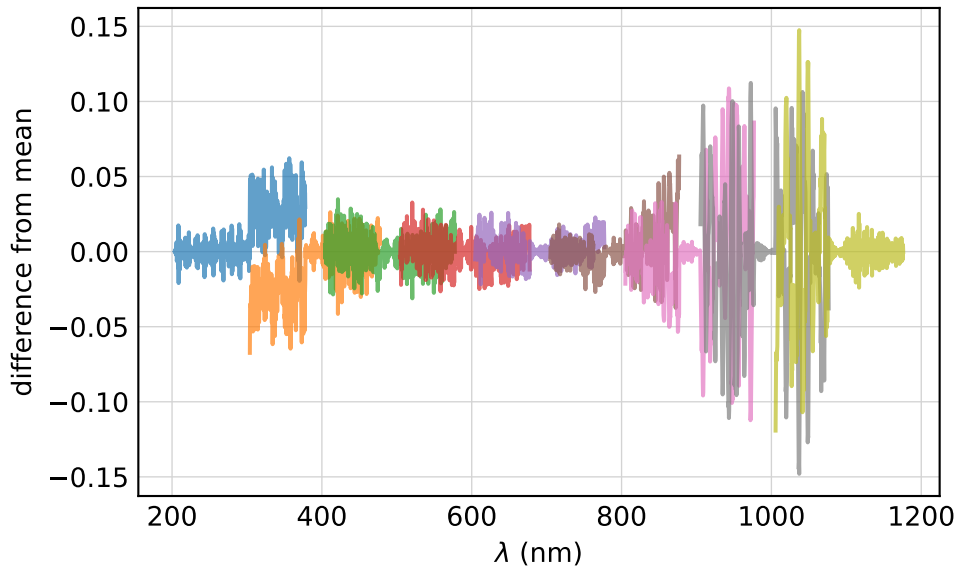


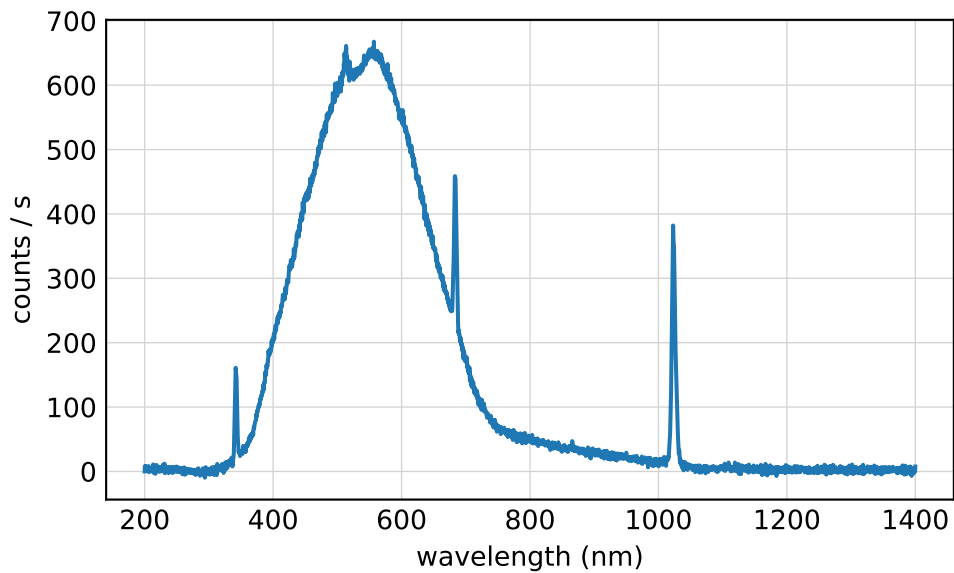
"Ripple correction of high-dispersion IUE spectra - Blazing echelles", Barker 1984



DH-2000 Deuterium Tungsten Halogen Spectral Output

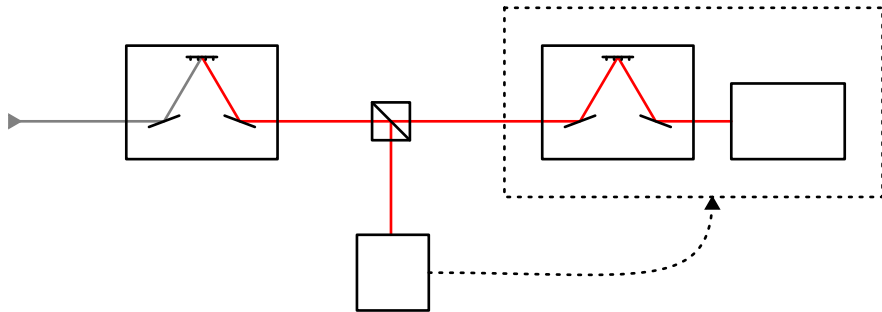


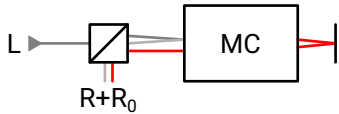
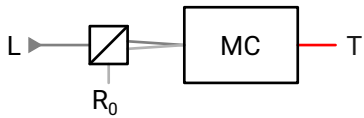




measured at 300mW 2s

Roob needet 20x5s





$$T = \eta_{\leftarrow} \eta_{\text{Detektor}} L$$

$$R = \eta_{\leftarrow} \eta_{\rightarrow} \eta_{\text{Detektor}} L$$

$$\Rightarrow \eta_{\leftarrow} = R/T$$

