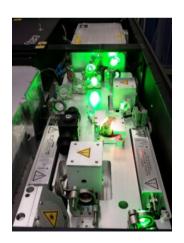
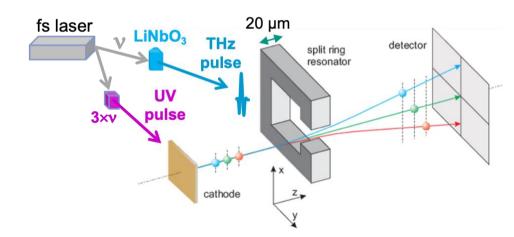
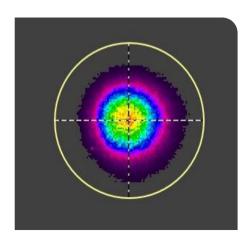


The split ring resonator experiment at FLUTE

M.J. Nasse, M. Nabinger, T. Schmelzer, N. Smale, R. Ruprecht, E. Bründermann, A.-S. Müller, R. Ischebeck, M. Dehler, V. Schlott, Z. Ollmann, M. Hayati, T. Feurer





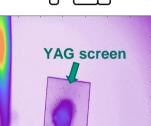


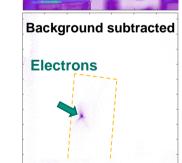
THz streaking using a split ring resonator (SRR)





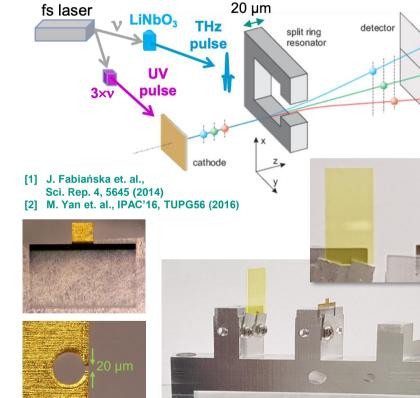


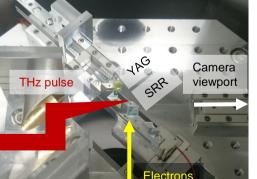












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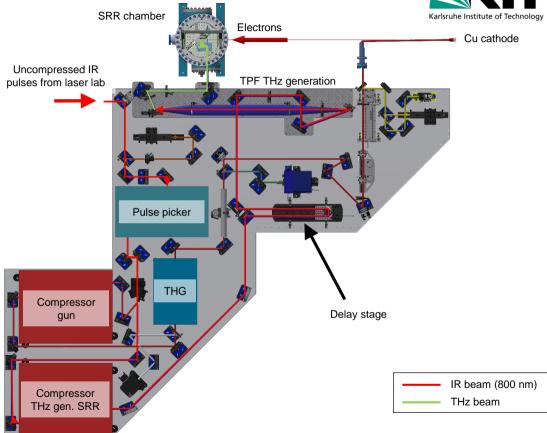
Overview photoinjector & SRR laser system SRR chamber Electrons Cu cathode Uncompressed IR TPF THz generation pulses from laser lab FLUTE hall Pulse picker THG Compressor gun Compressor THz gen. SRR

Photoinjector: UV beam generation SRR chamber In-vacuum mirror Electrons Cu cathode Uncompressed IR TPF THz generation pulses from laser lab FLUTE hall Pulse picker THG Quartz rod for UV Compressor pulse stretching gun IR beam (800 nm) Compressor THz Measurementlab UV beam (266 nm) THz gen. SRR

Michael J. Nasse – The split ring resonator experiment at FLUTE

Split ring resonator: THz beam generation





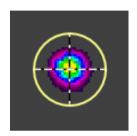
5

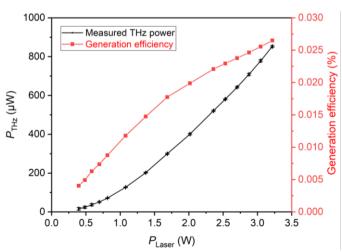
Split ring resonator: THz beam generation

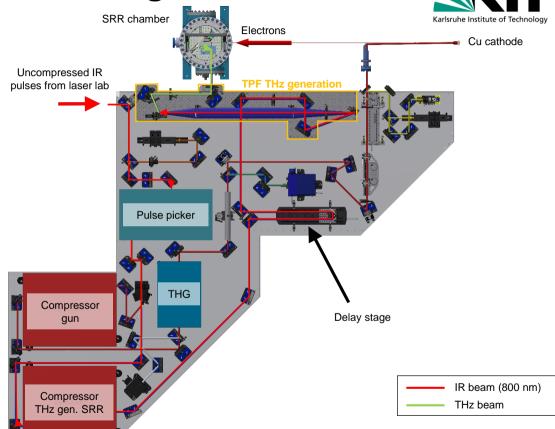


Tilted pulse front technique



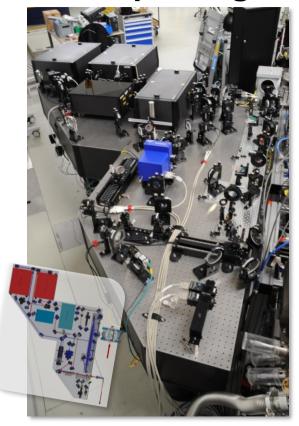






Status split ring resonator experiment







- Optics for photoinjector & SRR experiment set up and working
- High THz generation efficiency reached (up to ~0.03%)
- Laser diagnostics needs to be aligned and commissioned
- Temporal and spatial overlap needs to be established









