

Permanent laser parameters

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Femto at EH2, BL3

Sync. Laser 1
Rep. rate: <60 Hz
Jitter: ~50 fs
Timing Monitor: Available
Fundamental (800 nm)
Pulse energy: ~12 mJ
Pulse width: ~40 fs
2nd harmonics (400 nm)
Pulse energy: ~0.5 mJ
Pulse width: ~30 fs
3rd harmonics (267 nm)
Pulse energy: ~0.2 mJ
Pulse width: ~50 fs
OPA + SFG
Wavelength: 0.25 - 2.6 μm
Output: Max. ~1.7 mJ
(Signal + Idler)

Femto at EH4c, BL3

Sync. Laser 1
Rep. rate: <60 Hz
Jitter: ~50 fs
Timing Monitor: Available
Fundamental (800 nm)
Pulse energy: ~12 mJ
Pulse width: ~40 fs
2nd harmonics (400 nm)
Pulse energy: ~0.5 mJ
Pulse width: ~30 fs
3rd harmonics (267 nm)
Pulse energy: ~0.2 mJ
Pulse width: ~50 fs

Femto at EH4a, BL1

Sync. Laser 2
Rep. rate: <60 Hz
Jitter: ~300 fs
(improved up to ~50 fs)
Timing Monitor: Available
Fundamental (800 nm)
Pulse energy: ~12 mJ
Pulse width: ~40 fs
2nd harmonics (400 nm)
Pulse energy: ~0.5 mJ
Pulse width: ~30 fs
3rd harmonics (267 nm)
Pulse energy: ~0.2 mJ
Pulse width: ~50 fs
OPA + SFG
Wavelength: 0.25 - 2.6 μm
Output: Max. ~1.7 mJ
(Signal + Idler)

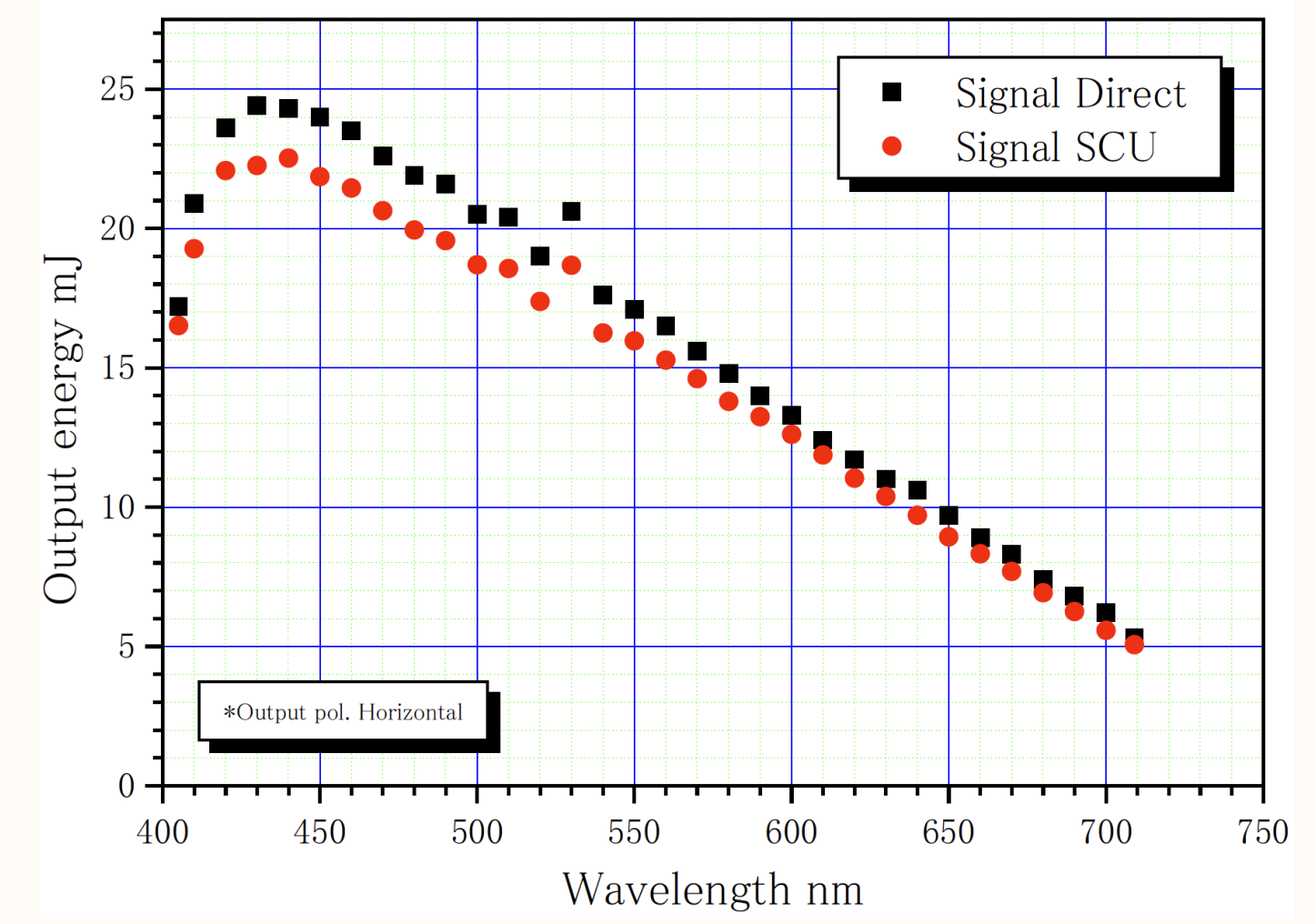
Femto at EH3, BL2

Sync. Laser 2
Rep. rate: <60 Hz
Jitter: ~300 fs
(improved up to ~50 fs)
Fundamental (800 nm)
Pulse energy: ~1 mJ
Pulse width: ~40 fs
OPA + SFG
Wavelength: 0.25 - 2.6 μm
Output: Max. ~1.7 mJ
(Signal + Idler)

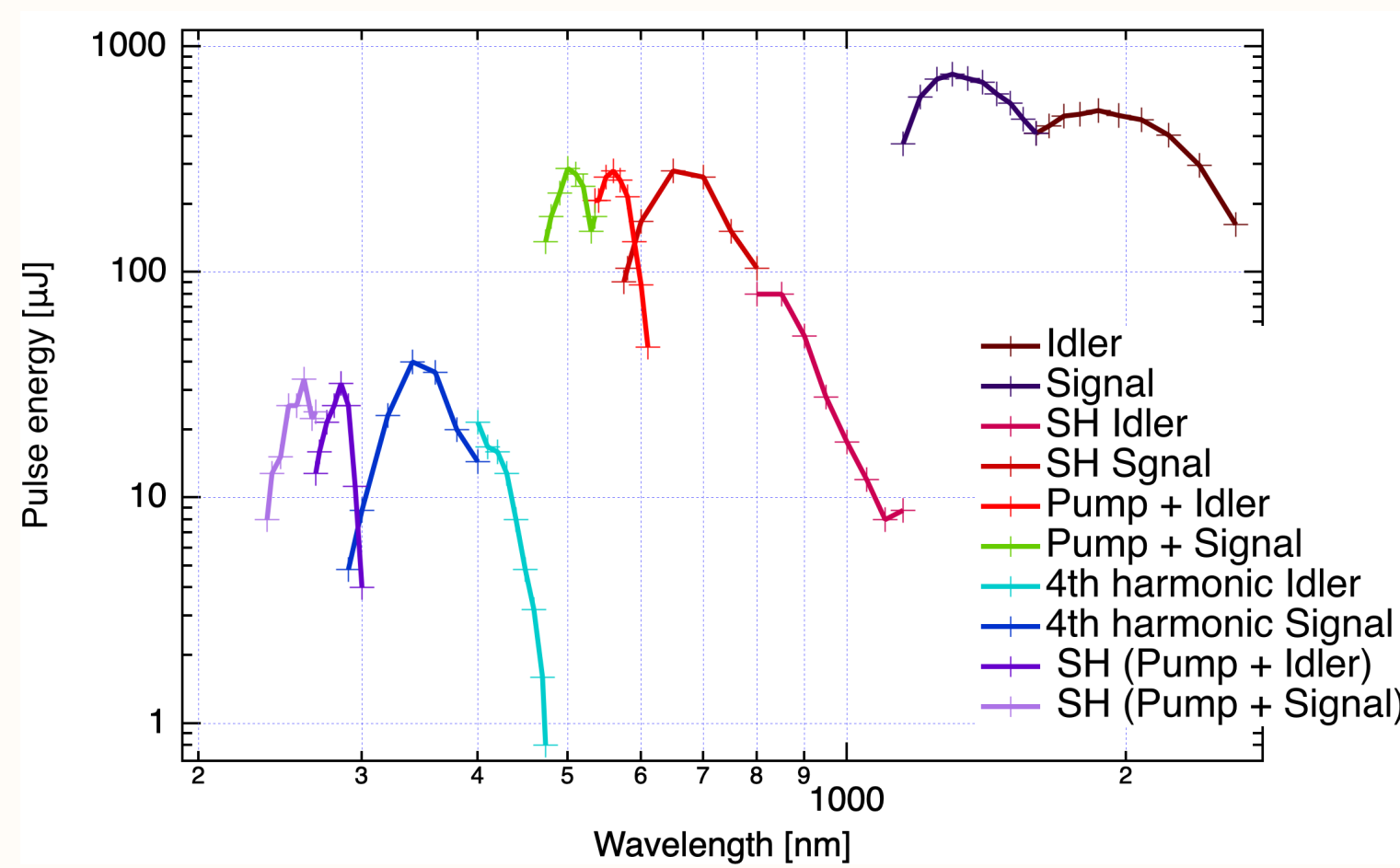
Nano at EH3, BL2

Nano-OPO
(NT232, EKSPILA)
Rep. rate: <30 Hz
Wavelength: 210 - 2600 nm

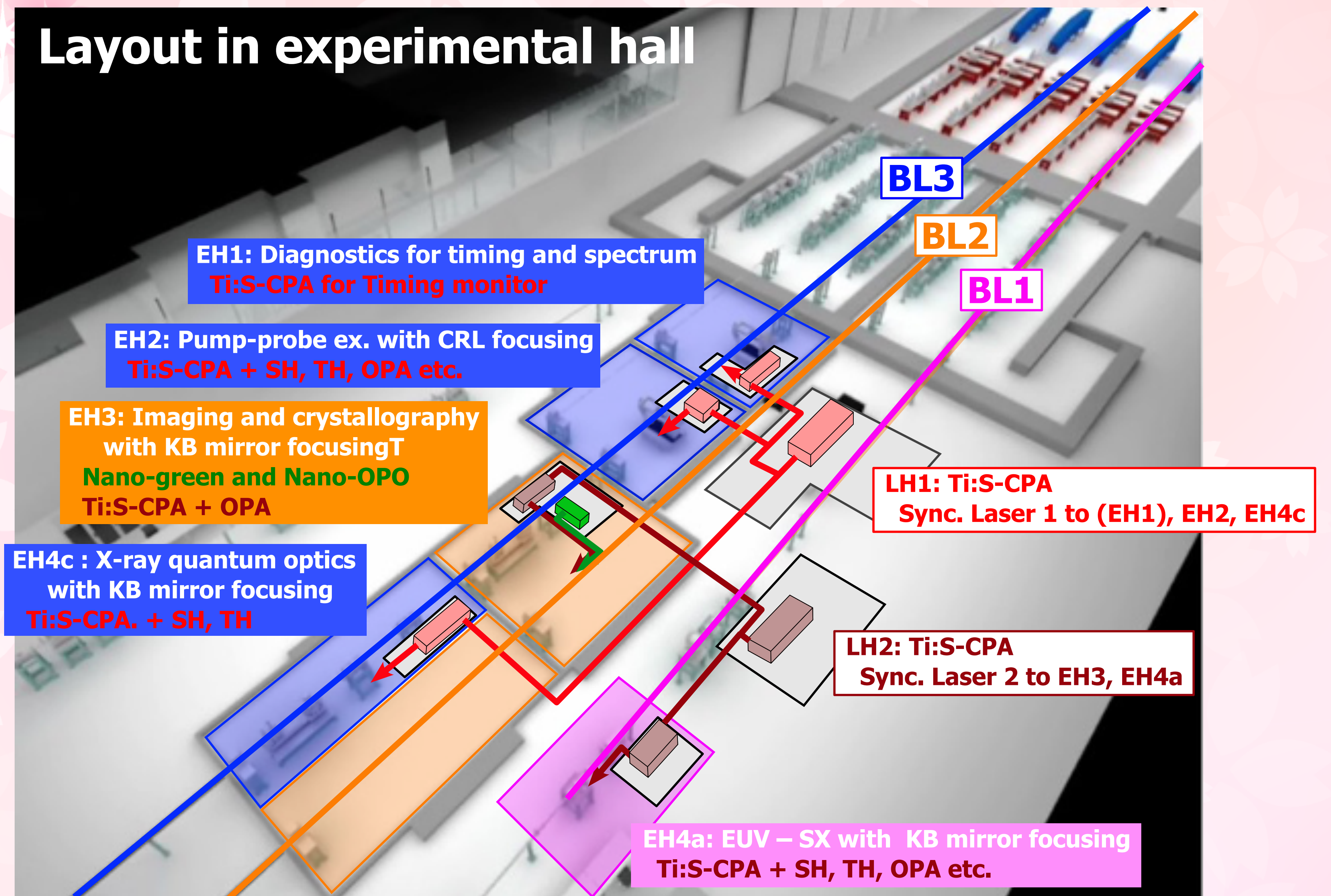
Typical pulse energy of Nano-OPO



Typical pulse energy of OPA + SFG



Layout in experimental hall



Mobile units

The mobile units, which can expand the pulse profile and the spectral region, are available on users' demand in the several hatches.

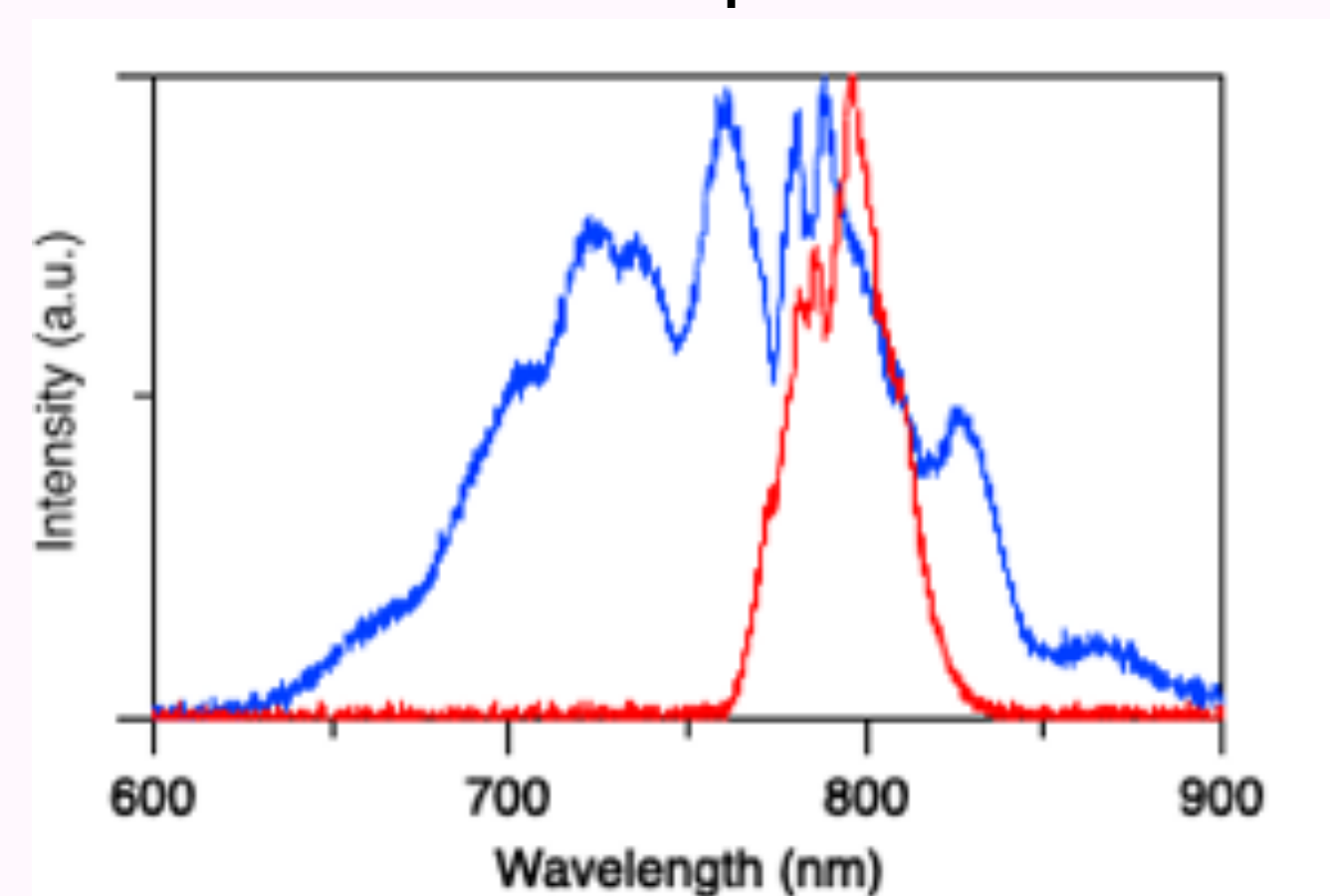
4th harmonics

$\omega + 3\omega$ with BBO
Wavelength: 200 nm
Pulse energy: ~5 μJ
Hatch: **EH2, EH4c, EH4a**

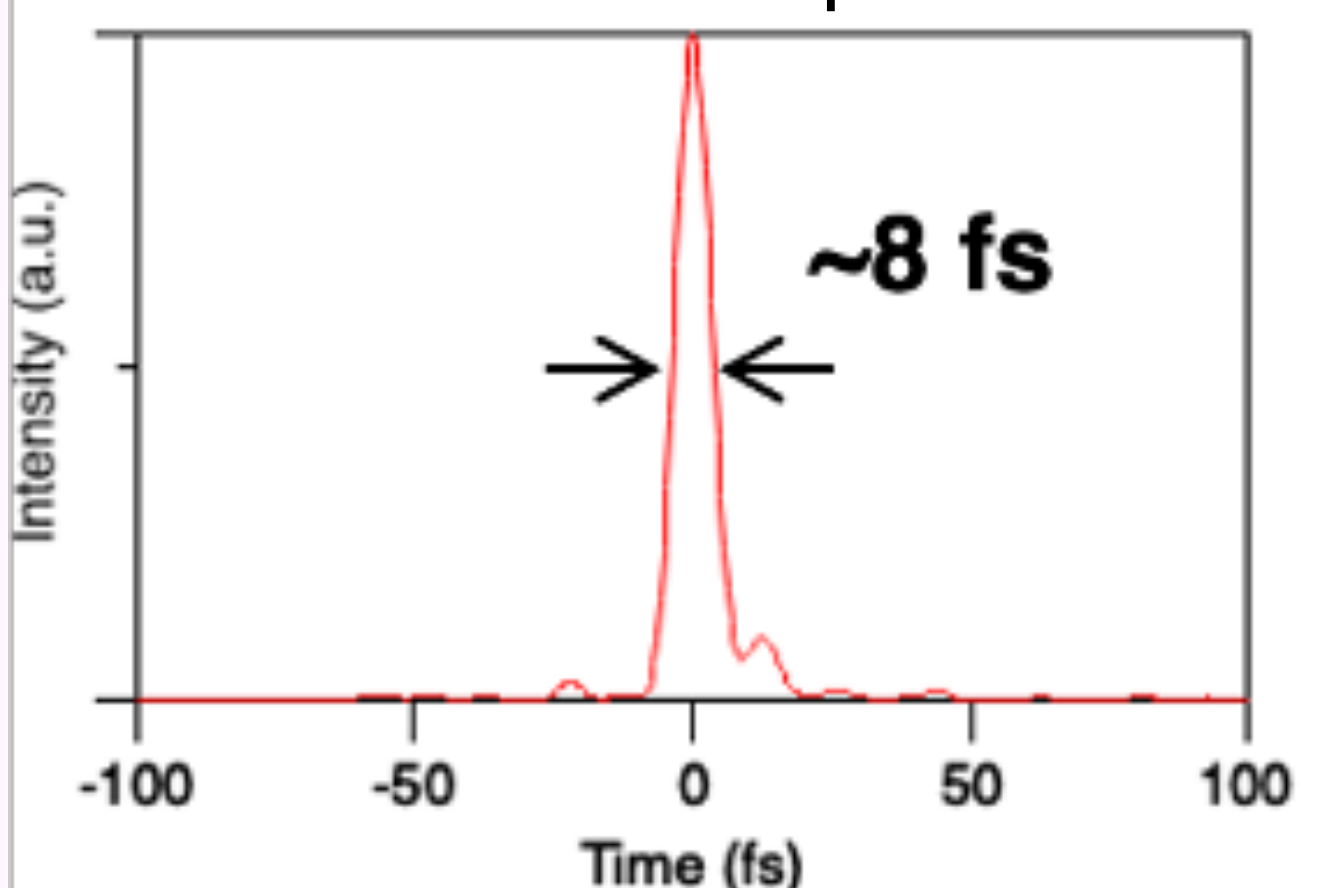
Short pulse generation

Spectral broadening with Ar in Hollow fiber
Pulse width: ~8 fs
Hatch: **EH2, EH4a**

Broaden spectrum



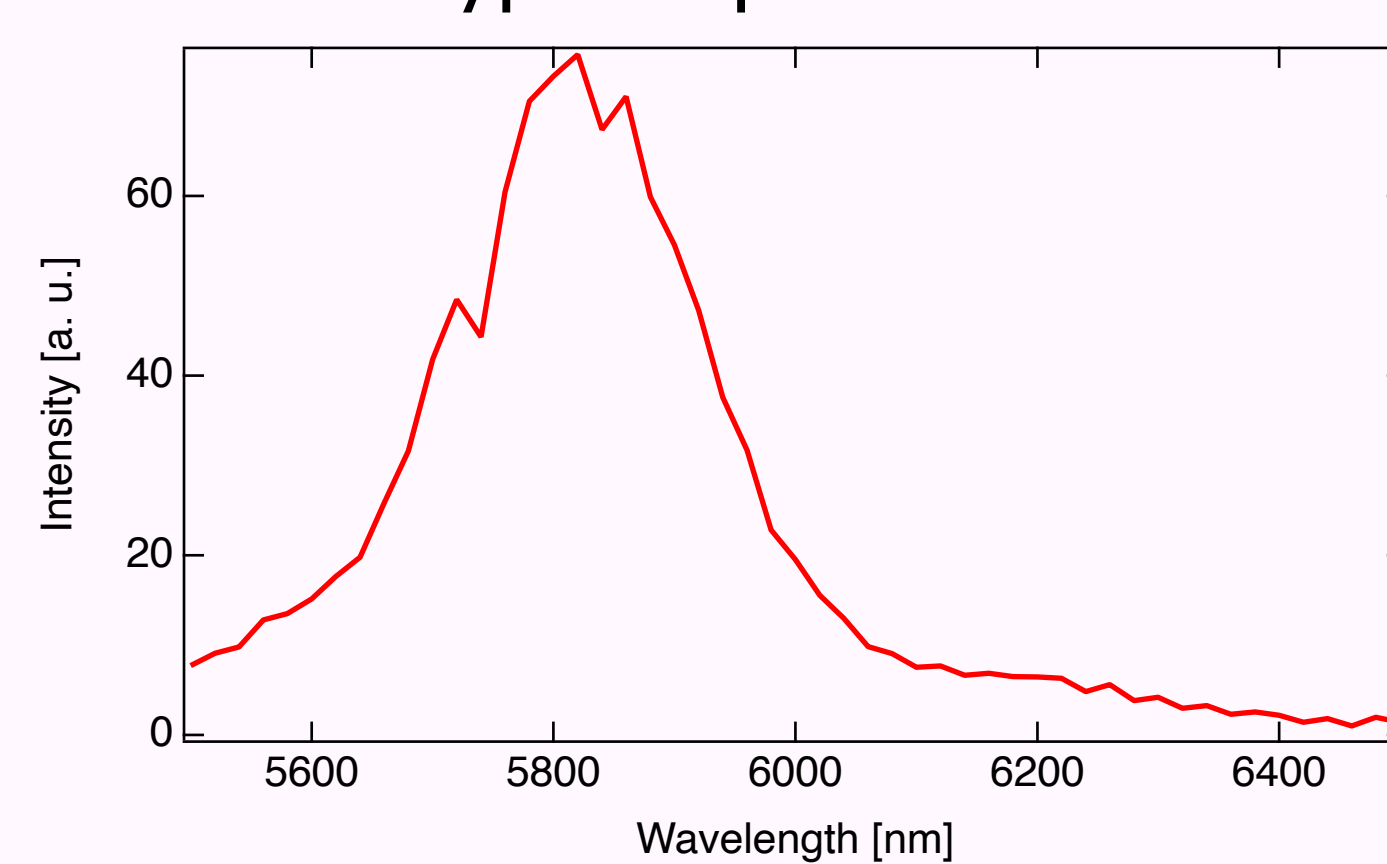
Pulse shape



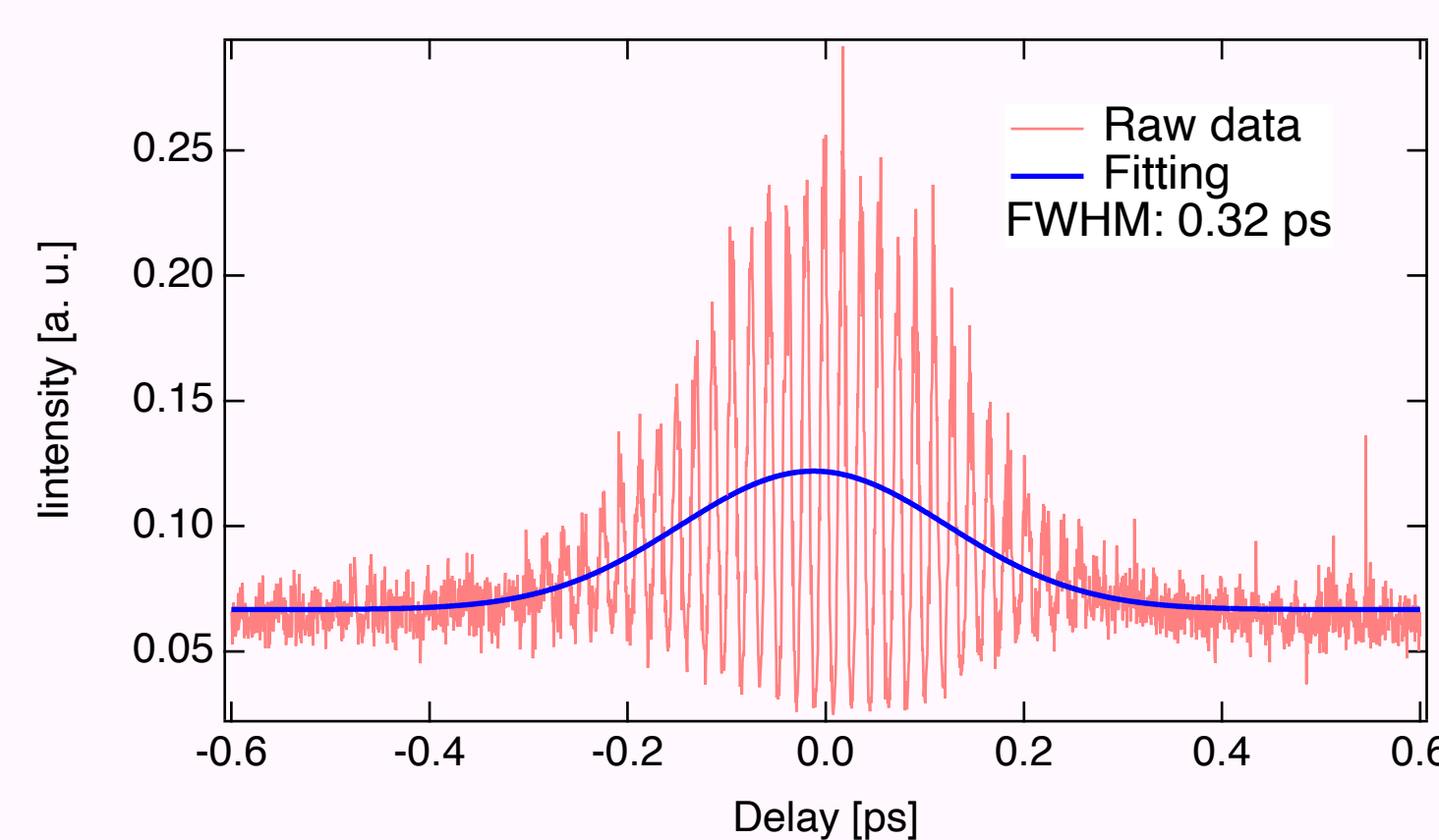
Mid-IR

DFG of Signal and Idler
Wavelength:
2 ~ 11 μm (AgGaS₂, Eksma)
3 ~ 18 μm (GaSe, Eksma)
Pulse energy: < 20 μJ @15 μm
Focus size: ~400 μm (FWHM)
Hatch: **EH2, EH4a**

Typical spectrum



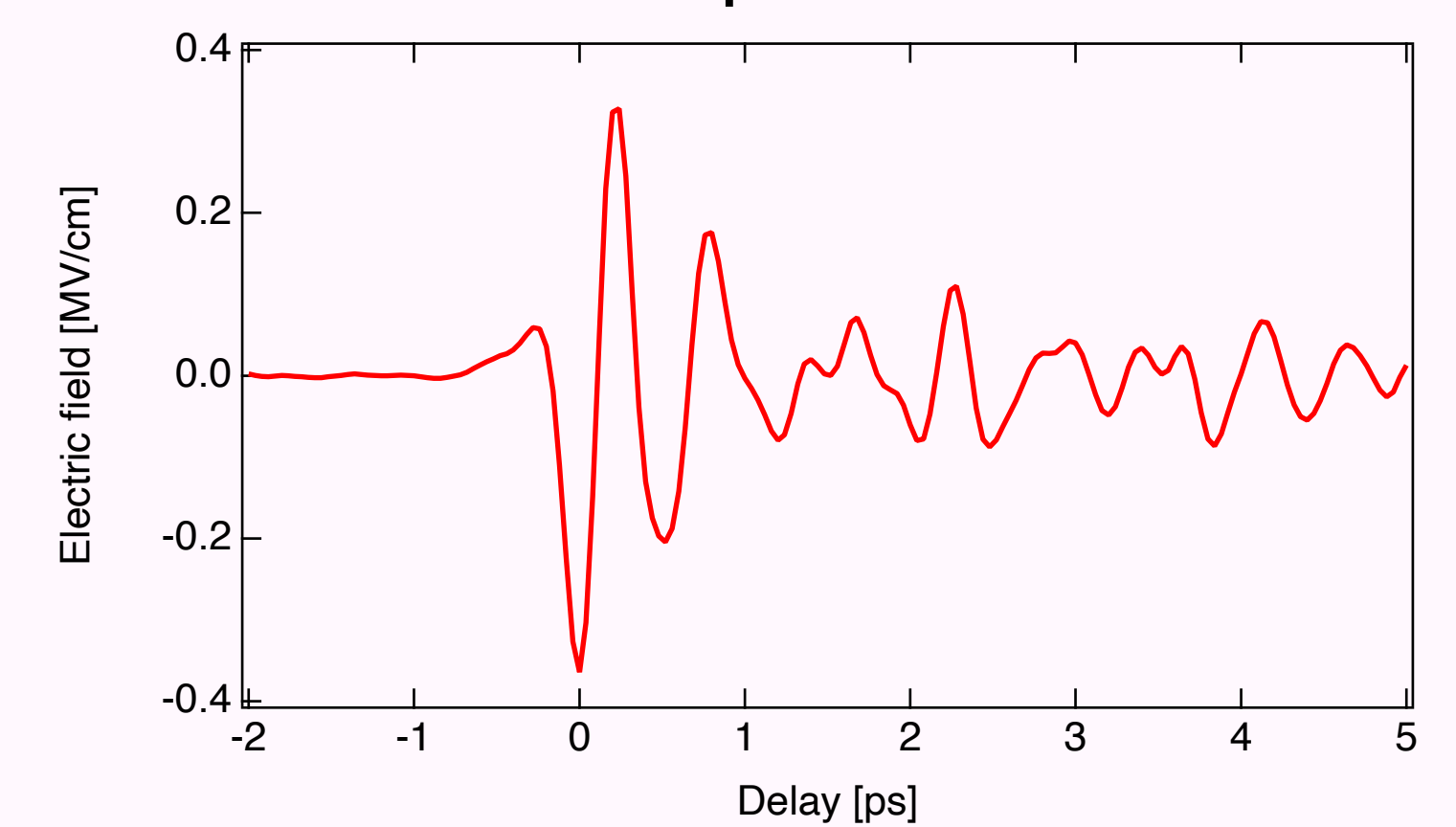
Autocorrelation



THz

Method: DSTMS pumped at 1.5 μm
Spot size: ~ φ1 mm
Field intensity: ~ 0.4 MV/cm

Field profile



Spectrum

