Squeezed light sources for ET-LF

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State of the art:

	1550nm	~2um
squeezing @ MHz	**13dB** Schönbeck et.al., Optics Letters 43, No.1 (2018)	**7dB** Darsow-Fromm et.al, arXiv:2105.10209 (2021)
squeezing @ kHz	**10dB** Schönbeck PhD-thesis (2018)	**4dB** Yap et.al, Optics Letters 44, No.21 (2019)

GOAL: strong squeezing (~15dB) down to 1Hz (not yet demonstrated)

What we have:

	1550nm	2um
Non-linear materials (OPA/SHG)		
Low loss Faraday Isolators		
High QE PDs (>99%)		
Low noise laser systems		

Strong squeezing down to 1Hz requires further R&D with the focus on reduction of optical loss (incl. PDs@2um), laser noise, electronic readout noise, long term system stability, ….