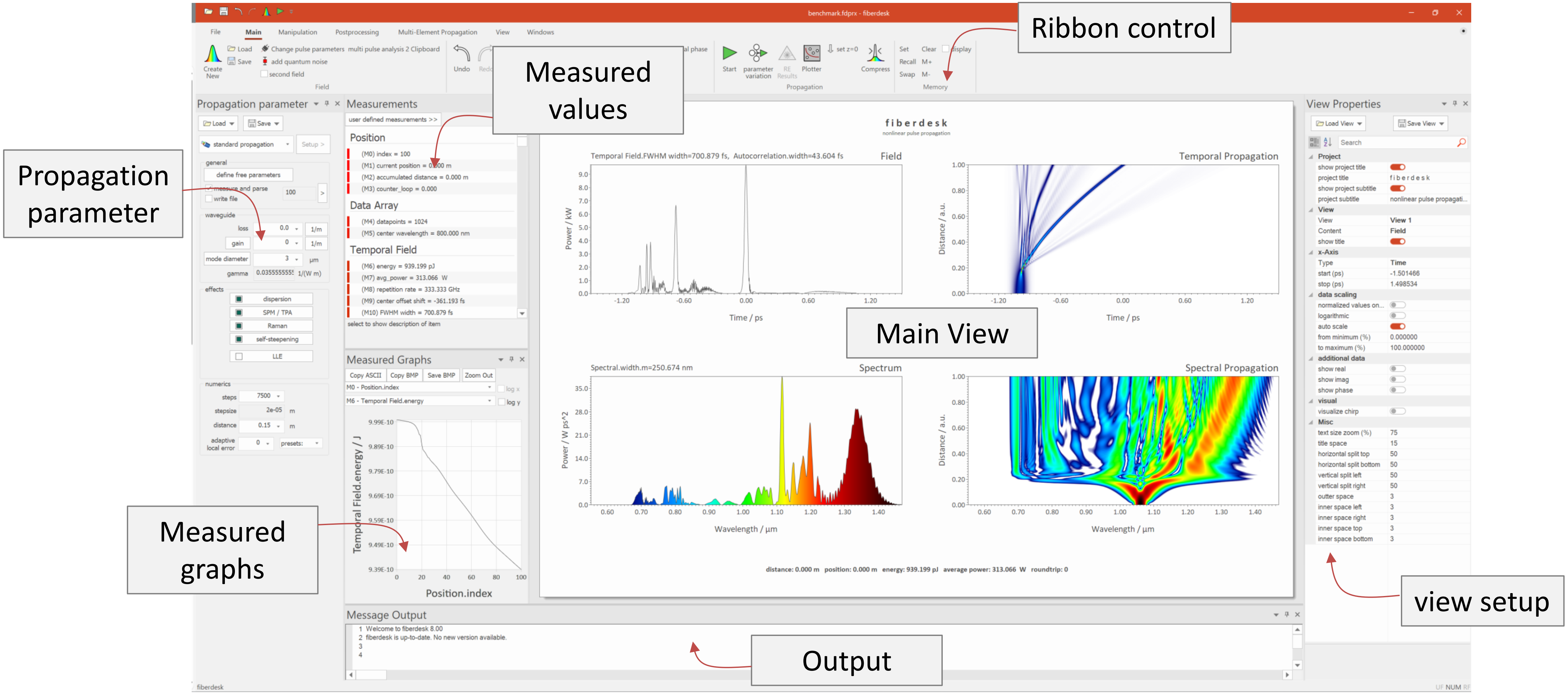
fiberdesk

nonlinear pulse propagation

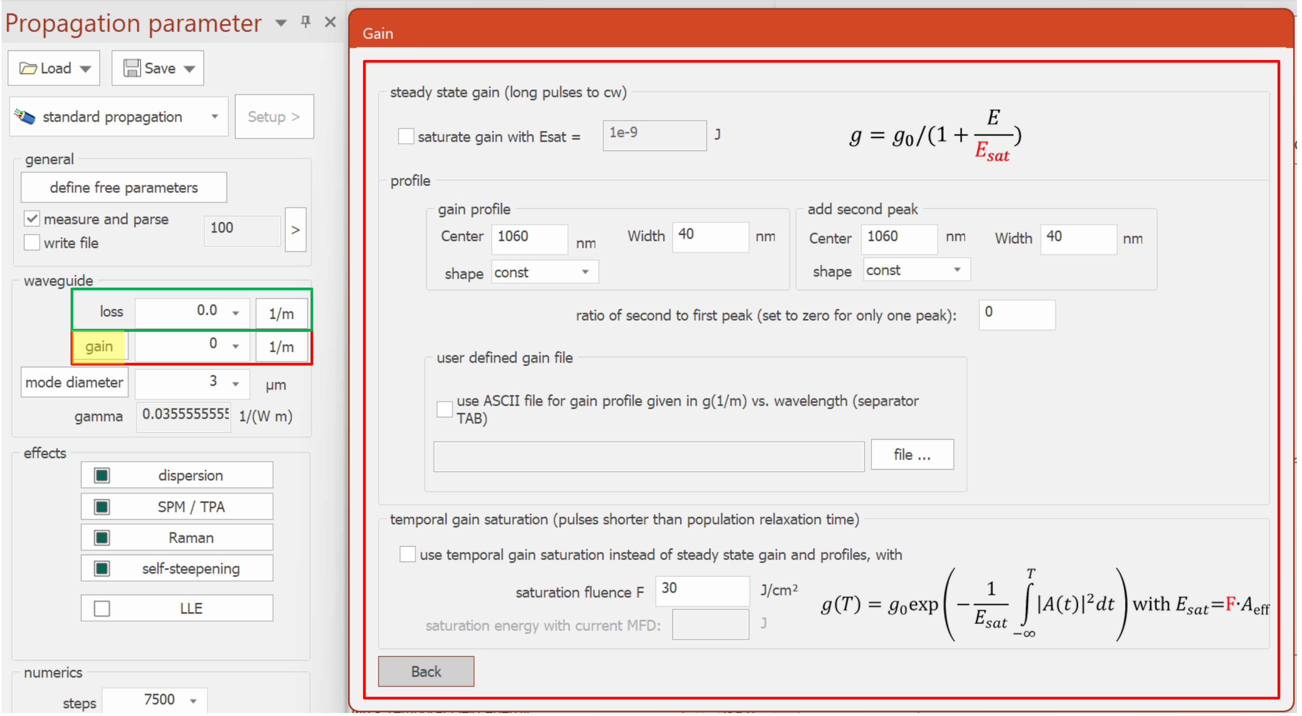
fiberdesk – graphical user interface (GUI)



fiberdesk – NLSE parameter setup

Parameter access in detail:

$$\frac{\partial A}{\partial z} = -\frac{\alpha}{2}A + \int_{-\infty}^{\infty} \frac{g(\omega)}{2}\tilde{A}(\omega)e^{-i\omega T}d\omega + \sum_{n\geq 1}\beta_n \frac{i^{n+1}}{n!}\frac{\partial^n}{\partial T^n}A + i\gamma\cdot\left(1 + i\tau_{shock}\frac{\partial}{\partial T}\right)\left(A(T)\int_{-\infty}^{\infty}R(\tau)\left|A(T-\tau)\right|^2 d\tau\right)$$



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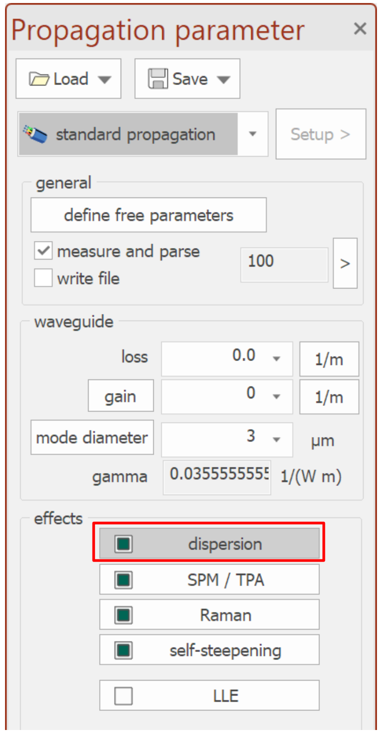

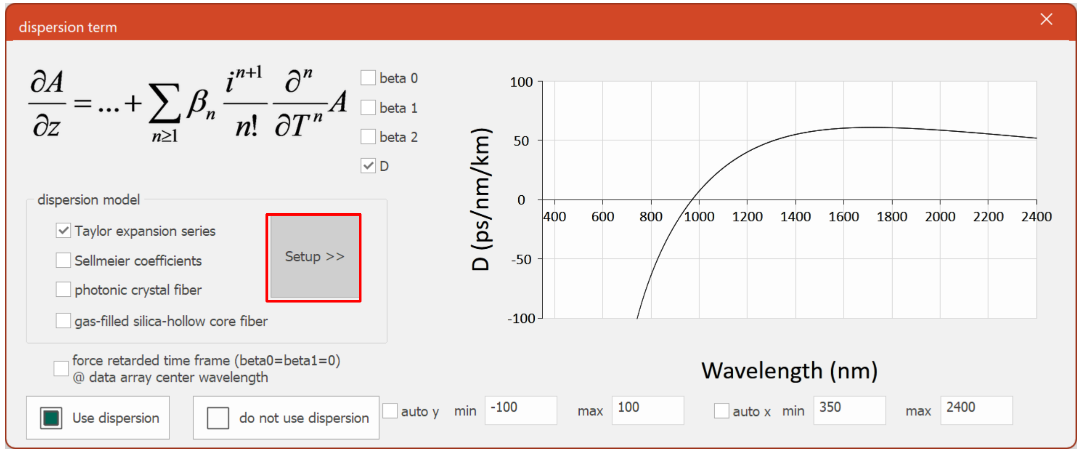

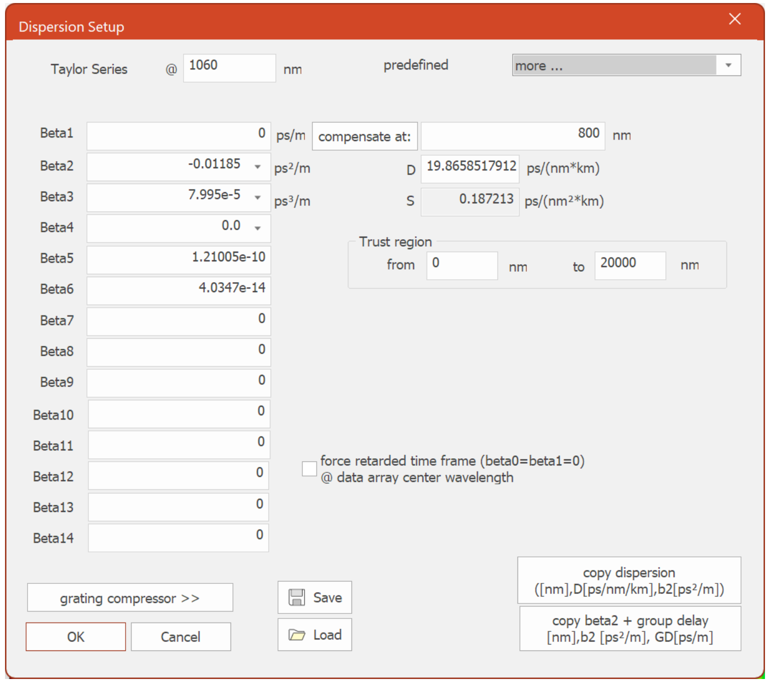

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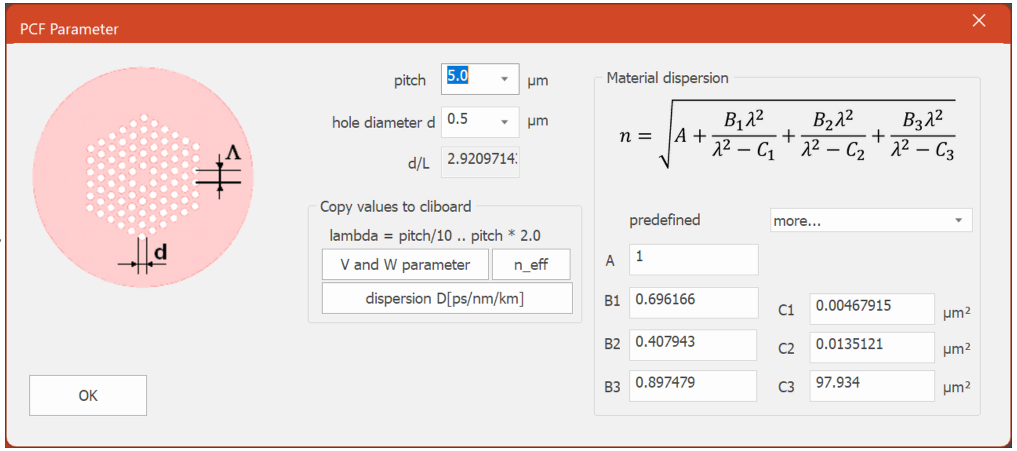

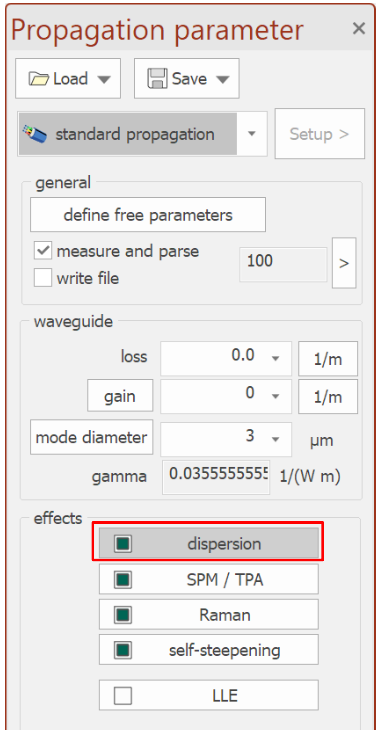

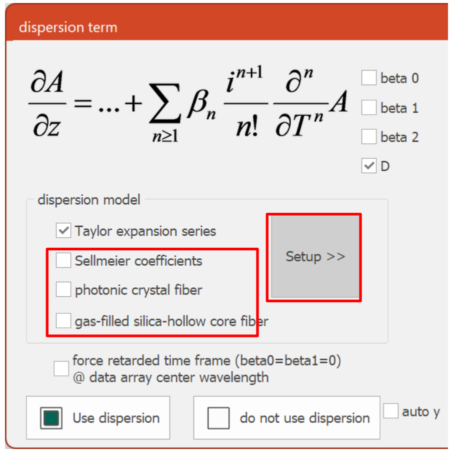

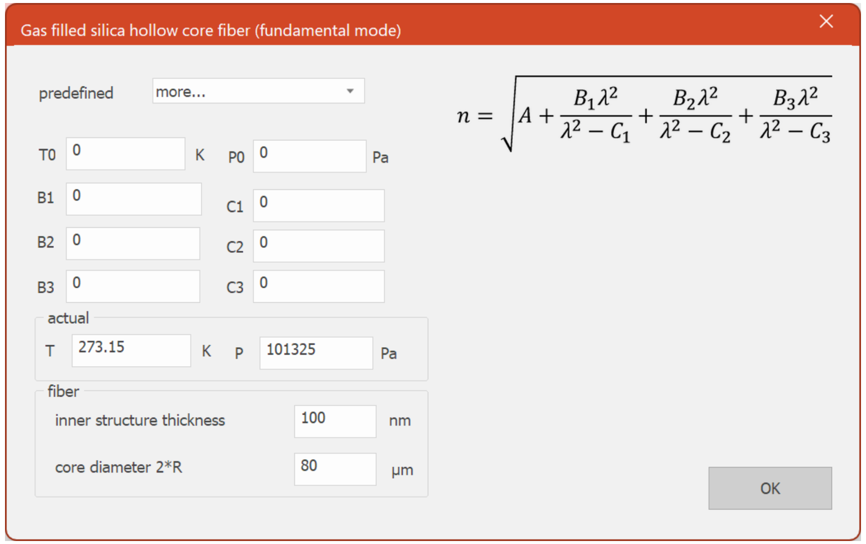

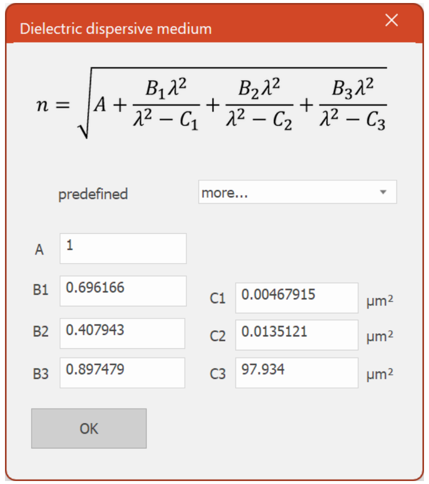

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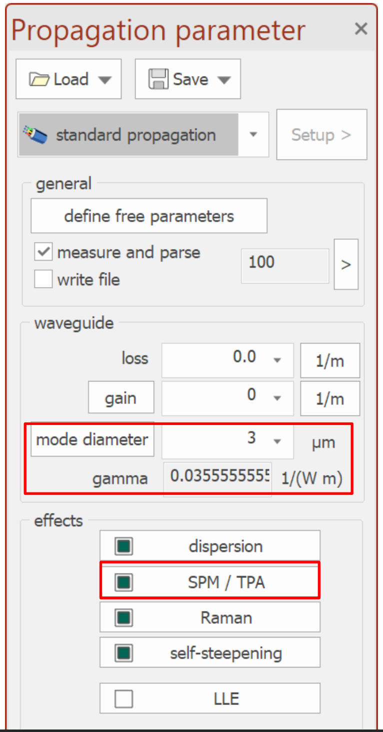

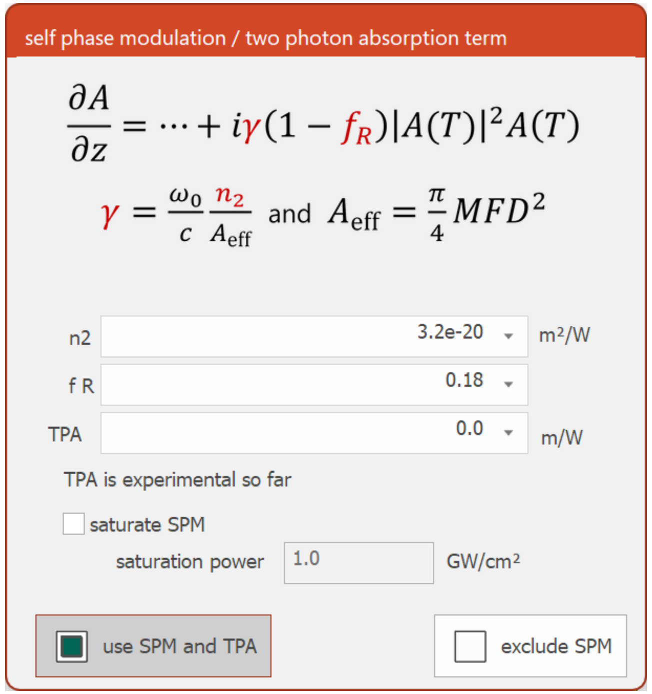

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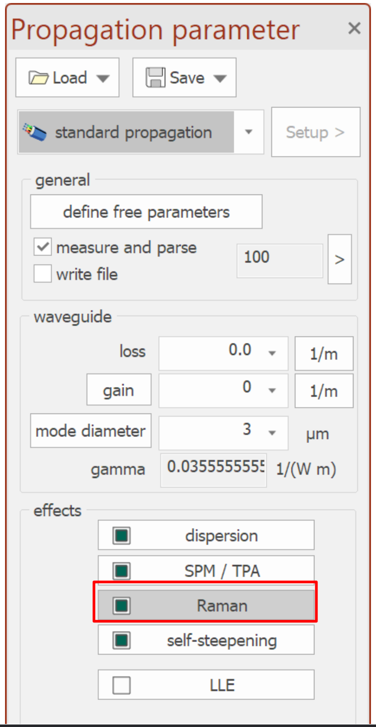

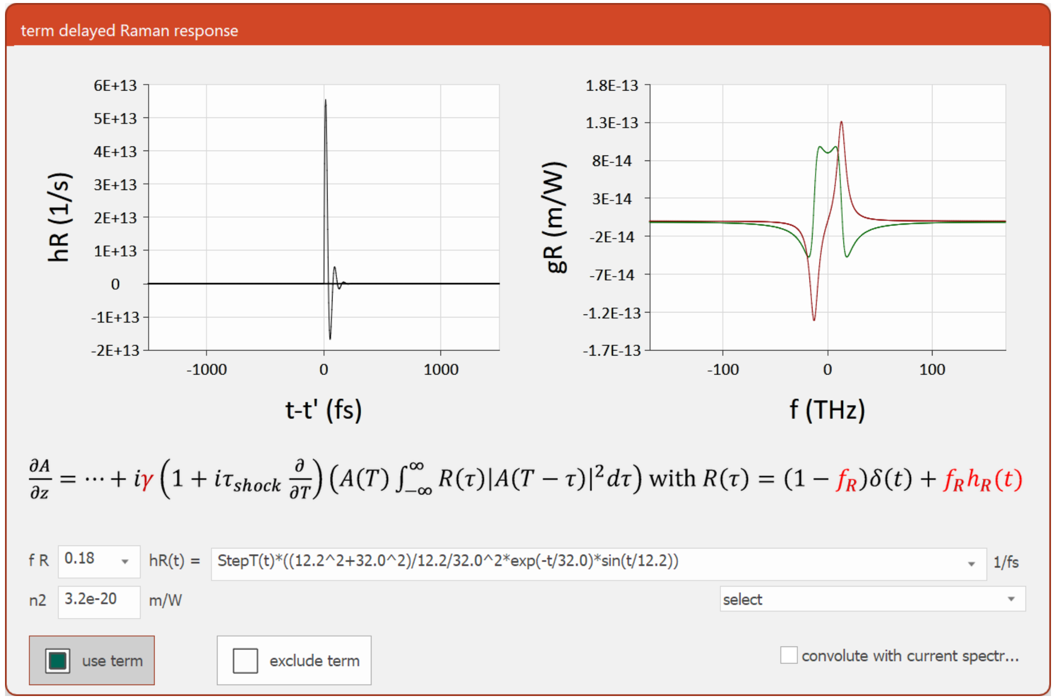

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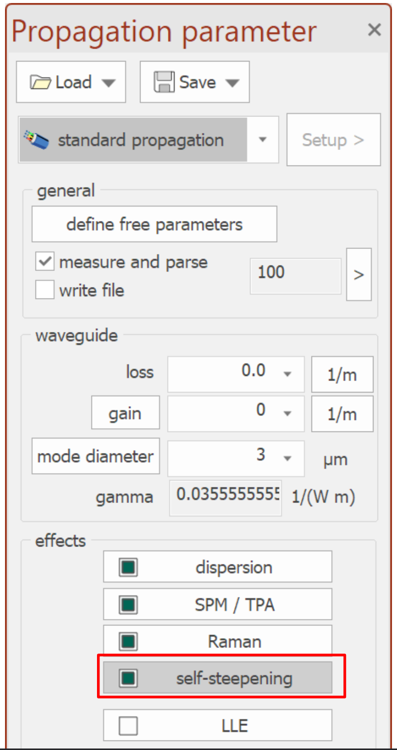

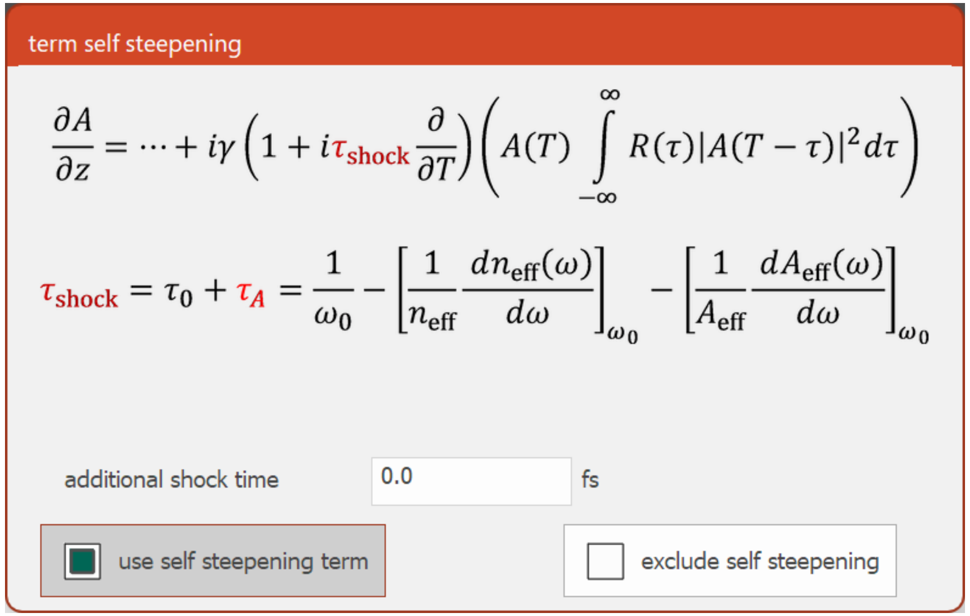

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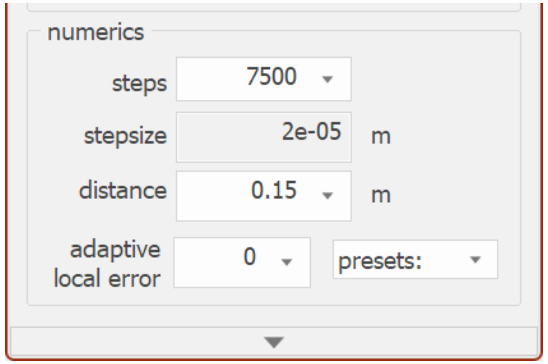
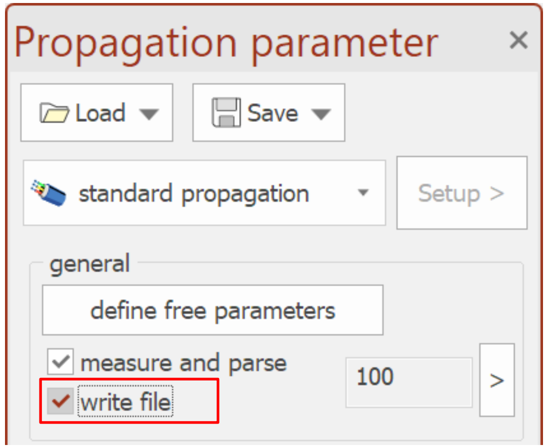
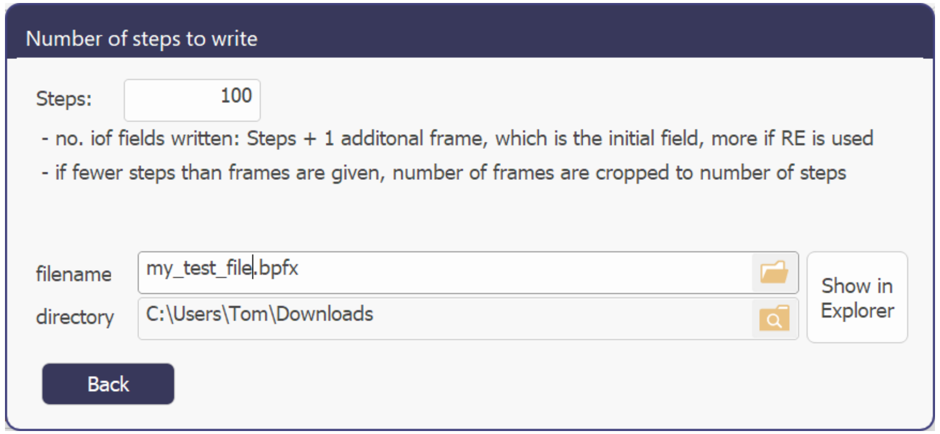


Propagation setup:distance, stepsize, numercial accuracy etc.

$$\frac{\partial A}{\partial z} = -\frac{\alpha}{2}A + \int_{-\infty}^{\infty} \frac{g(\omega)}{2}\tilde{A}(\omega)e^{-i\omega T}d\omega + \sum_{n\geq 1}\beta_n \frac{i^{n+1}}{n!}\frac{\partial^n}{\partial T^n}A + i\gamma\cdot\left(1+i\tau_{shock}\frac{\partial}{\partial T}\right)\left(A(T)\int_{-\infty}^{\infty}R(\tau)\left|A(T-\tau)\right|^2 d\tau\right)$$





file contains the initial field plus the field after 100 steps from the calculated propagation for later analysis

file extension: ***.bpfx**