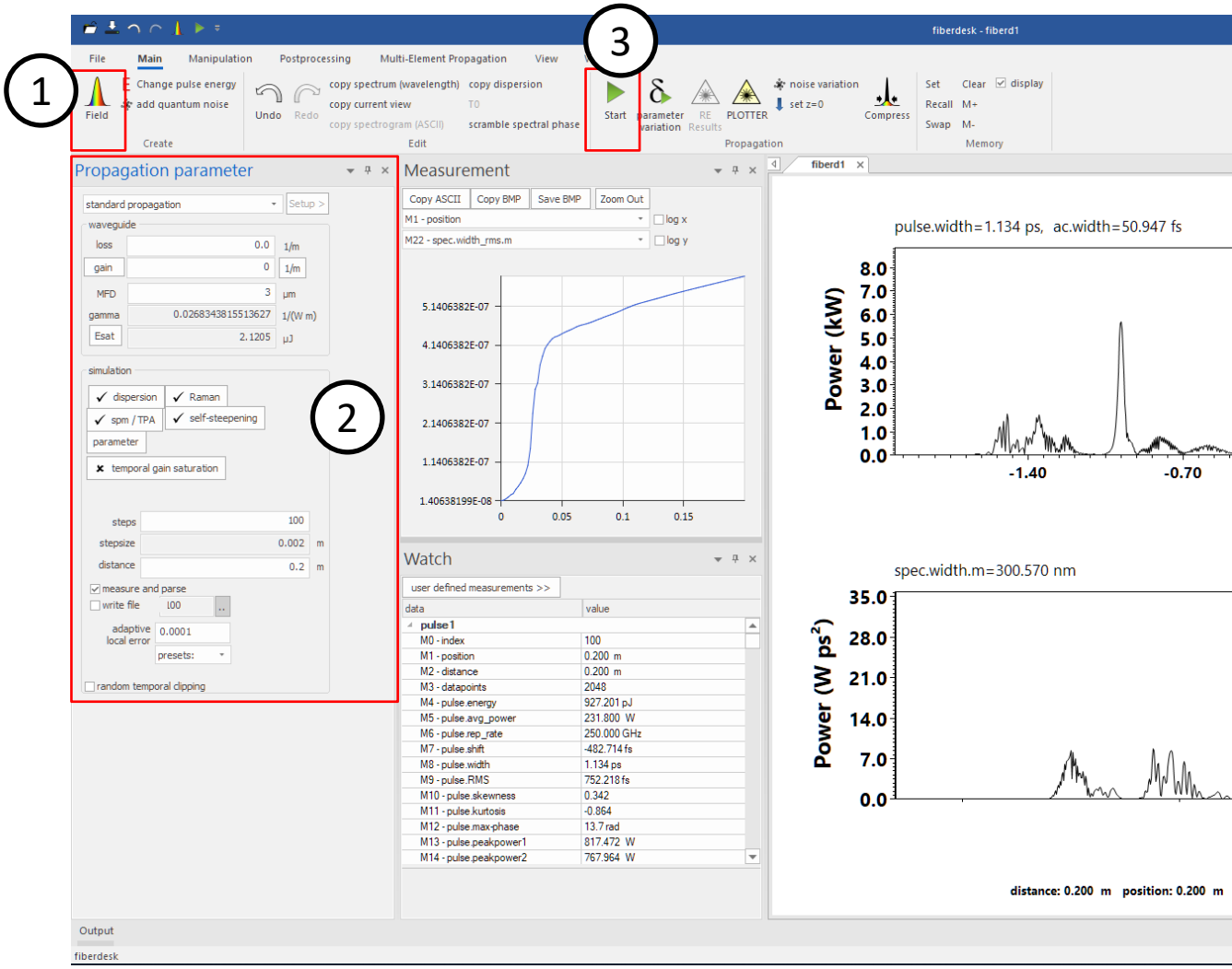
lecture 1

Content:

lecture 1 - Learn the most simple workflow

Three simple steps:

(1) create a pulse
(2) choose parameters
(3) press start

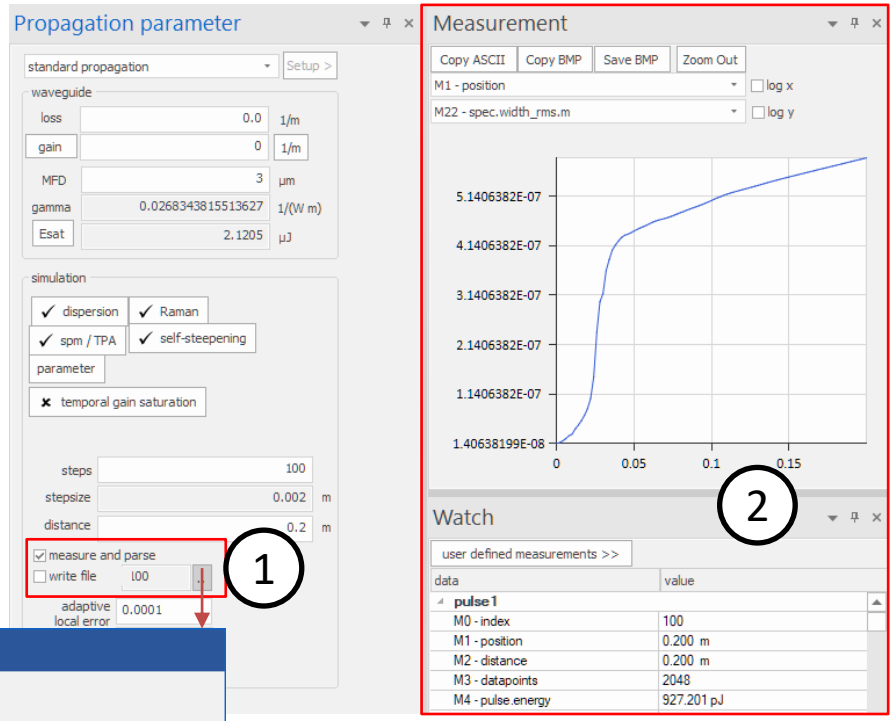


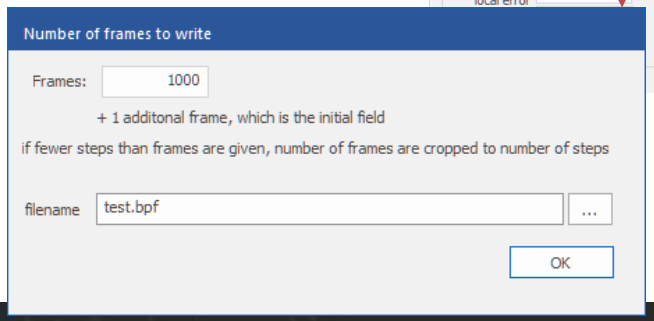
lecture 1 - Measure something along z

To measure different values of the numerical field that fiberdesk is propagating:

(1) choose „measure and parse" and setup the number of measurement points along z, which should be equal or less than the number of steps. (button with three dots)

(2) After propagation, you will see the measured values as instantaneous values or graphs along the propagation.





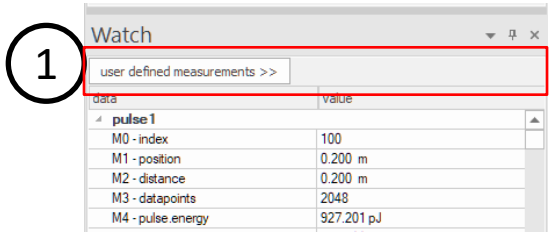
lecture 1 - User defined measures (B-Integral)

You can also define your own measurement in addition to the pre-defined options. You need to:

(1) Open the dialog „user defined measurements >>“

(2) Script your own function by either using values measured before or math expressionen with variables

M84 = just an example, no meaning



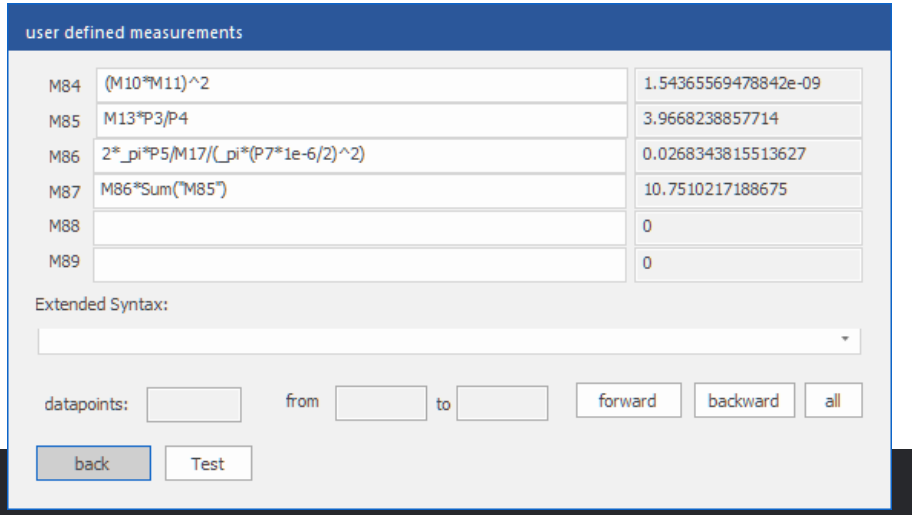
Now real example: How to measure the B-Integral? (shown by several user defined measurements for educational reasons) We translate the equation to measured values and a function that integrates (summation) along z.

$$B = \gamma \int_0^L P_{Peak}(z) \cdot dz \quad \text{with} \quad \gamma = \frac{2\pi n_2}{\lambda A_{eff}}$$

M86 = 2* π *n_2/λ/(π*(MFD_µm*1e-6/2)^2)

M85 = P_{Peak}*L / Steps

M87 = γ * Sum(“M85“)



Hint: excecution times are slowed down by complex measurements.