Free water MWE:

A close-up of a graph

Description automatically generatedA graph of a pressure

Description automatically generated

3.4213 1.7744 2.6639 5.2804 0.0462 0.7516 4.2449 5.1641 0.8284 0.0110

A close-up of a graph

Description automatically generatedA graph of a function

Description automatically generated

3.4209 1.7943 2.6609 5.2629 0.0479 0.7467 4.2252 5.1933 0.8088 0.0104

A close-up of a graph

Description automatically generatedA graph of a function

Description automatically generated

3.4216 1.7800 2.6674 5.2867 0.0391 0.7545 4.2485 5.1865 0.8376 0.0118

3.8278 0.3648 2.4458 2.2033 0.5225 0.0960 0.4667 2.5710 0.4438 0.0921

Exiting: Maximum number of function evaluations has been exceeded

- increase MaxFunEvals option.

Current function value: 0.000128

A close-up of a graph

Description automatically generatedA graph of a pressure

Description automatically generated

3.1432 1.8512 2.7972 5.1112 0.4564 2.5425 5.0119 5.8028 1.4066 0.0105

Increased MaxFunEvals from 1e4 to 1e5

A close-up of a graph

Description automatically generated A graph of a pressure

Description automatically generated

Starting from rand vals:

3.6248 4.6651 3.9596 3.6558 0.1284 1.3196 3.4224 4.8325 1.5752 1.7963

A graph of a red and blue line

Description automatically generated with medium confidenceA graph of a pressure

Description automatically generated

3.6134 5.6003 1.3145 1.1645 0.6810 1.3804 6.1489 5.1000 1.0803 5.1285

A close-up of a graph

Description automatically generated A graph of a pressure

Description automatically generated

* 2.9166 0.0025 2.5676 5.5722 0.0747 1.1346 5.8958 3.0909 3.8624 0.1475

A graph of a pressure

Description automatically generated

Off by factor of 1e6? i.e. computed axial\_position in the wrong direction?

A close-up of a graph

Description automatically generated A graph of a pressure

Description automatically generated

5.0733 5.5856 5.7232 5.6797 0.2919 0.0037 5.6702 5.0430 0.0125 0.0142

A graph with blue lines and red dots

Description automatically generated

Using boxcar function: distance 80 mm

5.9150 0.0252 6.1743 5.8724 0.5326 0.1607 6.2484 0.7526 0.5902 0.0097

A graph of a graph

Description automatically generated

Using boxcar function: distance 60 mm

4.5608 4.0669 2.8453 5.5864 4.8131 0.1581 6.2395 6.2668 1.1104 0.0110

A graph of a pressure

Description automatically generated

Using boxcar function: distance 40 mm

3.1363 3.0154 4.1519 3.7630 1.0497 0.1215 2.2111 2.0794 2.7886 0.0118

A graph of a pressure along with a red line

Description automatically generated

Intensity check

A graph of a graph

Description automatically generated A graph of a graph

Description automatically generated

Boxcar vs. Gaussian

A graph of a function

Description automatically generated A graph of a function

Description automatically generated

Weights on one or not?

A graph of a graph

Description automatically generated A graph with a line graph

Description automatically generated with medium confidence

Comparison:

Whole script:

A graph of a function

Description automatically generated

MWE script:

Left: All phases included; right: Phases moved up 1, 0 as second phase, dropping the first phase

A graph of a function

Description automatically generatedA graph of a function

Description automatically generated

A graph of a function

Description automatically generatedA graph of a function

Description automatically generated

A graph of a number of objects

Description automatically generated with medium confidence A graph of a number of objects

Description automatically generated with medium confidence