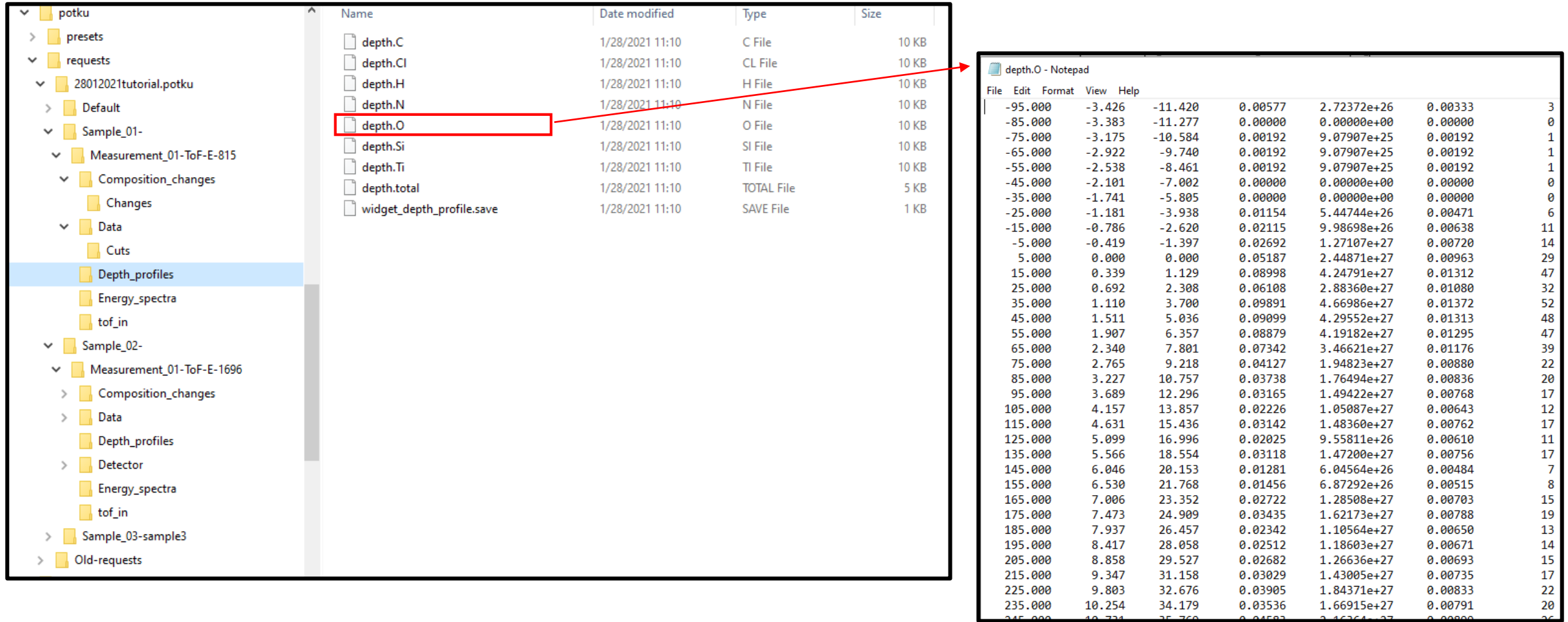


ToF-ERDA analysis software Potku

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Depth profile Output files explained

# Potku – Data – Depth profiles



The image shows a file explorer window with the 'potku' directory selected. The left pane shows the directory tree, with 'Depth\_profiles' highlighted. The right pane shows a list of files in the 'Depth\_profiles' directory. The 'depth.O' file is highlighted with a red box. A red arrow points from this file to a Notepad window titled 'depth.O - Notepad'. The Notepad window displays the contents of the 'depth.O' file, which is a text file containing numerical data.

Name	Date modified	Type	Size
depth.C	1/28/2021 11:10	C File	10 KB
depth.Cl	1/28/2021 11:10	CL File	10 KB
depth.H	1/28/2021 11:10	H File	10 KB
depth.N	1/28/2021 11:10	N File	10 KB
depth.O	1/28/2021 11:10	O File	10 KB
depth.Si	1/28/2021 11:10	SI File	10 KB
depth.Ti	1/28/2021 11:10	TI File	10 KB
depth.total	1/28/2021 11:10	TOTAL File	5 KB
widget_depth_profile.save	1/28/2021 11:10	SAVE File	1 KB

depth.O - Notepad

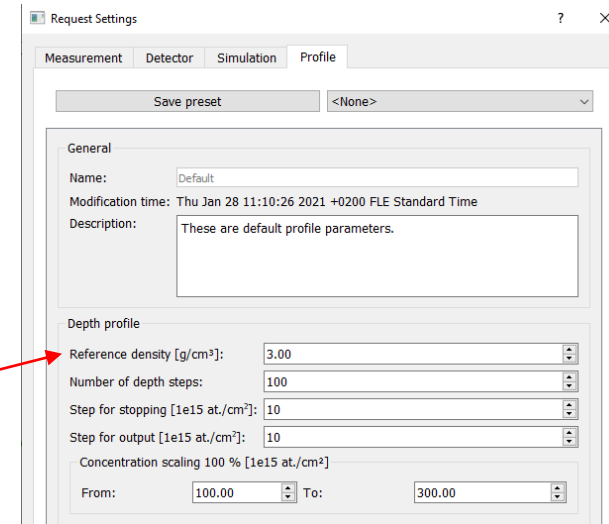
File	Edit	Format	View	Help		
-95.000	-3.426	-11.420	0.00577	2.72372e+26	0.00333	3
-85.000	-3.383	-11.277	0.00000	0.00000e+00	0.00000	0
-75.000	-3.175	-10.584	0.00192	9.07907e+25	0.00192	1
-65.000	-2.922	-9.740	0.00192	9.07907e+25	0.00192	1
-55.000	-2.538	-8.461	0.00192	9.07907e+25	0.00192	1
-45.000	-2.101	-7.002	0.00000	0.00000e+00	0.00000	0
-35.000	-1.741	-5.805	0.00000	0.00000e+00	0.00000	0
-25.000	-1.181	-3.938	0.01154	5.44744e+26	0.00471	6
-15.000	-0.786	-2.620	0.02115	9.98698e+26	0.00638	11
-5.000	-0.419	-1.397	0.02692	1.27107e+27	0.00720	14
5.000	0.000	0.000	0.05187	2.44871e+27	0.00963	29
15.000	0.339	1.129	0.08998	4.24791e+27	0.01312	47
25.000	0.692	2.308	0.06108	2.88360e+27	0.01080	32
35.000	1.110	3.700	0.09891	4.66986e+27	0.01372	52
45.000	1.511	5.036	0.09099	4.29552e+27	0.01313	48
55.000	1.907	6.357	0.08879	4.19182e+27	0.01295	47
65.000	2.340	7.801	0.07342	3.46621e+27	0.01176	39
75.000	2.765	9.218	0.04127	1.94823e+27	0.00880	22
85.000	3.227	10.757	0.03738	1.76494e+27	0.00836	20
95.000	3.689	12.296	0.03165	1.49422e+27	0.00768	17
105.000	4.157	13.857	0.02226	1.05087e+27	0.00643	12
115.000	4.631	15.436	0.03142	1.48360e+27	0.00762	17
125.000	5.099	16.996	0.02025	9.55811e+26	0.00610	11
135.000	5.566	18.554	0.03118	1.47200e+27	0.00756	17
145.000	6.046	20.153	0.01281	6.04564e+26	0.00484	7
155.000	6.530	21.768	0.01456	6.87292e+26	0.00515	8
165.000	7.006	23.352	0.02722	1.28508e+27	0.00703	15
175.000	7.473	24.909	0.03435	1.62173e+27	0.00788	19
185.000	7.937	26.457	0.02342	1.10564e+27	0.00650	13
195.000	8.417	28.058	0.02512	1.18603e+27	0.00671	14
205.000	8.858	29.527	0.02682	1.26636e+27	0.00693	15
215.000	9.347	31.158	0.03029	1.43005e+27	0.00735	17
225.000	9.803	32.676	0.03905	1.84371e+27	0.00833	22
235.000	10.254	34.179	0.03536	1.66915e+27	0.00791	20
245.000	10.724	35.760	0.04583	2.16364e+27	0.00880	26

# Depth profiles – explanation of columns

1	2	3	4	5	6	7
-95.000	-3.426	-11.420	0.00577	2.72372e+26	0.00333	3
-85.000	-3.383	-11.277	0.00000	0.00000e+00	0.00000	0
-75.000	-3.175	-10.584	0.00192	9.07907e+25	0.00192	1
-65.000	-2.922	-9.740	0.00192	9.07907e+25	0.00192	1
-55.000	-2.538	-8.461	0.00192	9.07907e+25	0.00192	1
-45.000	-2.101	-7.002	0.00000	0.00000e+00	0.00000	0
-35.000	-1.741	-5.805	0.00000	0.00000e+00	0.00000	0
-25.000	-1.181	-3.938	0.01154	5.44744e+26	0.00471	6
-15.000	-0.786	-2.620	0.02115	9.98698e+26	0.00638	11
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45.000	1.511	5.036	0.09099	4.29552e+27	0.01313	48
55.000	1.907	6.357	0.08879	4.19182e+27	0.01295	47
65.000	2.340	7.801	0.07342	3.46621e+27	0.01176	39
75.000	2.765	9.218	0.04127	1.94823e+27	0.00880	22
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115.000	4.631	15.436	0.03142	1.48360e+27	0.00762	17
125.000	5.099	16.996	0.02025	9.55811e+26	0.00610	11
135.000	5.566	18.554	0.03118	1.47200e+27	0.00756	17
145.000	6.046	20.153	0.01281	6.04564e+26	0.00484	7
155.000	6.530	21.768	0.01456	6.87292e+26	0.00515	8
165.000	7.006	23.352	0.02722	1.28508e+27	0.00703	15
175.000	7.473	24.909	0.03435	1.62173e+27	0.00788	19
185.000	7.937	26.457	0.02342	1.10564e+27	0.00650	13
195.000	8.417	28.058	0.02512	1.18603e+27	0.00671	14
205.000	8.858	29.527	0.02682	1.26636e+27	0.00693	15
215.000	9.347	31.158	0.03029	1.43005e+27	0.00735	17
225.000	9.803	32.676	0.03905	1.84371e+27	0.00833	22
235.000	10.254	34.179	0.03536	1.66915e+27	0.00791	20

Columns explained:

1. “**X-axis**”, in  $1e15$  at./cm $^2$
2. “**X-axis**”, in  $\mu\text{g}/\text{cm}^2$
3. “**X-axis**”, in nm, when density is given



The next columns are concentration and uncertainty related

4. “**Result**”: Atomic fraction, normalized (sum of concentrations to 100%)
5. Same as 4 but without normalization
6. “**Uncertainty**”:  $\text{Column 4} / \sqrt{\text{column 7}}$  - an (approximative) statistical uncertainty of atomic fraction of column 4.
7. **Number of events** contributing to this depth bin (to calculate  $\text{SQRT}(N)$ )

# Depth profiles – explanation of columns

depth.O - Notepad

File	Edit	Format	View	Help					
-95.000	-3.426	-11.420	0.00577	2.72372e+26	0.00333	3			
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-75.000	-3.175	-10.584	0.00192	9.07907e+25	0.00192	1			
-65.000	-2.922	-9.740	0.00192	9.07907e+25	0.00192	1			
-55.000	-2.538	-8.461	0.00192	9.07907e+25	0.00192	1			
-45.000	-2.101	-7.002	0.00000	0.00000e+00	0.00000	0			
-35.000	-1.741	-5.805	0.00000	0.00000e+00	0.00000	0			
-25.000	-1.181	-3.938	0.01154	5.44744e+26	0.00471	6			
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65.000	2.340	7.801	0.07342	3.46621e+27	0.01176	39			
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105.000	4.157	13.857	0.02226	1.05087e+27	0.00643	12			
115.000	4.631	15.436	0.03142	1.48360e+27	0.00762	17			
125.000	5.099	16.996	0.02025	9.55811e+26	0.00610	11			
135.000	5.566	18.554	0.03118	1.47200e+27	0.00756	17			
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155.000	6.530	21.768	0.01456	6.87292e+26	0.00515	8			
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245.000	10.721	35.760	0.04583	2.46264e+27	0.00880	26			

