## Report document

Report generated: 2024-08-20 14:57:39.938671

The next 4 sections describe individual scans, without a pre-focus lens and then one per pre-focus lens

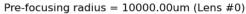
## Scan 1: No pre-focusing lens

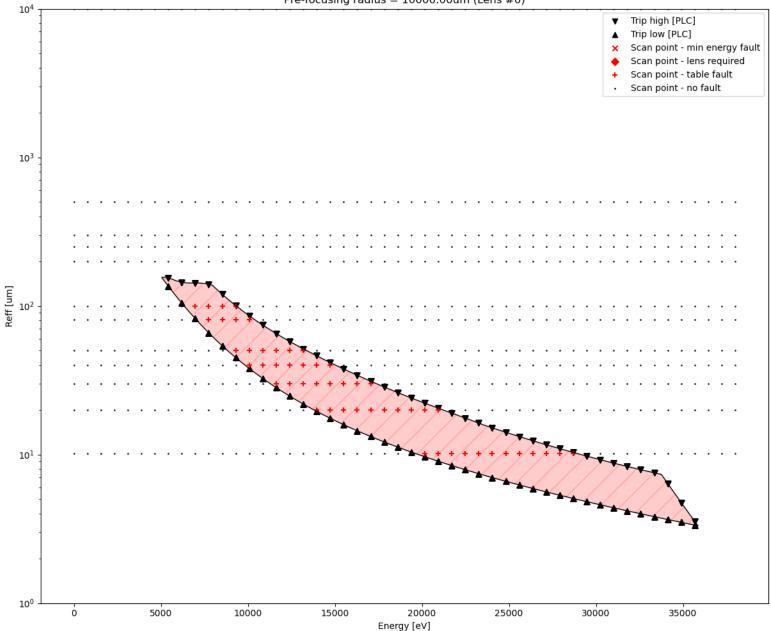
Data generated: 2024-08-20 21:59:11

bluesky scan sweep\_energy\_plan performed without a pre-focus lens.

#### **Scan Information**

- 1. Choose a few transfocator lens sets to span the effective radius range.
- 2. For each of those lens sets, scan energy at regular intervals.
- 3. Each marker on the plot represents one of those scan points.
- 4. Record if PLC reported a fault and why.





#### **Plot / Table Information**

**No fault** indicates that a data point was checked but no fault reported by PLC.

**Trip Low** and **Trip High** are values from the spreadsheet table, interpolated by the PLC and reported to EPICS.

The lines drawn around these regions and the highlighted regions are directly from the spreadsheet. **Min Energy Fault** indicates that it does not meet minimum energy requirement for a given XRT lens. **Table Fault** indicates a fault from the spreadsheet table disallowed region.

Lens Required Fault markers are clipped at the bottom of the plot.

Scan 1: No pre-focusing lens: Scan Data Table

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
0.00	0.00	10000.00	0.00	0	0	0	0	0
775.51	0.00	10000.00	0.00	0	0	0	0	0
1551.02	0.00	10000.00	0.00	0	0	0	0	0
2326.53	0.00	10000.00	0.00	0	0	0	0	0
3102.04	0.00	10000.00	0.00	0	0	0	0	0
3877.55	0.00	10000.00	0.00	0	0	0	0	0
4653.06	0.00	10000.00	0.00	0	0	0	0	0
5428.57	135.90	10000.00	154.66	0	0	0	0	0
6204.08	104.53	10000.00	144.25	0	0	0	0	0
6979.59	82.12	10000.00	142.55	0	0	0	0	0
7755.10	65.89	10000.00	139.79	0	0	0	0	0
8530.61	53.89	10000.00	119.71	0	0	0	0	0
9306.12	44.86	10000.00	100.49	0	0	0	0	0
10081.63	37.92	10000.00	85.80	0	0	0	0	0
10857.14	32.50	10000.00	74.31	0	0	0	0	0
11632.65	28.19	10000.00	65.13	0	0	0	0	0
12408.16	24.71	10000.00	57.64	0	0	0	0	0
13183.67	21.86	10000.00	51.44	0	0	0	0	0
13959.18	19.51	10000.00	46.13	0	0	0	0	0
14734.69	17.54	10000.00	41.55	0	0	0	0	0
15510.20	15.87	10000.00	37.59	0	0	0	0	0
16285.71	14.44	10000.00	34.14	0	0	0	0	0
17061.22	13.21	10000.00	31.12	0	0	0	0	0
17836.73	12.14	10000.00	28.45	0	0	0	0	0
18612.24	11.21	10000.00	26.09	0	0	0	0	0
19387.76	10.39	10000.00	24.01	0	0	0	0	0
20163.27	9.66	10000.00	22.16	0	0	0	0	0
20938.78	9.01	10000.00	20.50	0	0	0	0	0
21714.29	8.42	10000.00	19.00	0	0	0	0	0
22489.80	7.90	10000.00	17.61	0	0	0	0	0
23265.31	7.42	10000.00	16.30	0	0	0	0	0
24040.82	6.99	10000.00	15.11	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
24816.33	6.60	10000.00	14.12	0	0	0	0	0
25591.84	6.24	10000.00	13.21	0	0	0	0	0
26367.35	5.91	10000.00	12.38	0	0	0	0	0
27142.86	5.60	10000.00	11.63	0	0	0	0	0
27918.37	5.32	10000.00	10.95	0	0	0	0	0
28693.88	5.06	10000.00	10.32	0	0	0	0	0
29469.39	4.81	10000.00	9.75	0	0	0	0	0
30244.90	4.59	10000.00	9.23	0	0	0	0	0
31020.41	4.38	10000.00	8.75	0	0	0	0	0
31795.92	4.18	10000.00	8.31	0	0	0	0	0
32571.43	3.99	10000.00	7.90	0	0	0	0	0
33346.94	3.82	10000.00	7.53	0	0	0	0	0
34122.45	3.65	10000.00	6.38	0	0	0	0	0
34897.96	3.50	10000.00	4.74	0	0	0	0	0
35673.47	3.35	10000.00	3.55	0	0	0	0	0
36448.98	0.00	10000.00	0.00	0	0	0	0	0
37224.49	0.00	10000.00	0.00	0	0	0	0	0
38000.00	0.00	10000.00	0.00	0	0	0	0	0
0.00	0.00	10.17	0.00	0	0	0	0	0
775.51	0.00	10.17	0.00	0	0	0	0	0
1551.02	0.00	10.17	0.00	0	0	0	0	0
2326.53	0.00	10.17	0.00	0	0	0	0	0
3102.04	0.00	10.17	0.00	0	0	0	0	0
3877.55	0.00	10.17	0.00	0	0	0	0	0
4653.06	0.00	10.17	0.00	0	0	0	0	0
5428.57	135.90	10.17	154.66	0	0	0	0	0
6204.08	104.53	10.17	144.25	0	0	0	0	0
6979.59	82.12	10.17	142.55	0	0	0	0	0
7755.10	65.89	10.17	139.79	0	0	0	0	0
8530.61	53.89	10.17	119.71	0	0	0	0	0
9306.12	44.86	10.17	100.49	0	0	0	0	0
10081.63	37.92	10.17	85.80	0	0	0	0	0
10857.14	32.50	10.17	74.31	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
11632.65	28.19	10.17	65.13	0	0	0	0	0
12408.16	24.71	10.17	57.64	0	0	0	0	0
13183.67	21.86	10.17	51.44	0	0	0	0	0
13959.18	19.51	10.17	46.13	0	0	0	0	0
14734.69	17.54	10.17	41.55	0	0	0	0	0
15510.20	15.87	10.17	37.59	0	0	0	0	0
16285.71	14.44	10.17	34.14	0	0	0	0	0
17061.22	13.21	10.17	31.12	0	0	0	0	0
17836.73	12.14	10.17	28.45	0	0	0	0	0
18612.24	11.21	10.17	26.09	0	0	0	0	0
19387.76	10.39	10.17	24.01	0	0	0	0	0
20163.27	9.66	10.17	22.16	1	0	0	0	1
20938.78	9.01	10.17	20.50	1	0	0	0	1
21714.29	8.42	10.17	19.00	1	0	0	0	1
22489.80	7.90	10.17	17.61	1	0	0	0	1
23265.31	7.42	10.17	16.30	1	0	0	0	1
24040.82	6.99	10.17	15.11	1	0	0	0	1
24816.33	6.60	10.17	14.12	1	0	0	0	1
25591.84	6.24	10.17	13.21	1	0	0	0	1
26367.35	5.91	10.17	12.38	1	0	0	0	1
27142.86	5.60	10.17	11.63	1	0	0	0	1
27918.37	5.32	10.17	10.95	1	0	0	0	1
28693.88	5.06	10.17	10.32	1	0	0	0	1
29469.39	4.81	10.17	9.75	0	0	0	0	0
30244.90	4.59	10.17	9.23	0	0	0	0	0
31020.41	4.38	10.17	8.75	0	0	0	0	0
31795.92	4.18	10.17	8.31	0	0	0	0	0
32571.43	3.99	10.17	7.90	0	0	0	0	0
33346.94	3.82	10.17	7.53	0	0	0	0	0
34122.45	3.65	10.17	6.38	0	0	0	0	0
34897.96	3.50	10.17	4.74	0	0	0	0	0
35673.47	3.35	10.17	3.55	0	0	0	0	0
36448.98	0.00	10.17	0.00	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
37224.49	0.00	10.17	0.00	0	0	0	0	0
38000.00	0.00	10.17	0.00	0	0	0	0	0
0.00	0.00	20.00	0.00	0	0	0	0	0
775.51	0.00	20.00	0.00	0	0	0	0	0
1551.02	0.00	20.00	0.00	0	0	0	0	0
2326.53	0.00	20.00	0.00	0	0	0	0	0
3102.04	0.00	20.00	0.00	0	0	0	0	0
3877.55	0.00	20.00	0.00	0	0	0	0	0
4653.06	0.00	20.00	0.00	0	0	0	0	0
5428.57	135.90	20.00	154.66	0	0	0	0	0
6204.08	104.53	20.00	144.25	0	0	0	0	0
6979.59	82.12	20.00	142.55	0	0	0	0	0
7755.10	65.89	20.00	139.79	0	0	0	0	0
8530.61	53.89	20.00	119.71	0	0	0	0	0
9306.12	44.86	20.00	100.49	0	0	0	0	0
10081.63	37.92	20.00	85.80	0	0	0	0	0
10857.14	32.50	20.00	74.31	0	0	0	0	0
11632.65	28.19	20.00	65.13	0	0	0	0	0
12408.16	24.71	20.00	57.64	0	0	0	0	0
13183.67	21.86	20.00	51.44	0	0	0	0	0
13959.18	19.51	20.00	46.13	1	0	0	0	1
14734.69	17.54	20.00	41.55	1	0	0	0	1
15510.20	15.87	20.00	37.59	1	0	0	0	1
16285.71	14.44	20.00	34.14	1	0	0	0	1
17061.22	13.21	20.00	31.12	1	0	0	0	1
17836.73	12.14	20.00	28.45	1	0	0	0	1
18612.24	11.21	20.00	26.09	1	0	0	0	1
19387.76	10.39	20.00	24.01	1	0	0	0	1
20163.27	9.66	20.00	22.16	1	0	0	0	1
20938.78	9.01	20.00	20.50	1	0	0	0	1
21714.29	8.42	20.00	19.00	0	0	0	0	0
22489.80	7.90	20.00	17.61	0	0	0	0	0
23265.31	7.42	20.00	16.30	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
24040.82	6.99	20.00	15.11	0	0	0	0	0
24816.33	6.60	20.00	14.12	0	0	0	0	0
25591.84	6.24	20.00	13.21	0	0	0	0	0
26367.35	5.91	20.00	12.38	0	0	0	0	0
27142.86	5.60	20.00	11.63	0	0	0	0	0
27918.37	5.32	20.00	10.95	0	0	0	0	0
28693.88	5.06	20.00	10.32	0	0	0	0	0
29469.39	4.81	20.00	9.75	0	0	0	0	0
30244.90	4.59	20.00	9.23	0	0	0	0	0
31020.41	4.38	20.00	8.75	0	0	0	0	0
31795.92	4.18	20.00	8.31	0	0	0	0	0
32571.43	3.99	20.00	7.90	0	0	0	0	0
33346.94	3.82	20.00	7.53	0	0	0	0	0
34122.45	3.65	20.00	6.38	0	0	0	0	0
34897.96	3.50	20.00	4.74	0	0	0	0	0
35673.47	3.35	20.00	3.55	0	0	0	0	0
36448.98	0.00	20.00	0.00	0	0	0	0	0
37224.49	0.00	20.00	0.00	0	0	0	0	0
38000.00	0.00	20.00	0.00	0	0	0	0	0
0.00	0.00	30.00	0.00	0	0	0	0	0
775.51	0.00	30.00	0.00	0	0	0	0	0
1551.02	0.00	30.00	0.00	0	0	0	0	0
2326.53	0.00	30.00	0.00	0	0	0	0	0
3102.04	0.00	30.00	0.00	0	0	0	0	0
3877.55	0.00	30.00	0.00	0	0	0	0	0
4653.06	0.00	30.00	0.00	0	0	0	0	0
5428.57	135.90	30.00	154.66	0	0	0	0	0
6204.08	104.53	30.00	144.25	0	0	0	0	0
6979.59	82.12	30.00	142.55	0	0	0	0	0
7755.10	65.89	30.00	139.79	0	0	0	0	0
8530.61	53.89	30.00	119.71	0	0	0	0	0
9306.12	44.86	30.00	100.49	0	0	0	0	0
10081.63	37.92	30.00	85.80	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
10857.14	32.50	30.00	74.31	0	0	0	0	0
11632.65	28.19	30.00	65.13	1	0	0	0	1
12408.16	24.71	30.00	57.64	1	0	0	0	1
13183.67	21.86	30.00	51.44	1	0	0	0	1
13959.18	19.51	30.00	46.13	1	0	0	0	1
14734.69	17.54	30.00	41.55	1	0	0	0	1
15510.20	15.87	30.00	37.59	1	0	0	0	1
16285.71	14.44	30.00	34.14	1	0	0	0	1
17061.22	13.21	30.00	31.12	1	0	0	0	1
17836.73	12.14	30.00	28.45	0	0	0	0	0
18612.24	11.21	30.00	26.09	0	0	0	0	0
19387.76	10.39	30.00	24.01	0	0	0	0	0
20163.27	9.66	30.00	22.16	0	0	0	0	0
20938.78	9.01	30.00	20.50	0	0	0	0	0
21714.29	8.42	30.00	19.00	0	0	0	0	0
22489.80	7.90	30.00	17.61	0	0	0	0	0
23265.31	7.42	30.00	16.30	0	0	0	0	0
24040.82	6.99	30.00	15.11	0	0	0	0	0
24816.33	6.60	30.00	14.12	0	0	0	0	0
25591.84	6.24	30.00	13.21	0	0	0	0	0
26367.35	5.91	30.00	12.38	0	0	0	0	0
27142.86	5.60	30.00	11.63	0	0	0	0	0
27918.37	5.32	30.00	10.95	0	0	0	0	0
28693.88	5.06	30.00	10.32	0	0	0	0	0
29469.39	4.81	30.00	9.75	0	0	0	0	0
30244.90	4.59	30.00	9.23	0	0	0	0	0
31020.41	4.38	30.00	8.75	0	0	0	0	0
31795.92	4.18	30.00	8.31	0	0	0	0	0
32571.43	3.99	30.00	7.90	0	0	0	0	0
33346.94	3.82	30.00	7.53	0	0	0	0	0
34122.45	3.65	30.00	6.38	0	0	0	0	0
34897.96	3.50	30.00	4.74	0	0	0	0	0
35673.47	3.35	30.00	3.55	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
36448.98	0.00	30.00	0.00	0	0	0	0	0
37224.49	0.00	30.00	0.00	0	0	0	0	0
38000.00	0.00	30.00	0.00	0	0	0	0	0
0.00	0.00	40.00	0.00	0	0	0	0	0
775.51	0.00	40.00	0.00	0	0	0	0	0
1551.02	0.00	40.00	0.00	0	0	0	0	0
2326.53	0.00	40.00	0.00	0	0	0	0	0
3102.04	0.00	40.00	0.00	0	0	0	0	0
3877.55	0.00	40.00	0.00	0	0	0	0	0
4653.06	0.00	40.00	0.00	0	0	0	0	0
5428.57	135.90	40.00	154.66	0	0	0	0	0
6204.08	104.53	40.00	144.25	0	0	0	0	0
6979.59	82.12	40.00	142.55	0	0	0	0	0
7755.10	65.89	40.00	139.79	0	0	0	0	0
8530.61	53.89	40.00	119.71	0	0	0	0	0
9306.12	44.86	40.00	100.49	0	0	0	0	0
10081.63	37.92	40.00	85.80	1	0	0	0	1
10857.14	32.50	40.00	74.31	1	0	0	0	1
11632.65	28.19	40.00	65.13	1	0	0	0	1
12408.16	24.71	40.00	57.64	1	0	0	0	1
13183.67	21.86	40.00	51.44	1	0	0	0	1
13959.18	19.51	40.00	46.13	1	0	0	0	1
14734.69	17.54	40.00	41.55	1	0	0	0	1
15510.20	15.87	40.00	37.59	0	0	0	0	0
16285.71	14.44	40.00	34.14	0	0	0	0	0
17061.22	13.21	40.00	31.12	0	0	0	0	0
17836.73	12.14	40.00	28.45	0	0	0	0	0
18612.24	11.21	40.00	26.09	0	0	0	0	0
19387.76	10.39	40.00	24.01	0	0	0	0	0
20163.27	9.66	40.00	22.16	0	0	0	0	0
20938.78	9.01	40.00	20.50	0	0	0	0	0
21714.29	8.42	40.00	19.00	0	0	0	0	0
22489.80	7.90	40.00	17.61	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
23265.31	7.42	40.00	16.30	0	0	0	0	0
24040.82	6.99	40.00	15.11	0	0	0	0	0
24816.33	6.60	40.00	14.12	0	0	0	0	0
25591.84	6.24	40.00	13.21	0	0	0	0	0
26367.35	5.91	40.00	12.38	0	0	0	0	0
27142.86	5.60	40.00	11.63	0	0	0	0	0
27918.37	5.32	40.00	10.95	0	0	0	0	0
28693.88	5.06	40.00	10.32	0	0	0	0	0
29469.39	4.81	40.00	9.75	0	0	0	0	0
30244.90	4.59	40.00	9.23	0	0	0	0	0
31020.41	4.38	40.00	8.75	0	0	0	0	0
31795.92	4.18	40.00	8.31	0	0	0	0	0
32571.43	3.99	40.00	7.90	0	0	0	0	0
33346.94	3.82	40.00	7.53	0	0	0	0	0
34122.45	3.65	40.00	6.38	0	0	0	0	0
34897.96	3.50	40.00	4.74	0	0	0	0	0
35673.47	3.35	40.00	3.55	0	0	0	0	0
36448.98	0.00	40.00	0.00	0	0	0	0	0
37224.49	0.00	40.00	0.00	0	0	0	0	0
38000.00	0.00	40.00	0.00	0	0	0	0	0
0.00	0.00	50.00	0.00	0	0	0	0	0
775.51	0.00	50.00	0.00	0	0	0	0	0
1551.02	0.00	50.00	0.00	0	0	0	0	0
2326.53	0.00	50.00	0.00	0	0	0	0	0
3102.04	0.00	50.00	0.00	0	0	0	0	0
3877.55	0.00	50.00	0.00	0	0	0	0	0
4653.06	0.00	50.00	0.00	0	0	0	0	0
5428.57	135.90	50.00	154.66	0	0	0	0	0
6204.08	104.53	50.00	144.25	0	0	0	0	0
6979.59	82.12	50.00	142.55	0	0	0	0	0
7755.10	65.89	50.00	139.79	0	0	0	0	0
8530.61	53.89	50.00	119.71	0	0	0	0	0
9306.12	44.86	50.00	100.49	1	0	0	0	1

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
10081.63	37.92	50.00	85.80	1	0	0	0	1
10857.14	32.50	50.00	74.31	1	0	0	0	1
11632.65	28.19	50.00	65.13	1	0	0	0	1
12408.16	24.71	50.00	57.64	1	0	0	0	1
13183.67	21.86	50.00	51.44	1	0	0	0	1
13959.18	19.51	50.00	46.13	0	0	0	0	0
14734.69	17.54	50.00	41.55	0	0	0	0	0
15510.20	15.87	50.00	37.59	0	0	0	0	0
16285.71	14.44	50.00	34.14	0	0	0	0	0
17061.22	13.21	50.00	31.12	0	0	0	0	0
17836.73	12.14	50.00	28.45	0	0	0	0	0
18612.24	11.21	50.00	26.09	0	0	0	0	0
19387.76	10.39	50.00	24.01	0	0	0	0	0
20163.27	9.66	50.00	22.16	0	0	0	0	0
20938.78	9.01	50.00	20.50	0	0	0	0	0
21714.29	8.42	50.00	19.00	0	0	0	0	0
22489.80	7.90	50.00	17.61	0	0	0	0	0
23265.31	7.42	50.00	16.30	0	0	0	0	0
24040.82	6.99	50.00	15.11	0	0	0	0	0
24816.33	6.60	50.00	14.12	0	0	0	0	0
25591.84	6.24	50.00	13.21	0	0	0	0	0
26367.35	5.91	50.00	12.38	0	0	0	0	0
27142.86	5.60	50.00	11.63	0	0	0	0	0
27918.37	5.32	50.00	10.95	0	0	0	0	0
28693.88	5.06	50.00	10.32	0	0	0	0	0
29469.39	4.81	50.00	9.75	0	0	0	0	0
30244.90	4.59	50.00	9.23	0	0	0	0	0
31020.41	4.38	50.00	8.75	0	0	0	0	0
31795.92	4.18	50.00	8.31	0	0	0	0	0
32571.43	3.99	50.00	7.90	0	0	0	0	0
33346.94	3.82	50.00	7.53	0	0	0	0	0
34122.45	3.65	50.00	6.38	0	0	0	0	0
34897.96	3.50	50.00	4.74	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
35673.47	3.35	50.00	3.55	0	0	0	0	0
36448.98	0.00	50.00	0.00	0	0	0	0	0
37224.49	0.00	50.00	0.00	0	0	0	0	0
38000.00	0.00	50.00	0.00	0	0	0	0	0
0.00	0.00	81.08	0.00	0	0	0	0	0
775.51	0.00	81.08	0.00	0	0	0	0	0
1551.02	0.00	81.08	0.00	0	0	0	0	0
2326.53	0.00	81.08	0.00	0	0	0	0	0
3102.04	0.00	81.08	0.00	0	0	0	0	0
3877.55	0.00	81.08	0.00	0	0	0	0	0
4653.06	0.00	81.08	0.00	0	0	0	0	0
5428.57	135.90	81.08	154.66	0	0	0	0	0
6204.08	104.53	81.08	144.25	0	0	0	0	0
6979.59	82.12	81.08	142.55	0	0	0	0	0
7755.10	65.89	81.08	139.79	1	0	0	0	1
8530.61	53.89	81.08	119.71	1	0	0	0	1
9306.12	44.86	81.08	100.49	1	0	0	0	1
10081.63	37.92	81.08	85.80	1	0	0	0	1
10857.14	32.50	81.08	74.31	0	0	0	0	0
11632.65	28.19	81.08	65.13	0	0	0	0	0
12408.16	24.71	81.08	57.64	0	0	0	0	0
13183.67	21.86	81.08	51.44	0	0	0	0	0
13959.18	19.51	81.08	46.13	0	0	0	0	0
14734.69	17.54	81.08	41.55	0	0	0	0	0
15510.20	15.87	81.08	37.59	0	0	0	0	0
16285.71	14.44	81.08	34.14	0	0	0	0	0
17061.22	13.21	81.08	31.12	0	0	0	0	0
17836.73	12.14	81.08	28.45	0	0	0	0	0
18612.24	11.21	81.08	26.09	0	0	0	0	0
19387.76	10.39	81.08	24.01	0	0	0	0	0
20163.27	9.66	81.08	22.16	0	0	0	0	0
20938.78	9.01	81.08	20.50	0	0	0	0	0
21714.29	8.42	81.08	19.00	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
22489.80	7.90	81.08	17.61	0	0	0	0	0
23265.31	7.42	81.08	16.30	0	0	0	0	0
24040.82	6.99	81.08	15.11	0	0	0	0	0
24816.33	6.60	81.08	14.12	0	0	0	0	0
25591.84	6.24	81.08	13.21	0	0	0	0	0
26367.35	5.91	81.08	12.38	0	0	0	0	0
27142.86	5.60	81.08	11.63	0	0	0	0	0
27918.37	5.32	81.08	10.95	0	0	0	0	0
28693.88	5.06	81.08	10.32	0	0	0	0	0
29469.39	4.81	81.08	9.75	0	0	0	0	0
30244.90	4.59	81.08	9.23	0	0	0	0	0
31020.41	4.38	81.08	8.75	0	0	0	0	0
31795.92	4.18	81.08	8.31	0	0	0	0	0
32571.43	3.99	81.08	7.90	0	0	0	0	0
33346.94	3.82	81.08	7.53	0	0	0	0	0
34122.45	3.65	81.08	6.38	0	0	0	0	0
34897.96	3.50	81.08	4.74	0	0	0	0	0
35673.47	3.35	81.08	3.55	0	0	0	0	0
36448.98	0.00	81.08	0.00	0	0	0	0	0
37224.49	0.00	81.08	0.00	0	0	0	0	0
38000.00	0.00	81.08	0.00	0	0	0	0	0
0.00	0.00	100.00	0.00	0	0	0	0	0
775.51	0.00	100.00	0.00	0	0	0	0	0
1551.02	0.00	100.00	0.00	0	0	0	0	0
2326.53	0.00	100.00	0.00	0	0	0	0	0
3102.04	0.00	100.00	0.00	0	0	0	0	0
3877.55	0.00	100.00	0.00	0	0	0	0	0
4653.06	0.00	100.00	0.00	0	0	0	0	0
5428.57	135.90	100.00	154.66	0	0	0	0	0
6204.08	104.53	100.00	144.25	0	0	0	0	0
6979.59	82.12	100.00	142.55	1	0	0	0	1
7755.10	65.89	100.00	139.79	1	0	0	0	1
8530.61	53.89	100.00	119.71	1	0	0	0	1

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
9306.12	44.86	100.00	100.49	1	0	0	0	1
10081.63	37.92	100.00	85.80	0	0	0	0	0
10857.14	32.50	100.00	74.31	0	0	0	0	0
11632.65	28.19	100.00	65.13	0	0	0	0	0
12408.16	24.71	100.00	57.64	0	0	0	0	0
13183.67	21.86	100.00	51.44	0	0	0	0	0
13959.18	19.51	100.00	46.13	0	0	0	0	0
14734.69	17.54	100.00	41.55	0	0	0	0	0
15510.20	15.87	100.00	37.59	0	0	0	0	0
16285.71	14.44	100.00	34.14	0	0	0	0	0
17061.22	13.21	100.00	31.12	0	0	0	0	0
17836.73	12.14	100.00	28.45	0	0	0	0	0
18612.24	11.21	100.00	26.09	0	0	0	0	0
19387.76	10.39	100.00	24.01	0	0	0	0	0
20163.27	9.66	100.00	22.16	0	0	0	0	0
20938.78	9.01	100.00	20.50	0	0	0	0	0
21714.29	8.42	100.00	19.00	0	0	0	0	0
22489.80	7.90	100.00	17.61	0	0	0	0	0
23265.31	7.42	100.00	16.30	0	0	0	0	0
24040.82	6.99	100.00	15.11	0	0	0	0	0
24816.33	6.60	100.00	14.12	0	0	0	0	0
25591.84	6.24	100.00	13.21	0	0	0	0	0
26367.35	5.91	100.00	12.38	0	0	0	0	0
27142.86	5.60	100.00	11.63	0	0	0	0	0
27918.37	5.32	100.00	10.95	0	0	0	0	0
28693.88	5.06	100.00	10.32	0	0	0	0	0
29469.39	4.81	100.00	9.75	0	0	0	0	0
30244.90	4.59	100.00	9.23	0	0	0	0	0
31020.41	4.38	100.00	8.75	0	0	0	0	0
31795.92	4.18	100.00	8.31	0	0	0	0	0
32571.43	3.99	100.00	7.90	0	0	0	0	0
33346.94	3.82	100.00	7.53	0	0	0	0	0
34122.45	3.65	100.00	6.38	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
34897.96	3.50	100.00	4.74	0	0	0	0	0
35673.47	3.35	100.00	3.55	0	0	0	0	0
36448.98	0.00	100.00	0.00	0	0	0	0	0
37224.49	0.00	100.00	0.00	0	0	0	0	0
38000.00	0.00	100.00	0.00	0	0	0	0	0
0.00	0.00	200.00	0.00	0	0	0	0	0
775.51	0.00	200.00	0.00	0	0	0	0	0
1551.02	0.00	200.00	0.00	0	0	0	0	0
2326.53	0.00	200.00	0.00	0	0	0	0	0
3102.04	0.00	200.00	0.00	0	0	0	0	0
3877.55	0.00	200.00	0.00	0	0	0	0	0
4653.06	0.00	200.00	0.00	0	0	0	0	0
5428.57	135.90	200.00	154.66	0	0	0	0	0
6204.08	104.53	200.00	144.25	0	0	0	0	0
6979.59	82.12	200.00	142.55	0	0	0	0	0
7755.10	65.89	200.00	139.79	0	0	0	0	0
8530.61	53.89	200.00	119.71	0	0	0	0	0
9306.12	44.86	200.00	100.49	0	0	0	0	0
10081.63	37.92	200.00	85.80	0	0	0	0	0
10857.14	32.50	200.00	74.31	0	0	0	0	0
11632.65	28.19	200.00	65.13	0	0	0	0	0
12408.16	24.71	200.00	57.64	0	0	0	0	0
13183.67	21.86	200.00	51.44	0	0	0	0	0
13959.18	19.51	200.00	46.13	0	0	0	0	0
14734.69	17.54	200.00	41.55	0	0	0	0	0
15510.20	15.87	200.00	37.59	0	0	0	0	0
16285.71	14.44	200.00	34.14	0	0	0	0	0
17061.22	13.21	200.00	31.12	0	0	0	0	0
17836.73	12.14	200.00	28.45	0	0	0	0	0
18612.24	11.21	200.00	26.09	0	0	0	0	0
19387.76	10.39	200.00	24.01	0	0	0	0	0
20163.27	9.66	200.00	22.16	0	0	0	0	0
20938.78	9.01	200.00	20.50	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
21714.29	8.42	200.00	19.00	0	0	0	0	0
22489.80	7.90	200.00	17.61	0	0	0	0	0
23265.31	7.42	200.00	16.30	0	0	0	0	0
24040.82	6.99	200.00	15.11	0	0	0	0	0
24816.33	6.60	200.00	14.12	0	0	0	0	0
25591.84	6.24	200.00	13.21	0	0	0	0	0
26367.35	5.91	200.00	12.38	0	0	0	0	0
27142.86	5.60	200.00	11.63	0	0	0	0	0
27918.37	5.32	200.00	10.95	0	0	0	0	0
28693.88	5.06	200.00	10.32	0	0	0	0	0
29469.39	4.81	200.00	9.75	0	0	0	0	0
30244.90	4.59	200.00	9.23	0	0	0	0	0
31020.41	4.38	200.00	8.75	0	0	0	0	0
31795.92	4.18	200.00	8.31	0	0	0	0	0
32571.43	3.99	200.00	7.90	0	0	0	0	0
33346.94	3.82	200.00	7.53	0	0	0	0	0
34122.45	3.65	200.00	6.38	0	0	0	0	0
34897.96	3.50	200.00	4.74	0	0	0	0	0
35673.47	3.35	200.00	3.55	0	0	0	0	0
36448.98	0.00	200.00	0.00	0	0	0	0	0
37224.49	0.00	200.00	0.00	0	0	0	0	0
38000.00	0.00	200.00	0.00	0	0	0	0	0
0.00	0.00	250.00	0.00	0	0	0	0	0
775.51	0.00	250.00	0.00	0	0	0	0	0
1551.02	0.00	250.00	0.00	0	0	0	0	0
2326.53	0.00	250.00	0.00	0	0	0	0	0
3102.04	0.00	250.00	0.00	0	0	0	0	0
3877.55	0.00	250.00	0.00	0	0	0	0	0
4653.06	0.00	250.00	0.00	0	0	0	0	0
5428.57	135.90	250.00	154.66	0	0	0	0	0
6204.08	104.53	250.00	144.25	0	0	0	0	0
6979.59	82.12	250.00	142.55	0	0	0	0	0
7755.10	65.89	250.00	139.79	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
8530.61	53.89	250.00	119.71	0	0	0	0	0
9306.12	44.86	250.00	100.49	0	0	0	0	0
10081.63	37.92	250.00	85.80	0	0	0	0	0
10857.14	32.50	250.00	74.31	0	0	0	0	0
11632.65	28.19	250.00	65.13	0	0	0	0	0
12408.16	24.71	250.00	57.64	0	0	0	0	0
13183.67	21.86	250.00	51.44	0	0	0	0	0
13959.18	19.51	250.00	46.13	0	0	0	0	0
14734.69	17.54	250.00	41.55	0	0	0	0	0
15510.20	15.87	250.00	37.59	0	0	0	0	0
16285.71	14.44	250.00	34.14	0	0	0	0	0
17061.22	13.21	250.00	31.12	0	0	0	0	0
17836.73	12.14	250.00	28.45	0	0	0	0	0
18612.24	11.21	250.00	26.09	0	0	0	0	0
19387.76	10.39	250.00	24.01	0	0	0	0	0
20163.27	9.66	250.00	22.16	0	0	0	0	0
20938.78	9.01	250.00	20.50	0	0	0	0	0
21714.29	8.42	250.00	19.00	0	0	0	0	0
22489.80	7.90	250.00	17.61	0	0	0	0	0
23265.31	7.42	250.00	16.30	0	0	0	0	0
24040.82	6.99	250.00	15.11	0	0	0	0	0
24816.33	6.60	250.00	14.12	0	0	0	0	0
25591.84	6.24	250.00	13.21	0	0	0	0	0
26367.35	5.91	250.00	12.38	0	0	0	0	0
27142.86	5.60	250.00	11.63	0	0	0	0	0
27918.37	5.32	250.00	10.95	0	0	0	0	0
28693.88	5.06	250.00	10.32	0	0	0	0	0
29469.39	4.81	250.00	9.75	0	0	0	0	0
30244.90	4.59	250.00	9.23	0	0	0	0	0
31020.41	4.38	250.00	8.75	0	0	0	0	0
31795.92	4.18	250.00	8.31	0	0	0	0	0
32571.43	3.99	250.00	7.90	0	0	0	0	0
33346.94	3.82	250.00	7.53	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
34122.45	3.65	250.00	6.38	0	0	0	0	0
34897.96	3.50	250.00	4.74	0	0	0	0	0
35673.47	3.35	250.00	3.55	0	0	0	0	0
36448.98	0.00	250.00	0.00	0	0	0	0	0
37224.49	0.00	250.00	0.00	0	0	0	0	0
38000.00	0.00	250.00	0.00	0	0	0	0	0
0.00	0.00	300.00	0.00	0	0	0	0	0
775.51	0.00	300.00	0.00	0	0	0	0	0
1551.02	0.00	300.00	0.00	0	0	0	0	0
2326.53	0.00	300.00	0.00	0	0	0	0	0
3102.04	0.00	300.00	0.00	0	0	0	0	0
3877.55	0.00	300.00	0.00	0	0	0	0	0
4653.06	0.00	300.00	0.00	0	0	0	0	0
5428.57	135.90	300.00	154.66	0	0	0	0	0
6204.08	104.53	300.00	144.25	0	0	0	0	0
6979.59	82.12	300.00	142.55	0	0	0	0	0
7755.10	65.89	300.00	139.79	0	0	0	0	0
8530.61	53.89	300.00	119.71	0	0	0	0	0
9306.12	44.86	300.00	100.49	0	0	0	0	0
10081.63	37.92	300.00	85.80	0	0	0	0	0
10857.14	32.50	300.00	74.31	0	0	0	0	0
11632.65	28.19	300.00	65.13	0	0	0	0	0
12408.16	24.71	300.00	57.64	0	0	0	0	0
13183.67	21.86	300.00	51.44	0	0	0	0	0
13959.18	19.51	300.00	46.13	0	0	0	0	0
14734.69	17.54	300.00	41.55	0	0	0	0	0
15510.20	15.87	300.00	37.59	0	0	0	0	0
16285.71	14.44	300.00	34.14	0	0	0	0	0
17061.22	13.21	300.00	31.12	0	0	0	0	0
17836.73	12.14	300.00	28.45	0	0	0	0	0
18612.24	11.21	300.00	26.09	0	0	0	0	0
19387.76	10.39	300.00	24.01	0	0	0	0	0
20163.27	9.66	300.00	22.16	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
20938.78	9.01	300.00	20.50	0	0	0	0	0
21714.29	8.42	300.00	19.00	0	0	0	0	0
22489.80	7.90	300.00	17.61	0	0	0	0	0
23265.31	7.42	300.00	16.30	0	0	0	0	0
24040.82	6.99	300.00	15.11	0	0	0	0	0
24816.33	6.60	300.00	14.12	0	0	0	0	0
25591.84	6.24	300.00	13.21	0	0	0	0	0
26367.35	5.91	300.00	12.38	0	0	0	0	0
27142.86	5.60	300.00	11.63	0	0	0	0	0
27918.37	5.32	300.00	10.95	0	0	0	0	0
28693.88	5.06	300.00	10.32	0	0	0	0	0
29469.39	4.81	300.00	9.75	0	0	0	0	0
30244.90	4.59	300.00	9.23	0	0	0	0	0
31020.41	4.38	300.00	8.75	0	0	0	0	0
31795.92	4.18	300.00	8.31	0	0	0	0	0
32571.43	3.99	300.00	7.90	0	0	0	0	0
33346.94	3.82	300.00	7.53	0	0	0	0	0
34122.45	3.65	300.00	6.38	0	0	0	0	0
34897.96	3.50	300.00	4.74	0	0	0	0	0
35673.47	3.35	300.00	3.55	0	0	0	0	0
36448.98	0.00	300.00	0.00	0	0	0	0	0
37224.49	0.00	300.00	0.00	0	0	0	0	0
38000.00	0.00	300.00	0.00	0	0	0	0	0
0.00	0.00	500.00	0.00	0	0	0	0	0
775.51	0.00	500.00	0.00	0	0	0	0	0
1551.02	0.00	500.00	0.00	0	0	0	0	0
2326.53	0.00	500.00	0.00	0	0	0	0	0
3102.04	0.00	500.00	0.00	0	0	0	0	0
3877.55	0.00	500.00	0.00	0	0	0	0	0
4653.06	0.00	500.00	0.00	0	0	0	0	0
5428.57	135.90	500.00	154.66	0	0	0	0	0
6204.08	104.53	500.00	144.25	0	0	0	0	0
6979.59	82.12	500.00	142.55	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
7755.10	65.89	500.00	139.79	0	0	0	0	0
8530.61	53.89	500.00	119.71	0	0	0	0	0
9306.12	44.86	500.00	100.49	0	0	0	0	0
10081.63	37.92	500.00	85.80	0	0	0	0	0
10857.14	32.50	500.00	74.31	0	0	0	0	0
11632.65	28.19	500.00	65.13	0	0	0	0	0
12408.16	24.71	500.00	57.64	0	0	0	0	0
13183.67	21.86	500.00	51.44	0	0	0	0	0
13959.18	19.51	500.00	46.13	0	0	0	0	0
14734.69	17.54	500.00	41.55	0	0	0	0	0
15510.20	15.87	500.00	37.59	0	0	0	0	0
16285.71	14.44	500.00	34.14	0	0	0	0	0
17061.22	13.21	500.00	31.12	0	0	0	0	0
17836.73	12.14	500.00	28.45	0	0	0	0	0
18612.24	11.21	500.00	26.09	0	0	0	0	0
19387.76	10.39	500.00	24.01	0	0	0	0	0
20163.27	9.66	500.00	22.16	0	0	0	0	0
20938.78	9.01	500.00	20.50	0	0	0	0	0
21714.29	8.42	500.00	19.00	0	0	0	0	0
22489.80	7.90	500.00	17.61	0	0	0	0	0
23265.31	7.42	500.00	16.30	0	0	0	0	0
24040.82	6.99	500.00	15.11	0	0	0	0	0
24816.33	6.60	500.00	14.12	0	0	0	0	0
25591.84	6.24	500.00	13.21	0	0	0	0	0
26367.35	5.91	500.00	12.38	0	0	0	0	0
27142.86	5.60	500.00	11.63	0	0	0	0	0
27918.37	5.32	500.00	10.95	0	0	0	0	0
28693.88	5.06	500.00	10.32	0	0	0	0	0
29469.39	4.81	500.00	9.75	0	0	0	0	0
30244.90	4.59	500.00	9.23	0	0	0	0	0
31020.41	4.38	500.00	8.75	0	0	0	0	0
31795.92	4.18	500.00	8.31	0	0	0	0	0
32571.43	3.99	500.00	7.90	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
33346.94	3.82	500.00	7.53	0	0	0	0	0
34122.45	3.65	500.00	6.38	0	0	0	0	0
34897.96	3.50	500.00	4.74	0	0	0	0	0
35673.47	3.35	500.00	3.55	0	0	0	0	0
36448.98	0.00	500.00	0.00	0	0	0	0	0
37224.49	0.00	500.00	0.00	0	0	0	0	0
38000.00	0.00	500.00	0.00	0	0	0	0	0

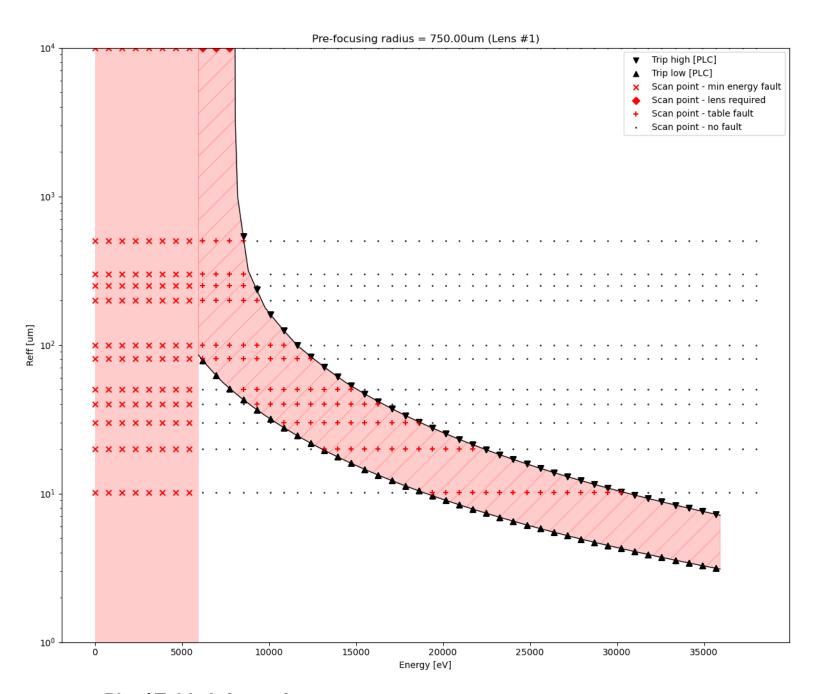
# Scan 2: 750.000µm pre-focusing lens

Data generated: 2024-08-20 22:00:29

bluesky scan sweep\_energy\_plan with 750.000µm pre-focusing lens..

### **Scan Information**

- 1. Choose a few transfocator lens sets to span the effective radius range.
- 2. For each of those lens sets, scan energy at regular intervals.
- 3. Each marker on the plot represents one of those scan points.
- 4. Record if PLC reported a fault and why.



### **Plot / Table Information**

**No fault** indicates that a data point was checked but no fault reported by PLC.

**Trip Low** and **Trip High** are values from the spreadsheet table, interpolated by the PLC and reported to EPICS.

The lines drawn around these regions and the highlighted regions are directly from the spreadsheet. **Min Energy Fault** indicates that it does not meet minimum energy requirement for a given XRT lens. **Table Fault** indicates a fault from the spreadsheet table disallowed region.

Lens Required Fault markers are clipped at the bottom of the plot.

Scan 2: 750.000µm pre-focusing lens: Scan Data Table

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
0.00	0.00	10000.00	0.00	1	0	1	0	0
775.51	0.00	10000.00	0.00	1	0	1	0	0
1551.02	0.00	10000.00	0.00	1	0	1	0	0
2326.53	0.00	10000.00	0.00	1	0	1	0	0
3102.04	0.00	10000.00	0.00	1	0	1	0	0
3877.55	0.00	10000.00	0.00	1	0	1	0	0
4653.06	0.00	10000.00	0.00	1	0	1	0	0
5428.57	0.00	10000.00	0.00	1	0	1	0	0
6204.08	78.79	10000.00	10000.00	1	0	0	1	1
6979.59	62.19	10000.00	10000.00	1	0	0	1	1
7755.10	50.90	10000.00	10000.00	1	0	0	1	1
8530.61	42.90	10000.00	539.26	0	0	0	0	0
9306.12	36.68	10000.00	235.21	0	0	0	0	0
10081.63	31.76	10000.00	161.03	0	0	0	0	0
10857.14	27.78	10000.00	125.36	0	0	0	0	0
11632.65	24.52	10000.00	99.43	0	0	0	0	0
12408.16	21.81	10000.00	83.63	0	0	0	0	0
13183.67	19.54	10000.00	71.09	0	0	0	0	0
13959.18	17.61	10000.00	60.99	0	0	0	0	0
14734.69	15.96	10000.00	53.02	0	0	0	0	0
15510.20	14.54	10000.00	46.82	0	0	0	0	0
16285.71	13.30	10000.00	41.65	0	0	0	0	0
17061.22	12.22	10000.00	37.29	0	0	0	0	0
17836.73	11.27	10000.00	33.57	0	0	0	0	0
18612.24	10.42	10000.00	30.39	0	0	0	0	0
19387.76	9.67	10000.00	27.64	0	0	0	0	0
20163.27	9.00	10000.00	25.25	0	0	0	0	0
20938.78	8.40	10000.00	23.16	0	0	0	0	0
21714.29	7.85	10000.00	21.32	0	0	0	0	0
22489.80	7.36	10000.00	19.70	0	0	0	0	0
23265.31	6.92	10000.00	18.25	0	0	0	0	0
24040.82	6.51	10000.00	16.97	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
24816.33	6.14	10000.00	15.81	0	0	0	0	0
25591.84	5.80	10000.00	14.78	0	0	0	0	0
26367.35	5.49	10000.00	13.84	0	0	0	0	0
27142.86	5.21	10000.00	13.00	0	0	0	0	0
27918.37	4.94	10000.00	12.23	0	0	0	0	0
28693.88	4.70	10000.00	11.53	0	0	0	0	0
29469.39	4.47	10000.00	10.89	0	0	0	0	0
30244.90	4.26	10000.00	10.30	0	0	0	0	0
31020.41	4.07	10000.00	9.76	0	0	0	0	0
31795.92	3.89	10000.00	9.26	0	0	0	0	0
32571.43	3.72	10000.00	8.80	0	0	0	0	0
33346.94	3.56	10000.00	8.37	0	0	0	0	0
34122.45	3.41	10000.00	7.97	0	0	0	0	0
34897.96	3.27	10000.00	7.59	0	0	0	0	0
35673.47	3.14	10000.00	7.25	0	0	0	0	0
36448.98	0.00	10000.00	0.00	0	0	0	0	0
37224.49	0.00	10000.00	0.00	0	0	0	0	0
38000.00	0.00	10000.00	0.00	0	0	0	0	0
0.00	0.00	10.17	0.00	1	0	1	0	0
775.51	0.00	10.17	0.00	1	0	1	0	0
1551.02	0.00	10.17	0.00	1	0	1	0	0
2326.53	0.00	10.17	0.00	1	0	1	0	0
3102.04	0.00	10.17	0.00	1	0	1	0	0
3877.55	0.00	10.17	0.00	1	0	1	0	0
4653.06	0.00	10.17	0.00	1	0	1	0	0
5428.57	0.00	10.17	0.00	1	0	1	0	0
6204.08	78.79	10.17	10000.00	0	0	0	0	0
6979.59	62.19	10.17	10000.00	0	0	0	0	0
7755.10	50.90	10.17	10000.00	0	0	0	0	0
8530.61	42.90	10.17	539.26	0	0	0	0	0
9306.12	36.68	10.17	235.21	0	0	0	0	0
10081.63	31.76	10.17	161.03	0	0	0	0	0
10857.14	27.78	10.17	125.36	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
11632.65	24.52	10.17	99.43	0	0	0	0	0
12408.16	21.81	10.17	83.63	0	0	0	0	0
13183.67	19.54	10.17	71.09	0	0	0	0	0
13959.18	17.61	10.17	60.99	0	0	0	0	0
14734.69	15.96	10.17	53.02	0	0	0	0	0
15510.20	14.54	10.17	46.82	0	0	0	0	0
16285.71	13.30	10.17	41.65	0	0	0	0	0
17061.22	12.22	10.17	37.29	0	0	0	0	0
17836.73	11.27	10.17	33.57	0	0	0	0	0
18612.24	10.42	10.17	30.39	0	0	0	0	0
19387.76	9.67	10.17	27.64	1	0	0	0	1
20163.27	9.00	10.17	25.25	1	0	0	0	1
20938.78	8.40	10.17	23.16	1	0	0	0	1
21714.29	7.85	10.17	21.32	1	0	0	0	1
22489.80	7.36	10.17	19.70	1	0	0	0	1
23265.31	6.92	10.17	18.25	1	0	0	0	1
24040.82	6.51	10.17	16.97	1	0	0	0	1
24816.33	6.14	10.17	15.81	1	0	0	0	1
25591.84	5.80	10.17	14.78	1	0	0	0	1
26367.35	5.49	10.17	13.84	1	0	0	0	1
27142.86	5.21	10.17	13.00	1	0	0	0	1
27918.37	4.94	10.17	12.23	1	0	0	0	1
28693.88	4.70	10.17	11.53	1	0	0	0	1
29469.39	4.47	10.17	10.89	1	0	0	0	1
30244.90	4.26	10.17	10.30	1	0	0	0	1
31020.41	4.07	10.17	9.76	0	0	0	0	0
31795.92	3.89	10.17	9.26	0	0	0	0	0
32571.43	3.72	10.17	8.80	0	0	0	0	0
33346.94	3.56	10.17	8.37	0	0	0	0	0
34122.45	3.41	10.17	7.97	0	0	0	0	0
34897.96	3.27	10.17	7.59	0	0	0	0	0
35673.47	3.14	10.17	7.25	0	0	0	0	0
36448.98	0.00	10.17	0.00	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
37224.49	0.00	10.17	0.00	0	0	0	0	0
38000.00	0.00	10.17	0.00	0	0	0	0	0
0.00	0.00	20.00	0.00	1	0	1	0	0
775.51	0.00	20.00	0.00	1	0	1	0	0
1551.02	0.00	20.00	0.00	1	0	1	0	0
2326.53	0.00	20.00	0.00	1	0	1	0	0
3102.04	0.00	20.00	0.00	1	0	1	0	0
3877.55	0.00	20.00	0.00	1	0	1	0	0
4653.06	0.00	20.00	0.00	1	0	1	0	0
5428.57	0.00	20.00	0.00	1	0	1	0	0
6204.08	78.79	20.00	10000.00	0	0	0	0	0
6979.59	62.19	20.00	10000.00	0	0	0	0	0
7755.10	50.90	20.00	10000.00	0	0	0	0	0
8530.61	42.90	20.00	539.26	0	0	0	0	0
9306.12	36.68	20.00	235.21	0	0	0	0	0
10081.63	31.76	20.00	161.03	0	0	0	0	0
10857.14	27.78	20.00	125.36	0	0	0	0	0
11632.65	24.52	20.00	99.43	0	0	0	0	0
12408.16	21.81	20.00	83.63	0	0	0	0	0
13183.67	19.54	20.00	71.09	1	0	0	0	1
13959.18	17.61	20.00	60.99	1	0	0	0	1
14734.69	15.96	20.00	53.02	1	0	0	0	1
15510.20	14.54	20.00	46.82	1	0	0	0	1
16285.71	13.30	20.00	41.65	1	0	0	0	1
17061.22	12.22	20.00	37.29	1	0	0	0	1
17836.73	11.27	20.00	33.57	1	0	0	0	1
18612.24	10.42	20.00	30.39	1	0	0	0	1
19387.76	9.67	20.00	27.64	1	0	0	0	1
20163.27	9.00	20.00	25.25	1	0	0	0	1
20938.78	8.40	20.00	23.16	1	0	0	0	1
21714.29	7.85	20.00	21.32	1	0	0	0	1
22489.80	7.36	20.00	19.70	0	0	0	0	0
23265.31	6.92	20.00	18.25	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
24040.82	6.51	20.00	16.97	0	0	0	0	0
24816.33	6.14	20.00	15.81	0	0	0	0	0
25591.84	5.80	20.00	14.78	0	0	0	0	0
26367.35	5.49	20.00	13.84	0	0	0	0	0
27142.86	5.21	20.00	13.00	0	0	0	0	0
27918.37	4.94	20.00	12.23	0	0	0	0	0
28693.88	4.70	20.00	11.53	0	0	0	0	0
29469.39	4.47	20.00	10.89	0	0	0	0	0
30244.90	4.26	20.00	10.30	0	0	0	0	0
31020.41	4.07	20.00	9.76	0	0	0	0	0
31795.92	3.89	20.00	9.26	0	0	0	0	0
32571.43	3.72	20.00	8.80	0	0	0	0	0
33346.94	3.56	20.00	8.37	0	0	0	0	0
34122.45	3.41	20.00	7.97	0	0	0	0	0
34897.96	3.27	20.00	7.59	0	0	0	0	0
35673.47	3.14	20.00	7.25	0	0	0	0	0
36448.98	0.00	20.00	0.00	0	0	0	0	0
37224.49	0.00	20.00	0.00	0	0	0	0	0
38000.00	0.00	20.00	0.00	0	0	0	0	0
0.00	0.00	30.00	0.00	1	0	1	0	0
775.51	0.00	30.00	0.00	1	0	1	0	0
1551.02	0.00	30.00	0.00	1	0	1	0	0
2326.53	0.00	30.00	0.00	1	0	1	0	0
3102.04	0.00	30.00	0.00	1	0	1	0	0
3877.55	0.00	30.00	0.00	1	0	1	0	0
4653.06	0.00	30.00	0.00	1	0	1	0	0
5428.57	0.00	30.00	0.00	1	0	1	0	0
6204.08	78.79	30.00	10000.00	0	0	0	0	0
6979.59	62.19	30.00	10000.00	0	0	0	0	0
7755.10	50.90	30.00	10000.00	0	0	0	0	0
8530.61	42.90	30.00	539.26	0	0	0	0	0
9306.12	36.68	30.00	235.21	0	0	0	0	0
10081.63	31.76	30.00	161.03	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
10857.14	27.78	30.00	125.36	1	0	0	0	1
11632.65	24.52	30.00	99.43	1	0	0	0	1
12408.16	21.81	30.00	83.63	1	0	0	0	1
13183.67	19.54	30.00	71.09	1	0	0	0	1
13959.18	17.61	30.00	60.99	1	0	0	0	1
14734.69	15.96	30.00	53.02	1	0	0	0	1
15510.20	14.54	30.00	46.82	1	0	0	0	1
16285.71	13.30	30.00	41.65	1	0	0	0	1
17061.22	12.22	30.00	37.29	1	0	0	0	1
17836.73	11.27	30.00	33.57	1	0	0	0	1
18612.24	10.42	30.00	30.39	1	0	0	0	1
19387.76	9.67	30.00	27.64	0	0	0	0	0
20163.27	9.00	30.00	25.25	0	0	0	0	0
20938.78	8.40	30.00	23.16	0	0	0	0	0
21714.29	7.85	30.00	21.32	0	0	0	0	0
22489.80	7.36	30.00	19.70	0	0	0	0	0
23265.31	6.92	30.00	18.25	0	0	0	0	0
24040.82	6.51	30.00	16.97	0	0	0	0	0
24816.33	6.14	30.00	15.81	0	0	0	0	0
25591.84	5.80	30.00	14.78	0	0	0	0	0
26367.35	5.49	30.00	13.84	0	0	0	0	0
27142.86	5.21	30.00	13.00	0	0	0	0	0
27918.37	4.94	30.00	12.23	0	0	0	0	0
28693.88	4.70	30.00	11.53	0	0	0	0	0
29469.39	4.47	30.00	10.89	0	0	0	0	0
30244.90	4.26	30.00	10.30	0	0	0	0	0
31020.41	4.07	30.00	9.76	0	0	0	0	0
31795.92	3.89	30.00	9.26	0	0	0	0	0
32571.43	3.72	30.00	8.80	0	0	0	0	0
33346.94	3.56	30.00	8.37	0	0	0	0	0
34122.45	3.41	30.00	7.97	0	0	0	0	0
34897.96	3.27	30.00	7.59	0	0	0	0	0
35673.47	3.14	30.00	7.25	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
36448.98	0.00	30.00	0.00	0	0	0	0	0
37224.49	0.00	30.00	0.00	0	0	0	0	0
38000.00	0.00	30.00	0.00	0	0	0	0	0
0.00	0.00	40.00	0.00	1	0	1	0	0
775.51	0.00	40.00	0.00	1	0	1	0	0
1551.02	0.00	40.00	0.00	1	0	1	0	0
2326.53	0.00	40.00	0.00	1	0	1	0	0
3102.04	0.00	40.00	0.00	1	0	1	0	0
3877.55	0.00	40.00	0.00	1	0	1	0	0
4653.06	0.00	40.00	0.00	1	0	1	0	0
5428.57	0.00	40.00	0.00	1	0	1	0	0
6204.08	78.79	40.00	10000.00	0	0	0	0	0
6979.59	62.19	40.00	10000.00	0	0	0	0	0
7755.10	50.90	40.00	10000.00	0	0	0	0	0
8530.61	42.90	40.00	539.26	0	0	0	0	0
9306.12	36.68	40.00	235.21	1	0	0	0	1
10081.63	31.76	40.00	161.03	1	0	0	0	1
10857.14	27.78	40.00	125.36	1	0	0	0	1
11632.65	24.52	40.00	99.43	1	0	0	0	1
12408.16	21.81	40.00	83.63	1	0	0	0	1
13183.67	19.54	40.00	71.09	1	0	0	0	1
13959.18	17.61	40.00	60.99	1	0	0	0	1
14734.69	15.96	40.00	53.02	1	0	0	0	1
15510.20	14.54	40.00	46.82	1	0	0	0	1
16285.71	13.30	40.00	41.65	1	0	0	0	1
17061.22	12.22	40.00	37.29	0	0	0	0	0
17836.73	11.27	40.00	33.57	0	0	0	0	0
18612.24	10.42	40.00	30.39	0	0	0	0	0
19387.76	9.67	40.00	27.64	0	0	0	0	0
20163.27	9.00	40.00	25.25	0	0	0	0	0
20938.78	8.40	40.00	23.16	0	0	0	0	0
21714.29	7.85	40.00	21.32	0	0	0	0	0
22489.80	7.36	40.00	19.70	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
23265.31	6.92	40.00	18.25	0	0	0	0	0
24040.82	6.51	40.00	16.97	0	0	0	0	0
24816.33	6.14	40.00	15.81	0	0	0	0	0
25591.84	5.80	40.00	14.78	0	0	0	0	0
26367.35	5.49	40.00	13.84	0	0	0	0	0
27142.86	5.21	40.00	13.00	0	0	0	0	0
27918.37	4.94	40.00	12.23	0	0	0	0	0
28693.88	4.70	40.00	11.53	0	0	0	0	0
29469.39	4.47	40.00	10.89	0	0	0	0	0
30244.90	4.26	40.00	10.30	0	0	0	0	0
31020.41	4.07	40.00	9.76	0	0	0	0	0
31795.92	3.89	40.00	9.26	0	0	0	0	0
32571.43	3.72	40.00	8.80	0	0	0	0	0
33346.94	3.56	40.00	8.37	0	0	0	0	0
34122.45	3.41	40.00	7.97	0	0	0	0	0
34897.96	3.27	40.00	7.59	0	0	0	0	0
35673.47	3.14	40.00	7.25	0	0	0	0	0
36448.98	0.00	40.00	0.00	0	0	0	0	0
37224.49	0.00	40.00	0.00	0	0	0	0	0
38000.00	0.00	40.00	0.00	0	0	0	0	0
0.00	0.00	50.00	0.00	1	0	1	0	0
775.51	0.00	50.00	0.00	1	0	1	0	0
1551.02	0.00	50.00	0.00	1	0	1	0	0
2326.53	0.00	50.00	0.00	1	0	1	0	0
3102.04	0.00	50.00	0.00	1	0	1	0	0
3877.55	0.00	50.00	0.00	1	0	1	0	0
4653.06	0.00	50.00	0.00	1	0	1	0	0
5428.57	0.00	50.00	0.00	1	0	1	0	0
6204.08	78.79	50.00	10000.00	0	0	0	0	0
6979.59	62.19	50.00	10000.00	0	0	0	0	0
7755.10	50.90	50.00	10000.00	0	0	0	0	0
8530.61	42.90	50.00	539.26	1	0	0	0	1
9306.12	36.68	50.00	235.21	1	0	0	0	1

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
10081.63	31.76	50.00	161.03	1	0	0	0	1
10857.14	27.78	50.00	125.36	1	0	0	0	1
11632.65	24.52	50.00	99.43	1	0	0	0	1
12408.16	21.81	50.00	83.63	1	0	0	0	1
13183.67	19.54	50.00	71.09	1	0	0	0	1
13959.18	17.61	50.00	60.99	1	0	0	0	1
14734.69	15.96	50.00	53.02	1	0	0	0	1
15510.20	14.54	50.00	46.82	0	0	0	0	0
16285.71	13.30	50.00	41.65	0	0	0	0	0
17061.22	12.22	50.00	37.29	0	0	0	0	0
17836.73	11.27	50.00	33.57	0	0	0	0	0
18612.24	10.42	50.00	30.39	0	0	0	0	0
19387.76	9.67	50.00	27.64	0	0	0	0	0
20163.27	9.00	50.00	25.25	0	0	0	0	0
20938.78	8.40	50.00	23.16	0	0	0	0	0
21714.29	7.85	50.00	21.32	0	0	0	0	0
22489.80	7.36	50.00	19.70	0	0	0	0	0
23265.31	6.92	50.00	18.25	0	0	0	0	0
24040.82	6.51	50.00	16.97	0	0	0	0	0
24816.33	6.14	50.00	15.81	0	0	0	0	0
25591.84	5.80	50.00	14.78	0	0	0	0	0
26367.35	5.49	50.00	13.84	0	0	0	0	0
27142.86	5.21	50.00	13.00	0	0	0	0	0
27918.37	4.94	50.00	12.23	0	0	0	0	0
28693.88	4.70	50.00	11.53	0	0	0	0	0
29469.39	4.47	50.00	10.89	0	0	0	0	0
30244.90	4.26	50.00	10.30	0	0	0	0	0
31020.41	4.07	50.00	9.76	0	0	0	0	0
31795.92	3.89	50.00	9.26	0	0	0	0	0
32571.43	3.72	50.00	8.80	0	0	0	0	0
33346.94	3.56	50.00	8.37	0	0	0	0	0
34122.45	3.41	50.00	7.97	0	0	0	0	0
34897.96	3.27	50.00	7.59	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
35673.47	3.14	50.00	7.25	0	0	0	0	0
36448.98	0.00	50.00	0.00	0	0	0	0	0
37224.49	0.00	50.00	0.00	0	0	0	0	0
38000.00	0.00	50.00	0.00	0	0	0	0	0
0.00	0.00	81.08	0.00	1	0	1	0	0
775.51	0.00	81.08	0.00	1	0	1	0	0
1551.02	0.00	81.08	0.00	1	0	1	0	0
2326.53	0.00	81.08	0.00	1	0	1	0	0
3102.04	0.00	81.08	0.00	1	0	1	0	0
3877.55	0.00	81.08	0.00	1	0	1	0	0
4653.06	0.00	81.08	0.00	1	0	1	0	0
5428.57	0.00	81.08	0.00	1	0	1	0	0
6204.08	78.79	81.08	10000.00	1	0	0	0	1
6979.59	62.19	81.08	10000.00	1	0	0	0	1
7755.10	50.90	81.08	10000.00	1	0	0	0	1
8530.61	42.90	81.08	539.26	1	0	0	0	1
9306.12	36.68	81.08	235.21	1	0	0	0	1
10081.63	31.76	81.08	161.03	1	0	0	0	1
10857.14	27.78	81.08	125.36	1	0	0	0	1
11632.65	24.52	81.08	99.43	1	0	0	0	1
12408.16	21.81	81.08	83.63	1	0	0	0	1
13183.67	19.54	81.08	71.09	0	0	0	0	0
13959.18	17.61	81.08	60.99	0	0	0	0	0
14734.69	15.96	81.08	53.02	0	0	0	0	0
15510.20	14.54	81.08	46.82	0	0	0	0	0
16285.71	13.30	81.08	41.65	0	0	0	0	0
17061.22	12.22	81.08	37.29	0	0	0	0	0
17836.73	11.27	81.08	33.57	0	0	0	0	0
18612.24	10.42	81.08	30.39	0	0	0	0	0
19387.76	9.67	81.08	27.64	0	0	0	0	0
20163.27	9.00	81.08	25.25	0	0	0	0	0
20938.78	8.40	81.08	23.16	0	0	0	0	0
21714.29	7.85	81.08	21.32	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
22489.80	7.36	81.08	19.70	0	0	0	0	0
23265.31	6.92	81.08	18.25	0	0	0	0	0
24040.82	6.51	81.08	16.97	0	0	0	0	0
24816.33	6.14	81.08	15.81	0	0	0	0	0
25591.84	5.80	81.08	14.78	0	0	0	0	0
26367.35	5.49	81.08	13.84	0	0	0	0	0
27142.86	5.21	81.08	13.00	0	0	0	0	0
27918.37	4.94	81.08	12.23	0	0	0	0	0
28693.88	4.70	81.08	11.53	0	0	0	0	0
29469.39	4.47	81.08	10.89	0	0	0	0	0
30244.90	4.26	81.08	10.30	0	0	0	0	0
31020.41	4.07	81.08	9.76	0	0	0	0	0
31795.92	3.89	81.08	9.26	0	0	0	0	0
32571.43	3.72	81.08	8.80	0	0	0	0	0
33346.94	3.56	81.08	8.37	0	0	0	0	0
34122.45	3.41	81.08	7.97	0	0	0	0	0
34897.96	3.27	81.08	7.59	0	0	0	0	0
35673.47	3.14	81.08	7.25	0	0	0	0	0
36448.98	0.00	81.08	0.00	0	0	0	0	0
37224.49	0.00	81.08	0.00	0	0	0	0	0
38000.00	0.00	81.08	0.00	0	0	0	0	0
0.00	0.00	100.00	0.00	1	0	1	0	0
775.51	0.00	100.00	0.00	1	0	1	0	0
1551.02	0.00	100.00	0.00	1	0	1	0	0
2326.53	0.00	100.00	0.00	1	0	1	0	0
3102.04	0.00	100.00	0.00	1	0	1	0	0
3877.55	0.00	100.00	0.00	1	0	1	0	0
4653.06	0.00	100.00	0.00	1	0	1	0	0
5428.57	0.00	100.00	0.00	1	0	1	0	0
6204.08	78.79	100.00	10000.00	1	0	0	0	1
6979.59	62.19	100.00	10000.00	1	0	0	0	1
7755.10	50.90	100.00	10000.00	1	0	0	0	1
8530.61	42.90	100.00	539.26	1	0	0	0	1

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
9306.12	36.68	100.00	235.21	1	0	0	0	1
10081.63	31.76	100.00	161.03	1	0	0	0	1
10857.14	27.78	100.00	125.36	1	0	0	0	1
11632.65	24.52	100.00	99.43	0	0	0	0	0
12408.16	21.81	100.00	83.63	0	0	0	0	0
13183.67	19.54	100.00	71.09	0	0	0	0	0
13959.18	17.61	100.00	60.99	0	0	0	0	0
14734.69	15.96	100.00	53.02	0	0	0	0	0
15510.20	14.54	100.00	46.82	0	0	0	0	0
16285.71	13.30	100.00	41.65	0	0	0	0	0
17061.22	12.22	100.00	37.29	0	0	0	0	0
17836.73	11.27	100.00	33.57	0	0	0	0	0
18612.24	10.42	100.00	30.39	0	0	0	0	0
19387.76	9.67	100.00	27.64	0	0	0	0	0
20163.27	9.00	100.00	25.25	0	0	0	0	0
20938.78	8.40	100.00	23.16	0	0	0	0	0
21714.29	7.85	100.00	21.32	0	0	0	0	0
22489.80	7.36	100.00	19.70	0	0	0	0	0
23265.31	6.92	100.00	18.25	0	0	0	0	0
24040.82	6.51	100.00	16.97	0	0	0	0	0
24816.33	6.14	100.00	15.81	0	0	0	0	0
25591.84	5.80	100.00	14.78	0	0	0	0	0
26367.35	5.49	100.00	13.84	0	0	0	0	0
27142.86	5.21	100.00	13.00	0	0	0	0	0
27918.37	4.94	100.00	12.23	0	0	0	0	0
28693.88	4.70	100.00	11.53	0	0	0	0	0
29469.39	4.47	100.00	10.89	0	0	0	0	0
30244.90	4.26	100.00	10.30	0	0	0	0	0
31020.41	4.07	100.00	9.76	0	0	0	0	0
31795.92	3.89	100.00	9.26	0	0	0	0	0
32571.43	3.72	100.00	8.80	0	0	0	0	0
33346.94	3.56	100.00	8.37	0	0	0	0	0
34122.45	3.41	100.00	7.97	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
34897.96	3.27	100.00	7.59	0	0	0	0	0
35673.47	3.14	100.00	7.25	0	0	0	0	0
36448.98	0.00	100.00	0.00	0	0	0	0	0
37224.49	0.00	100.00	0.00	0	0	0	0	0
38000.00	0.00	100.00	0.00	0	0	0	0	0
0.00	0.00	200.00	0.00	1	0	1	0	0
775.51	0.00	200.00	0.00	1	0	1	0	0
1551.02	0.00	200.00	0.00	1	0	1	0	0
2326.53	0.00	200.00	0.00	1	0	1	0	0
3102.04	0.00	200.00	0.00	1	0	1	0	0
3877.55	0.00	200.00	0.00	1	0	1	0	0
4653.06	0.00	200.00	0.00	1	0	1	0	0
5428.57	0.00	200.00	0.00	1	0	1	0	0
6204.08	78.79	200.00	10000.00	1	0	0	0	1
6979.59	62.19	200.00	10000.00	1	0	0	0	1
7755.10	50.90	200.00	10000.00	1	0	0	0	1
8530.61	42.90	200.00	539.26	1	0	0	0	1
9306.12	36.68	200.00	235.21	1	0	0	0	1
10081.63	31.76	200.00	161.03	0	0	0	0	0
10857.14	27.78	200.00	125.36	0	0	0	0	0
11632.65	24.52	200.00	99.43	0	0	0	0	0
12408.16	21.81	200.00	83.63	0	0	0	0	0
13183.67	19.54	200.00	71.09	0	0	0	0	0
13959.18	17.61	200.00	60.99	0	0	0	0	0
14734.69	15.96	200.00	53.02	0	0	0	0	0
15510.20	14.54	200.00	46.82	0	0	0	0	0
16285.71	13.30	200.00	41.65	0	0	0	0	0
17061.22	12.22	200.00	37.29	0	0	0	0	0
17836.73	11.27	200.00	33.57	0	0	0	0	0
18612.24	10.42	200.00	30.39	0	0	0	0	0
19387.76	9.67	200.00	27.64	0	0	0	0	0
20163.27	9.00	200.00	25.25	0	0	0	0	0
20938.78	8.40	200.00	23.16	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
21714.29	7.85	200.00	21.32	0	0	0	0	0
22489.80	7.36	200.00	19.70	0	0	0	0	0
23265.31	6.92	200.00	18.25	0	0	0	0	0
24040.82	6.51	200.00	16.97	0	0	0	0	0
24816.33	6.14	200.00	15.81	0	0	0	0	0
25591.84	5.80	200.00	14.78	0	0	0	0	0
26367.35	5.49	200.00	13.84	0	0	0	0	0
27142.86	5.21	200.00	13.00	0	0	0	0	0
27918.37	4.94	200.00	12.23	0	0	0	0	0
28693.88	4.70	200.00	11.53	0	0	0	0	0
29469.39	4.47	200.00	10.89	0	0	0	0	0
30244.90	4.26	200.00	10.30	0	0	0	0	0
31020.41	4.07	200.00	9.76	0	0	0	0	0
31795.92	3.89	200.00	9.26	0	0	0	0	0
32571.43	3.72	200.00	8.80	0	0	0	0	0
33346.94	3.56	200.00	8.37	0	0	0	0	0
34122.45	3.41	200.00	7.97	0	0	0	0	0
34897.96	3.27	200.00	7.59	0	0	0	0	0
35673.47	3.14	200.00	7.25	0	0	0	0	0
36448.98	0.00	200.00	0.00	0	0	0	0	0
37224.49	0.00	200.00	0.00	0	0	0	0	0
38000.00	0.00	200.00	0.00	0	0	0	0	0
0.00	0.00	250.00	0.00	1	0	1	0	0
775.51	0.00	250.00	0.00	1	0	1	0	0
1551.02	0.00	250.00	0.00	1	0	1	0	0
2326.53	0.00	250.00	0.00	1	0	1	0	0
3102.04	0.00	250.00	0.00	1	0	1	0	0
3877.55	0.00	250.00	0.00	1	0	1	0	0
4653.06	0.00	250.00	0.00	1	0	1	0	0
5428.57	0.00	250.00	0.00	1	0	1	0	0
6204.08	78.79	250.00	10000.00	1	0	0	0	1
6979.59	62.19	250.00	10000.00	1	0	0	0	1
7755.10	50.90	250.00	10000.00	1	0	0	0	1

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
8530.61	42.90	250.00	539.26	1	0	0	0	1
9306.12	36.68	250.00	235.21	0	0	0	0	0
10081.63	31.76	250.00	161.03	0	0	0	0	0
10857.14	27.78	250.00	125.36	0	0	0	0	0
11632.65	24.52	250.00	99.43	0	0	0	0	0
12408.16	21.81	250.00	83.63	0	0	0	0	0
13183.67	19.54	250.00	71.09	0	0	0	0	0
13959.18	17.61	250.00	60.99	0	0	0	0	0
14734.69	15.96	250.00	53.02	0	0	0	0	0
15510.20	14.54	250.00	46.82	0	0	0	0	0
16285.71	13.30	250.00	41.65	0	0	0	0	0
17061.22	12.22	250.00	37.29	0	0	0	0	0
17836.73	11.27	250.00	33.57	0	0	0	0	0
18612.24	10.42	250.00	30.39	0	0	0	0	0
19387.76	9.67	250.00	27.64	0	0	0	0	0
20163.27	9.00	250.00	25.25	0	0	0	0	0
20938.78	8.40	250.00	23.16	0	0	0	0	0
21714.29	7.85	250.00	21.32	0	0	0	0	0
22489.80	7.36	250.00	19.70	0	0	0	0	0
23265.31	6.92	250.00	18.25	0	0	0	0	0
24040.82	6.51	250.00	16.97	0	0	0	0	0
24816.33	6.14	250.00	15.81	0	0	0	0	0
25591.84	5.80	250.00	14.78	0	0	0	0	0
26367.35	5.49	250.00	13.84	0	0	0	0	0
27142.86	5.21	250.00	13.00	0	0	0	0	0
27918.37	4.94	250.00	12.23	0	0	0	0	0
28693.88	4.70	250.00	11.53	0	0	0	0	0
29469.39	4.47	250.00	10.89	0	0	0	0	0
30244.90	4.26	250.00	10.30	0	0	0	0	0
31020.41	4.07	250.00	9.76	0	0	0	0	0
31795.92	3.89	250.00	9.26	0	0	0	0	0
32571.43	3.72	250.00	8.80	0	0	0	0	0
33346.94	3.56	250.00	8.37	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
34122.45	3.41	250.00	7.97	0	0	0	0	0
34897.96	3.27	250.00	7.59	0	0	0	0	0
35673.47	3.14	250.00	7.25	0	0	0	0	0
36448.98	0.00	250.00	0.00	0	0	0	0	0
37224.49	0.00	250.00	0.00	0	0	0	0	0
38000.00	0.00	250.00	0.00	0	0	0	0	0
0.00	0.00	300.00	0.00	1	0	1	0	0
775.51	0.00	300.00	0.00	1	0	1	0	0
1551.02	0.00	300.00	0.00	1	0	1	0	0
2326.53	0.00	300.00	0.00	1	0	1	0	0
3102.04	0.00	300.00	0.00	1	0	1	0	0
3877.55	0.00	300.00	0.00	1	0	1	0	0
4653.06	0.00	300.00	0.00	1	0	1	0	0
5428.57	0.00	300.00	0.00	1	0	1	0	0
6204.08	78.79	300.00	10000.00	1	0	0	0	1
6979.59	62.19	300.00	10000.00	1	0	0	0	1
7755.10	50.90	300.00	10000.00	1	0	0	0	1
8530.61	42.90	300.00	539.26	1	0	0	0	1
9306.12	36.68	300.00	235.21	0	0	0	0	0
10081.63	31.76	300.00	161.03	0	0	0	0	0
10857.14	27.78	300.00	125.36	0	0	0	0	0
11632.65	24.52	300.00	99.43	0	0	0	0	0
12408.16	21.81	300.00	83.63	0	0	0	0	0
13183.67	19.54	300.00	71.09	0	0	0	0	0
13959.18	17.61	300.00	60.99	0	0	0	0	0
14734.69	15.96	300.00	53.02	0	0	0	0	0
15510.20	14.54	300.00	46.82	0	0	0	0	0
16285.71	13.30	300.00	41.65	0	0	0	0	0
17061.22	12.22	300.00	37.29	0	0	0	0	0
17836.73	11.27	300.00	33.57	0	0	0	0	0
18612.24	10.42	300.00	30.39	0	0	0	0	0
19387.76	9.67	300.00	27.64	0	0	0	0	0
20163.27	9.00	300.00	25.25	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
20938.78	8.40	300.00	23.16	0	0	0	0	0
21714.29	7.85	300.00	21.32	0	0	0	0	0
22489.80	7.36	300.00	19.70	0	0	0	0	0
23265.31	6.92	300.00	18.25	0	0	0	0	0
24040.82	6.51	300.00	16.97	0	0	0	0	0
24816.33	6.14	300.00	15.81	0	0	0	0	0
25591.84	5.80	300.00	14.78	0	0	0	0	0
26367.35	5.49	300.00	13.84	0	0	0	0	0
27142.86	5.21	300.00	13.00	0	0	0	0	0
27918.37	4.94	300.00	12.23	0	0	0	0	0
28693.88	4.70	300.00	11.53	0	0	0	0	0
29469.39	4.47	300.00	10.89	0	0	0	0	0
30244.90	4.26	300.00	10.30	0	0	0	0	0
31020.41	4.07	300.00	9.76	0	0	0	0	0
31795.92	3.89	300.00	9.26	0	0	0	0	0
32571.43	3.72	300.00	8.80	0	0	0	0	0
33346.94	3.56	300.00	8.37	0	0	0	0	0
34122.45	3.41	300.00	7.97	0	0	0	0	0
34897.96	3.27	300.00	7.59	0	0	0	0	0
35673.47	3.14	300.00	7.25	0	0	0	0	0
36448.98	0.00	300.00	0.00	0	0	0	0	0
37224.49	0.00	300.00	0.00	0	0	0	0	0
38000.00	0.00	300.00	0.00	0	0	0	0	0
0.00	0.00	500.00	0.00	1	0	1	0	0
775.51	0.00	500.00	0.00	1	0	1	0	0
1551.02	0.00	500.00	0.00	1	0	1	0	0
2326.53	0.00	500.00	0.00	1	0	1	0	0
3102.04	0.00	500.00	0.00	1	0	1	0	0
3877.55	0.00	500.00	0.00	1	0	1	0	0
4653.06	0.00	500.00	0.00	1	0	1	0	0
5428.57	0.00	500.00	0.00	1	0	1	0	0
6204.08	78.79	500.00	10000.00	1	0	0	0	1
6979.59	62.19	500.00	10000.00	1	0	0	0	1

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
7755.10	50.90	500.00	10000.00	1	0	0	0	1
8530.61	42.90	500.00	539.26	1	0	0	0	1
9306.12	36.68	500.00	235.21	0	0	0	0	0
10081.63	31.76	500.00	161.03	0	0	0	0	0
10857.14	27.78	500.00	125.36	0	0	0	0	0
11632.65	24.52	500.00	99.43	0	0	0	0	0
12408.16	21.81	500.00	83.63	0	0	0	0	0
13183.67	19.54	500.00	71.09	0	0	0	0	0
13959.18	17.61	500.00	60.99	0	0	0	0	0
14734.69	15.96	500.00	53.02	0	0	0	0	0
15510.20	14.54	500.00	46.82	0	0	0	0	0
16285.71	13.30	500.00	41.65	0	0	0	0	0
17061.22	12.22	500.00	37.29	0	0	0	0	0
17836.73	11.27	500.00	33.57	0	0	0	0	0
18612.24	10.42	500.00	30.39	0	0	0	0	0
19387.76	9.67	500.00	27.64	0	0	0	0	0
20163.27	9.00	500.00	25.25	0	0	0	0	0
20938.78	8.40	500.00	23.16	0	0	0	0	0
21714.29	7.85	500.00	21.32	0	0	0	0	0
22489.80	7.36	500.00	19.70	0	0	0	0	0
23265.31	6.92	500.00	18.25	0	0	0	0	0
24040.82	6.51	500.00	16.97	0	0	0	0	0
24816.33	6.14	500.00	15.81	0	0	0	0	0
25591.84	5.80	500.00	14.78	0	0	0	0	0
26367.35	5.49	500.00	13.84	0	0	0	0	0
27142.86	5.21	500.00	13.00	0	0	0	0	0
27918.37	4.94	500.00	12.23	0	0	0	0	0
28693.88	4.70	500.00	11.53	0	0	0	0	0
29469.39	4.47	500.00	10.89	0	0	0	0	0
30244.90	4.26	500.00	10.30	0	0	0	0	0
31020.41	4.07	500.00	9.76	0	0	0	0	0
31795.92	3.89	500.00	9.26	0	0	0	0	0
32571.43	3.72	500.00	8.80	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
33346.94	3.56	500.00	8.37	0	0	0	0	0
34122.45	3.41	500.00	7.97	0	0	0	0	0
34897.96	3.27	500.00	7.59	0	0	0	0	0
35673.47	3.14	500.00	7.25	0	0	0	0	0
36448.98	0.00	500.00	0.00	0	0	0	0	0
37224.49	0.00	500.00	0.00	0	0	0	0	0
38000.00	0.00	500.00	0.00	0	0	0	0	0

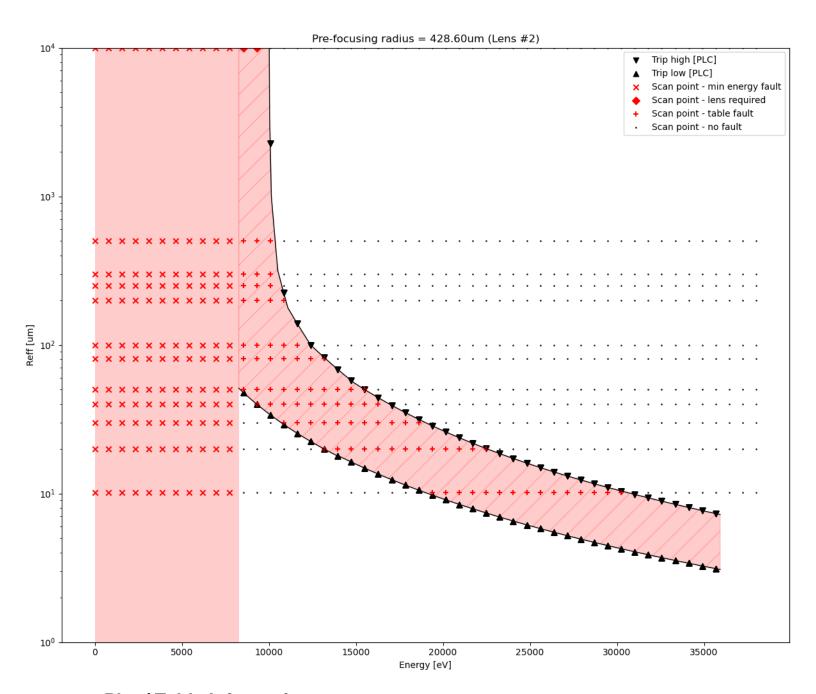
# Scan 3: 428.571µm pre-focusing lens

Data generated: 2024-08-20 22:01:46

bluesky scan sweep\_energy\_plan with 428.571µm pre-focusing lens.

## **Scan Information**

- 1. Choose a few transfocator lens sets to span the effective radius range.
- 2. For each of those lens sets, scan energy at regular intervals.
- 3. Each marker on the plot represents one of those scan points.
- 4. Record if PLC reported a fault and why.



### **Plot / Table Information**

**No fault** indicates that a data point was checked but no fault reported by PLC.

**Trip Low** and **Trip High** are values from the spreadsheet table, interpolated by the PLC and reported to EPICS.

The lines drawn around these regions and the highlighted regions are directly from the spreadsheet. **Min Energy Fault** indicates that it does not meet minimum energy requirement for a given XRT lens. **Table Fault** indicates a fault from the spreadsheet table disallowed region.

Lens Required Fault markers are clipped at the bottom of the plot.

Scan 3: 428.571µm pre-focusing lens: Scan Data Table

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
0.00	0.00	10000.00	0.00	1	0	1	0	0
775.51	0.00	10000.00	0.00	1	0	1	0	0
1551.02	0.00	10000.00	0.00	1	0	1	0	0
2326.53	0.00	10000.00	0.00	1	0	1	0	0
3102.04	0.00	10000.00	0.00	1	0	1	0	0
3877.55	0.00	10000.00	0.00	1	0	1	0	0
4653.06	0.00	10000.00	0.00	1	0	1	0	0
5428.57	0.00	10000.00	0.00	1	0	1	0	0
6204.08	0.00	10000.00	0.00	1	0	1	0	0
6979.59	0.00	10000.00	0.00	1	0	1	0	0
7755.10	0.00	10000.00	0.00	1	0	1	0	0
8530.61	47.89	10000.00	10000.00	1	0	0	1	1
9306.12	39.93	10000.00	10000.00	1	0	0	1	1
10081.63	33.87	10000.00	2263.58	0	0	0	0	0
10857.14	29.16	10000.00	224.18	0	0	0	0	0
11632.65	25.42	10000.00	139.24	0	0	0	0	0
12408.16	22.40	10000.00	99.99	0	0	0	0	0
13183.67	19.92	10000.00	82.26	0	0	0	0	0
13959.18	17.86	10000.00	68.49	0	0	0	0	0
14734.69	16.29	10000.00	57.58	0	0	0	0	0
15510.20	14.80	10000.00	50.05	0	0	0	0	0
16285.71	13.51	10000.00	44.14	0	0	0	0	0
17061.22	12.39	10000.00	39.21	0	0	0	0	0
17836.73	11.40	10000.00	35.07	0	0	0	0	0
18612.24	10.53	10000.00	31.56	0	0	0	0	0
19387.76	9.75	10000.00	28.56	0	0	0	0	0
20163.27	9.07	10000.00	25.98	0	0	0	0	0
20938.78	8.45	10000.00	23.74	0	0	0	0	0
21714.29	7.89	10000.00	21.78	0	0	0	0	0
22489.80	7.39	10000.00	20.06	0	0	0	0	0
23265.31	6.94	10000.00	18.55	0	0	0	0	0
24040.82	6.53	10000.00	17.21	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
24816.33	6.15	10000.00	16.02	0	0	0	0	0
25591.84	5.81	10000.00	14.95	0	0	0	0	0
26367.35	5.49	10000.00	13.99	0	0	0	0	0
27142.86	5.20	10000.00	13.12	0	0	0	0	0
27918.37	4.93	10000.00	12.34	0	0	0	0	0
28693.88	4.69	10000.00	11.63	0	0	0	0	0
29469.39	4.46	10000.00	10.99	0	0	0	0	0
30244.90	4.25	10000.00	10.40	0	0	0	0	0
31020.41	4.05	10000.00	9.86	0	0	0	0	0
31795.92	3.87	10000.00	9.35	0	0	0	0	0
32571.43	3.70	10000.00	8.89	0	0	0	0	0
33346.94	3.54	10000.00	8.45	0	0	0	0	0
34122.45	3.39	10000.00	8.05	0	0	0	0	0
34897.96	3.25	10000.00	7.67	0	0	0	0	0
35673.47	3.12	10000.00	7.32	0	0	0	0	0
36448.98	0.00	10000.00	0.00	0	0	0	0	0
37224.49	0.00	10000.00	0.00	0	0	0	0	0
38000.00	0.00	10000.00	0.00	0	0	0	0	0
0.00	0.00	10.17	0.00	1	0	1	0	0
775.51	0.00	10.17	0.00	1	0	1	0	0
1551.02	0.00	10.17	0.00	1	0	1	0	0
2326.53	0.00	10.17	0.00	1	0	1	0	0
3102.04	0.00	10.17	0.00	1	0	1	0	0
3877.55	0.00	10.17	0.00	1	0	1	0	0
4653.06	0.00	10.17	0.00	1	0	1	0	0
5428.57	0.00	10.17	0.00	1	0	1	0	0
6204.08	0.00	10.17	0.00	1	0	1	0	0
6979.59	0.00	10.17	0.00	1	0	1	0	0
7755.10	0.00	10.17	0.00	1	0	1	0	0
8530.61	47.89	10.17	10000.00	0	0	0	0	0
9306.12	39.93	10.17	10000.00	0	0	0	0	0
10081.63	33.87	10.17	2263.58	0	0	0	0	0
10857.14	29.16	10.17	224.18	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
11632.65	25.42	10.17	139.24	0	0	0	0	0
12408.16	22.40	10.17	99.99	0	0	0	0	0
13183.67	19.92	10.17	82.26	0	0	0	0	0
13959.18	17.86	10.17	68.49	0	0	0	0	0
14734.69	16.29	10.17	57.58	0	0	0	0	0
15510.20	14.80	10.17	50.05	0	0	0	0	0
16285.71	13.51	10.17	44.14	0	0	0	0	0
17061.22	12.39	10.17	39.21	0	0	0	0	0
17836.73	11.40	10.17	35.07	0	0	0	0	0
18612.24	10.53	10.17	31.56	0	0	0	0	0
19387.76	9.75	10.17	28.56	1	0	0	0	1
20163.27	9.07	10.17	25.98	1	0	0	0	1
20938.78	8.45	10.17	23.74	1	0	0	0	1
21714.29	7.89	10.17	21.78	1	0	0	0	1
22489.80	7.39	10.17	20.06	1	0	0	0	1
23265.31	6.94	10.17	18.55	1	0	0	0	1
24040.82	6.53	10.17	17.21	1	0	0	0	1
24816.33	6.15	10.17	16.02	1	0	0	0	1
25591.84	5.81	10.17	14.95	1	0	0	0	1
26367.35	5.49	10.17	13.99	1	0	0	0	1
27142.86	5.20	10.17	13.12	1	0	0	0	1
27918.37	4.93	10.17	12.34	1	0	0	0	1
28693.88	4.69	10.17	11.63	1	0	0	0	1
29469.39	4.46	10.17	10.99	1	0	0	0	1
30244.90	4.25	10.17	10.40	1	0	0	0	1
31020.41	4.05	10.17	9.86	0	0	0	0	0
31795.92	3.87	10.17	9.35	0	0	0	0	0
32571.43	3.70	10.17	8.89	0	0	0	0	0
33346.94	3.54	10.17	8.45	0	0	0	0	0
34122.45	3.39	10.17	8.05	0	0	0	0	0
34897.96	3.25	10.17	7.67	0	0	0	0	0
35673.47	3.12	10.17	7.32	0	0	0	0	0
36448.98	0.00	10.17	0.00	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
37224.49	0.00	10.17	0.00	0	0	0	0	0
38000.00	0.00	10.17	0.00	0	0	0	0	0
0.00	0.00	20.00	0.00	1	0	1	0	0
775.51	0.00	20.00	0.00	1	0	1	0	0
1551.02	0.00	20.00	0.00	1	0	1	0	0
2326.53	0.00	20.00	0.00	1	0	1	0	0
3102.04	0.00	20.00	0.00	1	0	1	0	0
3877.55	0.00	20.00	0.00	1	0	1	0	0
4653.06	0.00	20.00	0.00	1	0	1	0	0
5428.57	0.00	20.00	0.00	1	0	1	0	0
6204.08	0.00	20.00	0.00	1	0	1	0	0
6979.59	0.00	20.00	0.00	1	0	1	0	0
7755.10	0.00	20.00	0.00	1	0	1	0	0
8530.61	47.89	20.00	10000.00	0	0	0	0	0
9306.12	39.93	20.00	10000.00	0	0	0	0	0
10081.63	33.87	20.00	2263.58	0	0	0	0	0
10857.14	29.16	20.00	224.18	0	0	0	0	0
11632.65	25.42	20.00	139.24	0	0	0	0	0
12408.16	22.40	20.00	99.99	0	0	0	0	0
13183.67	19.92	20.00	82.26	1	0	0	0	1
13959.18	17.86	20.00	68.49	1	0	0	0	1
14734.69	16.29	20.00	57.58	1	0	0	0	1
15510.20	14.80	20.00	50.05	1	0	0	0	1
16285.71	13.51	20.00	44.14	1	0	0	0	1
17061.22	12.39	20.00	39.21	1	0	0	0	1
17836.73	11.40	20.00	35.07	1	0	0	0	1
18612.24	10.53	20.00	31.56	1	0	0	0	1
19387.76	9.75	20.00	28.56	1	0	0	0	1
20163.27	9.07	20.00	25.98	1	0	0	0	1
20938.78	8.45	20.00	23.74	1	0	0	0	1
21714.29	7.89	20.00	21.78	1	0	0	0	1
22489.80	7.39	20.00	20.06	1	0	0	0	1
23265.31	6.94	20.00	18.55	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
24040.82	6.53	20.00	17.21	0	0	0	0	0
24816.33	6.15	20.00	16.02	0	0	0	0	0
25591.84	5.81	20.00	14.95	0	0	0	0	0
26367.35	5.49	20.00	13.99	0	0	0	0	0
27142.86	5.20	20.00	13.12	0	0	0	0	0
27918.37	4.93	20.00	12.34	0	0	0	0	0
28693.88	4.69	20.00	11.63	0	0	0	0	0
29469.39	4.46	20.00	10.99	0	0	0	0	0
30244.90	4.25	20.00	10.40	0	0	0	0	0
31020.41	4.05	20.00	9.86	0	0	0	0	0
31795.92	3.87	20.00	9.35	0	0	0	0	0
32571.43	3.70	20.00	8.89	0	0	0	0	0
33346.94	3.54	20.00	8.45	0	0	0	0	0
34122.45	3.39	20.00	8.05	0	0	0	0	0
34897.96	3.25	20.00	7.67	0	0	0	0	0
35673.47	3.12	20.00	7.32	0	0	0	0	0
36448.98	0.00	20.00	0.00	0	0	0	0	0
37224.49	0.00	20.00	0.00	0	0	0	0	0
38000.00	0.00	20.00	0.00	0	0	0	0	0
0.00	0.00	30.00	0.00	1	0	1	0	0
775.51	0.00	30.00	0.00	1	0	1	0	0
1551.02	0.00	30.00	0.00	1	0	1	0	0
2326.53	0.00	30.00	0.00	1	0	1	0	0
3102.04	0.00	30.00	0.00	1	0	1	0	0
3877.55	0.00	30.00	0.00	1	0	1	0	0
4653.06	0.00	30.00	0.00	1	0	1	0	0
5428.57	0.00	30.00	0.00	1	0	1	0	0
6204.08	0.00	30.00	0.00	1	0	1	0	0
6979.59	0.00	30.00	0.00	1	0	1	0	0
7755.10	0.00	30.00	0.00	1	0	1	0	0
8530.61	47.89	30.00	10000.00	0	0	0	0	0
9306.12	39.93	30.00	10000.00	0	0	0	0	0
10081.63	33.87	30.00	2263.58	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
10857.14	29.16	30.00	224.18	1	0	0	0	1
11632.65	25.42	30.00	139.24	1	0	0	0	1
12408.16	22.40	30.00	99.99	1	0	0	0	1
13183.67	19.92	30.00	82.26	1	0	0	0	1
13959.18	17.86	30.00	68.49	1	0	0	0	1
14734.69	16.29	30.00	57.58	1	0	0	0	1
15510.20	14.80	30.00	50.05	1	0	0	0	1
16285.71	13.51	30.00	44.14	1	0	0	0	1
17061.22	12.39	30.00	39.21	1	0	0	0	1
17836.73	11.40	30.00	35.07	1	0	0	0	1
18612.24	10.53	30.00	31.56	1	0	0	0	1
19387.76	9.75	30.00	28.56	0	0	0	0	0
20163.27	9.07	30.00	25.98	0	0	0	0	0
20938.78	8.45	30.00	23.74	0	0	0	0	0
21714.29	7.89	30.00	21.78	0	0	0	0	0
22489.80	7.39	30.00	20.06	0	0	0	0	0
23265.31	6.94	30.00	18.55	0	0	0	0	0
24040.82	6.53	30.00	17.21	0	0	0	0	0
24816.33	6.15	30.00	16.02	0	0	0	0	0
25591.84	5.81	30.00	14.95	0	0	0	0	0
26367.35	5.49	30.00	13.99	0	0	0	0	0
27142.86	5.20	30.00	13.12	0	0	0	0	0
27918.37	4.93	30.00	12.34	0	0	0	0	0
28693.88	4.69	30.00	11.63	0	0	0	0	0
29469.39	4.46	30.00	10.99	0	0	0	0	0
30244.90	4.25	30.00	10.40	0	0	0	0	0
31020.41	4.05	30.00	9.86	0	0	0	0	0
31795.92	3.87	30.00	9.35	0	0	0	0	0
32571.43	3.70	30.00	8.89	0	0	0	0	0
33346.94	3.54	30.00	8.45	0	0	0	0	0
34122.45	3.39	30.00	8.05	0	0	0	0	0
34897.96	3.25	30.00	7.67	0	0	0	0	0
35673.47	3.12	30.00	7.32	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
36448.98	0.00	30.00	0.00	0	0	0	0	0
37224.49	0.00	30.00	0.00	0	0	0	0	0
38000.00	0.00	30.00	0.00	0	0	0	0	0
0.00	0.00	40.00	0.00	1	0	1	0	0
775.51	0.00	40.00	0.00	1	0	1	0	0
1551.02	0.00	40.00	0.00	1	0	1	0	0
2326.53	0.00	40.00	0.00	1	0	1	0	0
3102.04	0.00	40.00	0.00	1	0	1	0	0
3877.55	0.00	40.00	0.00	1	0	1	0	0
4653.06	0.00	40.00	0.00	1	0	1	0	0
5428.57	0.00	40.00	0.00	1	0	1	0	0
6204.08	0.00	40.00	0.00	1	0	1	0	0
6979.59	0.00	40.00	0.00	1	0	1	0	0
7755.10	0.00	40.00	0.00	1	0	1	0	0
8530.61	47.89	40.00	10000.00	0	0	0	0	0
9306.12	39.93	40.00	10000.00	1	0	0	0	1
10081.63	33.87	40.00	2263.58	1	0	0	0	1
10857.14	29.16	40.00	224.18	1	0	0	0	1
11632.65	25.42	40.00	139.24	1	0	0	0	1
12408.16	22.40	40.00	99.99	1	0	0	0	1
13183.67	19.92	40.00	82.26	1	0	0	0	1
13959.18	17.86	40.00	68.49	1	0	0	0	1
14734.69	16.29	40.00	57.58	1	0	0	0	1
15510.20	14.80	40.00	50.05	1	0	0	0	1
16285.71	13.51	40.00	44.14	1	0	0	0	1
17061.22	12.39	40.00	39.21	0	0	0	0	0
17836.73	11.40	40.00	35.07	0	0	0	0	0
18612.24	10.53	40.00	31.56	0	0	0	0	0
19387.76	9.75	40.00	28.56	0	0	0	0	0
20163.27	9.07	40.00	25.98	0	0	0	0	0
20938.78	8.45	40.00	23.74	0	0	0	0	0
21714.29	7.89	40.00	21.78	0	0	0	0	0
22489.80	7.39	40.00	20.06	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
23265.31	6.94	40.00	18.55	0	0	0	0	0
24040.82	6.53	40.00	17.21	0	0	0	0	0
24816.33	6.15	40.00	16.02	0	0	0	0	0
25591.84	5.81	40.00	14.95	0	0	0	0	0
26367.35	5.49	40.00	13.99	0	0	0	0	0
27142.86	5.20	40.00	13.12	0	0	0	0	0
27918.37	4.93	40.00	12.34	0	0	0	0	0
28693.88	4.69	40.00	11.63	0	0	0	0	0
29469.39	4.46	40.00	10.99	0	0	0	0	0
30244.90	4.25	40.00	10.40	0	0	0	0	0
31020.41	4.05	40.00	9.86	0	0	0	0	0
31795.92	3.87	40.00	9.35	0	0	0	0	0
32571.43	3.70	40.00	8.89	0	0	0	0	0
33346.94	3.54	40.00	8.45	0	0	0	0	0
34122.45	3.39	40.00	8.05	0	0	0	0	0
34897.96	3.25	40.00	7.67	0	0	0	0	0
35673.47	3.12	40.00	7.32	0	0	0	0	0
36448.98	0.00	40.00	0.00	0	0	0	0	0
37224.49	0.00	40.00	0.00	0	0	0	0	0
38000.00	0.00	40.00	0.00	0	0	0	0	0
0.00	0.00	50.00	0.00	1	0	1	0	0
775.51	0.00	50.00	0.00	1	0	1	0	0
1551.02	0.00	50.00	0.00	1	0	1	0	0
2326.53	0.00	50.00	0.00	1	0	1	0	0
3102.04	0.00	50.00	0.00	1	0	1	0	0
3877.55	0.00	50.00	0.00	1	0	1	0	0
4653.06	0.00	50.00	0.00	1	0	1	0	0
5428.57	0.00	50.00	0.00	1	0	1	0	0
6204.08	0.00	50.00	0.00	1	0	1	0	0
6979.59	0.00	50.00	0.00	1	0	1	0	0
7755.10	0.00	50.00	0.00	1	0	1	0	0
8530.61	47.89	50.00	10000.00	1	0	0	0	1
9306.12	39.93	50.00	10000.00	1	0	0	0	1

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
10081.63	33.87	50.00	2263.58	1	0	0	0	1
10857.14	29.16	50.00	224.18	1	0	0	0	1
11632.65	25.42	50.00	139.24	1	0	0	0	1
12408.16	22.40	50.00	99.99	1	0	0	0	1
13183.67	19.92	50.00	82.26	1	0	0	0	1
13959.18	17.86	50.00	68.49	1	0	0	0	1
14734.69	16.29	50.00	57.58	1	0	0	0	1
15510.20	14.80	50.00	50.05	1	0	0	0	1
16285.71	13.51	50.00	44.14	0	0	0	0	0
17061.22	12.39	50.00	39.21	0	0	0	0	0
17836.73	11.40	50.00	35.07	0	0	0	0	0
18612.24	10.53	50.00	31.56	0	0	0	0	0
19387.76	9.75	50.00	28.56	0	0	0	0	0
20163.27	9.07	50.00	25.98	0	0	0	0	0
20938.78	8.45	50.00	23.74	0	0	0	0	0
21714.29	7.89	50.00	21.78	0	0	0	0	0
22489.80	7.39	50.00	20.06	0	0	0	0	0
23265.31	6.94	50.00	18.55	0	0	0	0	0
24040.82	6.53	50.00	17.21	0	0	0	0	0
24816.33	6.15	50.00	16.02	0	0	0	0	0
25591.84	5.81	50.00	14.95	0	0	0	0	0
26367.35	5.49	50.00	13.99	0	0	0	0	0
27142.86	5.20	50.00	13.12	0	0	0	0	0
27918.37	4.93	50.00	12.34	0	0	0	0	0
28693.88	4.69	50.00	11.63	0	0	0	0	0
29469.39	4.46	50.00	10.99	0	0	0	0	0
30244.90	4.25	50.00	10.40	0	0	0	0	0
31020.41	4.05	50.00	9.86	0	0	0	0	0
31795.92	3.87	50.00	9.35	0	0	0	0	0
32571.43	3.70	50.00	8.89	0	0	0	0	0
33346.94	3.54	50.00	8.45	0	0	0	0	0
34122.45	3.39	50.00	8.05	0	0	0	0	0
34897.96	3.25	50.00	7.67	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
35673.47	3.12	50.00	7.32	0	0	0	0	0
36448.98	0.00	50.00	0.00	0	0	0	0	0
37224.49	0.00	50.00	0.00	0	0	0	0	0
38000.00	0.00	50.00	0.00	0	0	0	0	0
0.00	0.00	81.08	0.00	1	0	1	0	0
775.51	0.00	81.08	0.00	1	0	1	0	0
1551.02	0.00	81.08	0.00	1	0	1	0	0
2326.53	0.00	81.08	0.00	1	0	1	0	0
3102.04	0.00	81.08	0.00	1	0	1	0	0
3877.55	0.00	81.08	0.00	1	0	1	0	0
4653.06	0.00	81.08	0.00	1	0	1	0	0
5428.57	0.00	81.08	0.00	1	0	1	0	0
6204.08	0.00	81.08	0.00	1	0	1	0	0
6979.59	0.00	81.08	0.00	1	0	1	0	0
7755.10	0.00	81.08	0.00	1	0	1	0	0
8530.61	47.89	81.08	10000.00	1	0	0	0	1
9306.12	39.93	81.08	10000.00	1	0	0	0	1
10081.63	33.87	81.08	2263.58	1	0	0	0	1
10857.14	29.16	81.08	224.18	1	0	0	0	1
11632.65	25.42	81.08	139.24	1	0	0	0	1
12408.16	22.40	81.08	99.99	1	0	0	0	1
13183.67	19.92	81.08	82.26	1	0	0	0	1
13959.18	17.86	81.08	68.49	0	0	0	0	0
14734.69	16.29	81.08	57.58	0	0	0	0	0
15510.20	14.80	81.08	50.05	0	0	0	0	0
16285.71	13.51	81.08	44.14	0	0	0	0	0
17061.22	12.39	81.08	39.21	0	0	0	0	0
17836.73	11.40	81.08	35.07	0	0	0	0	0
18612.24	10.53	81.08	31.56	0	0	0	0	0
19387.76	9.75	81.08	28.56	0	0	0	0	0
20163.27	9.07	81.08	25.98	0	0	0	0	0
20938.78	8.45	81.08	23.74	0	0	0	0	0
21714.29	7.89	81.08	21.78	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
22489.80	7.39	81.08	20.06	0	0	0	0	0
23265.31	6.94	81.08	18.55	0	0	0	0	0
24040.82	6.53	81.08	17.21	0	0	0	0	0
24816.33	6.15	81.08	16.02	0	0	0	0	0
25591.84	5.81	81.08	14.95	0	0	0	0	0
26367.35	5.49	81.08	13.99	0	0	0	0	0
27142.86	5.20	81.08	13.12	0	0	0	0	0
27918.37	4.93	81.08	12.34	0	0	0	0	0
28693.88	4.69	81.08	11.63	0	0	0	0	0
29469.39	4.46	81.08	10.99	0	0	0	0	0
30244.90	4.25	81.08	10.40	0	0	0	0	0
31020.41	4.05	81.08	9.86	0	0	0	0	0
31795.92	3.87	81.08	9.35	0	0	0	0	0
32571.43	3.70	81.08	8.89	0	0	0	0	0
33346.94	3.54	81.08	8.45	0	0	0	0	0
34122.45	3.39	81.08	8.05	0	0	0	0	0
34897.96	3.25	81.08	7.67	0	0	0	0	0
35673.47	3.12	81.08	7.32	0	0	0	0	0
36448.98	0.00	81.08	0.00	0	0	0	0	0
37224.49	0.00	81.08	0.00	0	0	0	0	0
38000.00	0.00	81.08	0.00	0	0	0	0	0
0.00	0.00	100.00	0.00	1	0	1	0	0
775.51	0.00	100.00	0.00	1	0	1	0	0
1551.02	0.00	100.00	0.00	1	0	1	0	0
2326.53	0.00	100.00	0.00	1	0	1	0	0
3102.04	0.00	100.00	0.00	1	0	1	0	0
3877.55	0.00	100.00	0.00	1	0	1	0	0
4653.06	0.00	100.00	0.00	1	0	1	0	0
5428.57	0.00	100.00	0.00	1	0	1	0	0
6204.08	0.00	100.00	0.00	1	0	1	0	0
6979.59	0.00	100.00	0.00	1	0	1	0	0
7755.10	0.00	100.00	0.00	1	0	1	0	0
8530.61	47.89	100.00	10000.00	1	0	0	0	1

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
9306.12	39.93	100.00	10000.00	1	0	0	0	1
10081.63	33.87	100.00	2263.58	1	0	0	0	1
10857.14	29.16	100.00	224.18	1	0	0	0	1
11632.65	25.42	100.00	139.24	1	0	0	0	1
12408.16	22.40	100.00	99.99	0	0	0	0	0
13183.67	19.92	100.00	82.26	0	0	0	0	0
13959.18	17.86	100.00	68.49	0	0	0	0	0
14734.69	16.29	100.00	57.58	0	0	0	0	0
15510.20	14.80	100.00	50.05	0	0	0	0	0
16285.71	13.51	100.00	44.14	0	0	0	0	0
17061.22	12.39	100.00	39.21	0	0	0	0	0
17836.73	11.40	100.00	35.07	0	0	0	0	0
18612.24	10.53	100.00	31.56	0	0	0	0	0
19387.76	9.75	100.00	28.56	0	0	0	0	0
20163.27	9.07	100.00	25.98	0	0	0	0	0
20938.78	8.45	100.00	23.74	0	0	0	0	0
21714.29	7.89	100.00	21.78	0	0	0	0	0
22489.80	7.39	100.00	20.06	0	0	0	0	0
23265.31	6.94	100.00	18.55	0	0	0	0	0
24040.82	6.53	100.00	17.21	0	0	0	0	0
24816.33	6.15	100.00	16.02	0	0	0	0	0
25591.84	5.81	100.00	14.95	0	0	0	0	0
26367.35	5.49	100.00	13.99	0	0	0	0	0
27142.86	5.20	100.00	13.12	0	0	0	0	0
27918.37	4.93	100.00	12.34	0	0	0	0	0
28693.88	4.69	100.00	11.63	0	0	0	0	0
29469.39	4.46	100.00	10.99	0	0	0	0	0
30244.90	4.25	100.00	10.40	0	0	0	0	0
31020.41	4.05	100.00	9.86	0	0	0	0	0
31795.92	3.87	100.00	9.35	0	0	0	0	0
32571.43	3.70	100.00	8.89	0	0	0	0	0
33346.94	3.54	100.00	8.45	0	0	0	0	0
34122.45	3.39	100.00	8.05	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
34897.96	3.25	100.00	7.67	0	0	0	0	0
35673.47	3.12	100.00	7.32	0	0	0	0	0
36448.98	0.00	100.00	0.00	0	0	0	0	0
37224.49	0.00	100.00	0.00	0	0	0	0	0
38000.00	0.00	100.00	0.00	0	0	0	0	0
0.00	0.00	200.00	0.00	1	0	1	0	0
775.51	0.00	200.00	0.00	1	0	1	0	0
1551.02	0.00	200.00	0.00	1	0	1	0	0
2326.53	0.00	200.00	0.00	1	0	1	0	0
3102.04	0.00	200.00	0.00	1	0	1	0	0
3877.55	0.00	200.00	0.00	1	0	1	0	0
4653.06	0.00	200.00	0.00	1	0	1	0	0
5428.57	0.00	200.00	0.00	1	0	1	0	0
6204.08	0.00	200.00	0.00	1	0	1	0	0
6979.59	0.00	200.00	0.00	1	0	1	0	0
7755.10	0.00	200.00	0.00	1	0	1	0	0
8530.61	47.89	200.00	10000.00	1	0	0	0	1
9306.12	39.93	200.00	10000.00	1	0	0	0	1
10081.63	33.87	200.00	2263.58	1	0	0	0	1
10857.14	29.16	200.00	224.18	1	0	0	0	1
11632.65	25.42	200.00	139.24	0	0	0	0	0
12408.16	22.40	200.00	99.99	0	0	0	0	0
13183.67	19.92	200.00	82.26	0	0	0	0	0
13959.18	17.86	200.00	68.49	0	0	0	0	0
14734.69	16.29	200.00	57.58	0	0	0	0	0
15510.20	14.80	200.00	50.05	0	0	0	0	0
16285.71	13.51	200.00	44.14	0	0	0	0	0
17061.22	12.39	200.00	39.21	0	0	0	0	0
17836.73	11.40	200.00	35.07	0	0	0	0	0
18612.24	10.53	200.00	31.56	0	0	0	0	0
19387.76	9.75	200.00	28.56	0	0	0	0	0
20163.27	9.07	200.00	25.98	0	0	0	0	0
20938.78	8.45	200.00	23.74	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
21714.29	7.89	200.00	21.78	0	0	0	0	0
22489.80	7.39	200.00	20.06	0	0	0	0	0
23265.31	6.94	200.00	18.55	0	0	0	0	0
24040.82	6.53	200.00	17.21	0	0	0	0	0
24816.33	6.15	200.00	16.02	0	0	0	0	0
25591.84	5.81	200.00	14.95	0	0	0	0	0
26367.35	5.49	200.00	13.99	0	0	0	0	0
27142.86	5.20	200.00	13.12	0	0	0	0	0
27918.37	4.93	200.00	12.34	0	0	0	0	0
28693.88	4.69	200.00	11.63	0	0	0	0	0
29469.39	4.46	200.00	10.99	0	0	0	0	0
30244.90	4.25	200.00	10.40	0	0	0	0	0
31020.41	4.05	200.00	9.86	0	0	0	0	0
31795.92	3.87	200.00	9.35	0	0	0	0	0
32571.43	3.70	200.00	8.89	0	0	0	0	0
33346.94	3.54	200.00	8.45	0	0	0	0	0
34122.45	3.39	200.00	8.05	0	0	0	0	0
34897.96	3.25	200.00	7.67	0	0	0	0	0
35673.47	3.12	200.00	7.32	0	0	0	0	0
36448.98	0.00	200.00	0.00	0	0	0	0	0
37224.49	0.00	200.00	0.00	0	0	0	0	0
38000.00	0.00	200.00	0.00	0	0	0	0	0
0.00	0.00	250.00	0.00	1	0	1	0	0
775.51	0.00	250.00	0.00	1	0	1	0	0
1551.02	0.00	250.00	0.00	1	0	1	0	0
2326.53	0.00	250.00	0.00	1	0	1	0	0
3102.04	0.00	250.00	0.00	1	0	1	0	0
3877.55	0.00	250.00	0.00	1	0	1	0	0
4653.06	0.00	250.00	0.00	1	0	1	0	0
5428.57	0.00	250.00	0.00	1	0	1	0	0
6204.08	0.00	250.00	0.00	1	0	1	0	0
6979.59	0.00	250.00	0.00	1	0	1	0	0
7755.10	0.00	250.00	0.00	1	0	1	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
8530.61	47.89	250.00	10000.00	1	0	0	0	1
9306.12	39.93	250.00	10000.00	1	0	0	0	1
10081.63	33.87	250.00	2263.58	1	0	0	0	1
10857.14	29.16	250.00	224.18	0	0	0	0	0
11632.65	25.42	250.00	139.24	0	0	0	0	0
12408.16	22.40	250.00	99.99	0	0	0	0	0
13183.67	19.92	250.00	82.26	0	0	0	0	0
13959.18	17.86	250.00	68.49	0	0	0	0	0
14734.69	16.29	250.00	57.58	0	0	0	0	0
15510.20	14.80	250.00	50.05	0	0	0	0	0
16285.71	13.51	250.00	44.14	0	0	0	0	0
17061.22	12.39	250.00	39.21	0	0	0	0	0
17836.73	11.40	250.00	35.07	0	0	0	0	0
18612.24	10.53	250.00	31.56	0	0	0	0	0
19387.76	9.75	250.00	28.56	0	0	0	0	0
20163.27	9.07	250.00	25.98	0	0	0	0	0
20938.78	8.45	250.00	23.74	0	0	0	0	0
21714.29	7.89	250.00	21.78	0	0	0	0	0
22489.80	7.39	250.00	20.06	0	0	0	0	0
23265.31	6.94	250.00	18.55	0	0	0	0	0
24040.82	6.53	250.00	17.21	0	0	0	0	0
24816.33	6.15	250.00	16.02	0	0	0	0	0
25591.84	5.81	250.00	14.95	0	0	0	0	0
26367.35	5.49	250.00	13.99	0	0	0	0	0
27142.86	5.20	250.00	13.12	0	0	0	0	0
27918.37	4.93	250.00	12.34	0	0	0	0	0
28693.88	4.69	250.00	11.63	0	0	0	0	0
29469.39	4.46	250.00	10.99	0	0	0	0	0
30244.90	4.25	250.00	10.40	0	0	0	0	0
31020.41	4.05	250.00	9.86	0	0	0	0	0
31795.92	3.87	250.00	9.35	0	0	0	0	0
32571.43	3.70	250.00	8.89	0	0	0	0	0
33346.94	3.54	250.00	8.45	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
34122.45	3.39	250.00	8.05	0	0	0	0	0
34897.96	3.25	250.00	7.67	0	0	0	0	0
35673.47	3.12	250.00	7.32	0	0	0	0	0
36448.98	0.00	250.00	0.00	0	0	0	0	0
37224.49	0.00	250.00	0.00	0	0	0	0	0
38000.00	0.00	250.00	0.00	0	0	0	0	0
0.00	0.00	300.00	0.00	1	0	1	0	0
775.51	0.00	300.00	0.00	1	0	1	0	0
1551.02	0.00	300.00	0.00	1	0	1	0	0
2326.53	0.00	300.00	0.00	1	0	1	0	0
3102.04	0.00	300.00	0.00	1	0	1	0	0
3877.55	0.00	300.00	0.00	1	0	1	0	0
4653.06	0.00	300.00	0.00	1	0	1	0	0
5428.57	0.00	300.00	0.00	1	0	1	0	0
6204.08	0.00	300.00	0.00	1	0	1	0	0
6979.59	0.00	300.00	0.00	1	0	1	0	0
7755.10	0.00	300.00	0.00	1	0	1	0	0
8530.61	47.89	300.00	10000.00	1	0	0	0	1
9306.12	39.93	300.00	10000.00	1	0	0	0	1
10081.63	33.87	300.00	2263.58	1	0	0	0	1
10857.14	29.16	300.00	224.18	0	0	0	0	0
11632.65	25.42	300.00	139.24	0	0	0	0	0
12408.16	22.40	300.00	99.99	0	0	0	0	0
13183.67	19.92	300.00	82.26	0	0	0	0	0
13959.18	17.86	300.00	68.49	0	0	0	0	0
14734.69	16.29	300.00	57.58	0	0	0	0	0
15510.20	14.80	300.00	50.05	0	0	0	0	0
16285.71	13.51	300.00	44.14	0	0	0	0	0
17061.22	12.39	300.00	39.21	0	0	0	0	0
17836.73	11.40	300.00	35.07	0	0	0	0	0
18612.24	10.53	300.00	31.56	0	0	0	0	0
19387.76	9.75	300.00	28.56	0	0	0	0	0
20163.27	9.07	300.00	25.98	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
20938.78	8.45	300.00	23.74	0	0	0	0	0
21714.29	7.89	300.00	21.78	0	0	0	0	0
22489.80	7.39	300.00	20.06	0	0	0	0	0
23265.31	6.94	300.00	18.55	0	0	0	0	0
24040.82	6.53	300.00	17.21	0	0	0	0	0
24816.33	6.15	300.00	16.02	0	0	0	0	0
25591.84	5.81	300.00	14.95	0	0	0	0	0
26367.35	5.49	300.00	13.99	0	0	0	0	0
27142.86	5.20	300.00	13.12	0	0	0	0	0
27918.37	4.93	300.00	12.34	0	0	0	0	0
28693.88	4.69	300.00	11.63	0	0	0	0	0
29469.39	4.46	300.00	10.99	0	0	0	0	0
30244.90	4.25	300.00	10.40	0	0	0	0	0
31020.41	4.05	300.00	9.86	0	0	0	0	0
31795.92	3.87	300.00	9.35	0	0	0	0	0
32571.43	3.70	300.00	8.89	0	0	0	0	0
33346.94	3.54	300.00	8.45	0	0	0	0	0
34122.45	3.39	300.00	8.05	0	0	0	0	0
34897.96	3.25	300.00	7.67	0	0	0	0	0
35673.47	3.12	300.00	7.32	0	0	0	0	0
36448.98	0.00	300.00	0.00	0	0	0	0	0
37224.49	0.00	300.00	0.00	0	0	0	0	0
38000.00	0.00	300.00	0.00	0	0	0	0	0
0.00	0.00	500.00	0.00	1	0	1	0	0
775.51	0.00	500.00	0.00	1	0	1	0	0
1551.02	0.00	500.00	0.00	1	0	1	0	0
2326.53	0.00	500.00	0.00	1	0	1	0	0
3102.04	0.00	500.00	0.00	1	0	1	0	0
3877.55	0.00	500.00	0.00	1	0	1	0	0
4653.06	0.00	500.00	0.00	1	0	1	0	0
5428.57	0.00	500.00	0.00	1	0	1	0	0
6204.08	0.00	500.00	0.00	1	0	1	0	0
6979.59	0.00	500.00	0.00	1	0	1	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
7755.10	0.00	500.00	0.00	1	0	1	0	0
8530.61	47.89	500.00	10000.00	1	0	0	0	1
9306.12	39.93	500.00	10000.00	1	0	0	0	1
10081.63	33.87	500.00	2263.58	1	0	0	0	1
10857.14	29.16	500.00	224.18	0	0	0	0	0
11632.65	25.42	500.00	139.24	0	0	0	0	0
12408.16	22.40	500.00	99.99	0	0	0	0	0
13183.67	19.92	500.00	82.26	0	0	0	0	0
13959.18	17.86	500.00	68.49	0	0	0	0	0
14734.69	16.29	500.00	57.58	0	0	0	0	0
15510.20	14.80	500.00	50.05	0	0	0	0	0
16285.71	13.51	500.00	44.14	0	0	0	0	0
17061.22	12.39	500.00	39.21	0	0	0	0	0
17836.73	11.40	500.00	35.07	0	0	0	0	0
18612.24	10.53	500.00	31.56	0	0	0	0	0
19387.76	9.75	500.00	28.56	0	0	0	0	0
20163.27	9.07	500.00	25.98	0	0	0	0	0
20938.78	8.45	500.00	23.74	0	0	0	0	0
21714.29	7.89	500.00	21.78	0	0	0	0	0
22489.80	7.39	500.00	20.06	0	0	0	0	0
23265.31	6.94	500.00	18.55	0	0	0	0	0
24040.82	6.53	500.00	17.21	0	0	0	0	0
24816.33	6.15	500.00	16.02	0	0	0	0	0
25591.84	5.81	500.00	14.95	0	0	0	0	0
26367.35	5.49	500.00	13.99	0	0	0	0	0
27142.86	5.20	500.00	13.12	0	0	0	0	0
27918.37	4.93	500.00	12.34	0	0	0	0	0
28693.88	4.69	500.00	11.63	0	0	0	0	0
29469.39	4.46	500.00	10.99	0	0	0	0	0
30244.90	4.25	500.00	10.40	0	0	0	0	0
31020.41	4.05	500.00	9.86	0	0	0	0	0
31795.92	3.87	500.00	9.35	0	0	0	0	0
32571.43	3.70	500.00	8.89	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
33346.94	3.54	500.00	8.45	0	0	0	0	0
34122.45	3.39	500.00	8.05	0	0	0	0	0
34897.96	3.25	500.00	7.67	0	0	0	0	0
35673.47	3.12	500.00	7.32	0	0	0	0	0
36448.98	0.00	500.00	0.00	0	0	0	0	0
37224.49	0.00	500.00	0.00	0	0	0	0	0
38000.00	0.00	500.00	0.00	0	0	0	0	0

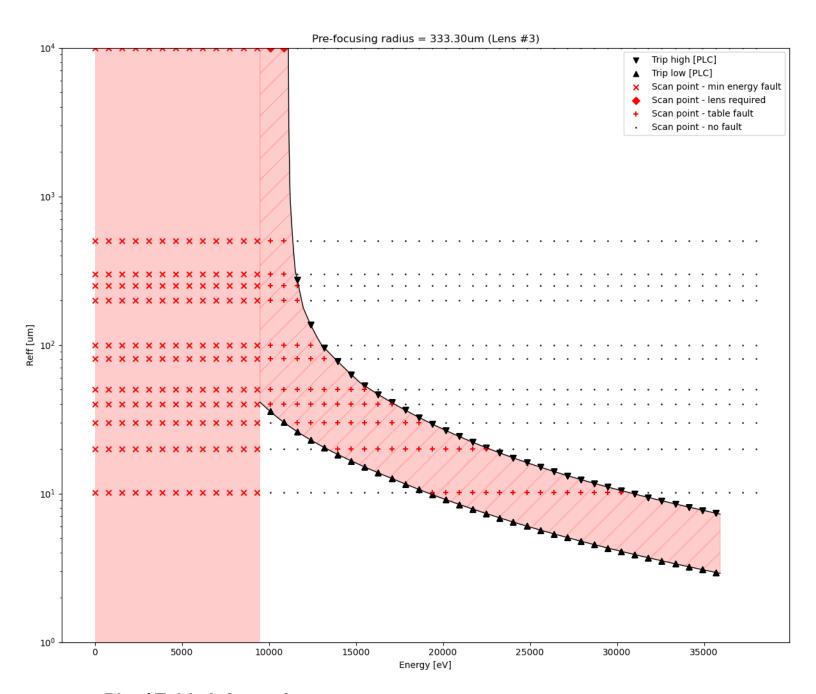
# Scan 4: 333.333µm pre-focusing lens

Data generated: 2024-08-20 22:03:06

bluesky scan sweep\_energy\_plan with 333.333µm pre-focusing lens.

## **Scan Information**

- 1. Choose a few transfocator lens sets to span the effective radius range.
- 2. For each of those lens sets, scan energy at regular intervals.
- 3. Each marker on the plot represents one of those scan points.
- 4. Record if PLC reported a fault and why.



### **Plot / Table Information**

**No fault** indicates that a data point was checked but no fault reported by PLC.

**Trip Low** and **Trip High** are values from the spreadsheet table, interpolated by the PLC and reported to EPICS.

The lines drawn around these regions and the highlighted regions are directly from the spreadsheet. **Min Energy Fault** indicates that it does not meet minimum energy requirement for a given XRT lens. **Table Fault** indicates a fault from the spreadsheet table disallowed region.

Lens Required Fault markers are clipped at the bottom of the plot.

Scan 4: 333.333µm pre-focusing lens: Scan Data Table

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
0.00	0.00	10000.00	0.00	1	0	1	0	0
775.51	0.00	10000.00	0.00	1	0	1	0	0
1551.02	0.00	10000.00	0.00	1	0	1	0	0
2326.53	0.00	10000.00	0.00	1	0	1	0	0
3102.04	0.00	10000.00	0.00	1	0	1	0	0
3877.55	0.00	10000.00	0.00	1	0	1	0	0
4653.06	0.00	10000.00	0.00	1	0	1	0	0
5428.57	0.00	10000.00	0.00	1	0	1	0	0
6204.08	0.00	10000.00	0.00	1	0	1	0	0
6979.59	0.00	10000.00	0.00	1	0	1	0	0
7755.10	0.00	10000.00	0.00	1	0	1	0	0
8530.61	0.00	10000.00	0.00	1	0	1	0	0
9306.12	0.00	10000.00	0.00	1	0	1	0	0
10081.63	35.65	10000.00	10000.00	1	0	0	1	1
10857.14	30.16	10000.00	10000.00	1	0	0	1	1
11632.65	26.07	10000.00	274.10	0	0	0	0	0
12408.16	22.92	10000.00	136.69	0	0	0	0	0
13183.67	20.39	10000.00	95.73	0	0	0	0	0
13959.18	18.32	10000.00	77.39	0	0	0	0	0
14734.69	16.58	10000.00	63.29	0	0	0	0	0
15510.20	15.08	10000.00	53.10	0	0	0	0	0
16285.71	13.78	10000.00	46.44	0	0	0	0	0
17061.22	12.62	10000.00	40.96	0	0	0	0	0
17836.73	11.59	10000.00	36.41	0	0	0	0	0
18612.24	10.66	10000.00	32.58	0	0	0	0	0
19387.76	9.83	10000.00	29.34	0	0	0	0	0
20163.27	9.10	10000.00	26.58	0	0	0	0	0
20938.78	8.44	10000.00	24.20	0	0	0	0	0
21714.29	7.86	10000.00	22.14	0	0	0	0	0
22489.80	7.33	10000.00	20.34	0	0	0	0	0
23265.31	6.85	10000.00	18.77	0	0	0	0	0
24040.82	6.42	10000.00	17.38	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
24816.33	6.03	10000.00	16.15	0	0	0	0	0
25591.84	5.68	10000.00	15.06	0	0	0	0	0
26367.35	5.35	10000.00	14.08	0	0	0	0	0
27142.86	5.05	10000.00	13.20	0	0	0	0	0
27918.37	4.78	10000.00	12.41	0	0	0	0	0
28693.88	4.53	10000.00	11.70	0	0	0	0	0
29469.39	4.30	10000.00	11.05	0	0	0	0	0
30244.90	4.08	10000.00	10.46	0	0	0	0	0
31020.41	3.88	10000.00	9.92	0	0	0	0	0
31795.92	3.70	10000.00	9.41	0	0	0	0	0
32571.43	3.52	10000.00	8.94	0	0	0	0	0
33346.94	3.36	10000.00	8.51	0	0	0	0	0
34122.45	3.21	10000.00	8.11	0	0	0	0	0
34897.96	3.07	10000.00	7.73	0	0	0	0	0
35673.47	2.94	10000.00	7.38	0	0	0	0	0
36448.98	0.00	10000.00	0.00	0	0	0	0	0
37224.49	0.00	10000.00	0.00	0	0	0	0	0
38000.00	0.00	10000.00	0.00	0	0	0	0	0
0.00	0.00	10.17	0.00	1	0	1	0	0
775.51	0.00	10.17	0.00	1	0	1	0	0
1551.02	0.00	10.17	0.00	1	0	1	0	0
2326.53	0.00	10.17	0.00	1	0	1	0	0
3102.04	0.00	10.17	0.00	1	0	1	0	0
3877.55	0.00	10.17	0.00	1	0	1	0	0
4653.06	0.00	10.17	0.00	1	0	1	0	0
5428.57	0.00	10.17	0.00	1	0	1	0	0
6204.08	0.00	10.17	0.00	1	0	1	0	0
6979.59	0.00	10.17	0.00	1	0	1	0	0
7755.10	0.00	10.17	0.00	1	0	1	0	0
8530.61	0.00	10.17	0.00	1	0	1	0	0
9306.12	0.00	10.17	0.00	1	0	1	0	0
10081.63	35.65	10.17	10000.00	0	0	0	0	0
10857.14	30.16	10.17	10000.00	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
11632.65	26.07	10.17	274.10	0	0	0	0	0
12408.16	22.92	10.17	136.69	0	0	0	0	0
13183.67	20.39	10.17	95.73	0	0	0	0	0
13959.18	18.32	10.17	77.39	0	0	0	0	0
14734.69	16.58	10.17	63.29	0	0	0	0	0
15510.20	15.08	10.17	53.10	0	0	0	0	0
16285.71	13.78	10.17	46.44	0	0	0	0	0
17061.22	12.62	10.17	40.96	0	0	0	0	0
17836.73	11.59	10.17	36.41	0	0	0	0	0
18612.24	10.66	10.17	32.58	0	0	0	0	0
19387.76	9.83	10.17	29.34	1	0	0	0	1
20163.27	9.10	10.17	26.58	1	0	0	0	1
20938.78	8.44	10.17	24.20	1	0	0	0	1
21714.29	7.86	10.17	22.14	1	0	0	0	1
22489.80	7.33	10.17	20.34	1	0	0	0	1
23265.31	6.85	10.17	18.77	1	0	0	0	1
24040.82	6.42	10.17	17.38	1	0	0	0	1
24816.33	6.03	10.17	16.15	1	0	0	0	1
25591.84	5.68	10.17	15.06	1	0	0	0	1
26367.35	5.35	10.17	14.08	1	0	0	0	1
27142.86	5.05	10.17	13.20	1	0	0	0	1
27918.37	4.78	10.17	12.41	1	0	0	0	1
28693.88	4.53	10.17	11.70	1	0	0	0	1
29469.39	4.30	10.17	11.05	1	0	0	0	1
30244.90	4.08	10.17	10.46	1	0	0	0	1
31020.41	3.88	10.17	9.92	0	0	0	0	0
31795.92	3.70	10.17	9.41	0	0	0	0	0
32571.43	3.52	10.17	8.94	0	0	0	0	0
33346.94	3.36	10.17	8.51	0	0	0	0	0
34122.45	3.21	10.17	8.11	0	0	0	0	0
34897.96	3.07	10.17	7.73	0	0	0	0	0
35673.47	2.94	10.17	7.38	0	0	0	0	0
36448.98	0.00	10.17	0.00	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
37224.49	0.00	10.17	0.00	0	0	0	0	0
38000.00	0.00	10.17	0.00	0	0	0	0	0
0.00	0.00	20.00	0.00	1	0	1	0	0
775.51	0.00	20.00	0.00	1	0	1	0	0
1551.02	0.00	20.00	0.00	1	0	1	0	0
2326.53	0.00	20.00	0.00	1	0	1	0	0
3102.04	0.00	20.00	0.00	1	0	1	0	0
3877.55	0.00	20.00	0.00	1	0	1	0	0
4653.06	0.00	20.00	0.00	1	0	1	0	0
5428.57	0.00	20.00	0.00	1	0	1	0	0
6204.08	0.00	20.00	0.00	1	0	1	0	0
6979.59	0.00	20.00	0.00	1	0	1	0	0
7755.10	0.00	20.00	0.00	1	0	1	0	0
8530.61	0.00	20.00	0.00	1	0	1	0	0
9306.12	0.00	20.00	0.00	1	0	1	0	0
10081.63	35.65	20.00	10000.00	0	0	0	0	0
10857.14	30.16	20.00	10000.00	0	0	0	0	0
11632.65	26.07	20.00	274.10	0	0	0	0	0
12408.16	22.92	20.00	136.69	0	0	0	0	0
13183.67	20.39	20.00	95.73	0	0	0	0	0
13959.18	18.32	20.00	77.39	1	0	0	0	1
14734.69	16.58	20.00	63.29	1	0	0	0	1
15510.20	15.08	20.00	53.10	1	0	0	0	1
16285.71	13.78	20.00	46.44	1	0	0	0	1
17061.22	12.62	20.00	40.96	1	0	0	0	1
17836.73	11.59	20.00	36.41	1	0	0	0	1
18612.24	10.66	20.00	32.58	1	0	0	0	1
19387.76	9.83	20.00	29.34	1	0	0	0	1
20163.27	9.10	20.00	26.58	1	0	0	0	1
20938.78	8.44	20.00	24.20	1	0	0	0	1
21714.29	7.86	20.00	22.14	1	0	0	0	1
22489.80	7.33	20.00	20.34	1	0	0	0	1
23265.31	6.85	20.00	18.77	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
24040.82	6.42	20.00	17.38	0	0	0	0	0
24816.33	6.03	20.00	16.15	0	0	0	0	0
25591.84	5.68	20.00	15.06	0	0	0	0	0
26367.35	5.35	20.00	14.08	0	0	0	0	0
27142.86	5.05	20.00	13.20	0	0	0	0	0
27918.37	4.78	20.00	12.41	0	0	0	0	0
28693.88	4.53	20.00	11.70	0	0	0	0	0
29469.39	4.30	20.00	11.05	0	0	0	0	0
30244.90	4.08	20.00	10.46	0	0	0	0	0
31020.41	3.88	20.00	9.92	0	0	0	0	0
31795.92	3.70	20.00	9.41	0	0	0	0	0
32571.43	3.52	20.00	8.94	0	0	0	0	0
33346.94	3.36	20.00	8.51	0	0	0	0	0
34122.45	3.21	20.00	8.11	0	0	0	0	0
34897.96	3.07	20.00	7.73	0	0	0	0	0
35673.47	2.94	20.00	7.38	0	0	0	0	0
36448.98	0.00	20.00	0.00	0	0	0	0	0
37224.49	0.00	20.00	0.00	0	0	0	0	0
38000.00	0.00	20.00	0.00	0	0	0	0	0
0.00	0.00	30.00	0.00	1	0	1	0	0
775.51	0.00	30.00	0.00	1	0	1	0	0
1551.02	0.00	30.00	0.00	1	0	1	0	0
2326.53	0.00	30.00	0.00	1	0	1	0	0
3102.04	0.00	30.00	0.00	1	0	1	0	0
3877.55	0.00	30.00	0.00	1	0	1	0	0
4653.06	0.00	30.00	0.00	1	0	1	0	0
5428.57	0.00	30.00	0.00	1	0	1	0	0
6204.08	0.00	30.00	0.00	1	0	1	0	0
6979.59	0.00	30.00	0.00	1	0	1	0	0
7755.10	0.00	30.00	0.00	1	0	1	0	0
8530.61	0.00	30.00	0.00	1	0	1	0	0
9306.12	0.00	30.00	0.00	1	0	1	0	0
10081.63	35.65	30.00	10000.00	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
10857.14	30.16	30.00	10000.00	0	0	0	0	0
11632.65	26.07	30.00	274.10	1	0	0	0	1
12408.16	22.92	30.00	136.69	1	0	0	0	1
13183.67	20.39	30.00	95.73	1	0	0	0	1
13959.18	18.32	30.00	77.39	1	0	0	0	1
14734.69	16.58	30.00	63.29	1	0	0	0	1
15510.20	15.08	30.00	53.10	1	0	0	0	1
16285.71	13.78	30.00	46.44	1	0	0	0	1
17061.22	12.62	30.00	40.96	1	0	0	0	1
17836.73	11.59	30.00	36.41	1	0	0	0	1
18612.24	10.66	30.00	32.58	1	0	0	0	1
19387.76	9.83	30.00	29.34	0	0	0	0	0
20163.27	9.10	30.00	26.58	0	0	0	0	0
20938.78	8.44	30.00	24.20	0	0	0	0	0
21714.29	7.86	30.00	22.14	0	0	0	0	0
22489.80	7.33	30.00	20.34	0	0	0	0	0
23265.31	6.85	30.00	18.77	0	0	0	0	0
24040.82	6.42	30.00	17.38	0	0	0	0	0
24816.33	6.03	30.00	16.15	0	0	0	0	0
25591.84	5.68	30.00	15.06	0	0	0	0	0
26367.35	5.35	30.00	14.08	0	0	0	0	0
27142.86	5.05	30.00	13.20	0	0	0	0	0
27918.37	4.78	30.00	12.41	0	0	0	0	0
28693.88	4.53	30.00	11.70	0	0	0	0	0
29469.39	4.30	30.00	11.05	0	0	0	0	0
30244.90	4.08	30.00	10.46	0	0	0	0	0
31020.41	3.88	30.00	9.92	0	0	0	0	0
31795.92	3.70	30.00	9.41	0	0	0	0	0
32571.43	3.52	30.00	8.94	0	0	0	0	0
33346.94	3.36	30.00	8.51	0	0	0	0	0
34122.45	3.21	30.00	8.11	0	0	0	0	0
34897.96	3.07	30.00	7.73	0	0	0	0	0
35673.47	2.94	30.00	7.38	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
36448.98	0.00	30.00	0.00	0	0	0	0	0
37224.49	0.00	30.00	0.00	0	0	0	0	0
38000.00	0.00	30.00	0.00	0	0	0	0	0
0.00	0.00	40.00	0.00	1	0	1	0	0
775.51	0.00	40.00	0.00	1	0	1	0	0
1551.02	0.00	40.00	0.00	1	0	1	0	0
2326.53	0.00	40.00	0.00	1	0	1	0	0
3102.04	0.00	40.00	0.00	1	0	1	0	0
3877.55	0.00	40.00	0.00	1	0	1	0	0
4653.06	0.00	40.00	0.00	1	0	1	0	0
5428.57	0.00	40.00	0.00	1	0	1	0	0
6204.08	0.00	40.00	0.00	1	0	1	0	0
6979.59	0.00	40.00	0.00	1	0	1	0	0
7755.10	0.00	40.00	0.00	1	0	1	0	0
8530.61	0.00	40.00	0.00	1	0	1	0	0
9306.12	0.00	40.00	0.00	1	0	1	0	0
10081.63	35.65	40.00	10000.00	1	0	0	0	1
10857.14	30.16	40.00	10000.00	1	0	0	0	1
11632.65	26.07	40.00	274.10	1	0	0	0	1
12408.16	22.92	40.00	136.69	1	0	0	0	1
13183.67	20.39	40.00	95.73	1	0	0	0	1
13959.18	18.32	40.00	77.39	1	0	0	0	1
14734.69	16.58	40.00	63.29	1	0	0	0	1
15510.20	15.08	40.00	53.10	1	0	0	0	1
16285.71	13.78	40.00	46.44	1	0	0	0	1
17061.22	12.62	40.00	40.96	1	0	0	0	1
17836.73	11.59	40.00	36.41	0	0	0	0	0
18612.24	10.66	40.00	32.58	0	0	0	0	0
19387.76	9.83	40.00	29.34	0	0	0	0	0
20163.27	9.10	40.00	26.58	0	0	0	0	0
20938.78	8.44	40.00	24.20	0	0	0	0	0
21714.29	7.86	40.00	22.14	0	0	0	0	0
22489.80	7.33	40.00	20.34	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
23265.31	6.85	40.00	18.77	0	0	0	0	0
24040.82	6.42	40.00	17.38	0	0	0	0	0
24816.33	6.03	40.00	16.15	0	0	0	0	0
25591.84	5.68	40.00	15.06	0	0	0	0	0
26367.35	5.35	40.00	14.08	0	0	0	0	0
27142.86	5.05	40.00	13.20	0	0	0	0	0
27918.37	4.78	40.00	12.41	0	0	0	0	0
28693.88	4.53	40.00	11.70	0	0	0	0	0
29469.39	4.30	40.00	11.05	0	0	0	0	0
30244.90	4.08	40.00	10.46	0	0	0	0	0
31020.41	3.88	40.00	9.92	0	0	0	0	0
31795.92	3.70	40.00	9.41	0	0	0	0	0
32571.43	3.52	40.00	8.94	0	0	0	0	0
33346.94	3.36	40.00	8.51	0	0	0	0	0
34122.45	3.21	40.00	8.11	0	0	0	0	0
34897.96	3.07	40.00	7.73	0	0	0	0	0
35673.47	2.94	40.00	7.38	0	0	0	0	0
36448.98	0.00	40.00	0.00	0	0	0	0	0
37224.49	0.00	40.00	0.00	0	0	0	0	0
38000.00	0.00	40.00	0.00	0	0	0	0	0
0.00	0.00	50.00	0.00	1	0	1	0	0
775.51	0.00	50.00	0.00	1	0	1	0	0
1551.02	0.00	50.00	0.00	1	0	1	0	0
2326.53	0.00	50.00	0.00	1	0	1	0	0
3102.04	0.00	50.00	0.00	1	0	1	0	0
3877.55	0.00	50.00	0.00	1	0	1	0	0
4653.06	0.00	50.00	0.00	1	0	1	0	0
5428.57	0.00	50.00	0.00	1	0	1	0	0
6204.08	0.00	50.00	0.00	1	0	1	0	0
6979.59	0.00	50.00	0.00	1	0	1	0	0
7755.10	0.00	50.00	0.00	1	0	1	0	0
8530.61	0.00	50.00	0.00	1	0	1	0	0
9306.12	0.00	50.00	0.00	1	0	1	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
10081.63	35.65	50.00	10000.00	1	0	0	0	1
10857.14	30.16	50.00	10000.00	1	0	0	0	1
11632.65	26.07	50.00	274.10	1	0	0	0	1
12408.16	22.92	50.00	136.69	1	0	0	0	1
13183.67	20.39	50.00	95.73	1	0	0	0	1
13959.18	18.32	50.00	77.39	1	0	0	0	1
14734.69	16.58	50.00	63.29	1	0	0	0	1
15510.20	15.08	50.00	53.10	1	0	0	0	1
16285.71	13.78	50.00	46.44	0	0	0	0	0
17061.22	12.62	50.00	40.96	0	0	0	0	0
17836.73	11.59	50.00	36.41	0	0	0	0	0
18612.24	10.66	50.00	32.58	0	0	0	0	0
19387.76	9.83	50.00	29.34	0	0	0	0	0
20163.27	9.10	50.00	26.58	0	0	0	0	0
20938.78	8.44	50.00	24.20	0	0	0	0	0
21714.29	7.86	50.00	22.14	0	0	0	0	0
22489.80	7.33	50.00	20.34	0	0	0	0	0
23265.31	6.85	50.00	18.77	0	0	0	0	0
24040.82	6.42	50.00	17.38	0	0	0	0	0
24816.33	6.03	50.00	16.15	0	0	0	0	0
25591.84	5.68	50.00	15.06	0	0	0	0	0
26367.35	5.35	50.00	14.08	0	0	0	0	0
27142.86	5.05	50.00	13.20	0	0	0	0	0
27918.37	4.78	50.00	12.41	0	0	0	0	0
28693.88	4.53	50.00	11.70	0	0	0	0	0
29469.39	4.30	50.00	11.05	0	0	0	0	0
30244.90	4.08	50.00	10.46	0	0	0	0	0
31020.41	3.88	50.00	9.92	0	0	0	0	0
31795.92	3.70	50.00	9.41	0	0	0	0	0
32571.43	3.52	50.00	8.94	0	0	0	0	0
33346.94	3.36	50.00	8.51	0	0	0	0	0
34122.45	3.21	50.00	8.11	0	0	0	0	0
34897.96	3.07	50.00	7.73	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
35673.47	2.94	50.00	7.38	0	0	0	0	0
36448.98	0.00	50.00	0.00	0	0	0	0	0
37224.49	0.00	50.00	0.00	0	0	0	0	0
38000.00	0.00	50.00	0.00	0	0	0	0	0
0.00	0.00	81.08	0.00	1	0	1	0	0
775.51	0.00	81.08	0.00	1	0	1	0	0
1551.02	0.00	81.08	0.00	1	0	1	0	0
2326.53	0.00	81.08	0.00	1	0	1	0	0
3102.04	0.00	81.08	0.00	1	0	1	0	0
3877.55	0.00	81.08	0.00	1	0	1	0	0
4653.06	0.00	81.08	0.00	1	0	1	0	0
5428.57	0.00	81.08	0.00	1	0	1	0	0
6204.08	0.00	81.08	0.00	1	0	1	0	0
6979.59	0.00	81.08	0.00	1	0	1	0	0
7755.10	0.00	81.08	0.00	1	0	1	0	0
8530.61	0.00	81.08	0.00	1	0	1	0	0
9306.12	0.00	81.08	0.00	1	0	1	0	0
10081.63	35.65	81.08	10000.00	1	0	0	0	1
10857.14	30.16	81.08	10000.00	1	0	0	0	1
11632.65	26.07	81.08	274.10	1	0	0	0	1
12408.16	22.92	81.08	136.69	1	0	0	0	1
13183.67	20.39	81.08	95.73	1	0	0	0	1
13959.18	18.32	81.08	77.39	0	0	0	0	0
14734.69	16.58	81.08	63.29	0	0	0	0	0
15510.20	15.08	81.08	53.10	0	0	0	0	0
16285.71	13.78	81.08	46.44	0	0	0	0	0
17061.22	12.62	81.08	40.96	0	0	0	0	0
17836.73	11.59	81.08	36.41	0	0	0	0	0
18612.24	10.66	81.08	32.58	0	0	0	0	0
19387.76	9.83	81.08	29.34	0	0	0	0	0
20163.27	9.10	81.08	26.58	0	0	0	0	0
20938.78	8.44	81.08	24.20	0	0	0	0	0
21714.29	7.86	81.08	22.14	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
22489.80	7.33	81.08	20.34	0	0	0	0	0
23265.31	6.85	81.08	18.77	0	0	0	0	0
24040.82	6.42	81.08	17.38	0	0	0	0	0
24816.33	6.03	81.08	16.15	0	0	0	0	0
25591.84	5.68	81.08	15.06	0	0	0	0	0
26367.35	5.35	81.08	14.08	0	0	0	0	0
27142.86	5.05	81.08	13.20	0	0	0	0	0
27918.37	4.78	81.08	12.41	0	0	0	0	0
28693.88	4.53	81.08	11.70	0	0	0	0	0
29469.39	4.30	81.08	11.05	0	0	0	0	0
30244.90	4.08	81.08	10.46	0	0	0	0	0
31020.41	3.88	81.08	9.92	0	0	0	0	0
31795.92	3.70	81.08	9.41	0	0	0	0	0
32571.43	3.52	81.08	8.94	0	0	0	0	0
33346.94	3.36	81.08	8.51	0	0	0	0	0
34122.45	3.21	81.08	8.11	0	0	0	0	0
34897.96	3.07	81.08	7.73	0	0	0	0	0
35673.47	2.94	81.08	7.38	0	0	0	0	0
36448.98	0.00	81.08	0.00	0	0	0	0	0
37224.49	0.00	81.08	0.00	0	0	0	0	0
38000.00	0.00	81.08	0.00	0	0	0	0	0
0.00	0.00	100.00	0.00	1	0	1	0	0
775.51	0.00	100.00	0.00	1	0	1	0	0
1551.02	0.00	100.00	0.00	1	0	1	0	0
2326.53	0.00	100.00	0.00	1	0	1	0	0
3102.04	0.00	100.00	0.00	1	0	1	0	0
3877.55	0.00	100.00	0.00	1	0	1	0	0
4653.06	0.00	100.00	0.00	1	0	1	0	0
5428.57	0.00	100.00	0.00	1	0	1	0	0
6204.08	0.00	100.00	0.00	1	0	1	0	0
6979.59	0.00	100.00	0.00	1	0	1	0	0
7755.10	0.00	100.00	0.00	1	0	1	0	0
8530.61	0.00	100.00	0.00	1	0	1	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
9306.12	0.00	100.00	0.00	1	0	1	0	0
10081.63	35.65	100.00	10000.00	1	0	0	0	1
10857.14	30.16	100.00	10000.00	1	0	0	0	1
11632.65	26.07	100.00	274.10	1	0	0	0	1
12408.16	22.92	100.00	136.69	1	0	0	0	1
13183.67	20.39	100.00	95.73	0	0	0	0	0
13959.18	18.32	100.00	77.39	0	0	0	0	0
14734.69	16.58	100.00	63.29	0	0	0	0	0
15510.20	15.08	100.00	53.10	0	0	0	0	0
16285.71	13.78	100.00	46.44	0	0	0	0	0
17061.22	12.62	100.00	40.96	0	0	0	0	0
17836.73	11.59	100.00	36.41	0	0	0	0	0
18612.24	10.66	100.00	32.58	0	0	0	0	0
19387.76	9.83	100.00	29.34	0	0	0	0	0
20163.27	9.10	100.00	26.58	0	0	0	0	0
20938.78	8.44	100.00	24.20	0	0	0	0	0
21714.29	7.86	100.00	22.14	0	0	0	0	0
22489.80	7.33	100.00	20.34	0	0	0	0	0
23265.31	6.85	100.00	18.77	0	0	0	0	0
24040.82	6.42	100.00	17.38	0	0	0	0	0
24816.33	6.03	100.00	16.15	0	0	0	0	0
25591.84	5.68	100.00	15.06	0	0	0	0	0
26367.35	5.35	100.00	14.08	0	0	0	0	0
27142.86	5.05	100.00	13.20	0	0	0	0	0
27918.37	4.78	100.00	12.41	0	0	0	0	0
28693.88	4.53	100.00	11.70	0	0	0	0	0
29469.39	4.30	100.00	11.05	0	0	0	0	0
30244.90	4.08	100.00	10.46	0	0	0	0	0
31020.41	3.88	100.00	9.92	0	0	0	0	0
31795.92	3.70	100.00	9.41	0	0	0	0	0
32571.43	3.52	100.00	8.94	0	0	0	0	0
33346.94	3.36	100.00	8.51	0	0	0	0	0
34122.45	3.21	100.00	8.11	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
34897.96	3.07	100.00	7.73	0	0	0	0	0
35673.47	2.94	100.00	7.38	0	0	0	0	0
36448.98	0.00	100.00	0.00	0	0	0	0	0
37224.49	0.00	100.00	0.00	0	0	0	0	0
38000.00	0.00	100.00	0.00	0	0	0	0	0
0.00	0.00	200.00	0.00	1	0	1	0	0
775.51	0.00	200.00	0.00	1	0	1	0	0
1551.02	0.00	200.00	0.00	1	0	1	0	0
2326.53	0.00	200.00	0.00	1	0	1	0	0
3102.04	0.00	200.00	0.00	1	0	1	0	0
3877.55	0.00	200.00	0.00	1	0	1	0	0
4653.06	0.00	200.00	0.00	1	0	1	0	0
5428.57	0.00	200.00	0.00	1	0	1	0	0
6204.08	0.00	200.00	0.00	1	0	1	0	0
6979.59	0.00	200.00	0.00	1	0	1	0	0
7755.10	0.00	200.00	0.00	1	0	1	0	0
8530.61	0.00	200.00	0.00	1	0	1	0	0
9306.12	0.00	200.00	0.00	1	0	1	0	0
10081.63	35.65	200.00	10000.00	1	0	0	0	1
10857.14	30.16	200.00	10000.00	1	0	0	0	1
11632.65	26.07	200.00	274.10	1	0	0	0	1
12408.16	22.92	200.00	136.69	0	0	0	0	0
13183.67	20.39	200.00	95.73	0	0	0	0	0
13959.18	18.32	200.00	77.39	0	0	0	0	0
14734.69	16.58	200.00	63.29	0	0	0	0	0
15510.20	15.08	200.00	53.10	0	0	0	0	0
16285.71	13.78	200.00	46.44	0	0	0	0	0
17061.22	12.62	200.00	40.96	0	0	0	0	0
17836.73	11.59	200.00	36.41	0	0	0	0	0
18612.24	10.66	200.00	32.58	0	0	0	0	0
19387.76	9.83	200.00	29.34	0	0	0	0	0
20163.27	9.10	200.00	26.58	0	0	0	0	0
20938.78	8.44	200.00	24.20	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
21714.29	7.86	200.00	22.14	0	0	0	0	0
22489.80	7.33	200.00	20.34	0	0	0	0	0
23265.31	6.85	200.00	18.77	0	0	0	0	0
24040.82	6.42	200.00	17.38	0	0	0	0	0
24816.33	6.03	200.00	16.15	0	0	0	0	0
25591.84	5.68	200.00	15.06	0	0	0	0	0
26367.35	5.35	200.00	14.08	0	0	0	0	0
27142.86	5.05	200.00	13.20	0	0	0	0	0
27918.37	4.78	200.00	12.41	0	0	0	0	0
28693.88	4.53	200.00	11.70	0	0	0	0	0
29469.39	4.30	200.00	11.05	0	0	0	0	0
30244.90	4.08	200.00	10.46	0	0	0	0	0
31020.41	3.88	200.00	9.92	0	0	0	0	0
31795.92	3.70	200.00	9.41	0	0	0	0	0
32571.43	3.52	200.00	8.94	0	0	0	0	0
33346.94	3.36	200.00	8.51	0	0	0	0	0
34122.45	3.21	200.00	8.11	0	0	0	0	0
34897.96	3.07	200.00	7.73	0	0	0	0	0
35673.47	2.94	200.00	7.38	0	0	0	0	0
36448.98	0.00	200.00	0.00	0	0	0	0	0
37224.49	0.00	200.00	0.00	0	0	0	0	0
38000.00	0.00	200.00	0.00	0	0	0	0	0
0.00	0.00	250.00	0.00	1	0	1	0	0
775.51	0.00	250.00	0.00	1	0	1	0	0
1551.02	0.00	250.00	0.00	1	0	1	0	0
2326.53	0.00	250.00	0.00	1	0	1	0	0
3102.04	0.00	250.00	0.00	1	0	1	0	0
3877.55	0.00	250.00	0.00	1	0	1	0	0
4653.06	0.00	250.00	0.00	1	0	1	0	0
5428.57	0.00	250.00	0.00	1	0	1	0	0
6204.08	0.00	250.00	0.00	1	0	1	0	0
6979.59	0.00	250.00	0.00	1	0	1	0	0
7755.10	0.00	250.00	0.00	1	0	1	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
8530.61	0.00	250.00	0.00	1	0	1	0	0
9306.12	0.00	250.00	0.00	1	0	1	0	0
10081.63	35.65	250.00	10000.00	1	0	0	0	1
10857.14	30.16	250.00	10000.00	1	0	0	0	1
11632.65	26.07	250.00	274.10	1	0	0	0	1
12408.16	22.92	250.00	136.69	0	0	0	0	0
13183.67	20.39	250.00	95.73	0	0	0	0	0
13959.18	18.32	250.00	77.39	0	0	0	0	0
14734.69	16.58	250.00	63.29	0	0	0	0	0
15510.20	15.08	250.00	53.10	0	0	0	0	0
16285.71	13.78	250.00	46.44	0	0	0	0	0
17061.22	12.62	250.00	40.96	0	0	0	0	0
17836.73	11.59	250.00	36.41	0	0	0	0	0
18612.24	10.66	250.00	32.58	0	0	0	0	0
19387.76	9.83	250.00	29.34	0	0	0	0	0
20163.27	9.10	250.00	26.58	0	0	0	0	0
20938.78	8.44	250.00	24.20	0	0	0	0	0
21714.29	7.86	250.00	22.14	0	0	0	0	0
22489.80	7.33	250.00	20.34	0	0	0	0	0
23265.31	6.85	250.00	18.77	0	0	0	0	0
24040.82	6.42	250.00	17.38	0	0	0	0	0
24816.33	6.03	250.00	16.15	0	0	0	0	0
25591.84	5.68	250.00	15.06	0	0	0	0	0
26367.35	5.35	250.00	14.08	0	0	0	0	0
27142.86	5.05	250.00	13.20	0	0	0	0	0
27918.37	4.78	250.00	12.41	0	0	0	0	0
28693.88	4.53	250.00	11.70	0	0	0	0	0
29469.39	4.30	250.00	11.05	0	0	0	0	0
30244.90	4.08	250.00	10.46	0	0	0	0	0
31020.41	3.88	250.00	9.92	0	0	0	0	0
31795.92	3.70	250.00	9.41	0	0	0	0	0
32571.43	3.52	250.00	8.94	0	0	0	0	0
33346.94	3.36	250.00	8.51	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
34122.45	3.21	250.00	8.11	0	0	0	0	0
34897.96	3.07	250.00	7.73	0	0	0	0	0
35673.47	2.94	250.00	7.38	0	0	0	0	0
36448.98	0.00	250.00	0.00	0	0	0	0	0
37224.49	0.00	250.00	0.00	0	0	0	0	0
38000.00	0.00	250.00	0.00	0	0	0	0	0
0.00	0.00	300.00	0.00	1	0	1	0	0
775.51	0.00	300.00	0.00	1	0	1	0	0
1551.02	0.00	300.00	0.00	1	0	1	0	0
2326.53	0.00	300.00	0.00	1	0	1	0	0
3102.04	0.00	300.00	0.00	1	0	1	0	0
3877.55	0.00	300.00	0.00	1	0	1	0	0
4653.06	0.00	300.00	0.00	1	0	1	0	0
5428.57	0.00	300.00	0.00	1	0	1	0	0
6204.08	0.00	300.00	0.00	1	0	1	0	0
6979.59	0.00	300.00	0.00	1	0	1	0	0
7755.10	0.00	300.00	0.00	1	0	1	0	0
8530.61	0.00	300.00	0.00	1	0	1	0	0
9306.12	0.00	300.00	0.00	1	0	1	0	0
10081.63	35.65	300.00	10000.00	1	0	0	0	1
10857.14	30.16	300.00	10000.00	1	0	0	0	1
11632.65	26.07	300.00	274.10	0	0	0	0	0
12408.16	22.92	300.00	136.69	0	0	0	0	0
13183.67	20.39	300.00	95.73	0	0	0	0	0
13959.18	18.32	300.00	77.39	0	0	0	0	0
14734.69	16.58	300.00	63.29	0	0	0	0	0
15510.20	15.08	300.00	53.10	0	0	0	0	0
16285.71	13.78	300.00	46.44	0	0	0	0	0
17061.22	12.62	300.00	40.96	0	0	0	0	0
17836.73	11.59	300.00	36.41	0	0	0	0	0
18612.24	10.66	300.00	32.58	0	0	0	0	0
19387.76	9.83	300.00	29.34	0	0	0	0	0
20163.27	9.10	300.00	26.58	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
20938.78	8.44	300.00	24.20	0	0	0	0	0
21714.29	7.86	300.00	22.14	0	0	0	0	0
22489.80	7.33	300.00	20.34	0	0	0	0	0
23265.31	6.85	300.00	18.77	0	0	0	0	0
24040.82	6.42	300.00	17.38	0	0	0	0	0
24816.33	6.03	300.00	16.15	0	0	0	0	0
25591.84	5.68	300.00	15.06	0	0	0	0	0
26367.35	5.35	300.00	14.08	0	0	0	0	0
27142.86	5.05	300.00	13.20	0	0	0	0	0
27918.37	4.78	300.00	12.41	0	0	0	0	0
28693.88	4.53	300.00	11.70	0	0	0	0	0
29469.39	4.30	300.00	11.05	0	0	0	0	0
30244.90	4.08	300.00	10.46	0	0	0	0	0
31020.41	3.88	300.00	9.92	0	0	0	0	0
31795.92	3.70	300.00	9.41	0	0	0	0	0
32571.43	3.52	300.00	8.94	0	0	0	0	0
33346.94	3.36	300.00	8.51	0	0	0	0	0
34122.45	3.21	300.00	8.11	0	0	0	0	0
34897.96	3.07	300.00	7.73	0	0	0	0	0
35673.47	2.94	300.00	7.38	0	0	0	0	0
36448.98	0.00	300.00	0.00	0	0	0	0	0
37224.49	0.00	300.00	0.00	0	0	0	0	0
38000.00	0.00	300.00	0.00	0	0	0	0	0
0.00	0.00	500.00	0.00	1	0	1	0	0
775.51	0.00	500.00	0.00	1	0	1	0	0
1551.02	0.00	500.00	0.00	1	0	1	0	0
2326.53	0.00	500.00	0.00	1	0	1	0	0
3102.04	0.00	500.00	0.00	1	0	1	0	0
3877.55	0.00	500.00	0.00	1	0	1	0	0
4653.06	0.00	500.00	0.00	1	0	1	0	0
5428.57	0.00	500.00	0.00	1	0	1	0	0
6204.08	0.00	500.00	0.00	1	0	1	0	0
6979.59	0.00	500.00	0.00	1	0	1	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
7755.10	0.00	500.00	0.00	1	0	1	0	0
8530.61	0.00	500.00	0.00	1	0	1	0	0
9306.12	0.00	500.00	0.00	1	0	1	0	0
10081.63	35.65	500.00	10000.00	1	0	0	0	1
10857.14	30.16	500.00	10000.00	1	0	0	0	1
11632.65	26.07	500.00	274.10	0	0	0	0	0
12408.16	22.92	500.00	136.69	0	0	0	0	0
13183.67	20.39	500.00	95.73	0	0	0	0	0
13959.18	18.32	500.00	77.39	0	0	0	0	0
14734.69	16.58	500.00	63.29	0	0	0	0	0
15510.20	15.08	500.00	53.10	0	0	0	0	0
16285.71	13.78	500.00	46.44	0	0	0	0	0
17061.22	12.62	500.00	40.96	0	0	0	0	0
17836.73	11.59	500.00	36.41	0	0	0	0	0
18612.24	10.66	500.00	32.58	0	0	0	0	0
19387.76	9.83	500.00	29.34	0	0	0	0	0
20163.27	9.10	500.00	26.58	0	0	0	0	0
20938.78	8.44	500.00	24.20	0	0	0	0	0
21714.29	7.86	500.00	22.14	0	0	0	0	0
22489.80	7.33	500.00	20.34	0	0	0	0	0
23265.31	6.85	500.00	18.77	0	0	0	0	0
24040.82	6.42	500.00	17.38	0	0	0	0	0
24816.33	6.03	500.00	16.15	0	0	0	0	0
25591.84	5.68	500.00	15.06	0	0	0	0	0
26367.35	5.35	500.00	14.08	0	0	0	0	0
27142.86	5.05	500.00	13.20	0	0	0	0	0
27918.37	4.78	500.00	12.41	0	0	0	0	0
28693.88	4.53	500.00	11.70	0	0	0	0	0
29469.39	4.30	500.00	11.05	0	0	0	0	0
30244.90	4.08	500.00	10.46	0	0	0	0	0
31020.41	3.88	500.00	9.92	0	0	0	0	0
31795.92	3.70	500.00	9.41	0	0	0	0	0
32571.43	3.52	500.00	8.94	0	0	0	0	0

Energy [eV]	Trip low [um]	TFS Radius [um]	Trip high [um]	Faulted	State Fault	Min Energy Fault	Lens Required Fault	Table Fault
33346.94	3.36	500.00	8.51	0	0	0	0	0
34122.45	3.21	500.00	8.11	0	0	0	0	0
34897.96	3.07	500.00	7.73	0	0	0	0	0
35673.47	2.94	500.00	7.38	0	0	0	0	0
36448.98	0.00	500.00	0.00	0	0	0	0	0
37224.49	0.00	500.00	0.00	0	0	0	0	0
38000.00	0.00	500.00	0.00	0	0	0	0	0