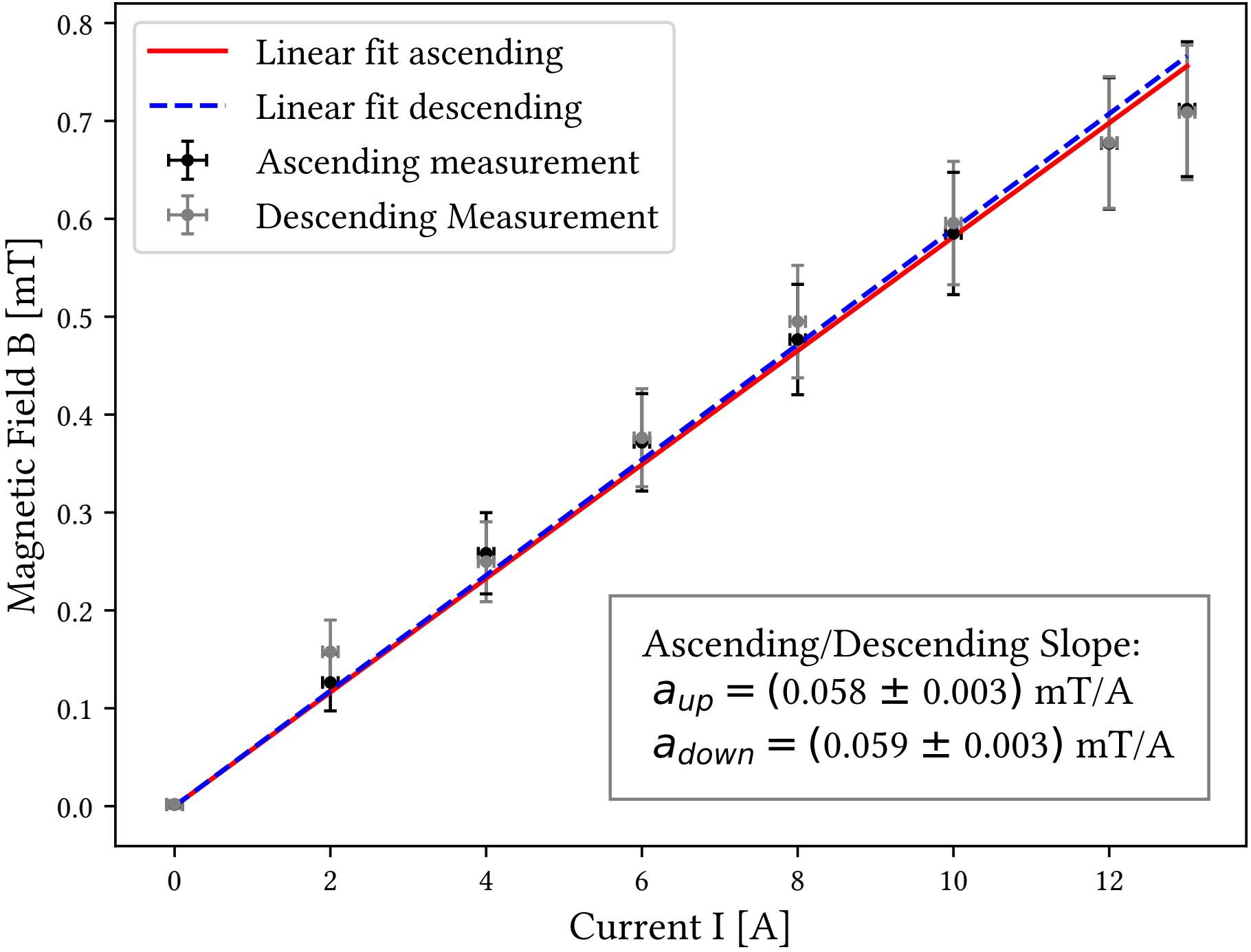
Fig. [1]: Hysteresis effect for magnets used



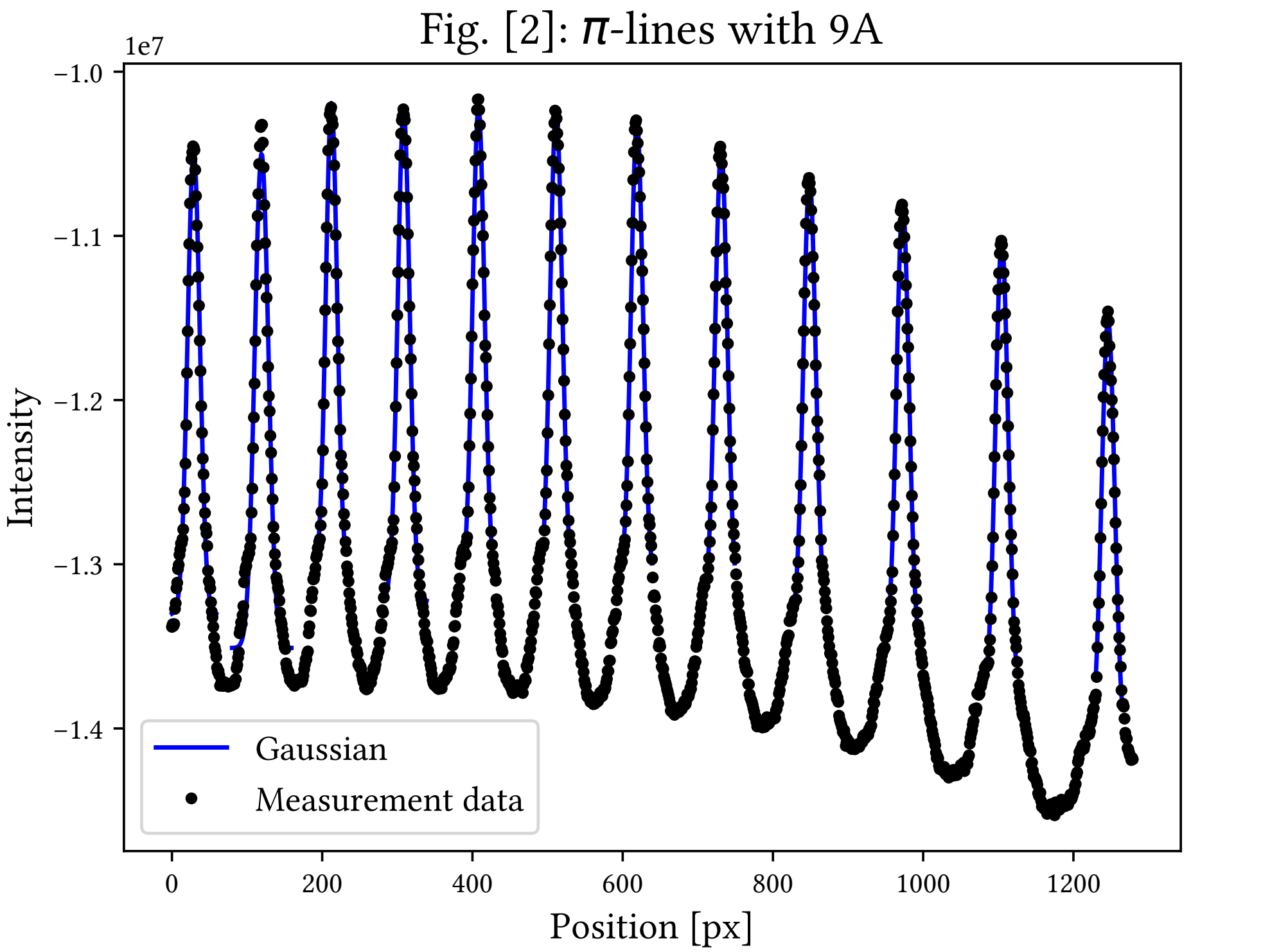


Fig. [2]: π-lines with 9A
1e7
−1.0
−1.1
−1.2
−1.3
−1.4
Intensity
0
200
400
600
800
1000
1200
Position [px]
Gaussian
Measurement data

σ^+-Peak	Order k	$\frac{\delta a}{\Delta a}$	σ^--Peak	Order k	$\frac{\delta a}{\Delta a}$
14 ± 8	12.167	0.167	55 ± 9	11.714	0.186
104 ± 13	11.165	0.165	146 ± 10	10.714	0.186
196 ± 44	10.174	0.174	239 ± 12	9.723	0.277
289 ± 10	9.200	0.200	334 ± 10	8.744	0.256
386 ± 8	8.218	0.218	433 ± 12	7.757	0.243
488 ± 11	7.225	0.225	535 ± 11	6.771	0.229
593 ± 9	6.234	0.234	644 ± 9	5.775	0.225
705 ± 12	5.226	0.226	758 ± 11	4.767	0.233
822 ± 13	4.220	0.220	878 ± 9	3.757	0.243
946 ± 12	3.215	0.215	1005 ± 11	2.752	0.248
1076 ± 11	2.212	0.212	1140 ± 8	1.744	0.256
1216 ± 9	1.205	0.205	1284 ± 5	0.740	0.260

Table 1: σ-lines and $\frac{\delta a}{\Delta a}$ by 9A

σ^+-Peak	Order k	$\frac{\delta a}{\Delta a}$	σ^--Peak	Order k	$\frac{\delta a}{\Delta a}$
6 ± 5	12.277	0.277	56 ± 7	11.718	0.282
97 ± 9	11.260	0.260	148 ± 9	10.708	0.292
190 ± 11	10.251	0.251	242 ± 10	9.706	0.294
286 ± 10	9.249	0.249	339 ± 9	8.701	0.299
386 ± 12	8.336	0.336	441 ± 10	7.690	0.310
488 ± 11	7.233	0.233	546 ± 9	6.684	0.316
595 ± 12	6.227	0.227	656 ± 11	5.674	0.326
707 ± 10	5.221	0.221	770 ± 11	4.673	0.327
824 ± 12	4.220	0.220	890 ± 11	3.673	0.327
947 ± 11	3.217	0.217	1017 ± 11	2.673	0.327
1077 ± 15	2.215	0.215	1151 ± 11	1.673	0.327
1215 ± 14	1.220	0.220	1288 ± 5	0.728	0.272

Table 2: σ-lines and the $\frac{\delta a}{\Delta a}$ by 11A

σ^+-Peak	Order k	$\frac{\delta a}{\Delta a}$	σ^--Peak	Order k	$\frac{\delta a}{\Delta a}$
2 ± 4	12.290	0.290	54 ± 10	11.703	0.297
90 ± 8	11.301	0.301	146 ± 10	10.696	0.304
183 ± 9	10.291	0.291	240 ± 10	9.687	0.313
279 ± 10	9.283	0.283	338 ± 11	8.676	0.324
379 ± 9	8.270	0.270	440 ± 11	7.664	0.336
482 ± 12	7.261	0.261	545 ± 12	6.657	0.343
588 ± 12	6.256	0.256	655 ± 11	5.648	0.352
700 ± 12	5.251	0.251	770 ± 12	4.648	0.352
816 ± 13	4.253	0.253	889 ± 10	3.650	0.350
939 ± 10	3.252	0.252	1016 ± 12	2.652	0.348
1069 ± 11	2.253	0.253	1151 ± 9	1.656	0.344
1207 ± 11	1.262	0.262			

Table 3: σ-lines and the Difference $\frac{\delta a}{\Delta a}$ by 13A

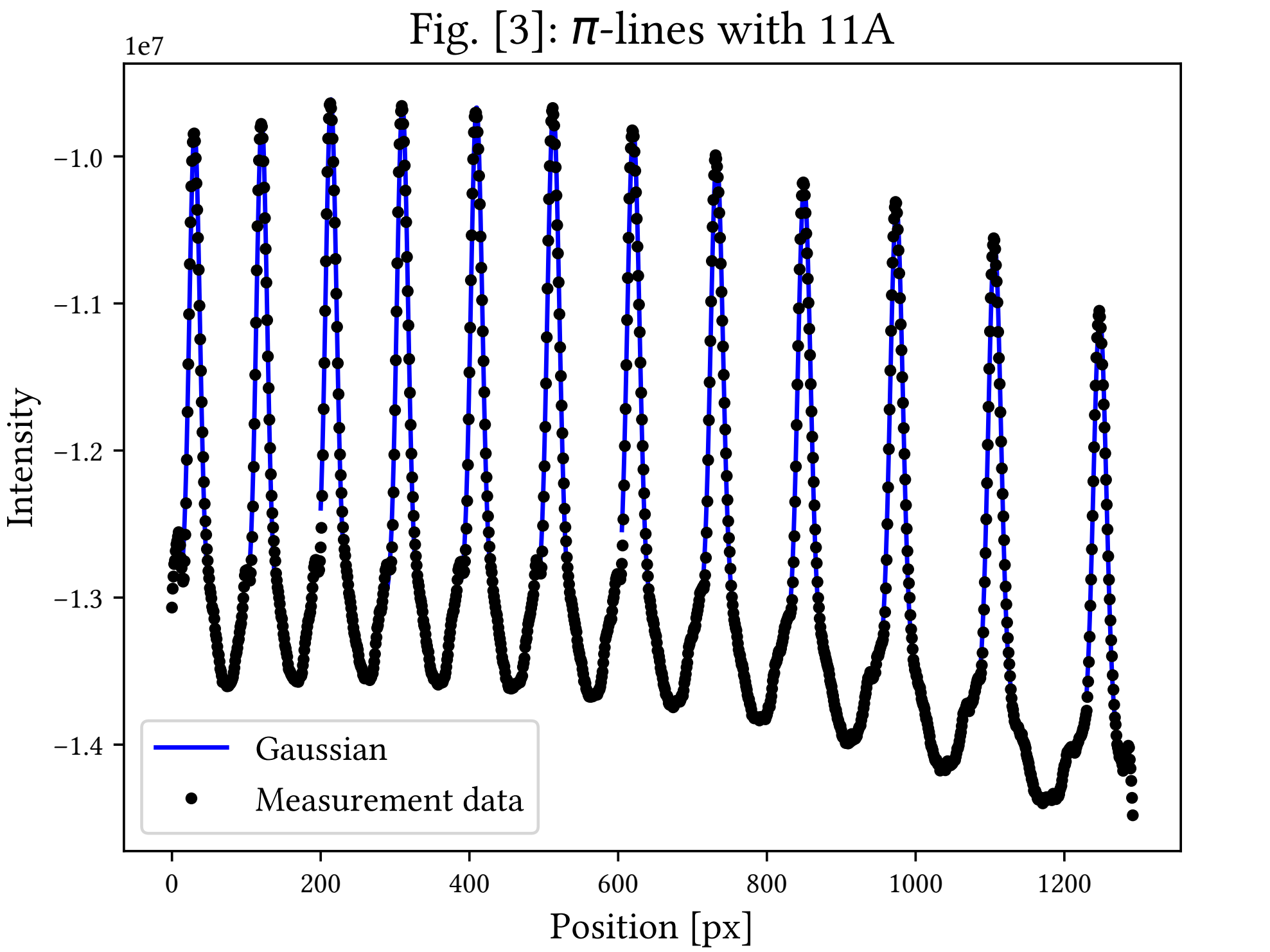
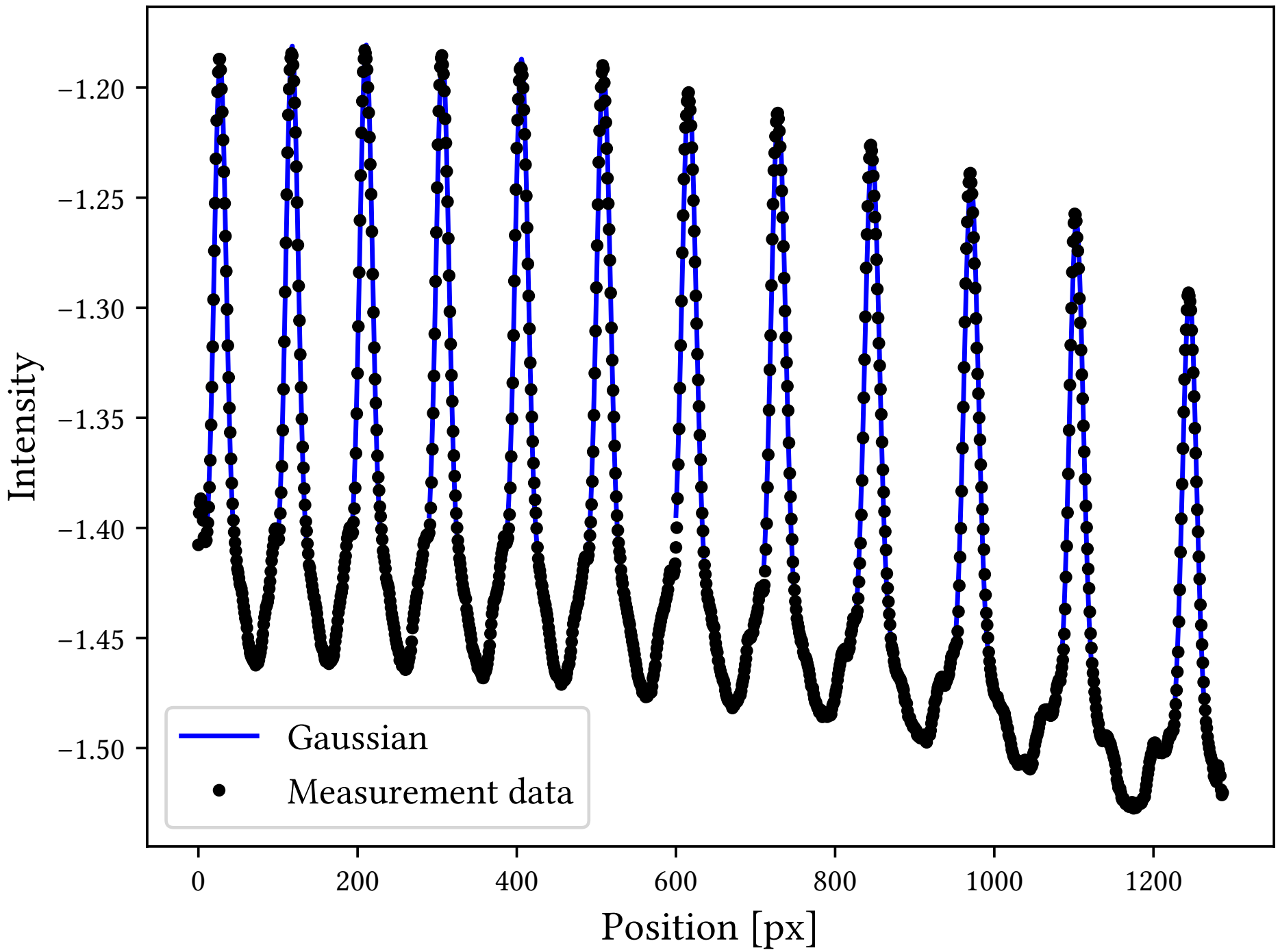


Fig. [3]: π-lines with 11A
1e7
−1.0
−1.1
−1.2
−1.3
−1.4
Intensity
Gaussian
Measurement data
0
200
400
600
800
1000
1200
Position [px]

Fig. [4]: π-lines with 13A



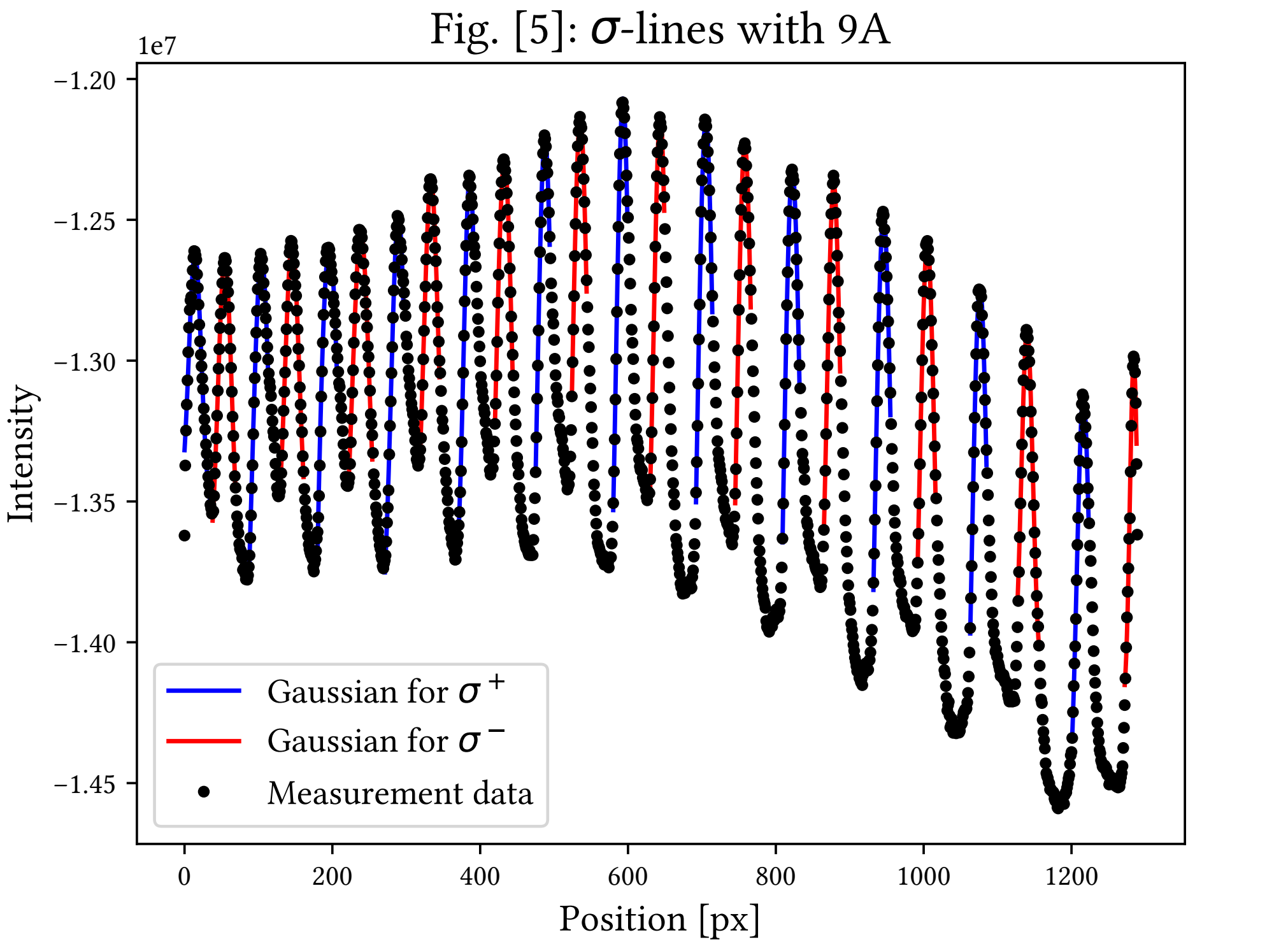


Fig. [5]: σ-lines with 9A
1e7
−1.20
−1.25
−1.30
−1.35
−1.40
−1.45
Intensity
0
200
400
600
800
1000
1200
Position [px]
Gaussian for σ +
Gaussian for σ −
Measurement data

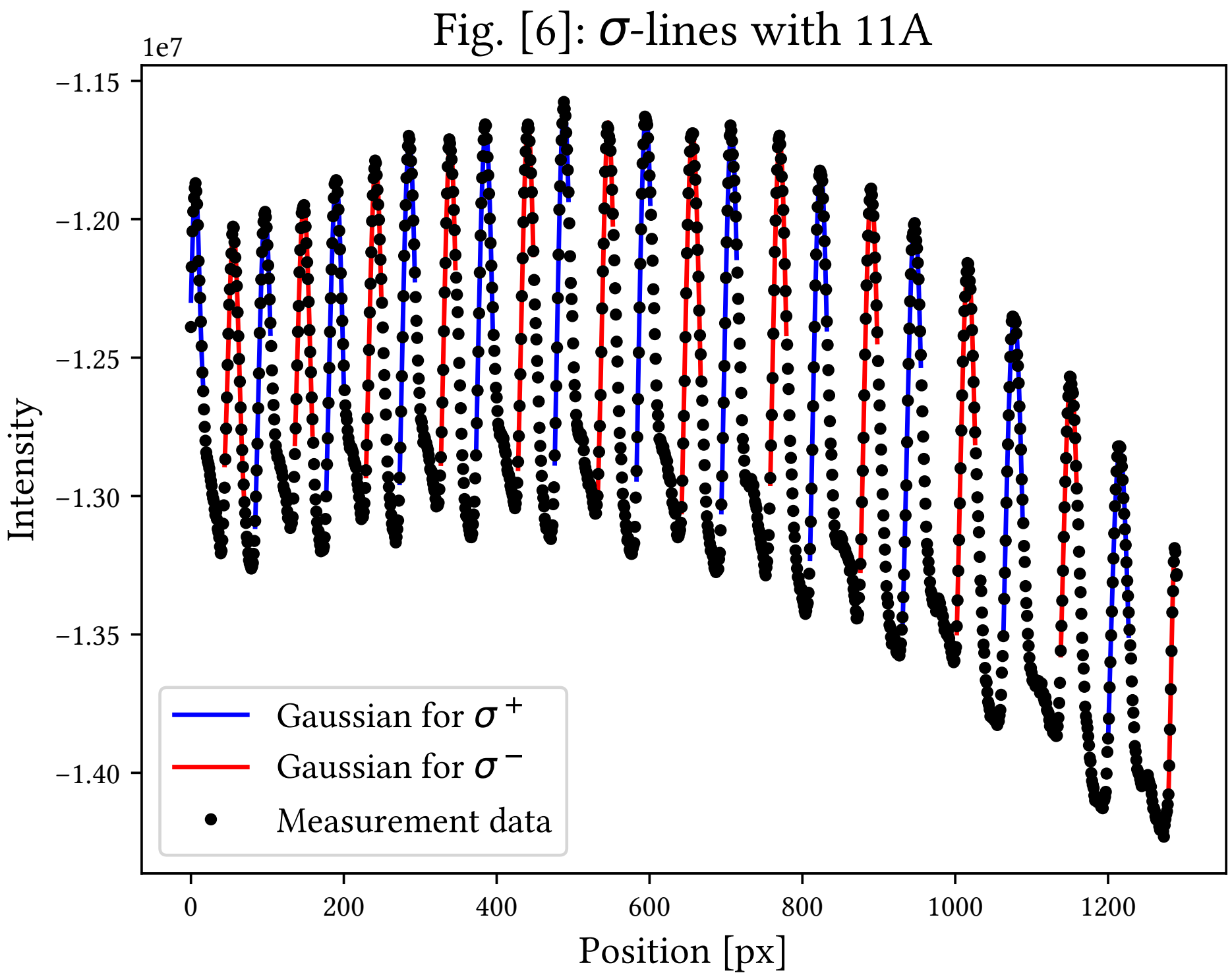


Fig. [6]: σ-lines with 11A
1e7
−1.15
−1.20
−1.25
−1.30
−1.35
−1.40
Intensity
0
200
400
600
800
1000
1200
Position [px]
Gaussian for σ +
Gaussian for σ −
Measurement data

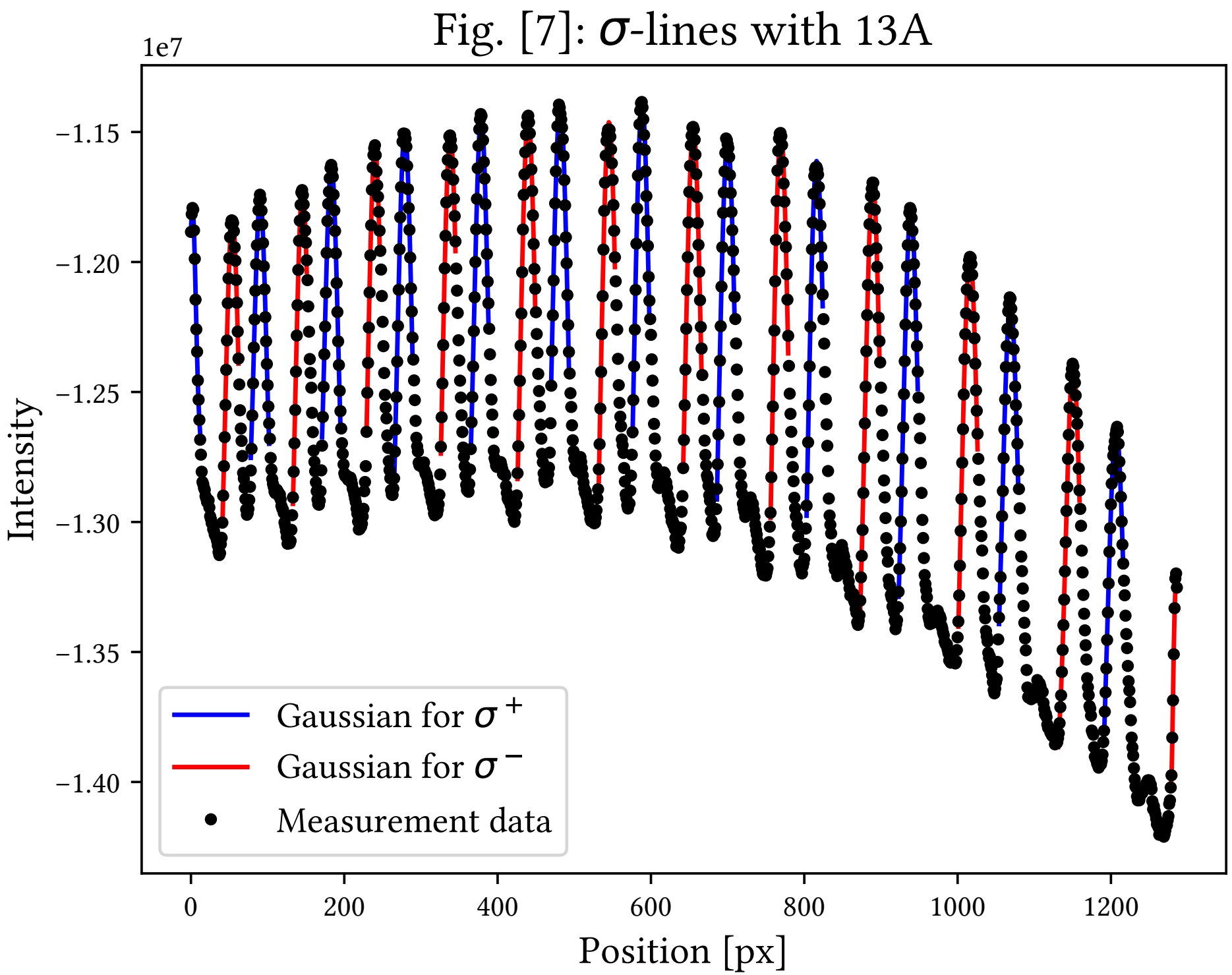


Fig. [7]: σ-lines with 13A
1e7
−1.15
−1.20
−1.25
−1.30
−1.35
−1.40
Intensity
0
200
400
600
800
1000
1200
Position [px]
Gaussian for σ +
Gaussian for σ −
Measurement data

Fig. [8]: Orders of the π-lines with 9A

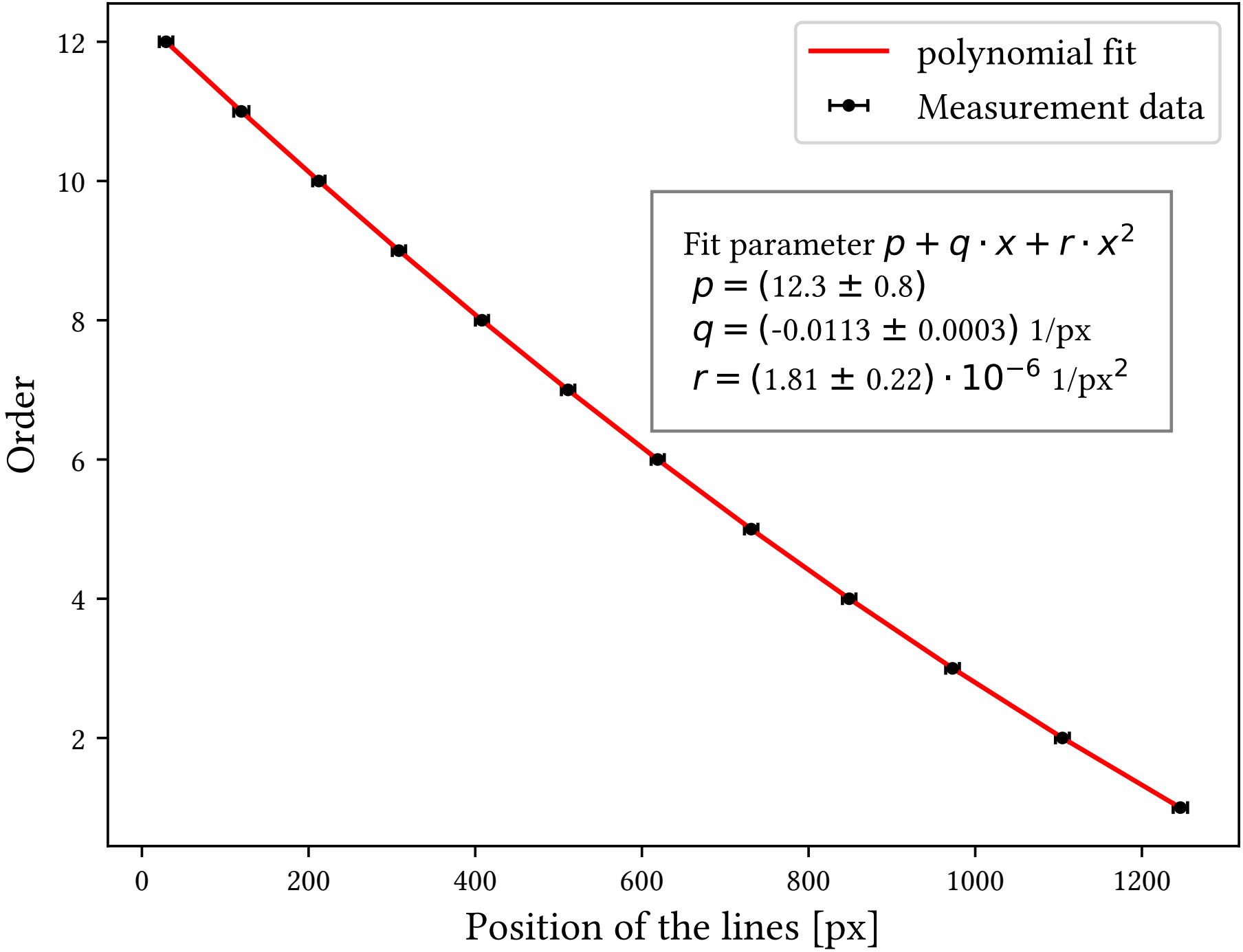


Fig. [9]: Orders of the π-lines with 11A

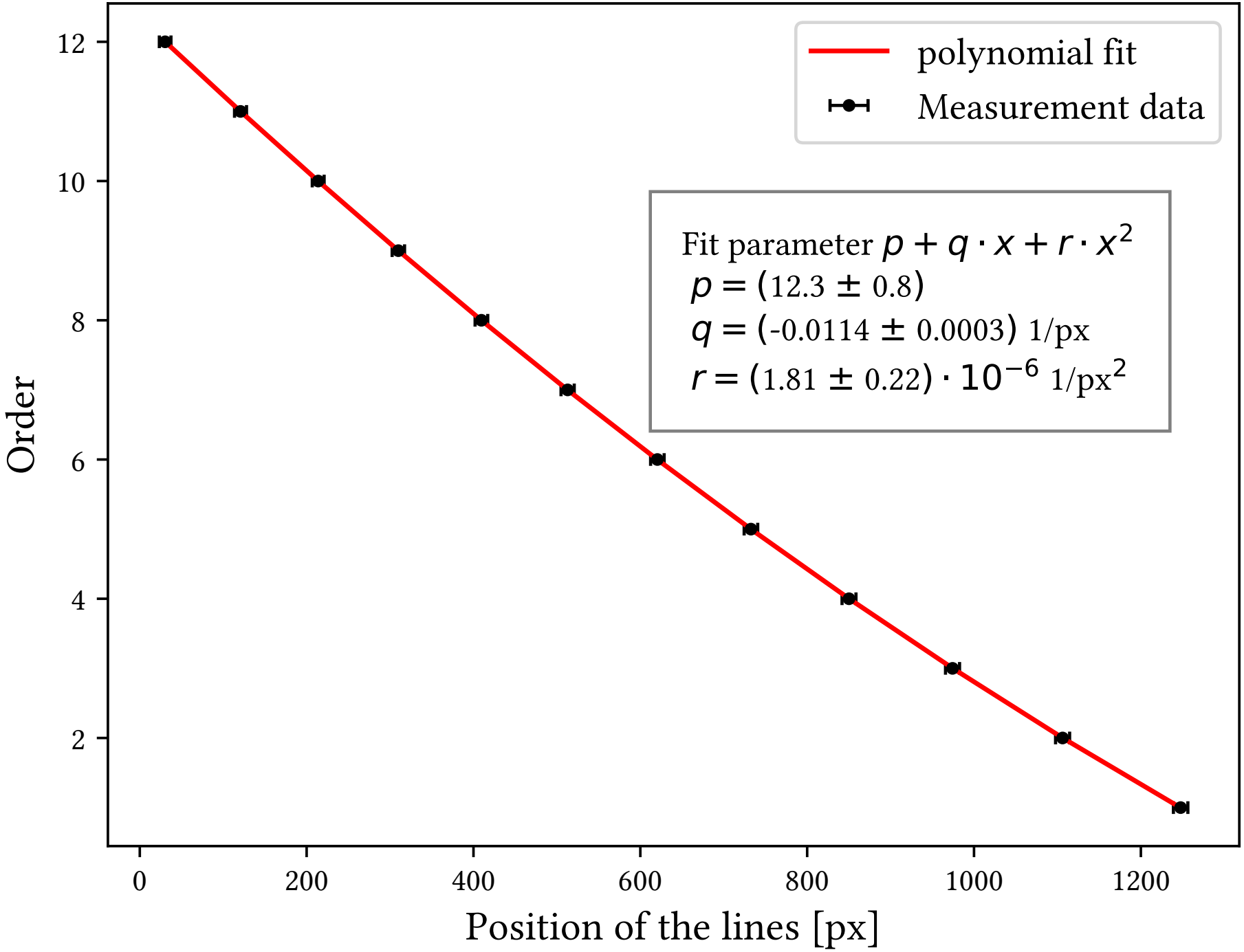


Fig. [10]: Orders of the π-lines with 13A

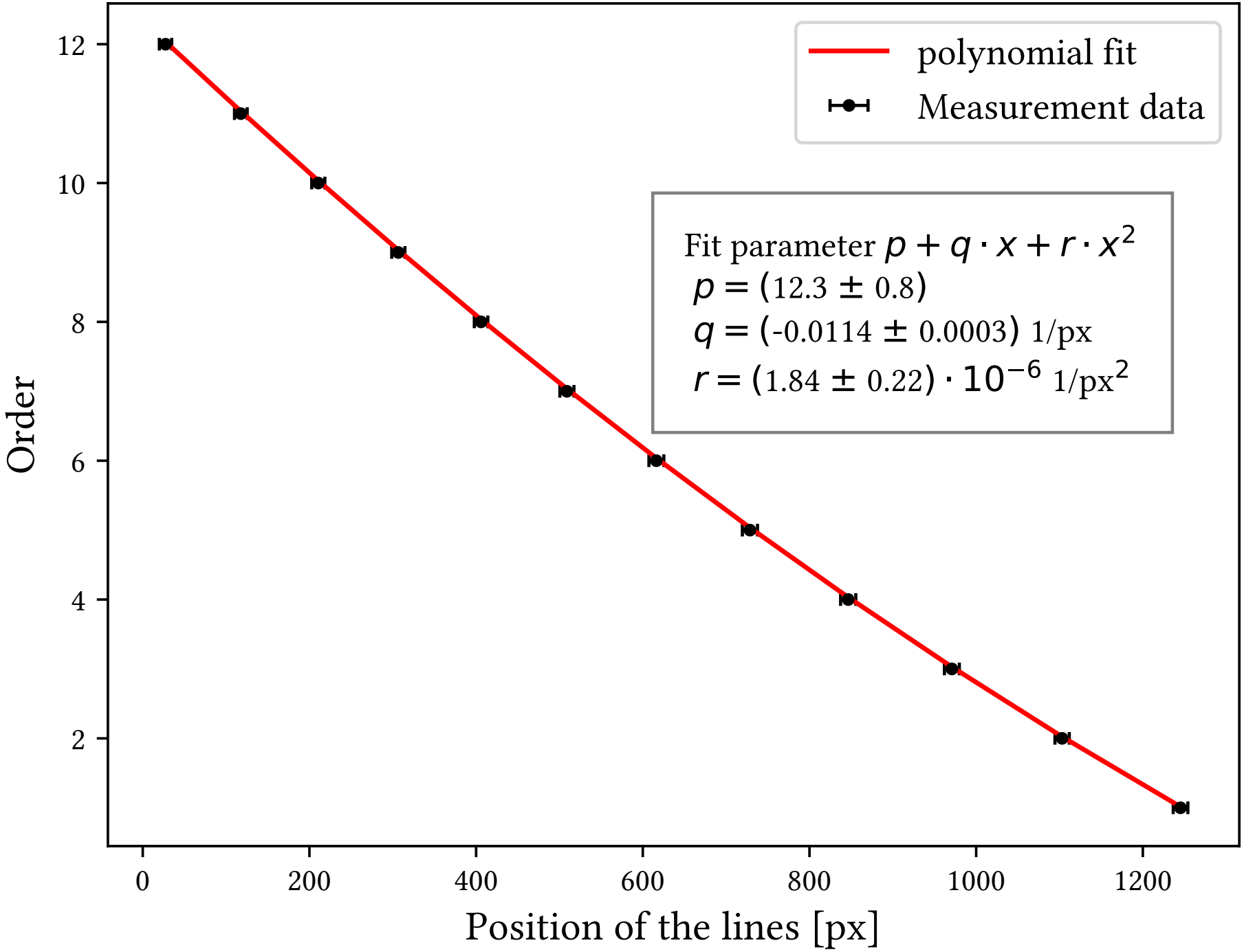


Fig. [11]: Spectrum of Cadmium and Neon

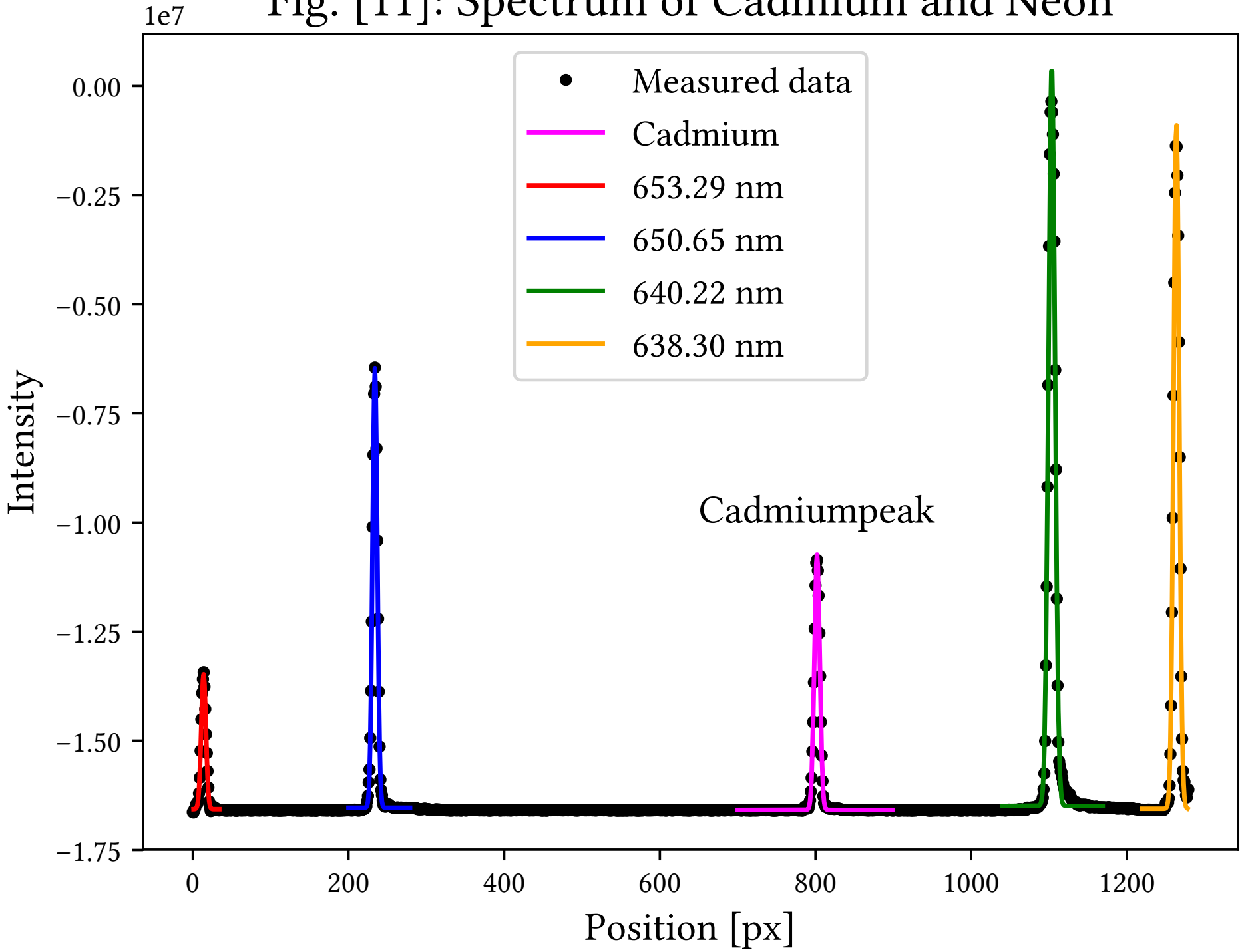


Fig. [12]: Wavelength as function of position