Subject: BRAHMS A_N measurement

If we chose to measure pi+ instead of pi-, then the analyzing power would be a factor of 2-3 larger (probably even more) ... just to remind you, the E704 data are:

x_f	A_N(pi+)	A_N(pi-)
0.27	0.06+/-0.04	0.02+/-0.04
0.36	0.12+/-0.02	-0.04+/-0.02
0.45	0.21+/-0.02	-0.11+/-0.01

Also, the production rate goes up a bit, I think. If the analyzing power (A_N) is 3-6%, then the raw asymmetry would be 1-2%. A 3-sigma (relative to zero) measurement would thus require only 110K-55K events.

Based on Run-3 data, staying at 3.5 degrees, we have:

x_f	rate	raw asym of 1%	raw asym of 2%
0.20	16K/hour	110K (7 hours)	55K (3.5 hours)
0.25	4K/hour	110K (28 hours)	55K (14 hours)

The pi+ rate, being higher, probably means that we would be able to do the xf=0.25 measurement in a day, event if the raw asym is of the order of 1%.

Moving to 2.3 degrees will make this easier plus we extend to higher xf, hopefully 0.4. The rate estimate needs to be firmed at this angle.