Experiment 3

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1. $R \pm \delta R = (29.8 \pm 1.2) cm$

Helmholtz Coil Measurements	
28.4±0.1 cm	31.5±0.1 cm
28.5±0.1 cm	31.0±0.1 cm
28.2±0.1 cm	31.3±0.1 cm
28.3±0.1 cm	31.0±0.1 cm

2.

Accelerating Voltage:
$V \pm \delta V = (200 \pm 2)$ V

Coil Current	Beam Loop Diameter	Magnetic Field	Charge to Mass Ratio
1.1±0.005	10.5 ±0.1	$4.71 \cdot 10^{-06} \pm 0.0028$	
1.15±0.005	10 ±0.1	$6.86 \cdot 10^{-06} \pm 0.0041$	
1.2±0.005	9.6 ±0.1	$9.01 \cdot 10^{-06} \pm 0.0054$	
1.25±0.005	9.3 ±0.1	$1.11 \cdot 10^{-05} \pm 0.0067$	
1.3±0.005	8.9 ±0.1	$1.33 \cdot 10^{-05} \pm 0.0080$	
1.35±0.005	8.5±0.1	$1.54 \cdot 10^{-05} \pm 0.0093$	
1.4±0.005	8.4 ±0.1	$1.76 \cdot 10^{-05} \pm 0.0106$	
1.45±0.005	8.0±0.1	$1.97 \cdot 10^{-05} \pm 0.0120$	
1.5±0.005	7.6 ±0.1	$2.19 \cdot 10^{-05} \pm 0.0133$	