Case 4: 141 amu, 80 km/s, 2e coulombs, 60 mT

$$141 \text{ amu}\,(1.672\times10^{-27}) = 2.3408\times10^{-26}$$

$$80 \text{ km/s} \cdot 1000 = 8\times10^{4}$$

$$2e = 2(1.6\times10^{-19}) = 3.2\times10^{-19}$$

$$60 \text{ mT} = .06 \text{ T}$$

$$R = \frac{(2.340k\times10^{-26} \cdot 8\times10^{4})}{(3.2\times10^{-19} \cdot .06)} = .0475$$

$$W = \frac{3.2\times10^{-19} \cdot .06}{2.3408\times10^{-26}} = 8.205\times10^{5}$$

Case 5: 6 amu, 160 km/s, $-2e$ coul. 50 mT

$$6 \text{ amu}\,(1.672\times10^{-27}) = 1.003\times10^{-26}$$

$$160 \text{ km/s} = 1.60\times10^{5} \qquad 50 \text{ mT} = .05 \text{ T}$$

$$-2e = -2\cdot(-1.6\times10^{-19}) = -3.2\times10^{-19}$$

$$R = \frac{(1.003\times10^{-26} \cdot 1.60\times10^{5})}{(-3.2\times10^{-19} \cdot .05)} = .1003$$

$$W = \frac{-3.2\times10^{-19} \cdot .05}{1.003\times10^{-26}} = 1.595$$

Case 6) 3 amu, 380 km/s, 1e, 240 mT

$$3(1.672\times10^{-27}) = 5.016\times10^{-27} \qquad 380 \text{ km/s} = 3.80\times10^{5}$$

$$1e = 1.6\times10^{-19} \qquad 240 \text{ mT} = .240 \text{ T}$$

$$R = \frac{(5.016\times10^{-27} \cdot 3.80\times10^{5})}{(1.6\times10^{-19} \cdot .240)} = .0496$$

$$W = \frac{1.6\times10^{-19} \cdot .240}{5.016\times10^{-27}} = 7.655\times10^{6}$$

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