Conclusion

Overall, the quality of the results was mixed. Earth's magnetic field was calculated fairly accurately as 5.09e-05 +- 3.38e-06 T and contains within error the actual strength of the field of that day. The charge to mass ratio 2.086 e11 +- 0.075 e11 C/kg was averaged from values that all had a bias. Measurements of the orbital radius were too small resulting in consistently high e/m ratios. For future projects more time must be spent on analysing the most impactful variable and making sure that especially this value is recorded correctly.

With the knowledge of the charge to mass ratio future experiments can use this value to calculate the mass of a particle. The earth's magnetic field affects acts everywhere around the planet. By determining its strength perhaps conclusions can be drawn about the shielding of solar winds and the way cosmic particles are guided towards the poles.