

Investigating the atom

Activity 2: Activity card

Investigating the atom

In your groups, discuss:

How can the conclusions of Geiger and Marsden, as presented in the resource card 1, be derived from the analysis of the data presented on resource card 2? Use table 1 to investigate conclusion A and table 2 for conclusion B.

Why do they present their results using the mathematical expression: $1/\sin^4(\phi/2)$? Consult resource card 3.

What does this investigation tell us about the structure of the atom? Can this data lead to different conclusions?

Product of the group:

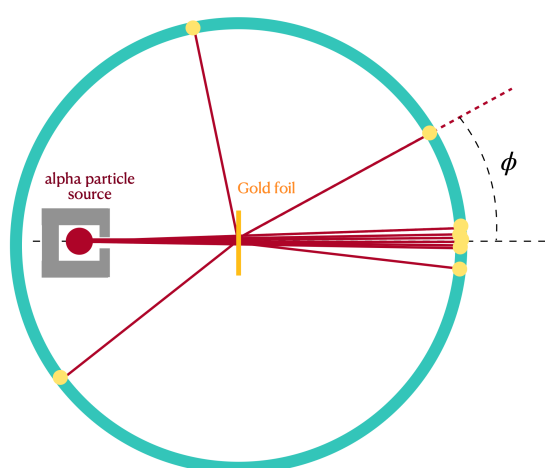
Present a possible sequence of steps that leads from the collected data to the presented conclusions.

Evaluation criteria:

The proposed sequence uses data to lead to a conclusion.

The group used graphs to obtain new information from the data.

The group presented conclusions consistent with its data analysis, even if they are not the same as those in the cited work of Geiger and Marsden.



Alpha particle scattering
Image courtesy of the authors