Experiment: Rutherford took a thin gold foil and made alpha particles [He^{2+}] positively charged Helium fall on it.

•Positive charge of the atom occupies very little space.

•Most of the space inside the atom is empty.

•Nucleus of an atom is very small as compared to the total size

Observation	Inference
1)Most of the a-particles passed through the gold foil without getting deflected. Very few particles were deflected.	
2) Very few particles were deflected.	
3) A very few alpha particles, 1 in 100000 completely rebound on hitting the gold foil.	

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Q.A Fill in the blanks with the correct answer based on the given options.(mass, deflected, nuclear, alpha particles, nucleus)

1. In Rutherford's experiment, a visible flash detected by the fluorescent screen signifies the arrival of _____.

2. Rutherford's experiment led him to propose the _____ model of the atom.

3. According to Rutherford's model, the atom has a small massive core called the_____

4.The discovery of the nucleus, the heavy, positively charged body at the center or nucleus took place when the alpha particles_____ backward.

5.The _____ of the atom is concentrated in the nucleus.

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