Title: Simulations of Electrode Misalignment Effects in Two-plate Linear Ion Traps

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Highlights

1. The impact of all six degrees of freedom on the resolving power as well as the ion detection efficiency is investigated.

2. The electric field in two-plate planar traps is strongly affected by the presence of the applied germanium layer.

3. The displacement effect on resolving power and peak area in three degrees of freedom (Y, pitch and yaw) are verified to be independent.

4. This study provides estimates for the effects of electrode misalignment in other type of linear ion traps.