Ion trap and applications

One lecture (1:30 hrs) speaker: Prof. G. Werth

1. Principle of ion trapping

a. Confining potentials for charge particles
b. Earnshaw's theorem and classification of traps

2. Paul traps

a. Equation of motion in ideal Paul trap
c. Pseudo-potential model
b. Ion motional spectrum
d. Quantized motion of ions in a linear trap
e. Alternative trap geometries (linear traps)
f. Influence of trap imperfections
g. Ion traps on chips