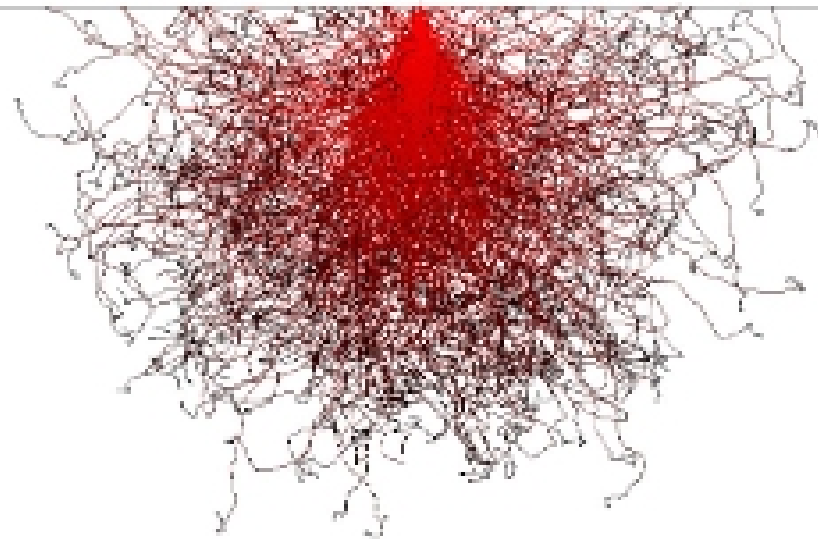




Electron probe microanalysis

Electron - Specimen



Interaction



What's the point?

Electrons from a source
interact with electrons in specimen
yielding a variety of photons and electrons
via elastic and inelastic scattering processes.
These are the “signals” that we monitor and
measure to characterize our specimens.



Overview

- Elastic and inelastic processes
- Characteristic and continuum X-rays
- K,L,M etc: families of X-rays
- Energy versus wavelength
- Moseley's relation
- Absorption or critical excitation energy
- Interaction volume and ranges
- Monte Carlo models
- Odds of X-ray production