



RECENT MEASUREMENTS OF ISOTOPE SHIFTS IN CALIFORNIUM ISOTOPES

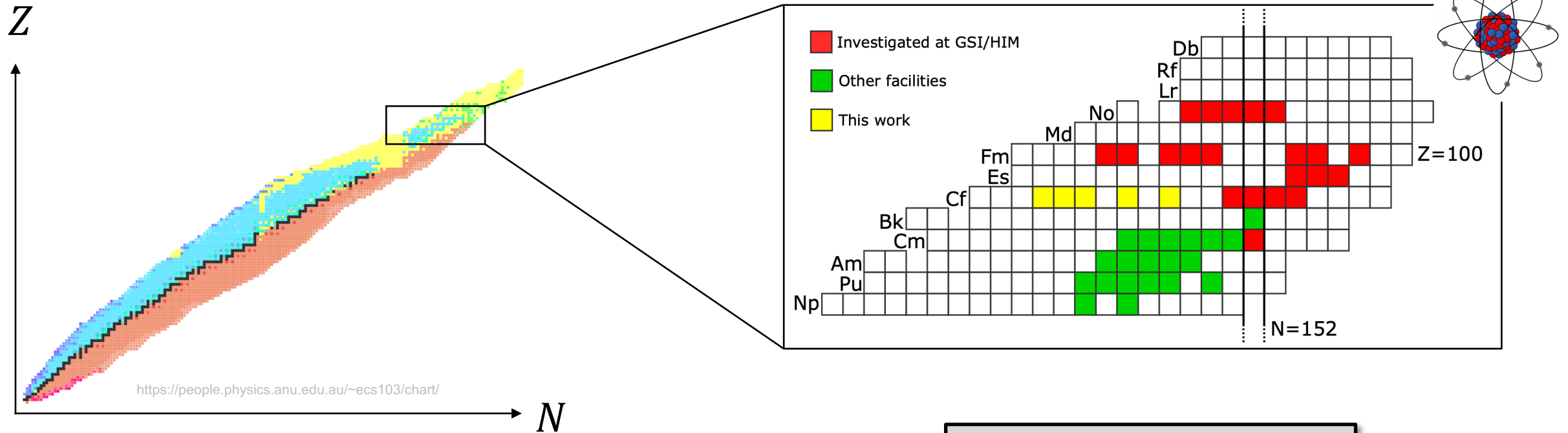
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HEAVY ELEMENTS: FAR FROM STABILITY



Macroscopic instability

Weak fission barrier $B_f \rightarrow 0$

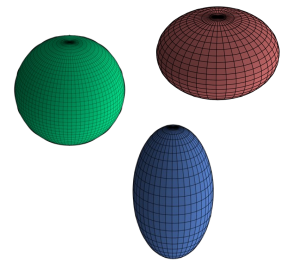
Permanent deformation

Microscopic stabilization

Shell effects

Pairing

Evolution can be traced by
measuring their charge
radii



MEASURING CHARGE RADII

Directly?

Indirect measurement

Scattering experiments:

Model-dependent (p, α)

Insufficient quantities for stationary targets

$$\delta\nu^{A,A'} = \frac{m^{A'} - m^A}{m^{A'} \cdot m^A} \cdot K + F \cdot \delta\langle r^2 \rangle^{A,A'}$$

