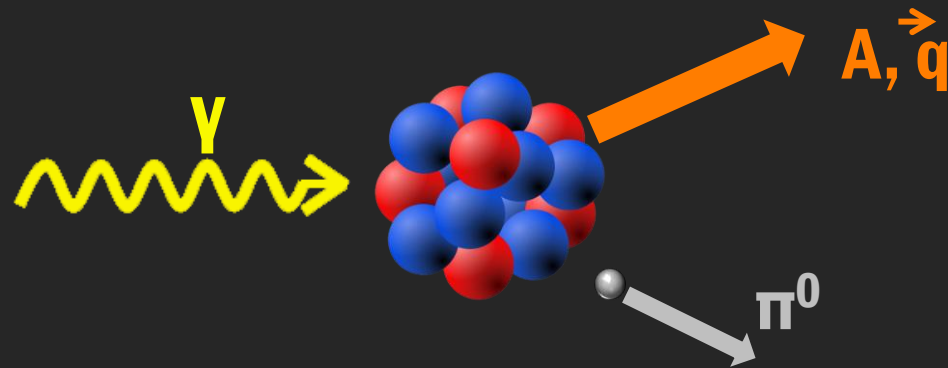


# Neutron skin studies with Coherent $\pi^0$ photoproduction



M. Isabel Ferretti, Mainz

Interesting

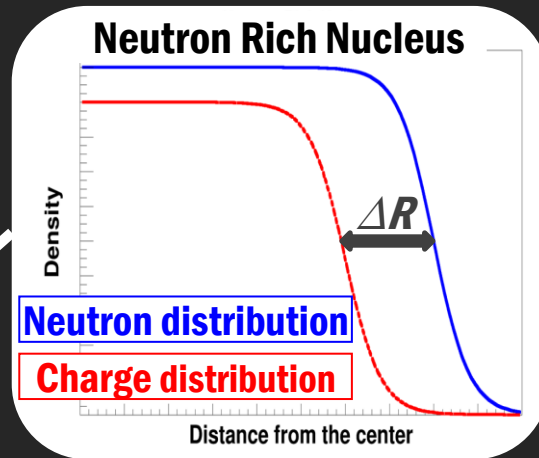
Basic  
property of  
nuclei

**WHY STUDY THE  
NEUTRON SKIN?**

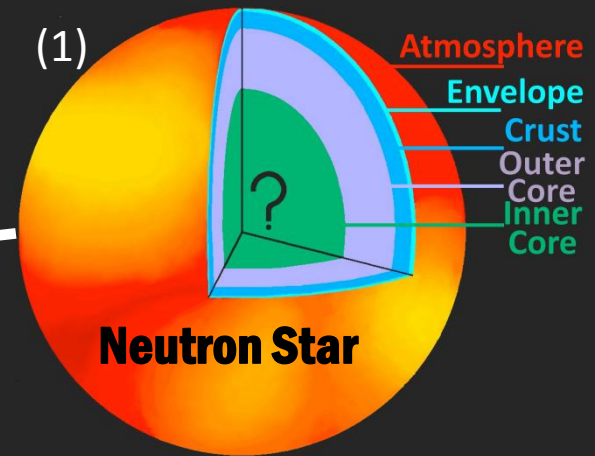
Link between  
Neutron-rich nuclei and  
Neutron Stars

Neutron skin:

$$\Delta R_{np} = \langle r^2 \rangle_n^{1/2} - \langle r^2 \rangle_p^{1/2}$$

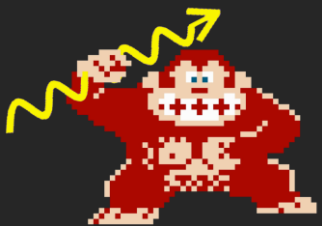


**NSkin & NStars?**



Governed by the same physics (EOS):

$$E(\rho, \delta) = E(\rho, 0) + E_{sym}(\rho)\delta^2 + O(\delta^4)$$



Experimental  
details

Preliminary  
results

HOW?

Ready for  
the journey?

WHAT?

Next steps

