

# Successive FRDM enhancements

## **Optimization** (1 → 2)

The search for optimum FRDM macroscopic parameters has been improved.

Accuracy improvement: 0.01 MeV

## **New exp. mass data base** (2 → 3)

We agree better with the new mass data base

Accuracy improvement: 0.04 MeV

## **Full 4D energy minimization** (3 → 4)

Search for minimum energy versus  $\epsilon_2, \epsilon_3, \epsilon_4, \epsilon_6$ , full 4D in steps of 0.01.

Accuracy improvement: 0.02 MeV

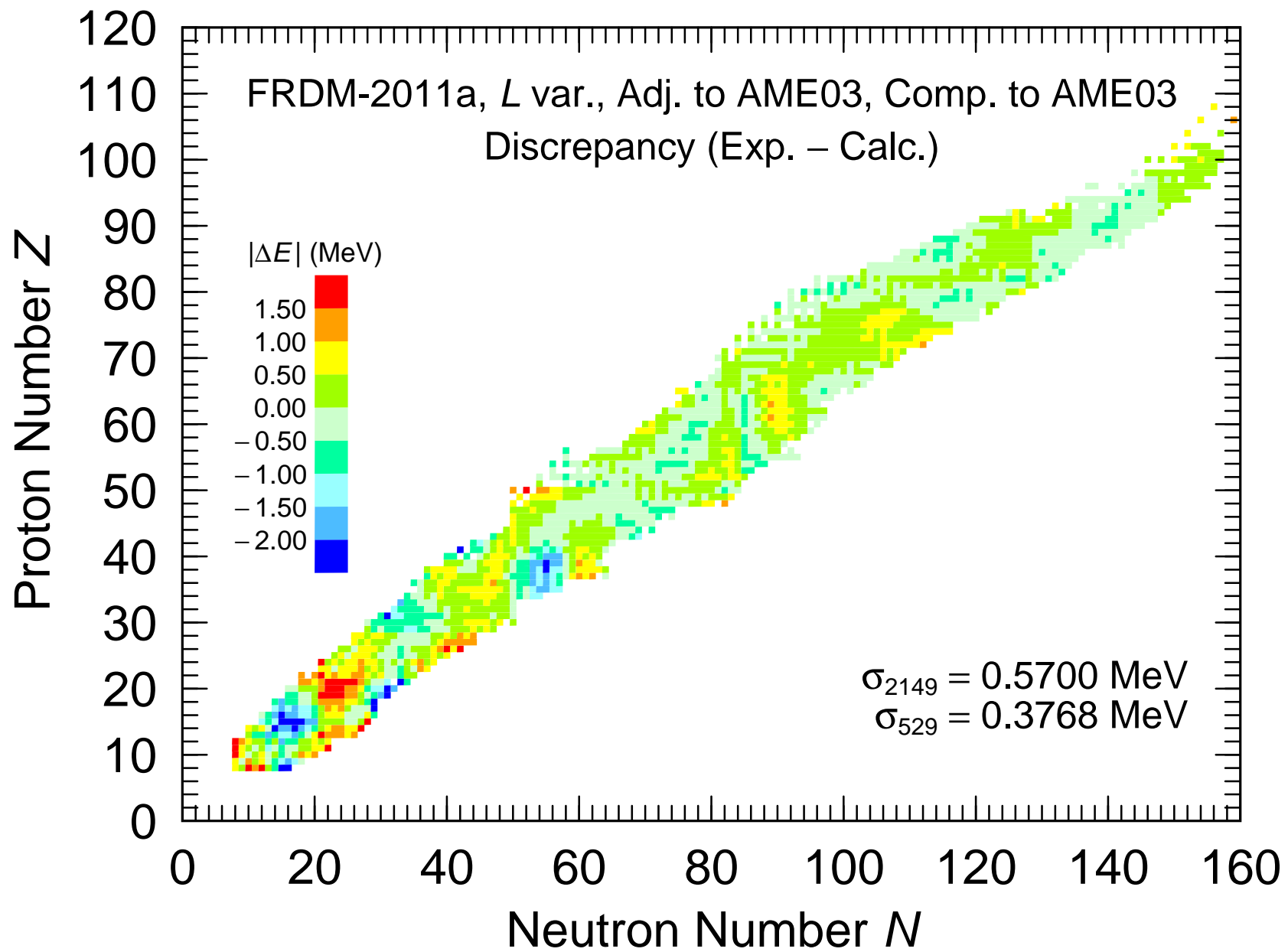
## **Axial asymmetry** (4 → 5)

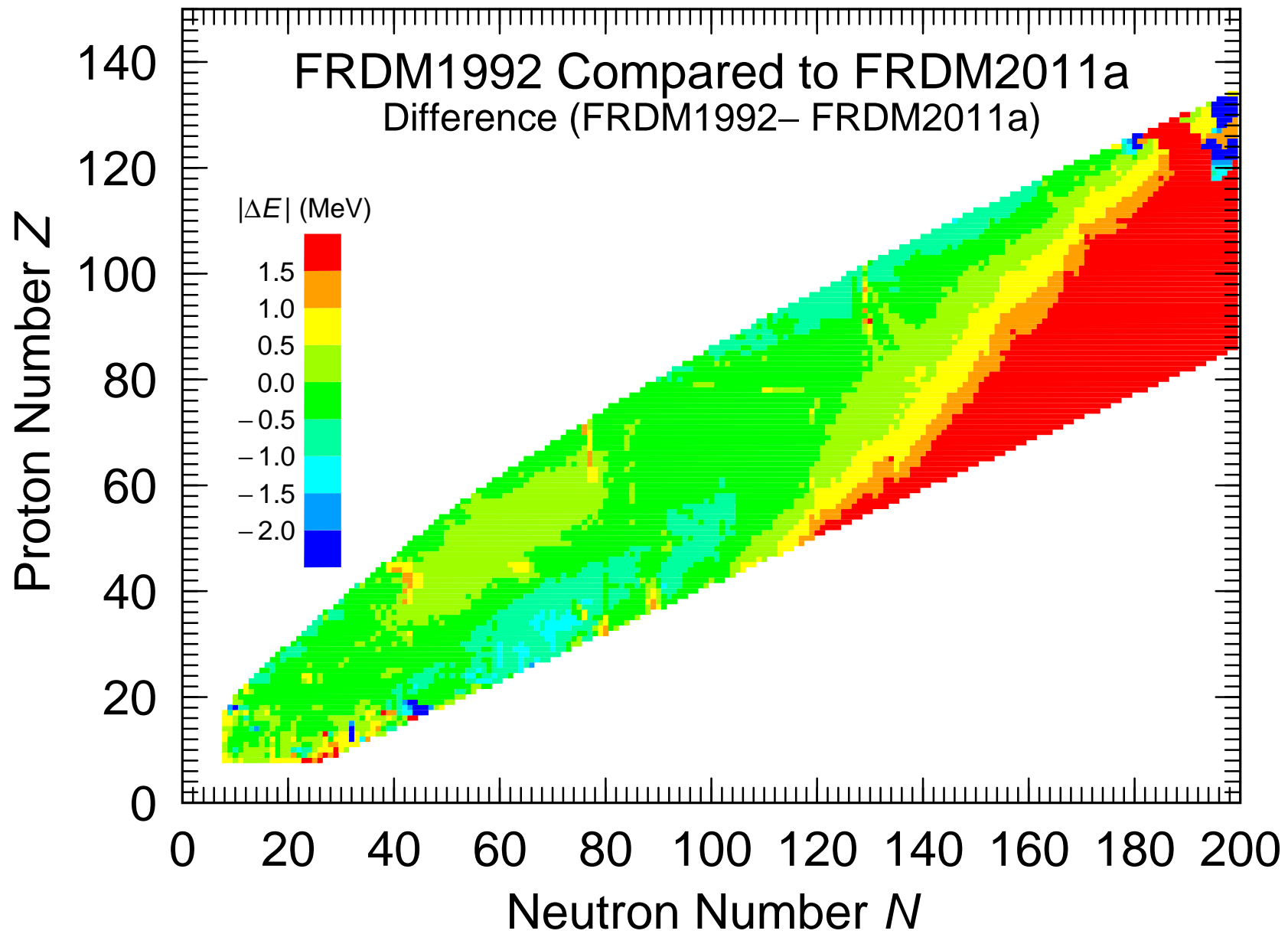
Results in correct gs assignments in SHE regions, and mass improvements.

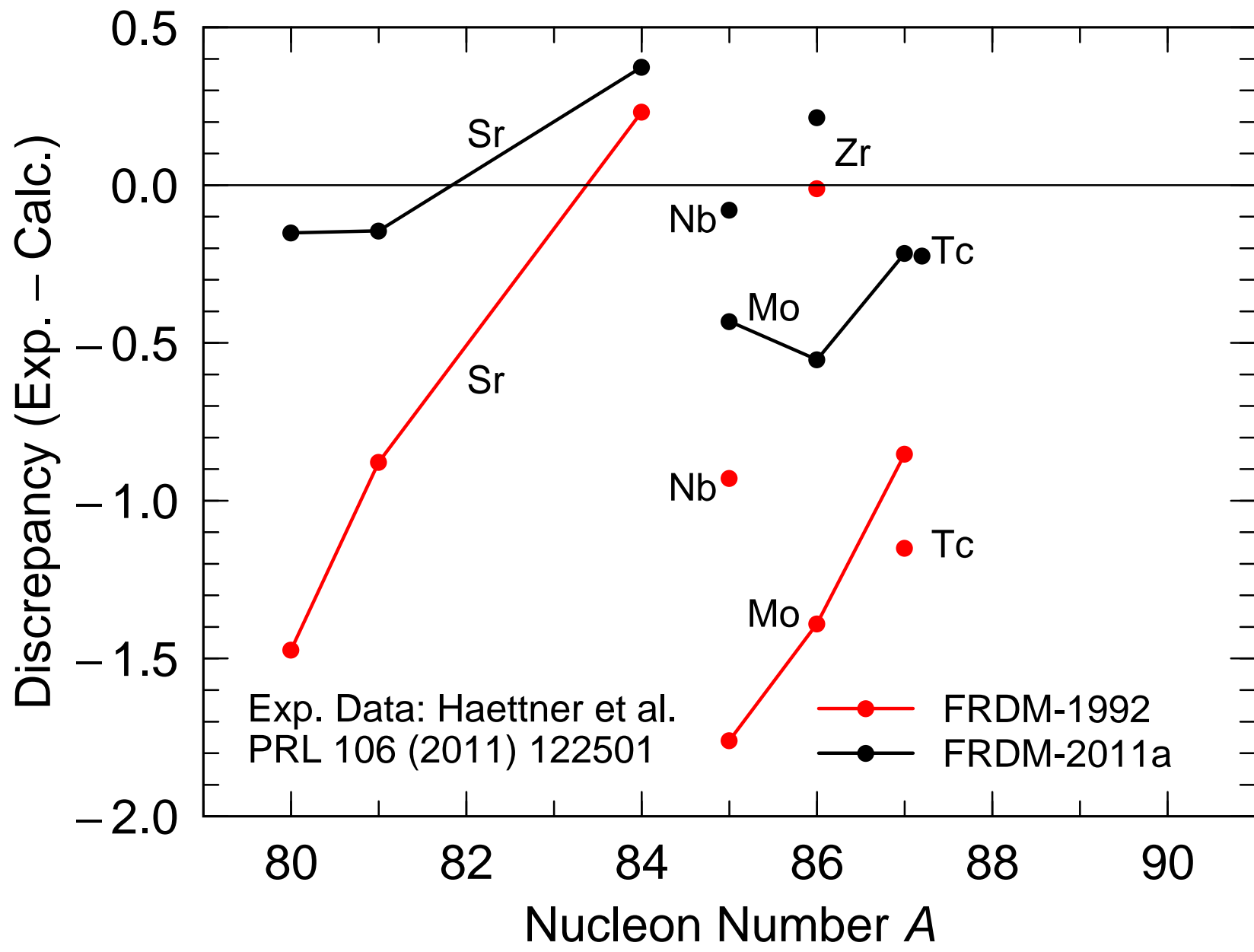
Accuracy improvement: 0.01 MeV

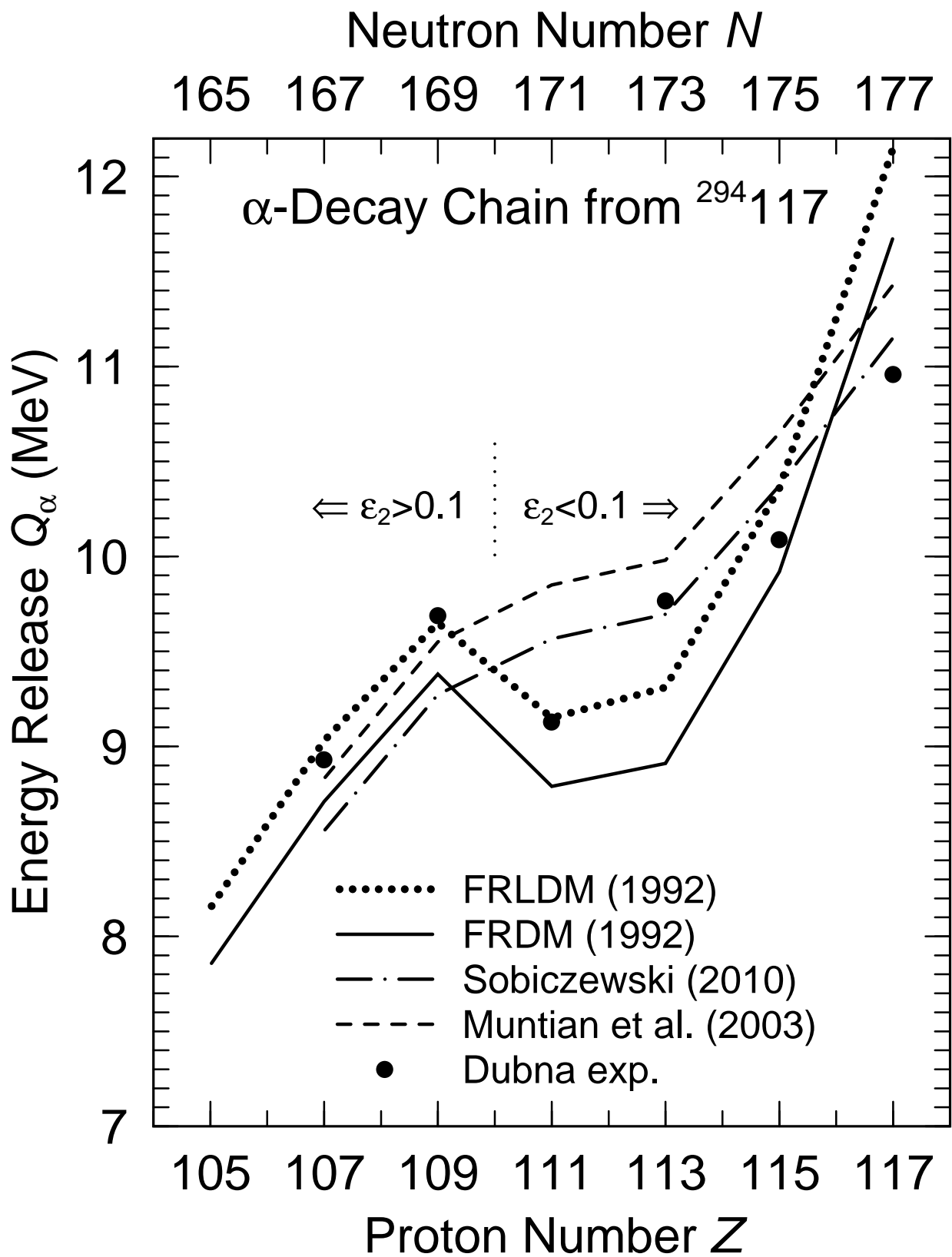
## ***L* variation** (5 → 7)

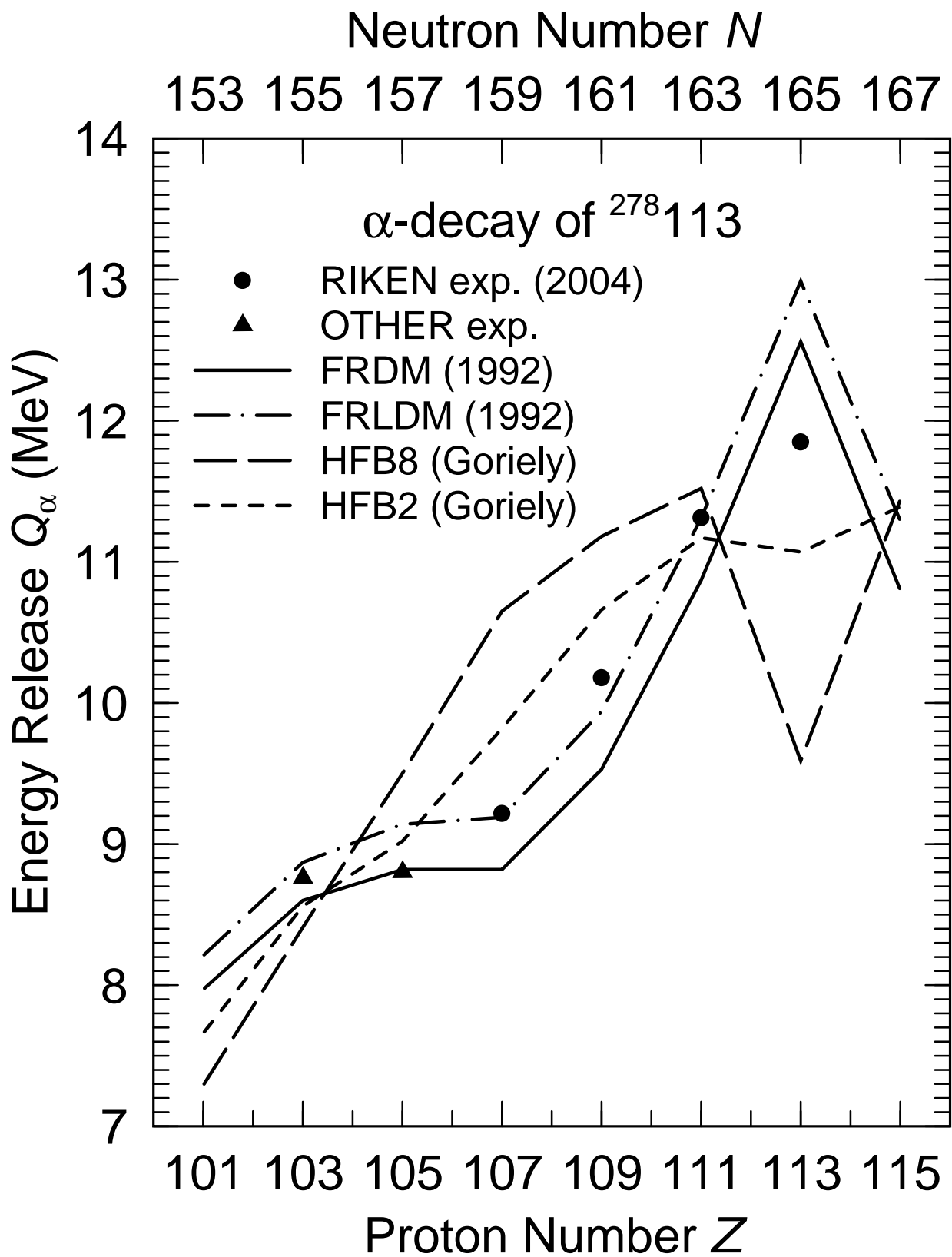
Accuracy improvement 0.02 MeV





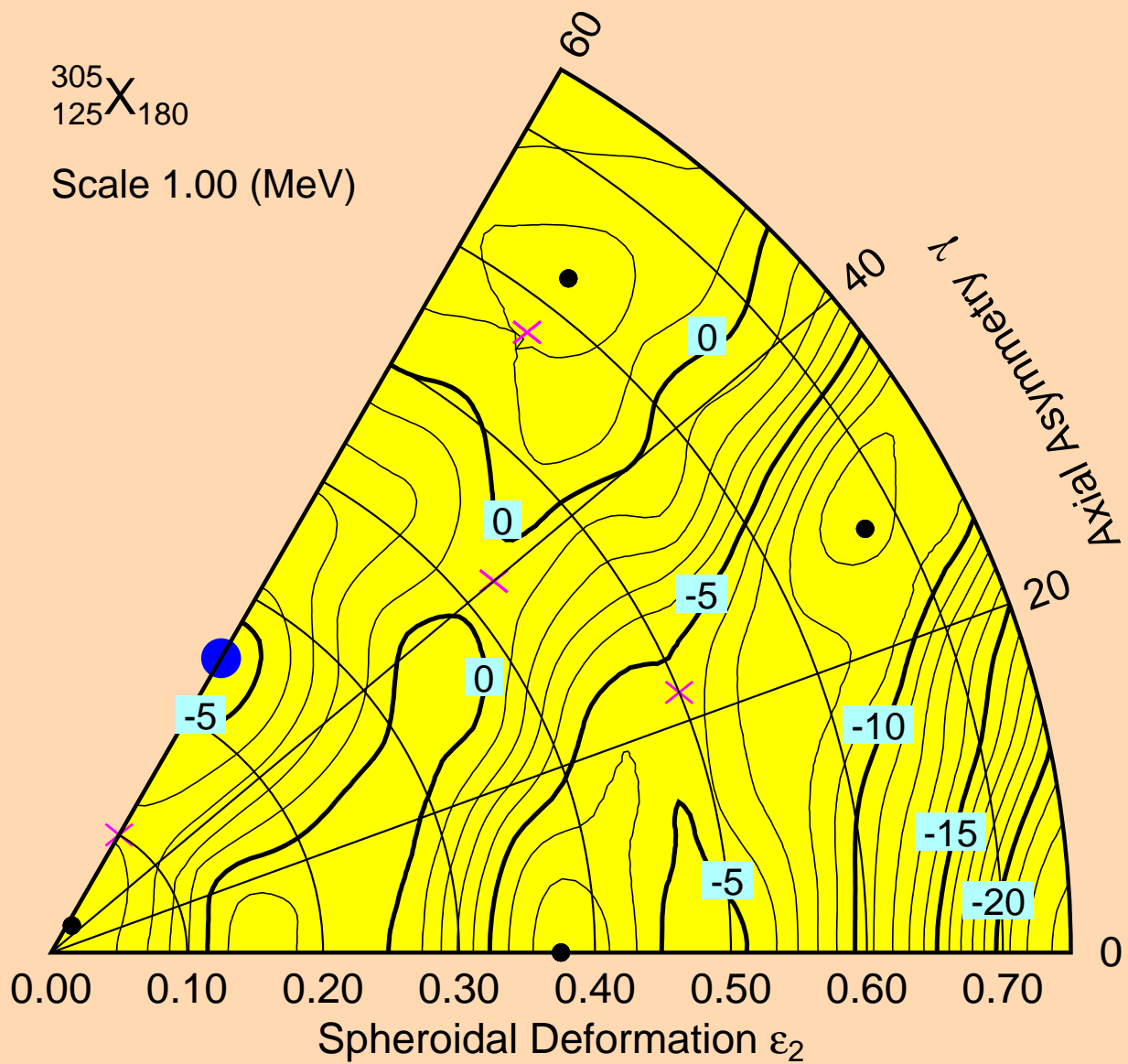


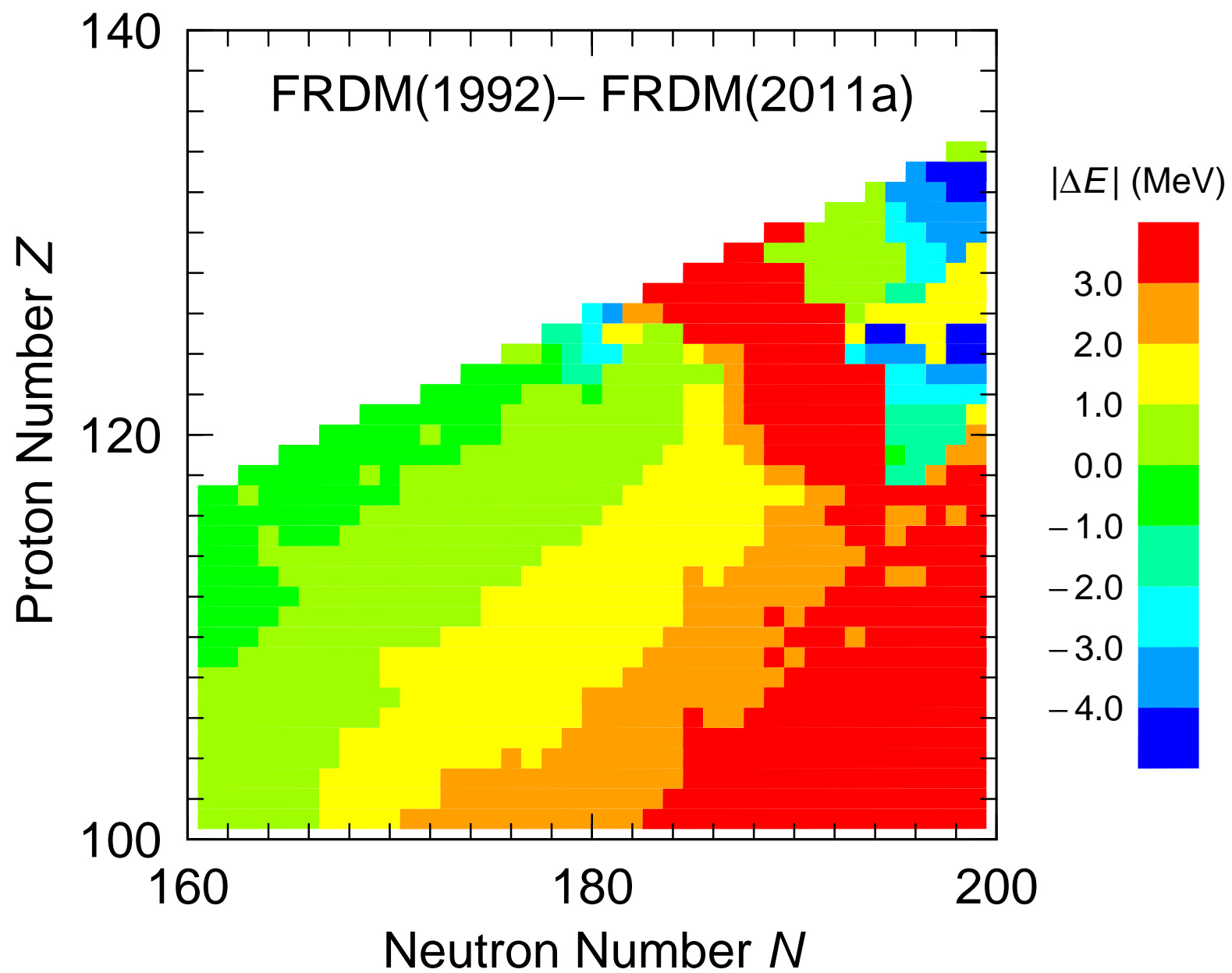




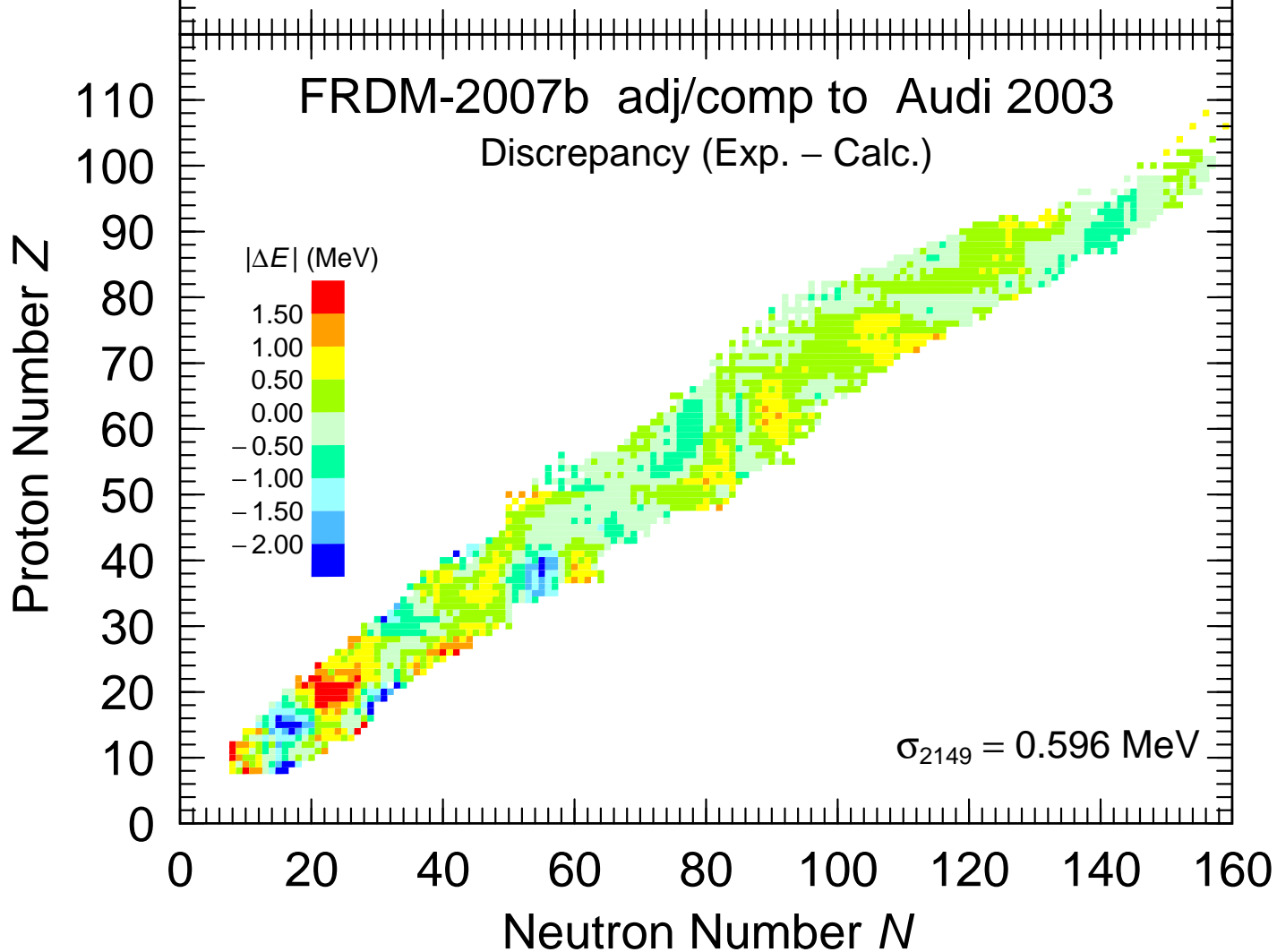
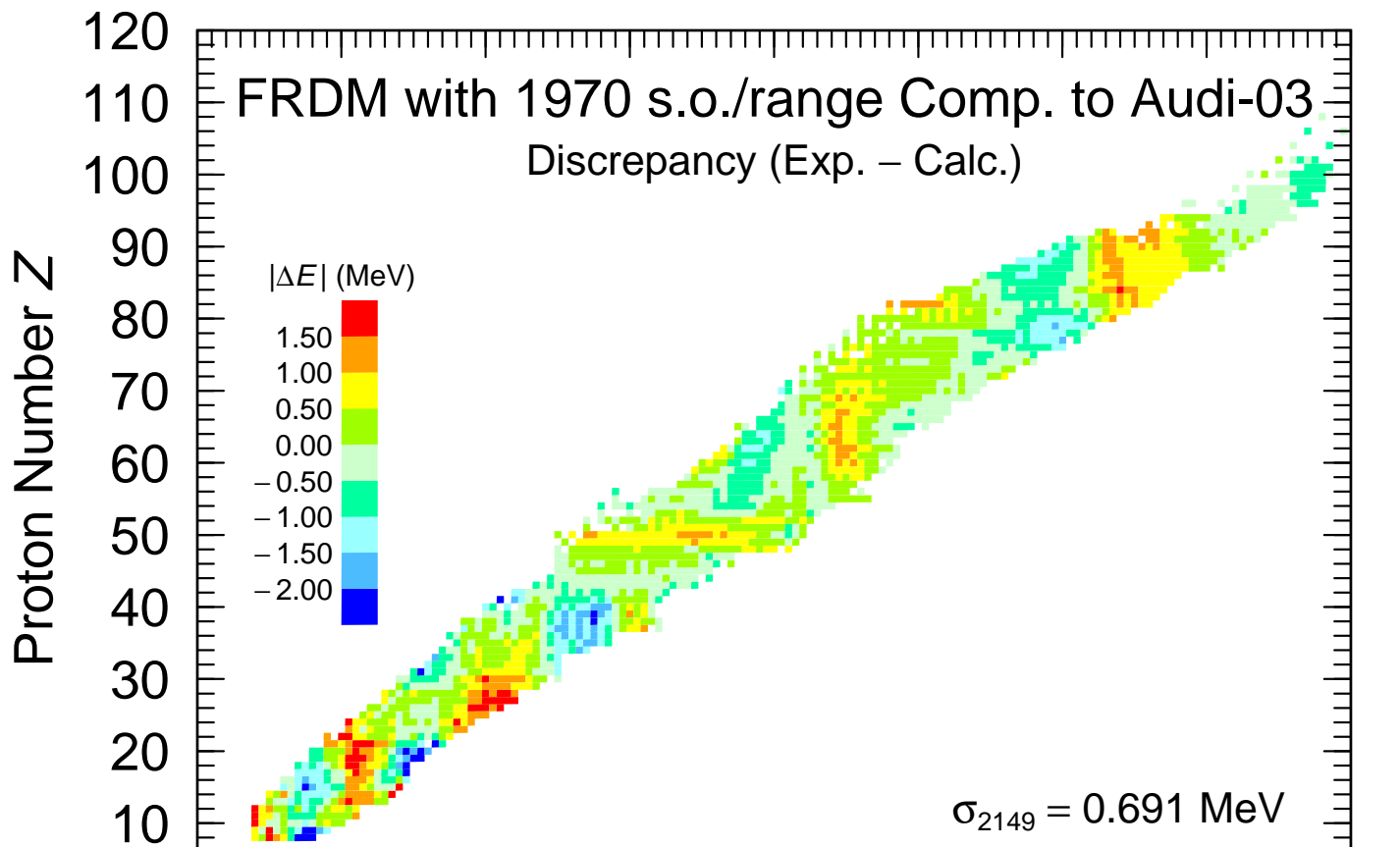
305  
125X<sub>180</sub>

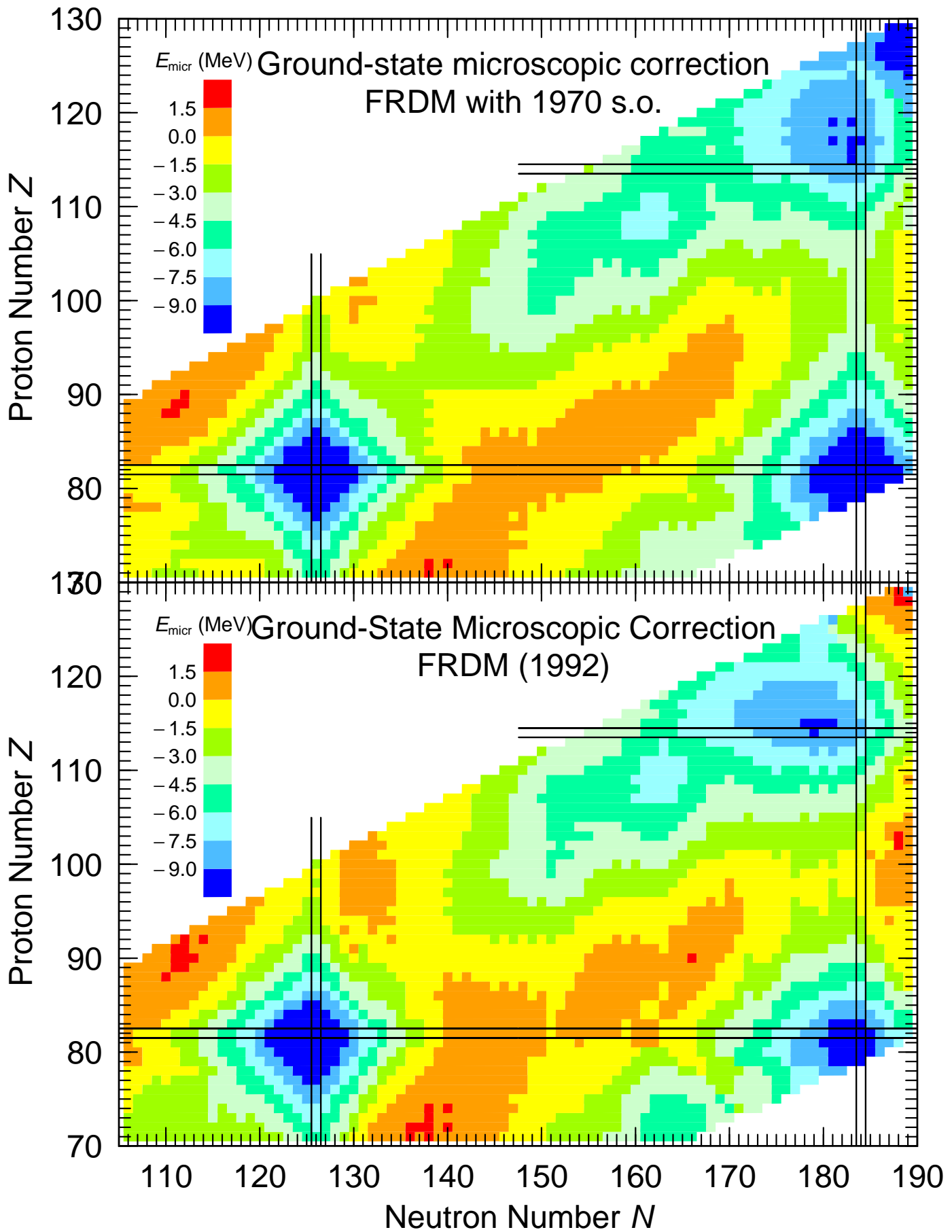
Scale 1.00 (MeV)

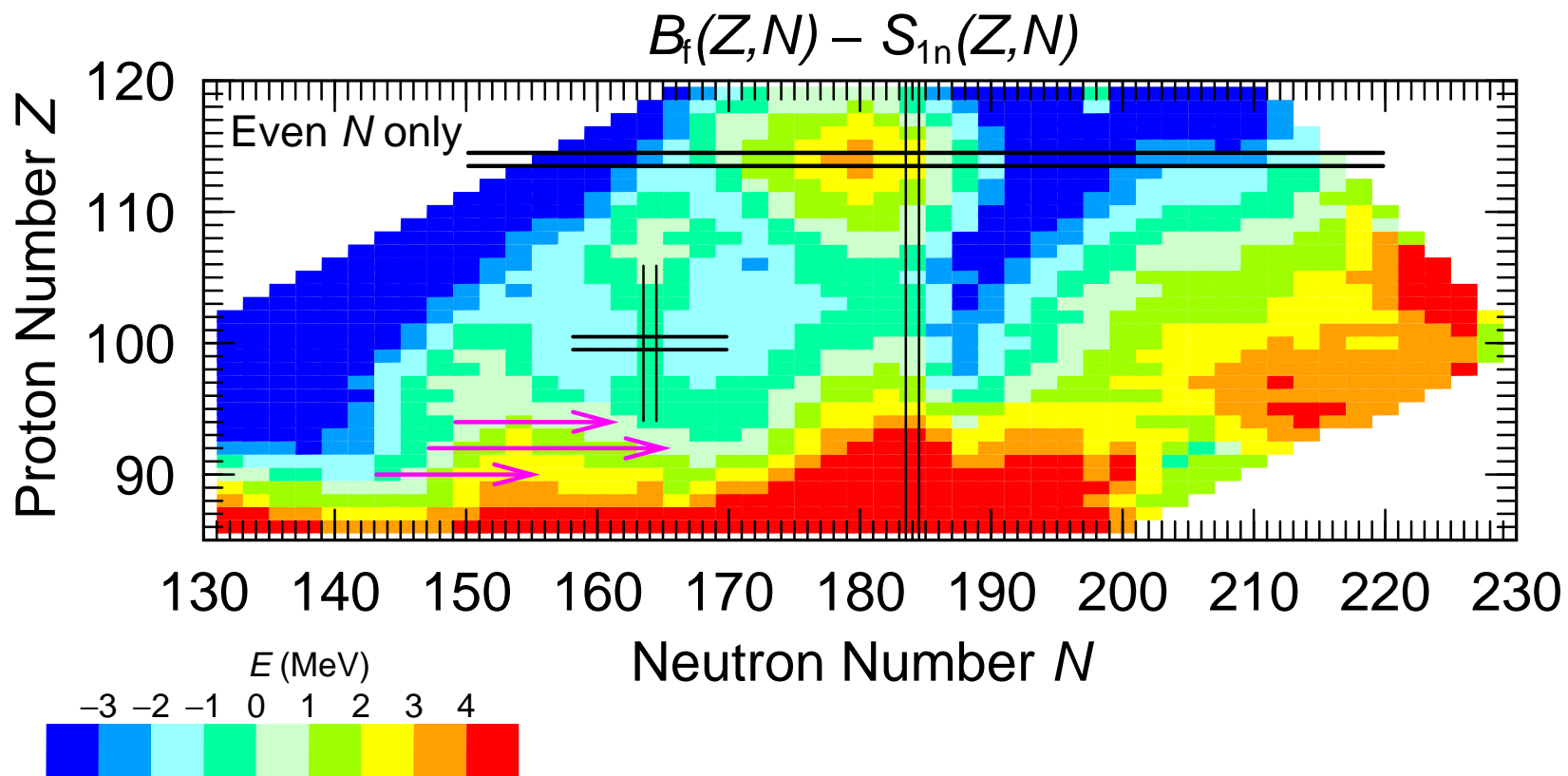




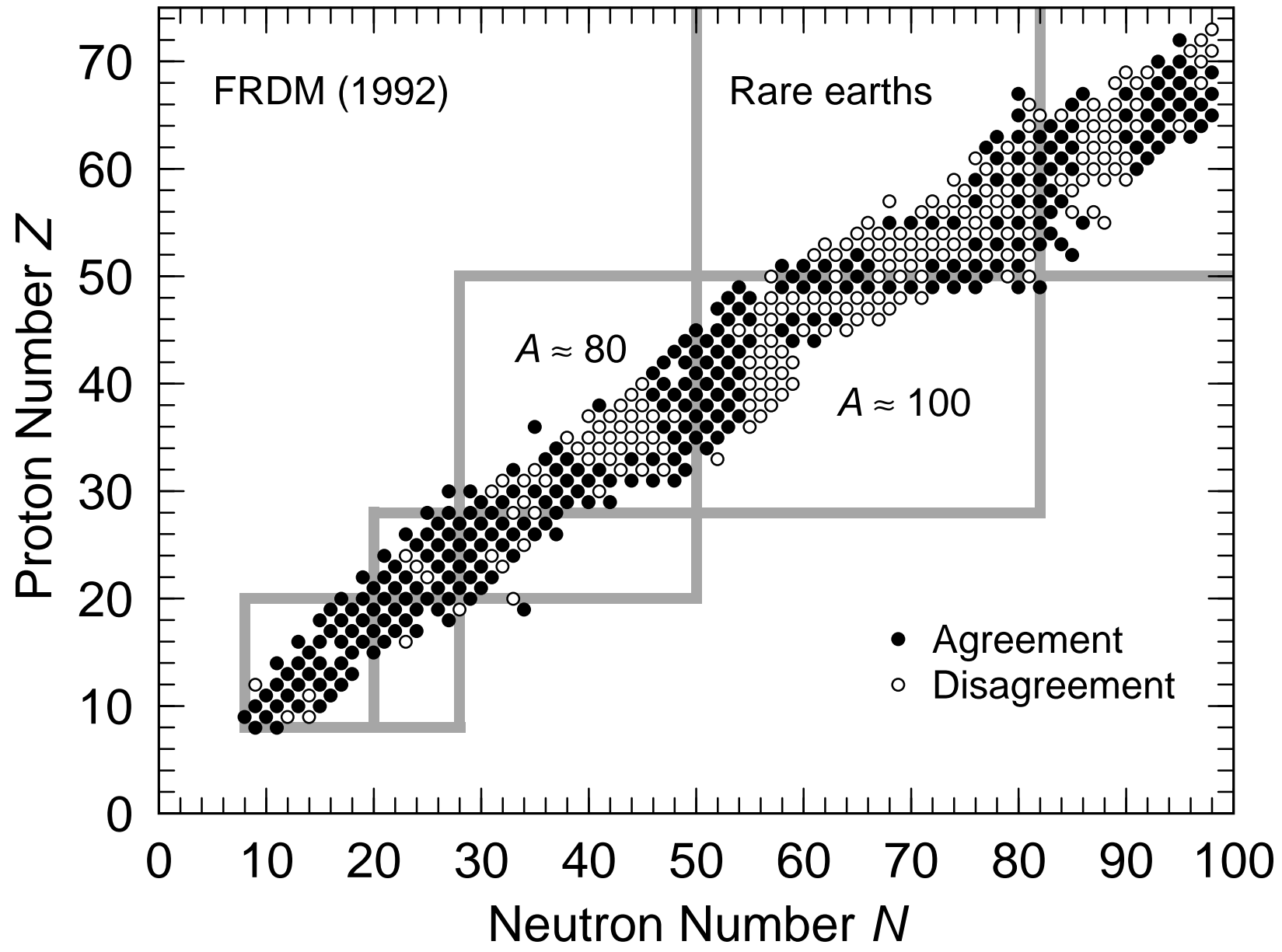




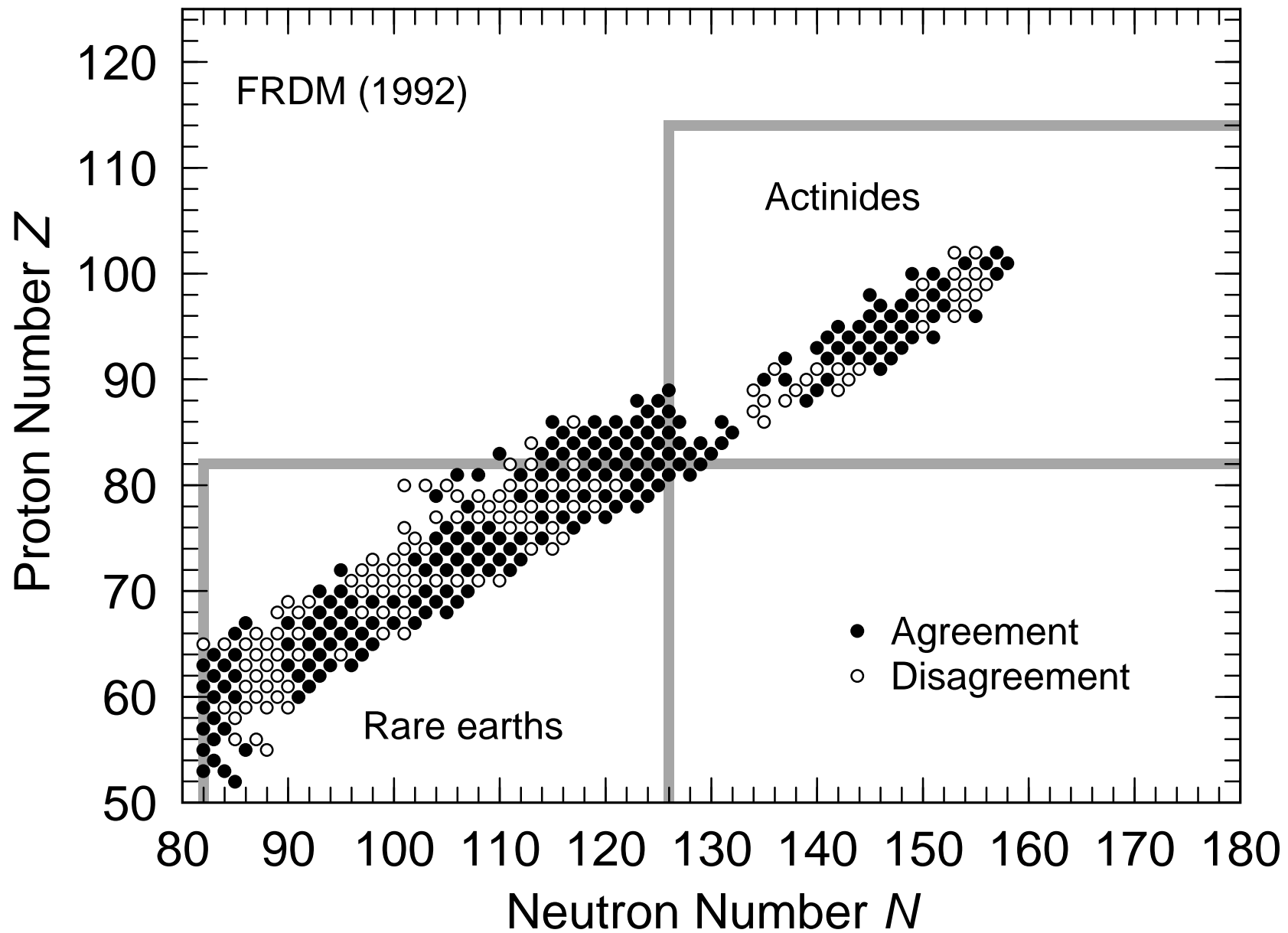




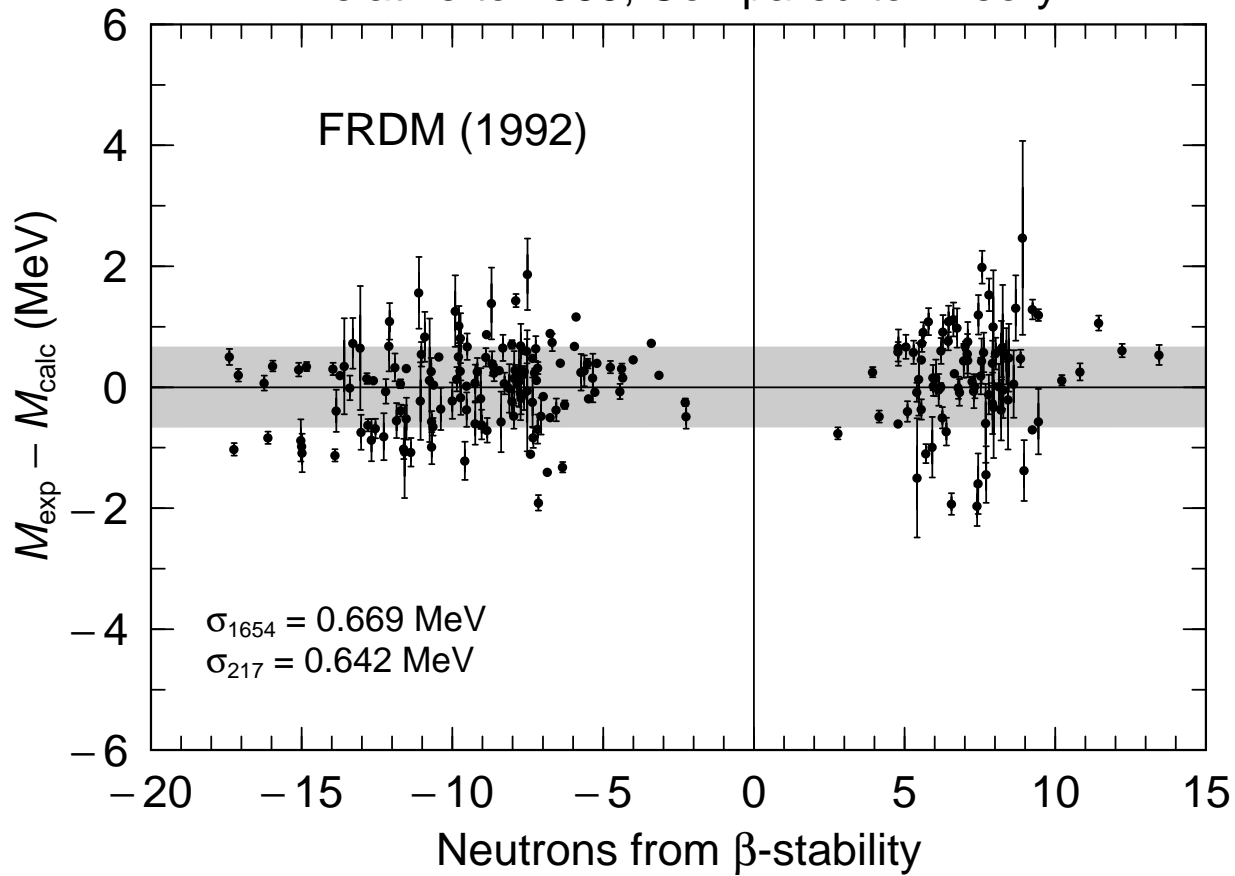
# Model spin and parity compared to experiment



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New Masses in Audi 1993 Evaluation,  
Relative to 1989, Compared to Theory



New Masses in Audi 2003 Evaluation,  
Relative to 1989, Compared to Theory

