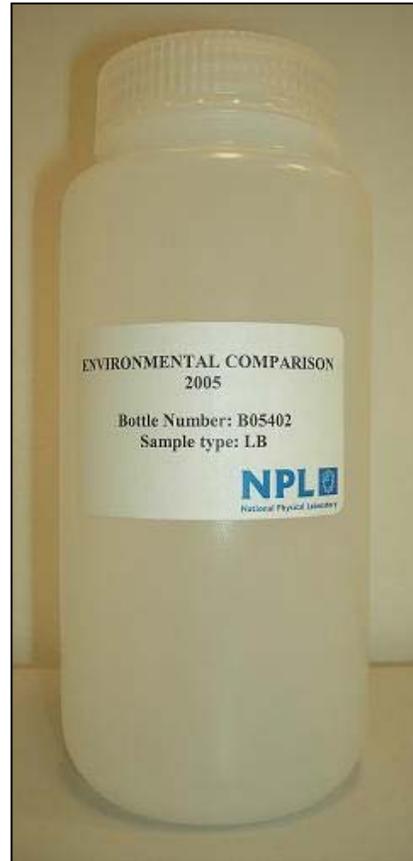


B2 samples 2008



Chris Gilligan
National Physical Laboratory
27 January 2009

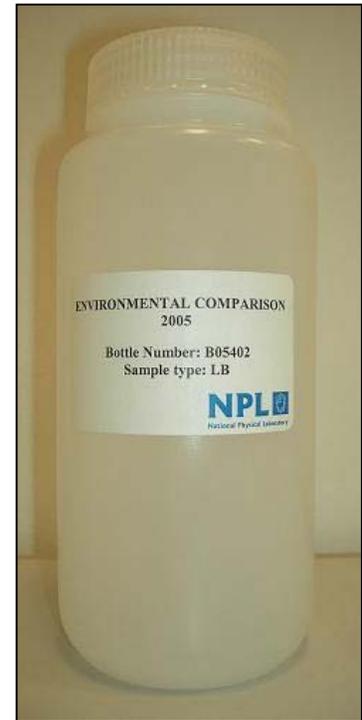
Radionuclides in B2

4 nuclides: 0.1 - 2 Bq g⁻¹

³H, ⁵⁵Fe, ⁶³Ni, ⁹⁰Sr

Gross Beta (i.e., ⁹⁰Sr and ⁹⁰Y)

Participants: 2008 B2: 31 (2007 BH: 18)



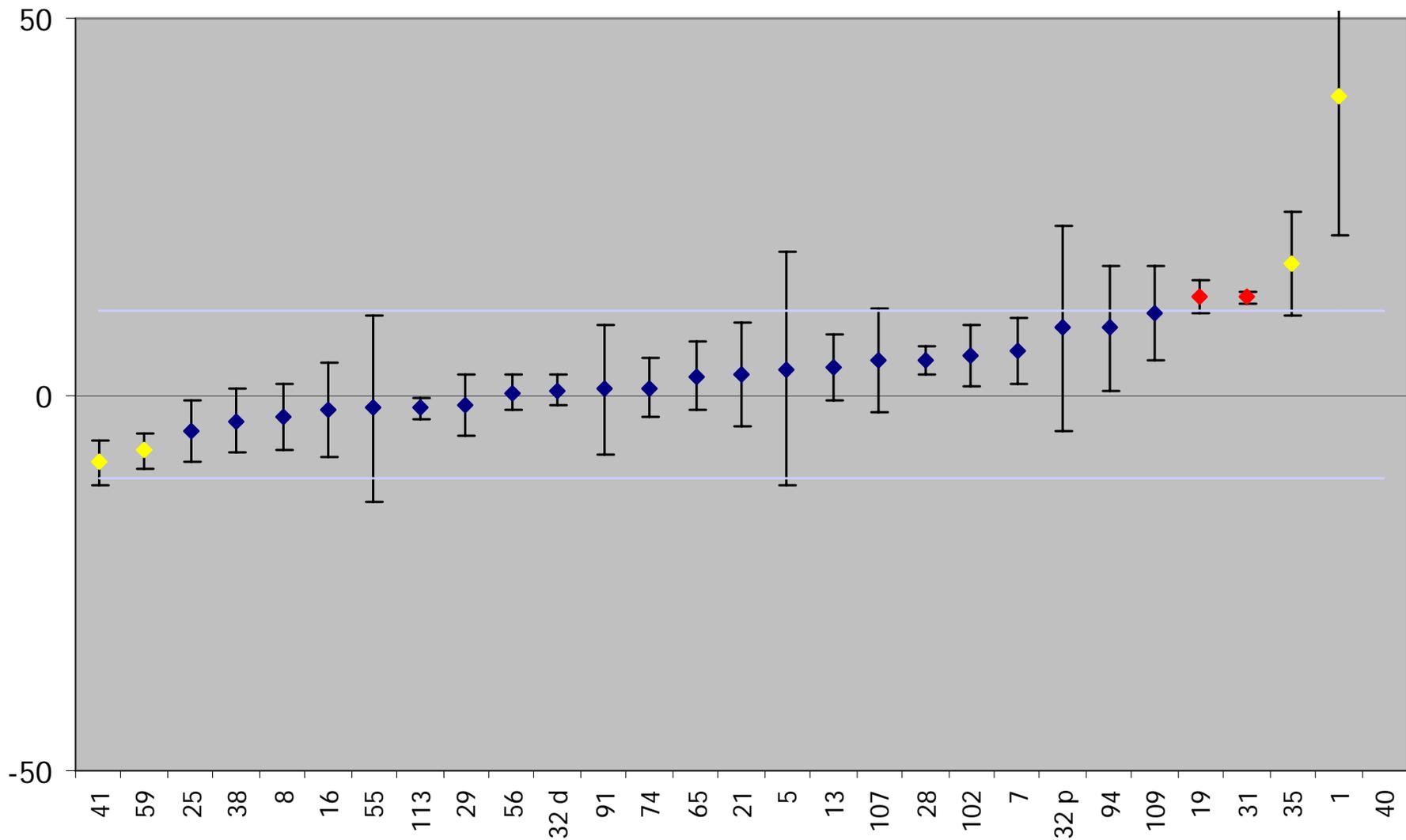
B2 composition (Bq g⁻¹)

| | NPL | Labs | % | Zeta |
|------------------|------------|-----------|------|------|
| ³ H | 0.487(4) | 0.489(3) | +0.4 | 0.44 |
| ⁵⁵ Fe | 1.65(4) | 1.37(4) | -17 | 5.21 |
| ⁶³ Ni | 0.596(24) | 0.586(12) | -1.7 | 0.39 |
| ⁹⁰ Sr | 0.5712(11) | 0.562(7) | -1.6 | 1.26 |
| Gross Beta | 1.1423(23) | 1.32(5) | +16 | 3.59 |

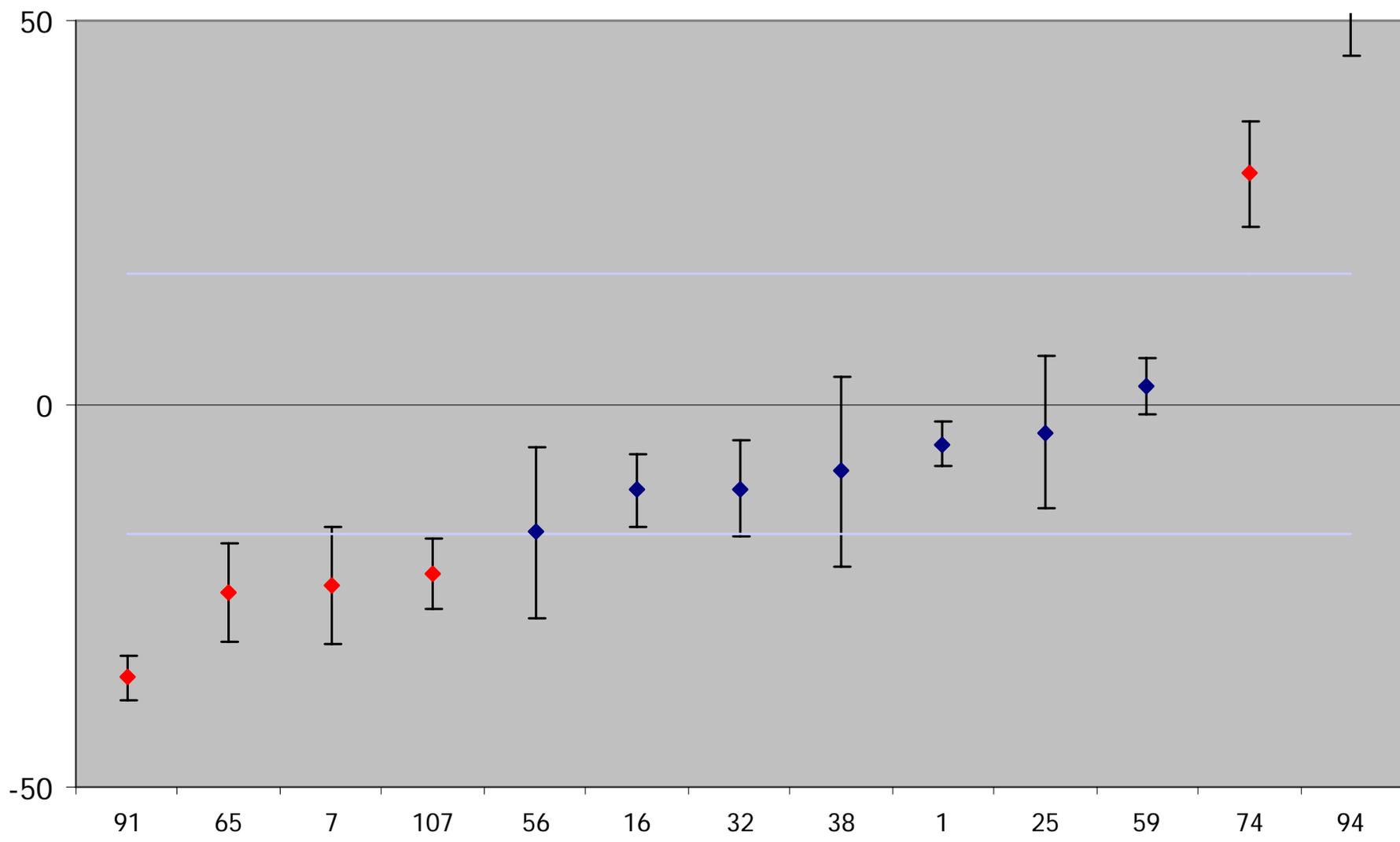
B2 in agreement (%)

| | (2008)B2 | (2007 BH) |
|------------------|----------|-----------|
| ^3H | 79% | 76% |
| ^{55}Fe | 54% | 57% |
| ^{63}Ni | 46% | 50% |
| ^{90}Sr | 74% | 47% |
| Gross Beta | 30% | 50% |

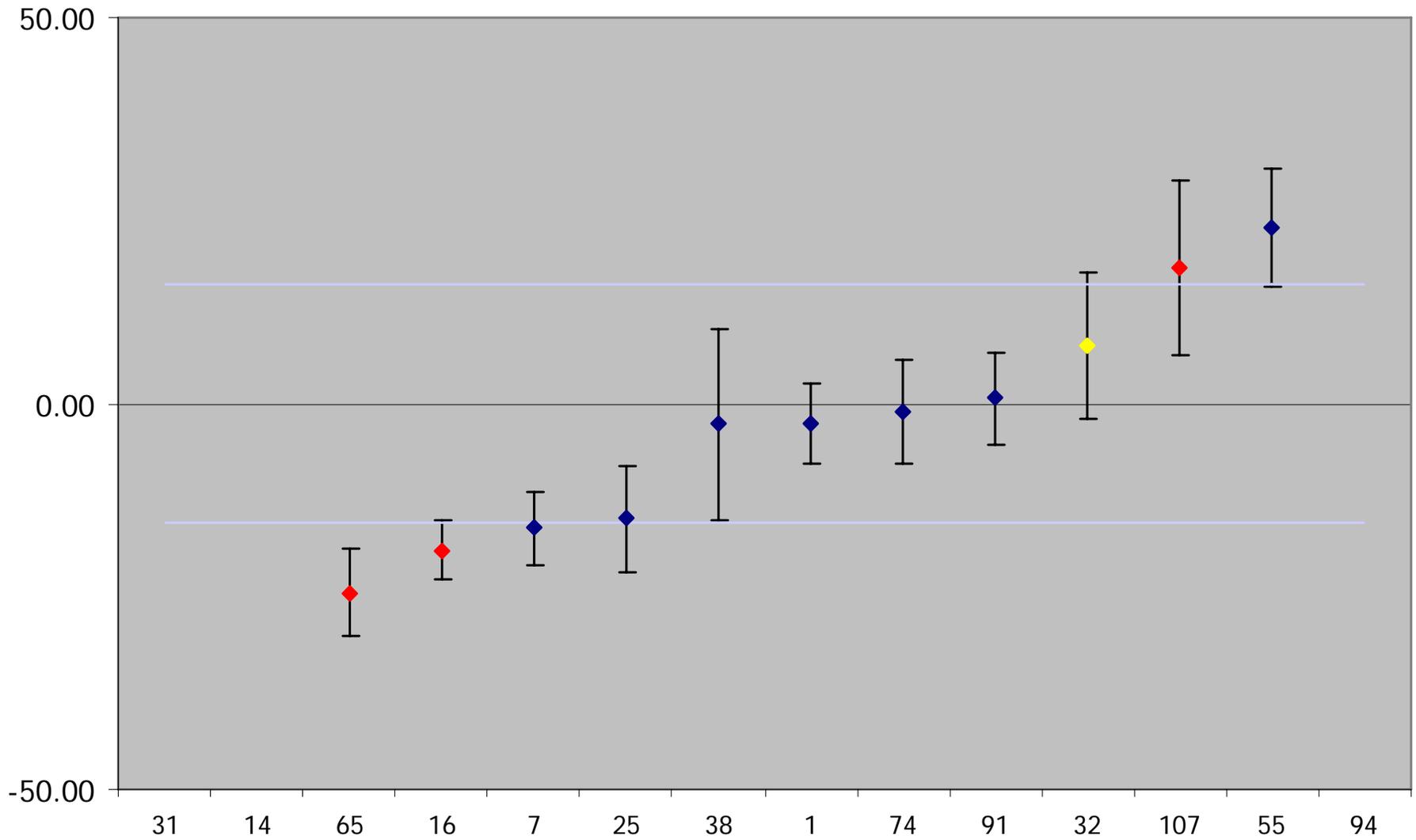
Deviation (%) H-3 B2



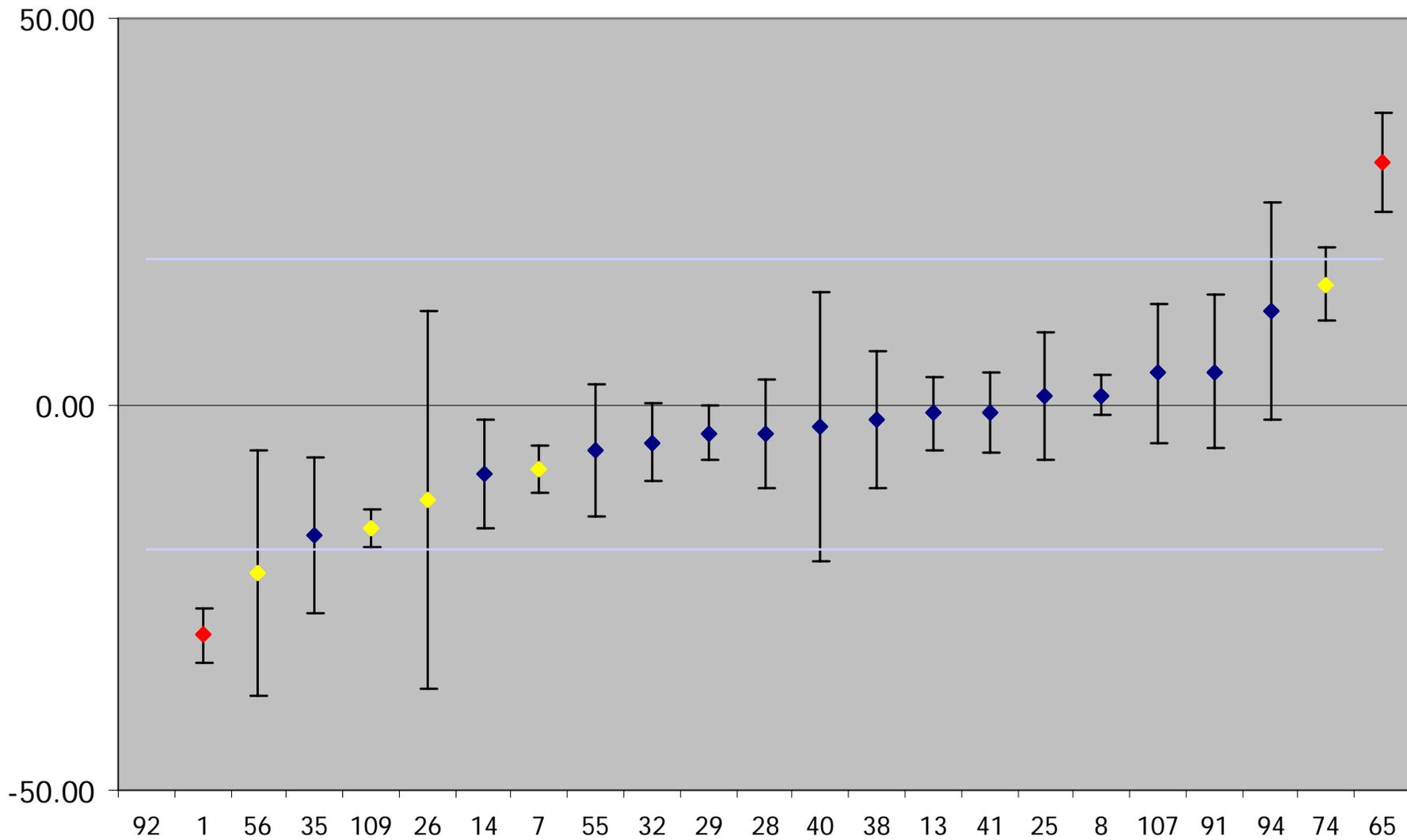
Deviation (%) Fe-55 B2



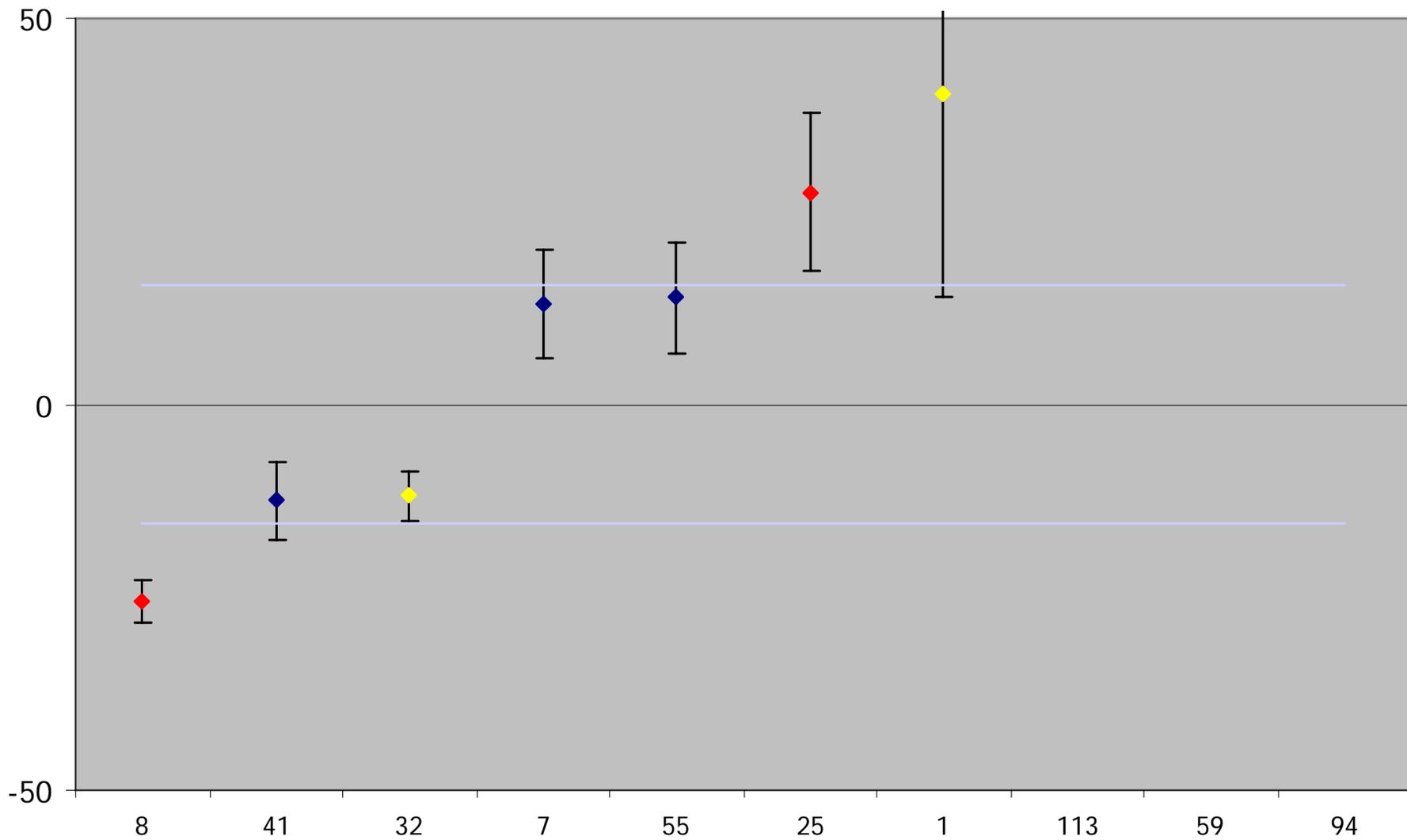
Deviation (%) Ni-63 B2



Deviation (%) Sr-90 B2



Deviation (%) Gross beta B2



Results

(2008) B2

(2007) BH

68%

‘in agreement’

57%

15%

‘questionable’

15%

13%

‘discrepant’

28%

Thank you