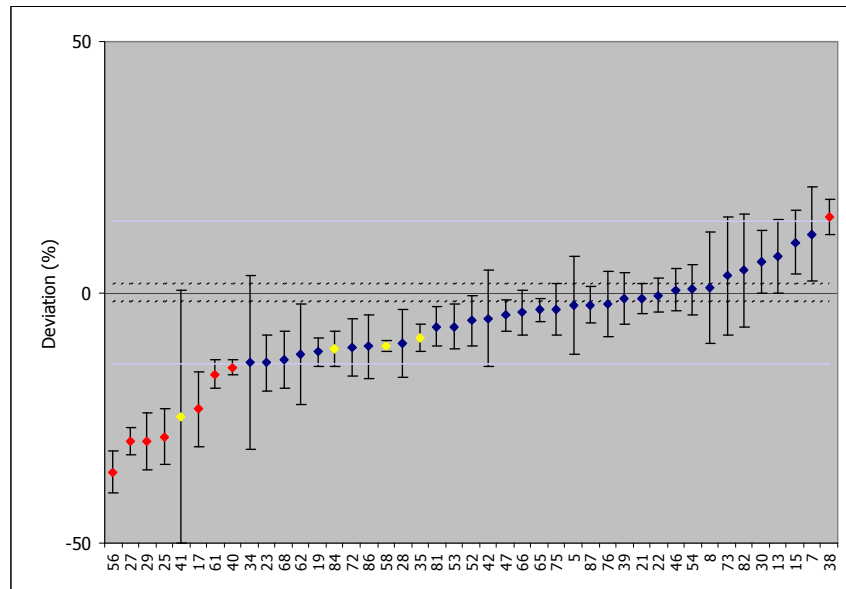


Exercise 2009 summary



Arvic Harms

National Physical Laboratory

20 January 2010

Summary

| | 2007 | 2008 | 2009 |
|-----------------|------|------|-------------|
| Sample types | 8 | 7 | 7 |
| Participants | 65 | 78 | 72 |
| UK participants | 32 | 37 | 35 |
| Results | 1356 | 1372 | 1214 |
| 'In agreement' | 73% | 68% | 71% |

Results in agreement (%)

| <u>2008</u> | | Proportion |
|-------------------|-----------|------------|
| Total | 66 | |
| 2007 participants | 72 | 66% |
| New participants | 55 | 34% |
| UK | 67 | 56% |
| non-UK | 66 | 44% |

| <u>2009</u> | | |
|-------------------|-----------|-----|
| Total | 71 | |
| 2008 participants | 75 | 76% |
| New participants | 60 | 24% |
| UK | 72 | 56% |
| non-UK | 69 | 44% |

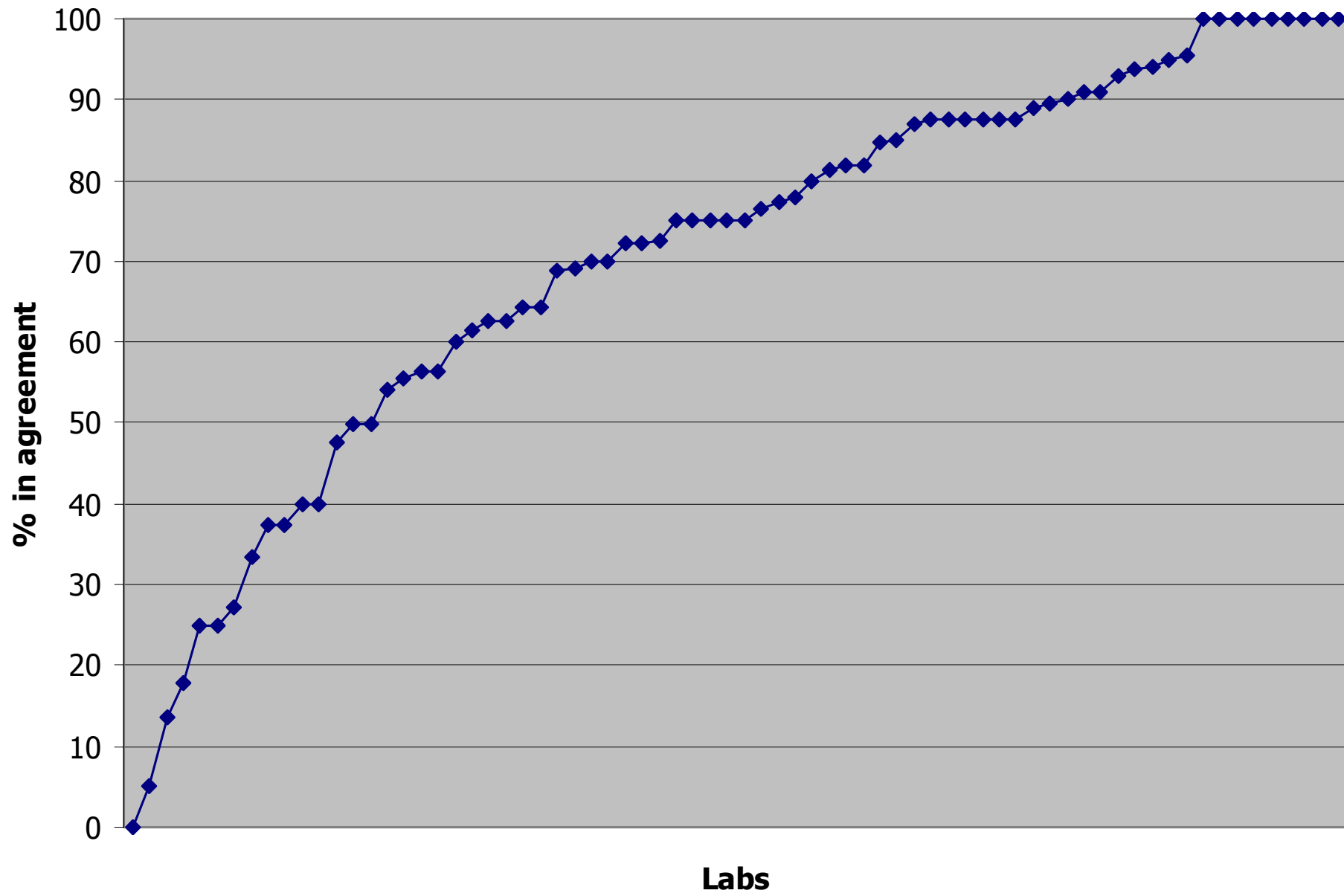
Comments

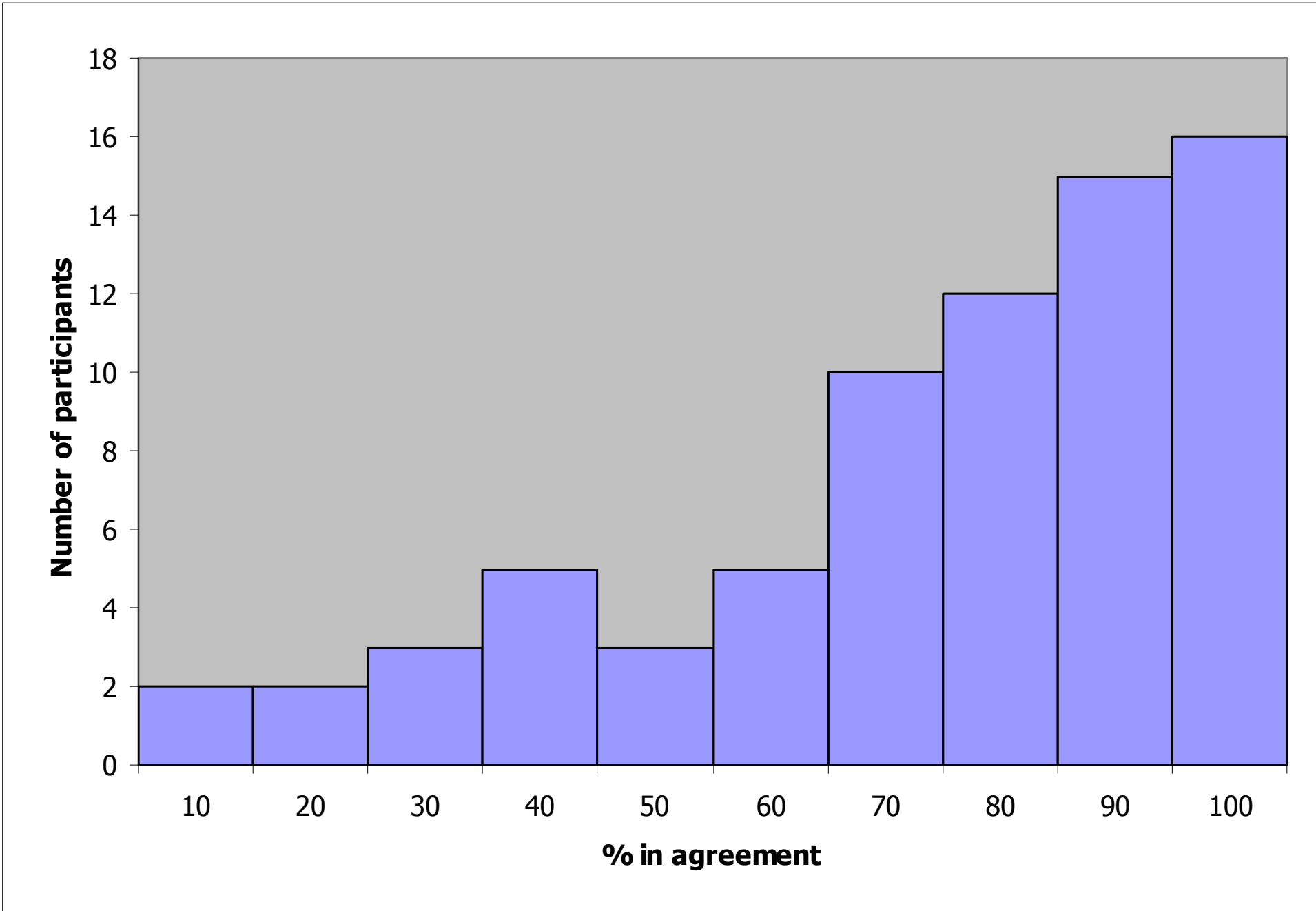
Overall performance higher than 2008

Still problems with coincidence summing corrections:

^{133}Ba , ^{134}Cs and ^{152}Eu

Significant less false positive identifications for the GL and GH samples (7 in 2009 instead of 29 in 2008)





Top labs

| | | | |
|---------|-----------|---------|----------|
| Lab 13 | 100% (16) | Lab 38 | 95% (22) |
| Lab 46 | 100% (16) | Lab 32 | 95% (40) |
| Lab 19 | 100% (9) | Lab 91 | 94% (17) |
| Lab 72 | 100% (9) | Lab 106 | 94% (16) |
| Lab 53 | 100% (8) | Lab 95 | 93% (14) |
| Lab 77 | 100% (8) | Lab 47 | 91% (33) |
| Lab 110 | 100% (8) | Lab 65 | 91% (22) |
| Lab 4 | 100% (4) | Lab 29 | 90% (20) |
| Lab 115 | 100% (2) | Lab 25 | 90% (29) |

Bottom labs

| | | | |
|---------|----------|---------|----------|
| Lab 116 | 0% (8) | Lab 118 | 40% (10) |
| Lab 126 | 5% (20) | Lab 40 | 40% (15) |
| Lab 100 | 14% (22) | Lab 76 | 48% (21) |
| Lab 31 | 18% (28) | Lab 93 | 50% (8) |
| Lab 78 | 25% (4) | Lab 111 | 50% (8) |
| Lab 113 | 25% (4) | Lab 121 | 54% (24) |
| Lab 16 | 27% (11) | Lab 90 | 56% (9) |
| Lab 83 | 33% (18) | Lab 82 | 56% (16) |
| Lab 124 | 38% (16) | Lab 117 | 56% (16) |
| Lab 7 | 38% (24) | Lab 58 | 60% (20) |

Other labs (I)

| | | | |
|---------|----------|---------|----------|
| Lab 51 | 62% (13) | Lab 35 | 72% (36) |
| Lab 27 | 63% (16) | Lab 28 | 72% (29) |
| Lab 26 | 63% (16) | Lab 48 | 75% (12) |
| Lab 41 | 64% (14) | Lab 74 | 75% (16) |
| Lab 61 | 64% (14) | Lab 5 | 75% (24) |
| Lab 15 | 69% (16) | Lab 17 | 75% (24) |
| Lab 59 | 69% (26) | Lab 88 | 75% (28) |
| Lab 62 | 70% (10) | Lab 119 | 76% (17) |
| Lab 108 | 70% (10) | Lab 55 | 77% (31) |
| Lab 120 | 72% (18) | Lab 1 | 78% (9) |

Other labs (II)

| | | | |
|---------|----------|---------|----------|
| Lab 114 | 80% (15) | Lab 104 | 88% (8) |
| Lab 8 | 81% (48) | Lab 10 | 88% (16) |
| Lab 107 | 82% (11) | Lab 89 | 88% (16) |
| Lab 86 | 82% (22) | Lab 122 | 89% (9) |
| Lab 42 | 85% (13) | | |
| Lab 18 | 85% (20) | | |
| Lab 123 | 87% (38) | | |
| Lab 23 | 88% (8) | | |
| Lab 39 | 88% (8) | | |
| Lab 45 | 88% (8) | | |

Publications

NPL Report on PTE 2008 (IR 15) published in May 2009

Three papers published

- Decay correction of ^{95}Nb Appl. Rad. Isot. (2009) 67, 641
- Data evaluation Accr. Qual. Assur. (2009) 14, 253
- Kiri plots Accr. Qual. Assur. (2009) 14, 307

One paper accepted

- Concrete reference material Appl. Rad. Isot. (2010) in press

Two papers in preparation

- Combined results 1989-2009
- Synthetic S reference material

Thank you

Arzu Arinc

Sean Collins

Julian Dean

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Ami Patel

Jean Wong

Eleanor Bakhshandear

Chris Cross

Andy Fenwick

Lena Johansson

Amanda Law

Andy Pearce

Thank you