

Tracking MQX at injection

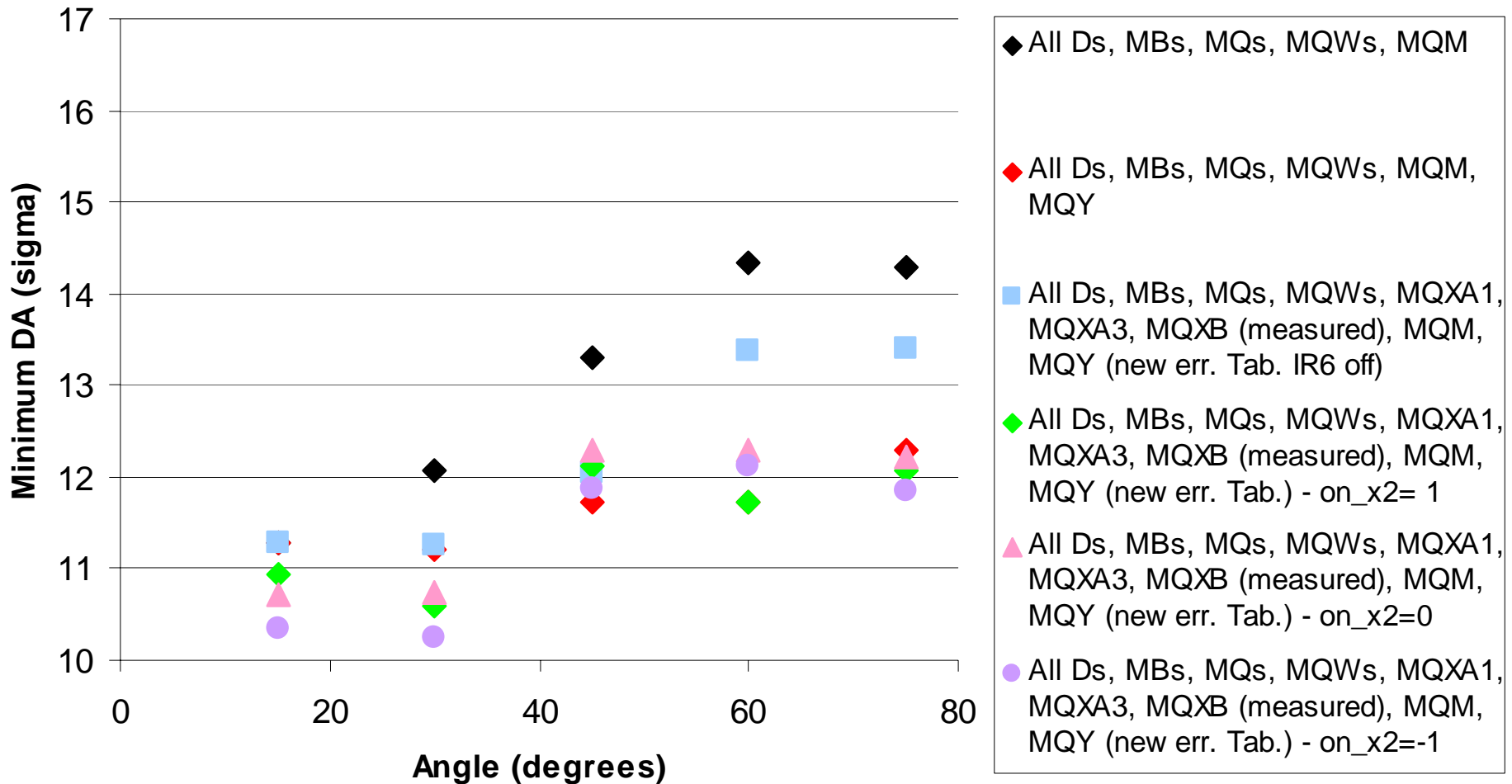
Acknowledgements: S. Fartoukh, F. Schmidt

- Aim and simulation conditions
- Numerical results
- Conclusions

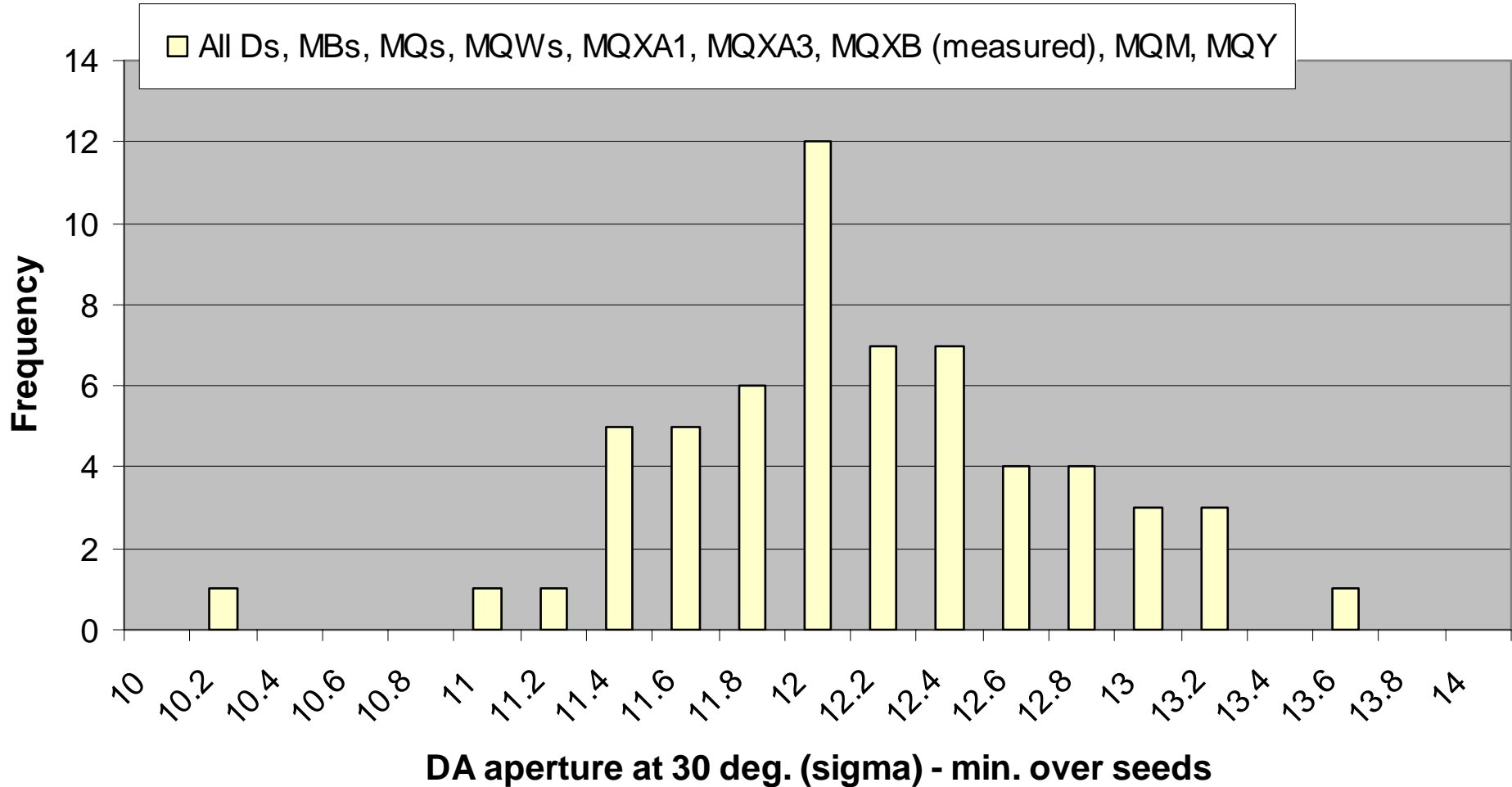
New tracking studies for MQMs: scan over skews - I

- Aim: test impact on DA of the measured FQ of triplet quadrupoles (previous studies focused on collision)
- Tracking setup: see previous presentation, plus
 - Measured errors in triplet quadrupoles
 - 180 degrees rotation around s-axis for Q3 taken into account
- Two optical configurations considered:
 - Nominal injection configuration $\beta^*(IR1/IR5)=18$ m
 - Pre-squeezed configuration $\beta^*(IR1/IR5)=11$ m
(see SF 23 LTC, 31/03/04).

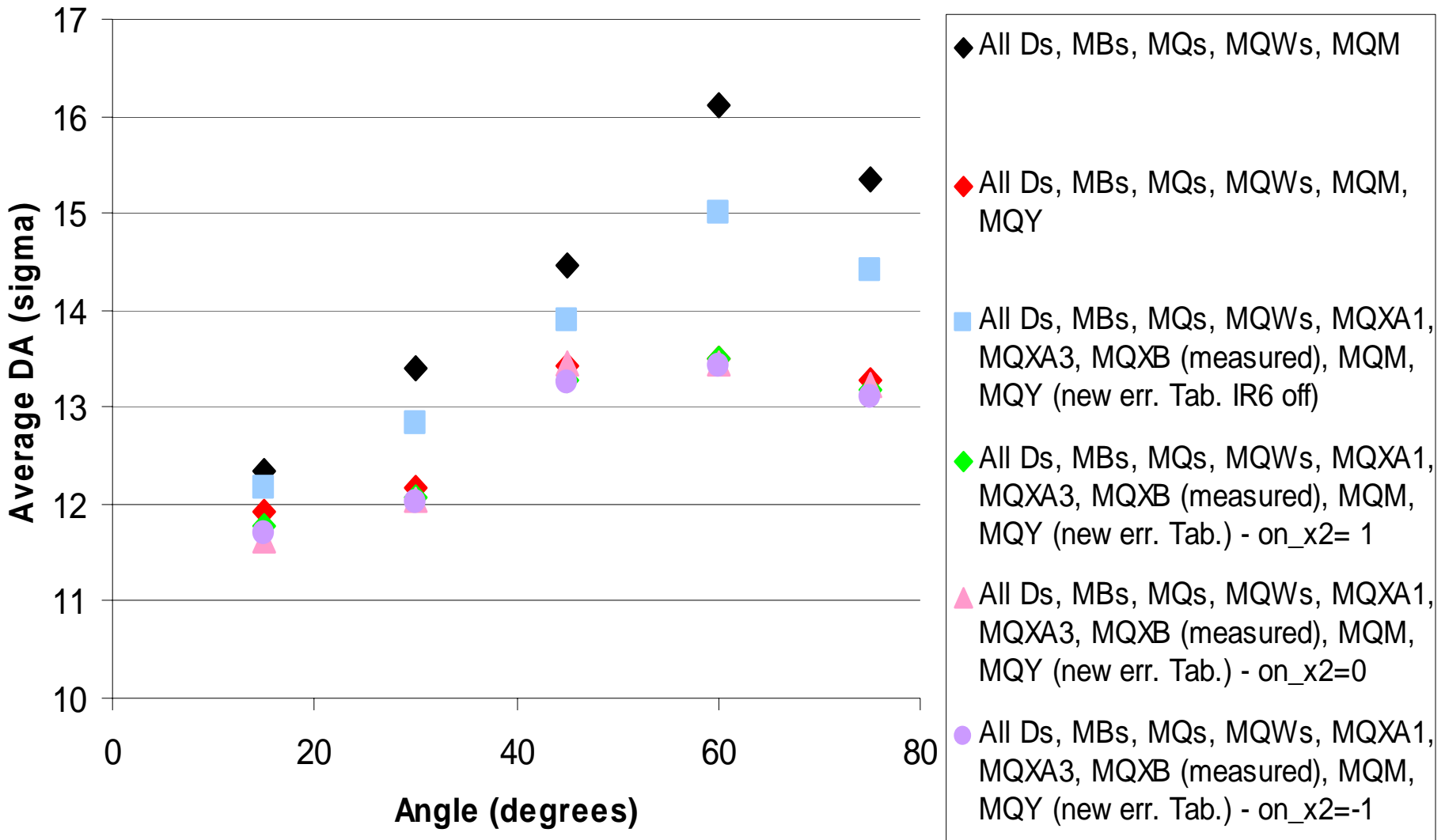
Tracking results (injection optics)- I



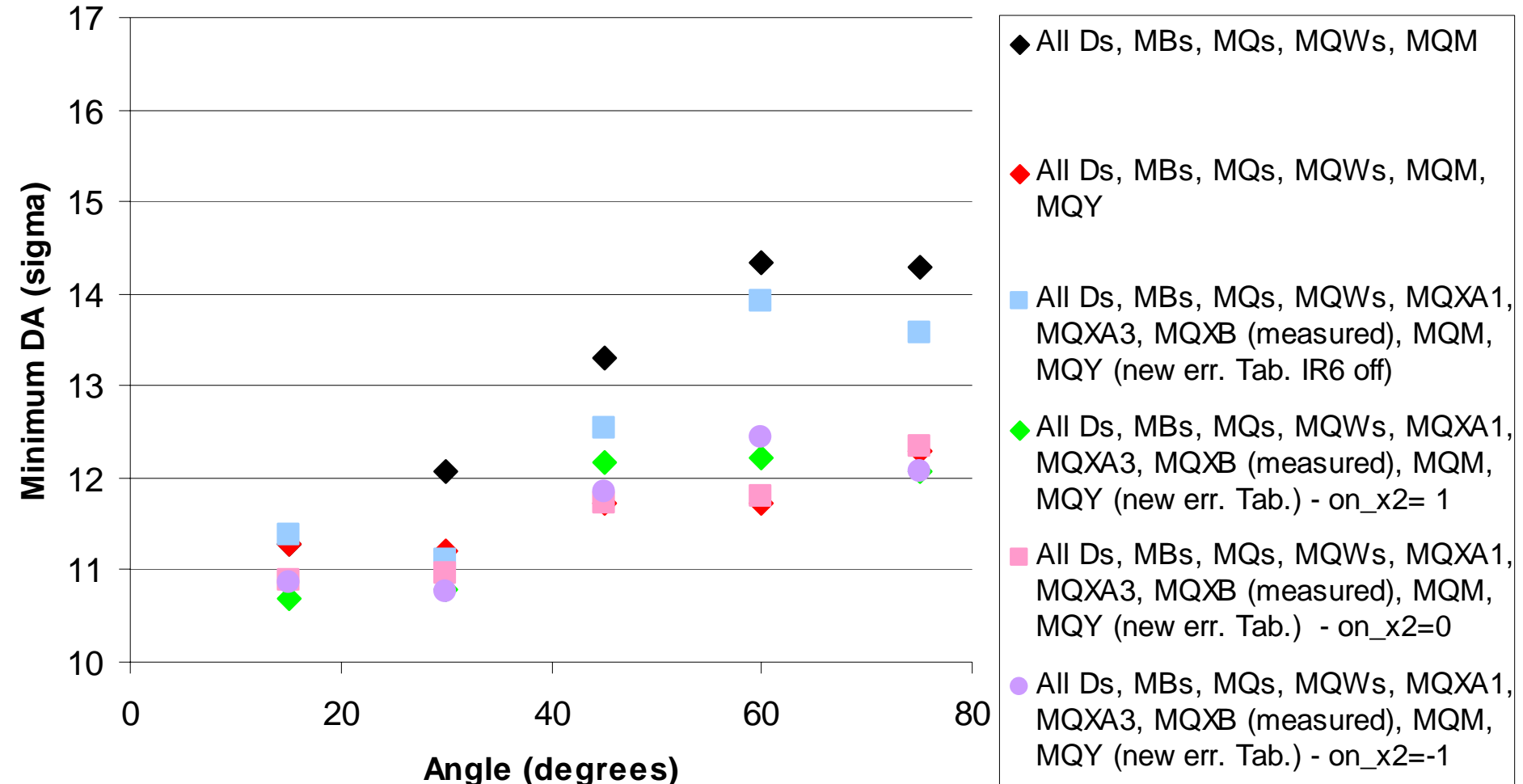
Tracking results (injection optics)- II



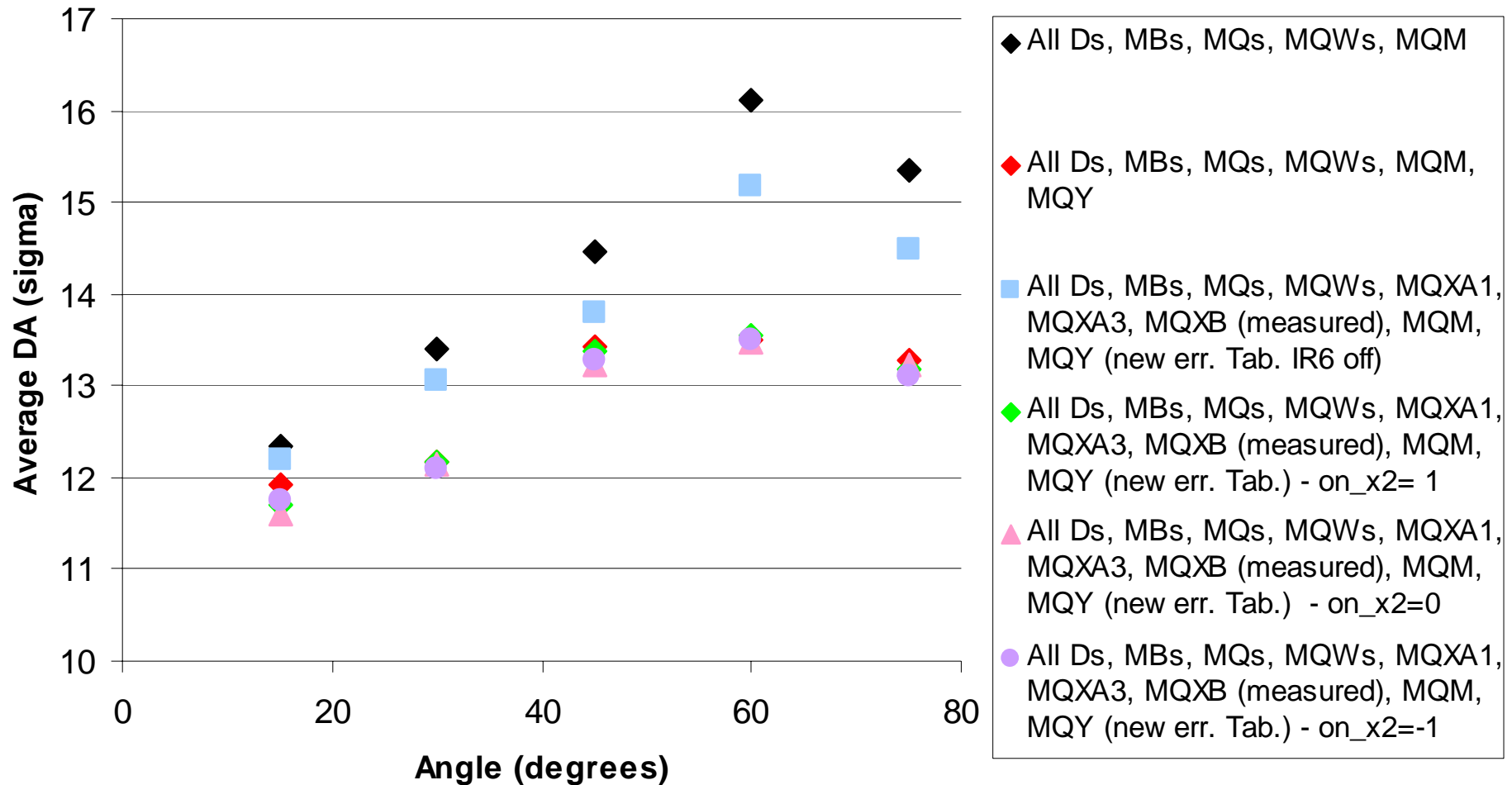
Tracking results (injection optics) - III



Tracking results (pre-squeezed optics) - IV



Tracking results (pre-squeezed optics) - V



Conclusions

- FQ of triplet quadrupoles has a clear impact on DA (now below 11 sigma).
- DA is weakly affected by feed-down effects due to IR2 vertical crossing (b10 into a9).
- DA does not differ significantly for the two optical configurations considered.
- Once more MQYs in IR6 dominate the scene...