



CERN, 30th May 2008
FiDeL Task Force

FIELD MODEL FOR MQXA TRANSFER FUNCTION

E. Todesco

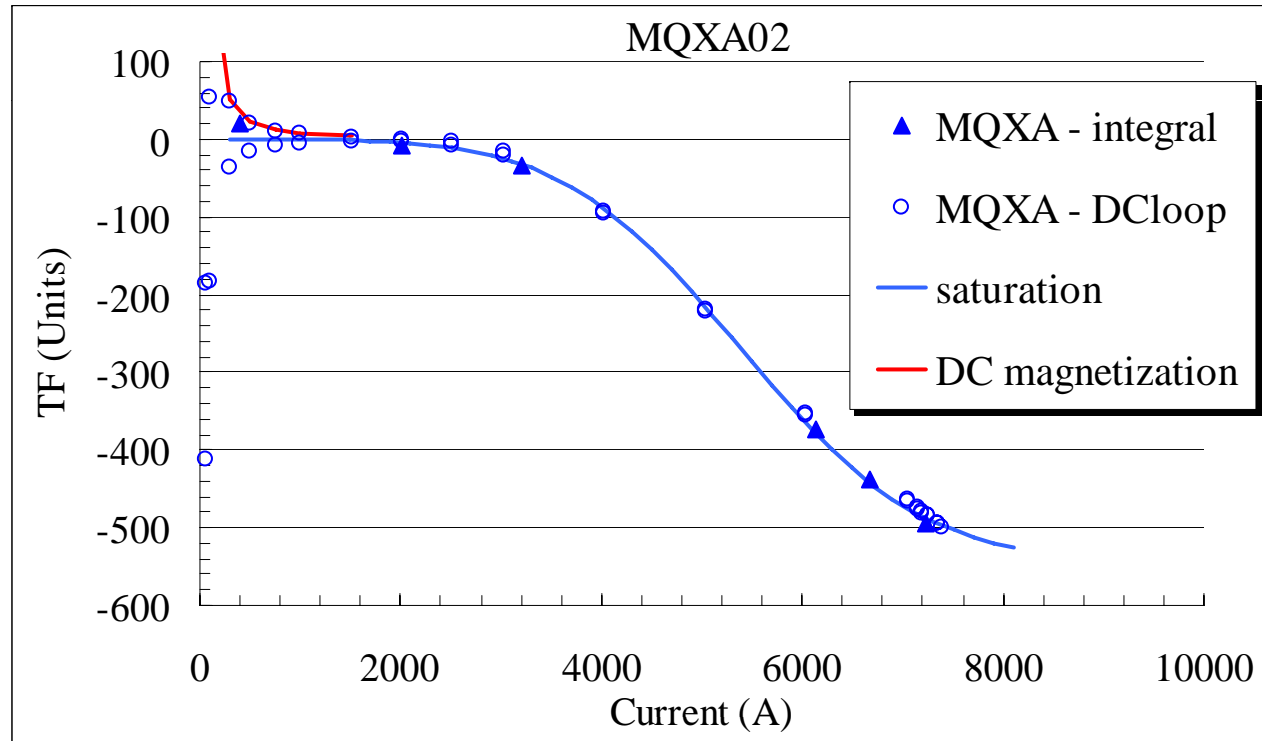
Magnets, Cryostats and Superconductors Group
Accelerator Technology Department, CERN

Acknowledgements: P. Hagen, L. Deniau, L. Bottura, and the Japanese team in charge of MQXA construction and measurements



MAGNETIZATION AND SATURATION FIT

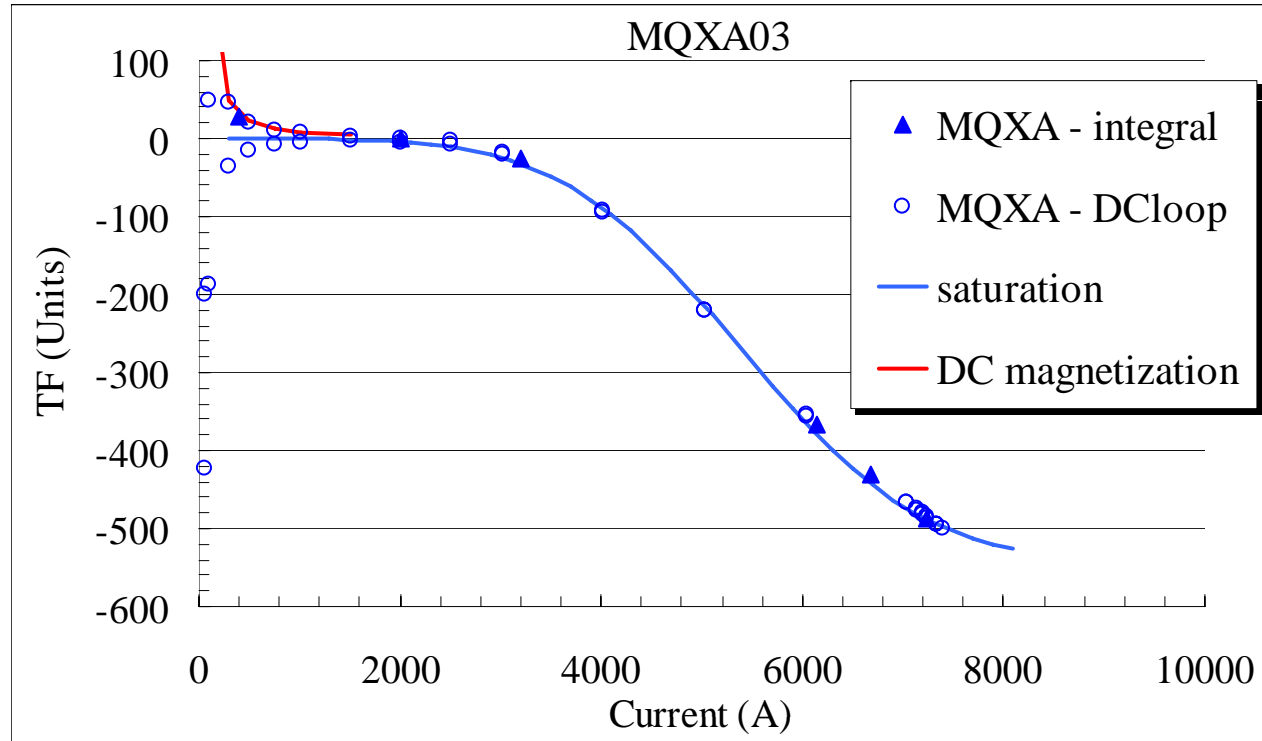
- Error saturation: 6.6 units
- Error magnetization: 2.3 units





MAGNETIZATION AND SATURATION FIT

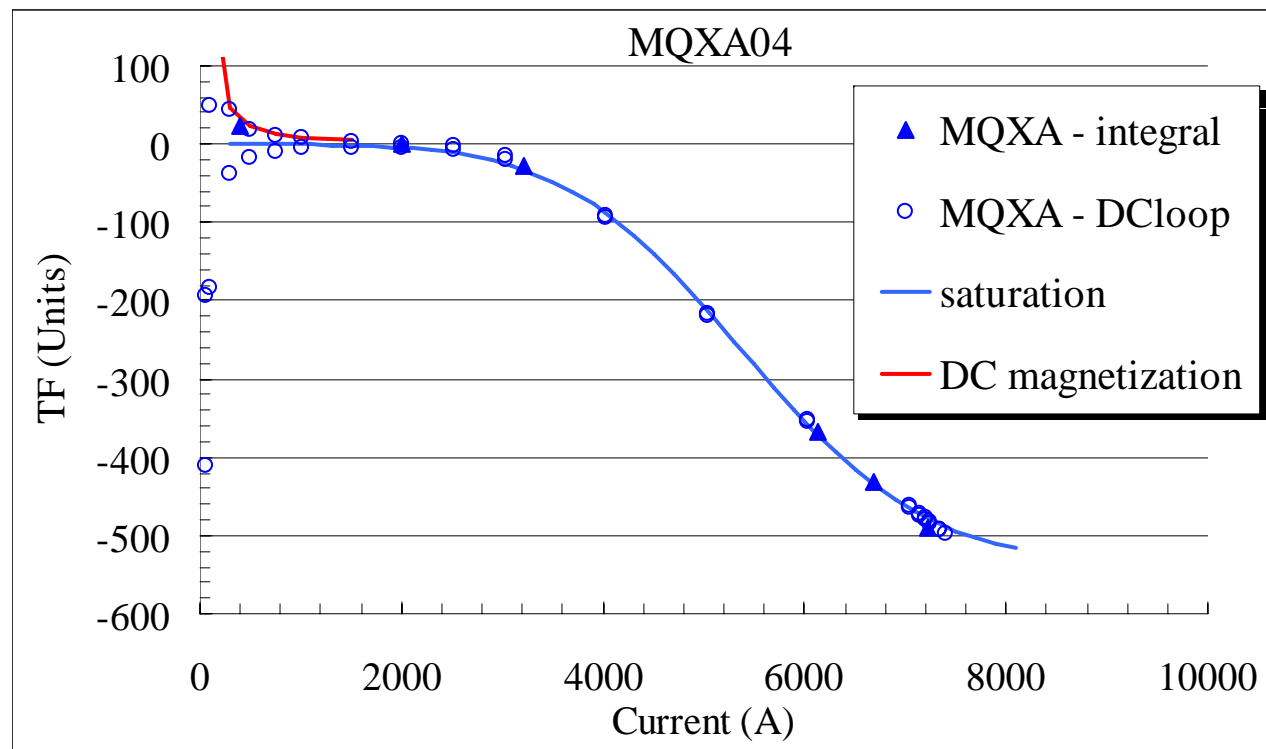
- Error saturation: 6.2 units
- Error magnetization: 2.3 units





MAGNETIZATION AND SATURATION FIT

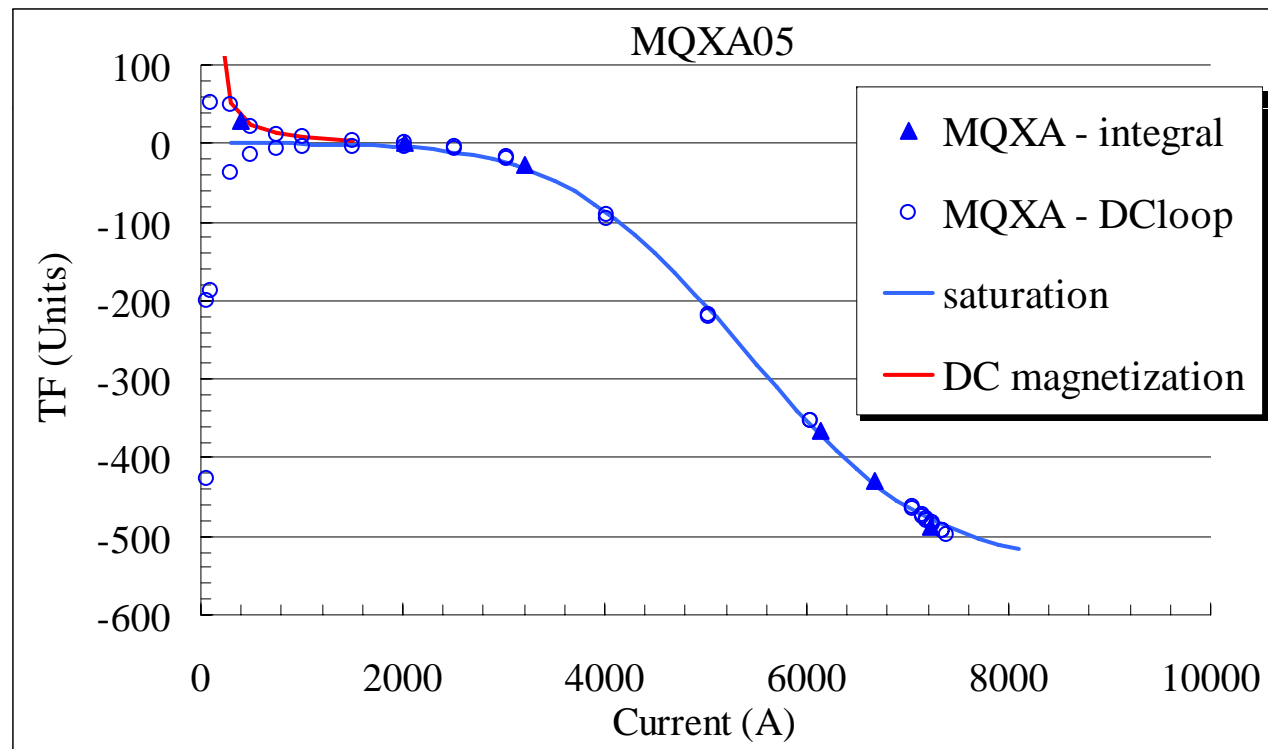
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- Error magnetization: 2.0 units





MAGNETIZATION AND SATURATION FIT

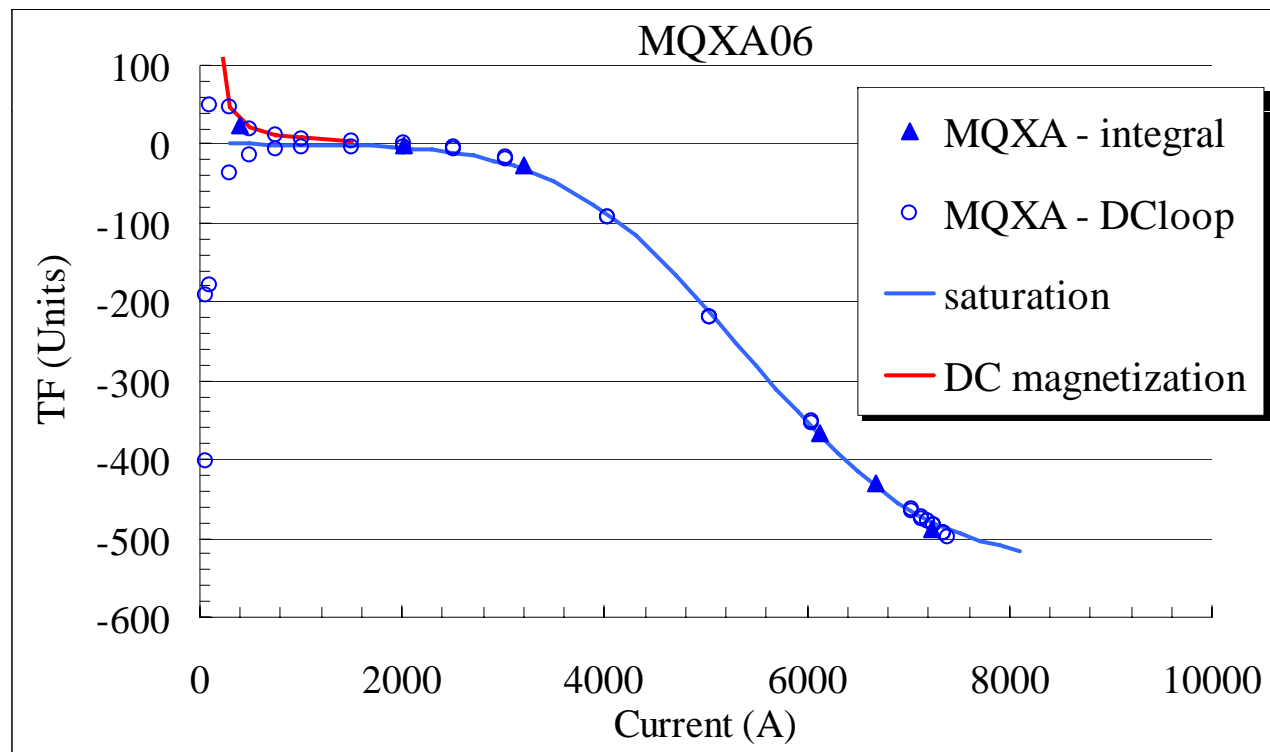
- Error saturation: 5.9 units
- Error magnetization: 2.2 units





MAGNETIZATION AND SATURATION FIT

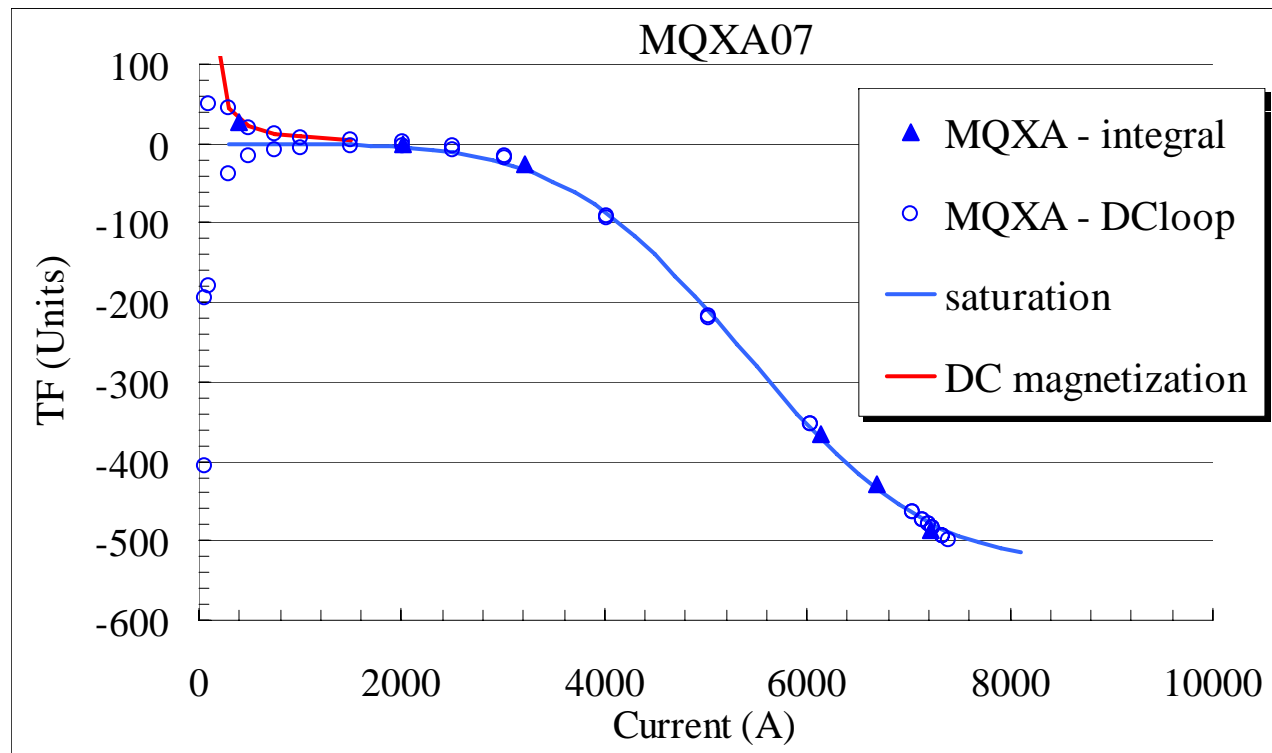
- Error saturation: 6.1 units
- Error magnetization: 2.1 units





MAGNETIZATION AND SATURATION FIT

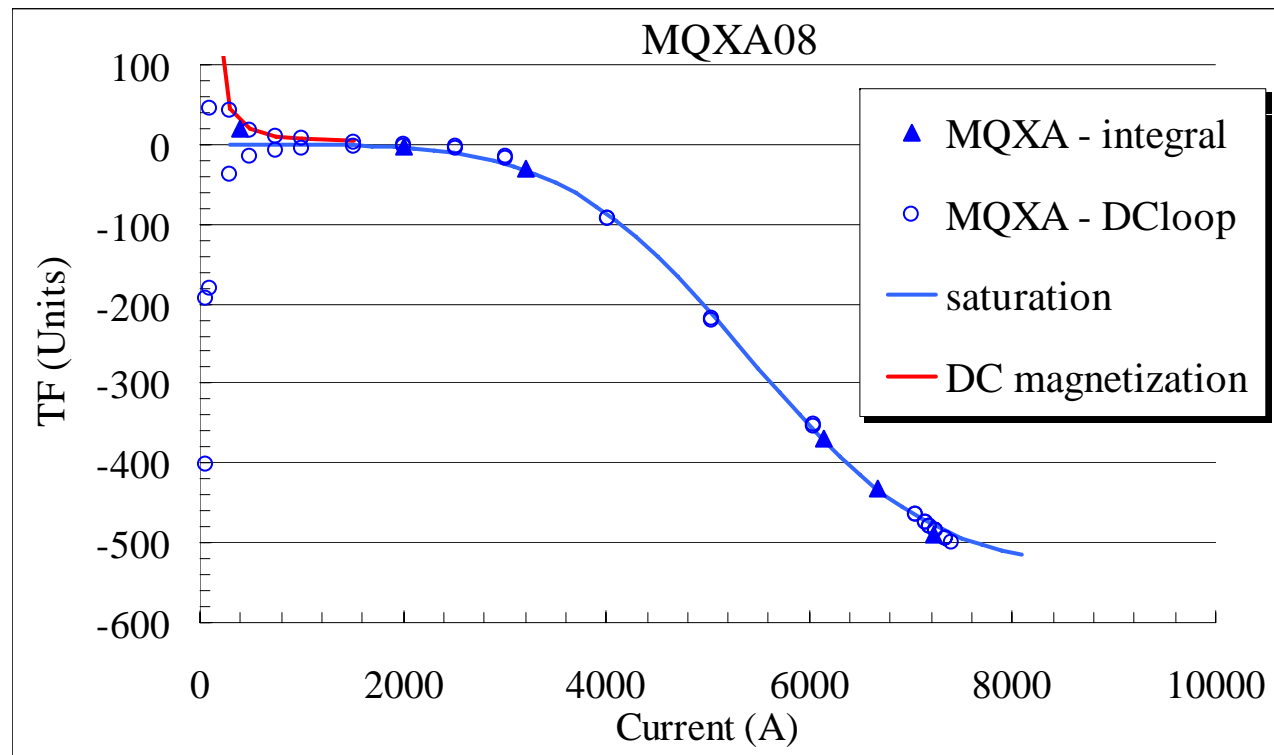
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- Error magnetization: 2.1 units





MAGNETIZATION AND SATURATION FIT

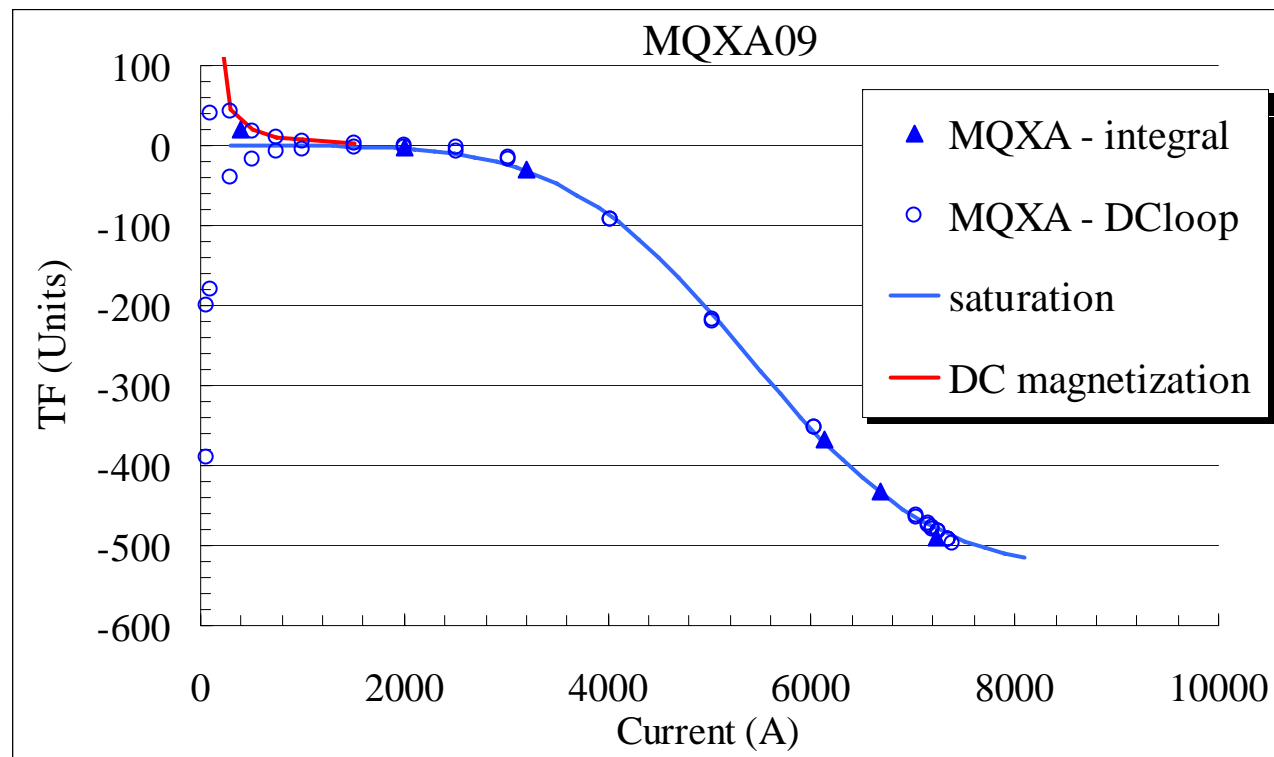
- Error saturation: 5.7 units
- Error magnetization: 2.1 units





MAGNETIZATION AND SATURATION FIT

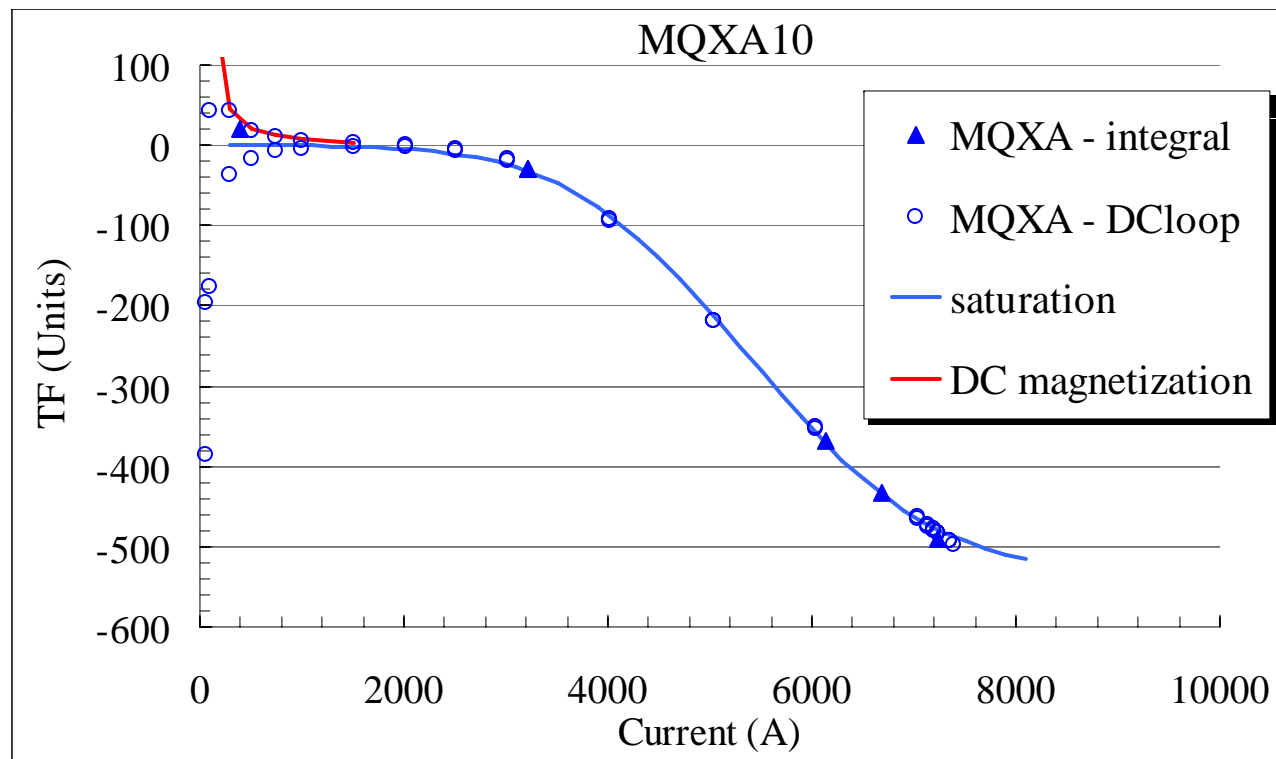
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- Error magnetization: 5.7 units





MAGNETIZATION AND SATURATION FIT

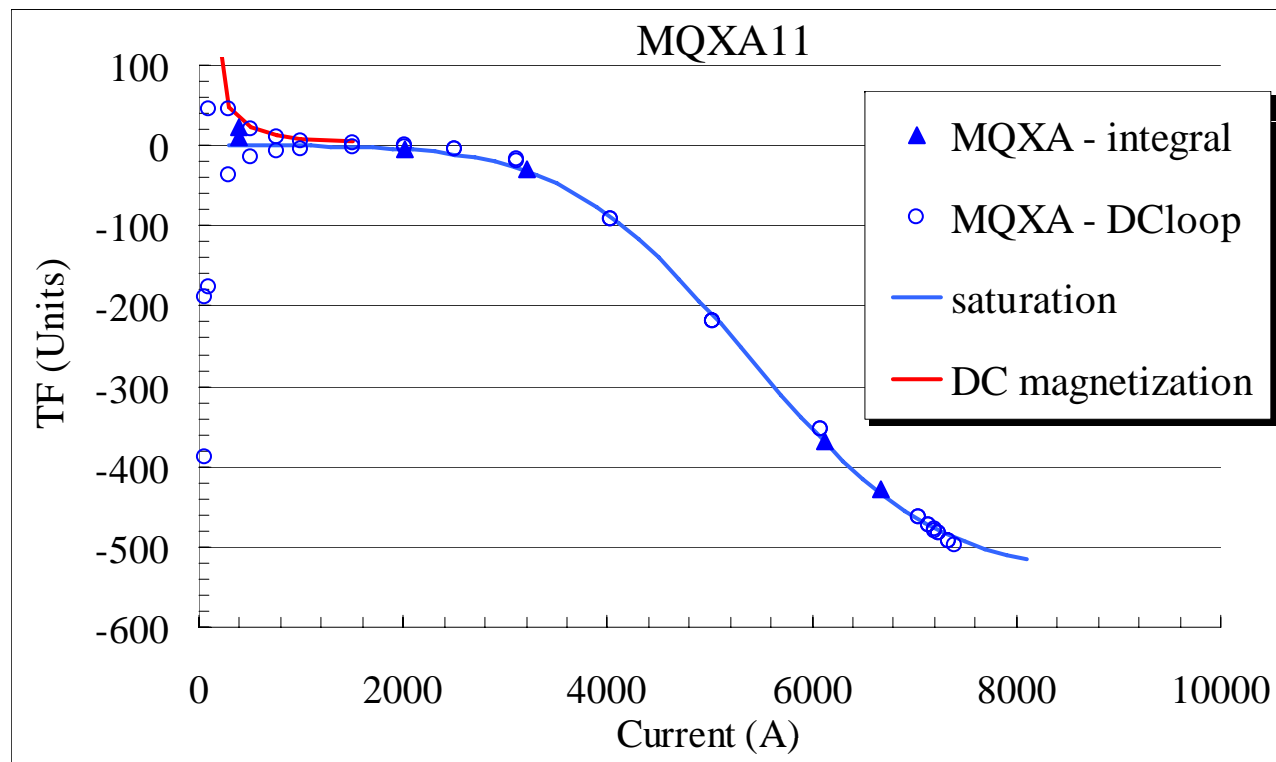
- Error saturation: 5.8 units
- Error magnetization: 2.2 units





MAGNETIZATION AND SATURATION FIT

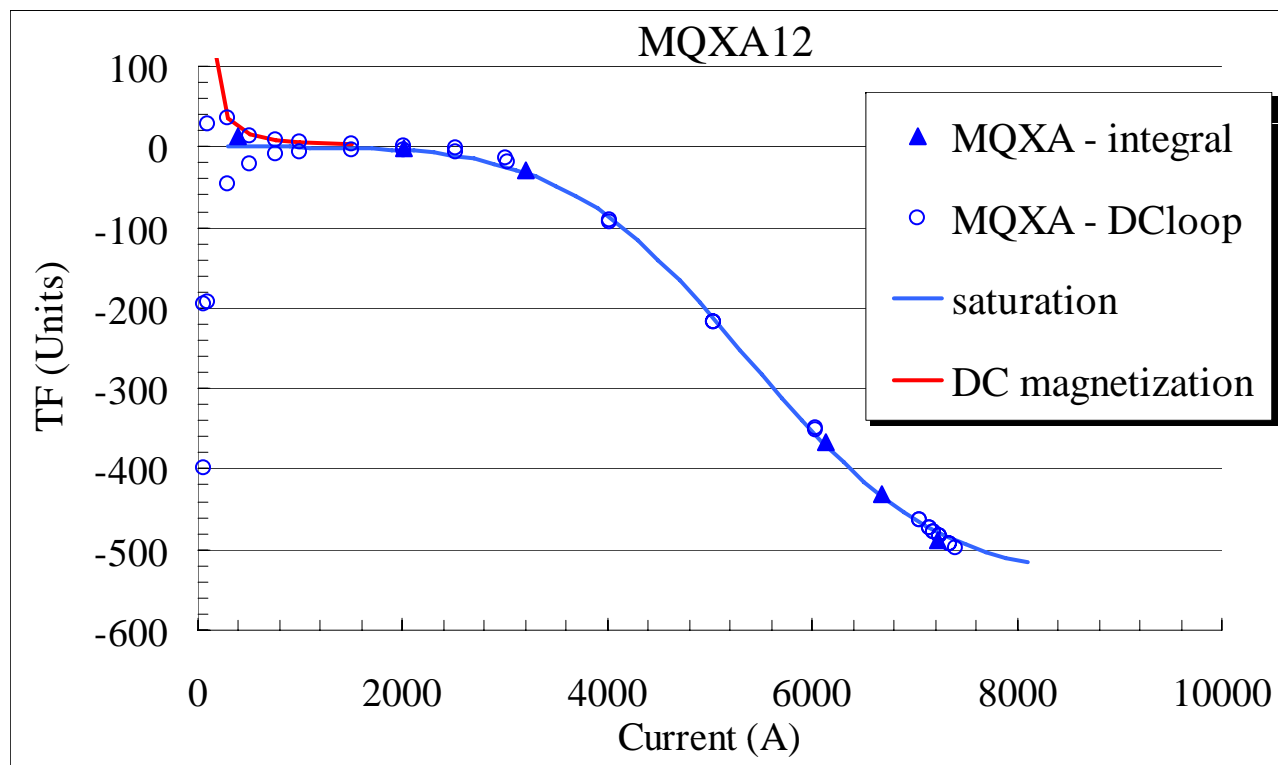
- Error saturation: 5.4 units
- Error magnetization: 2.4 units





MAGNETIZATION AND SATURATION FIT

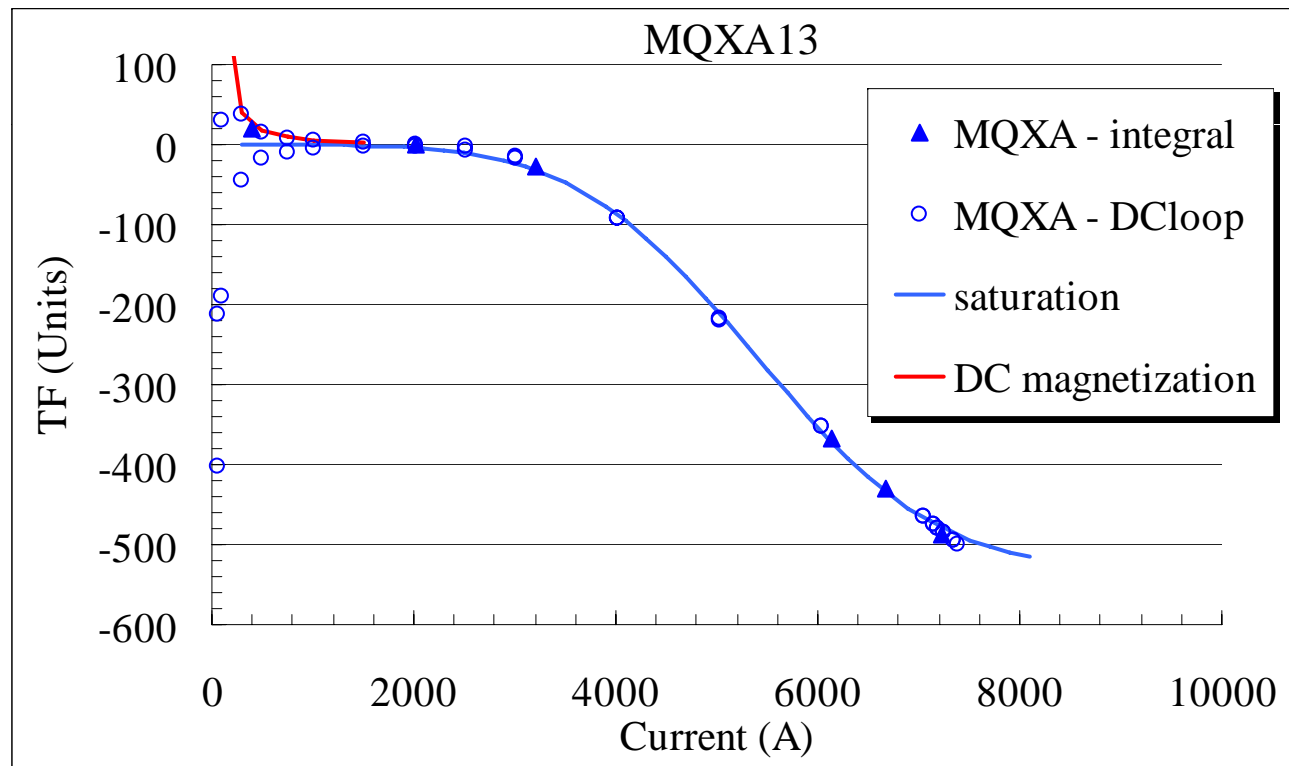
- Error saturation: 6.0 units
- Error magnetization: 1.5 units





MAGNETIZATION AND SATURATION FIT

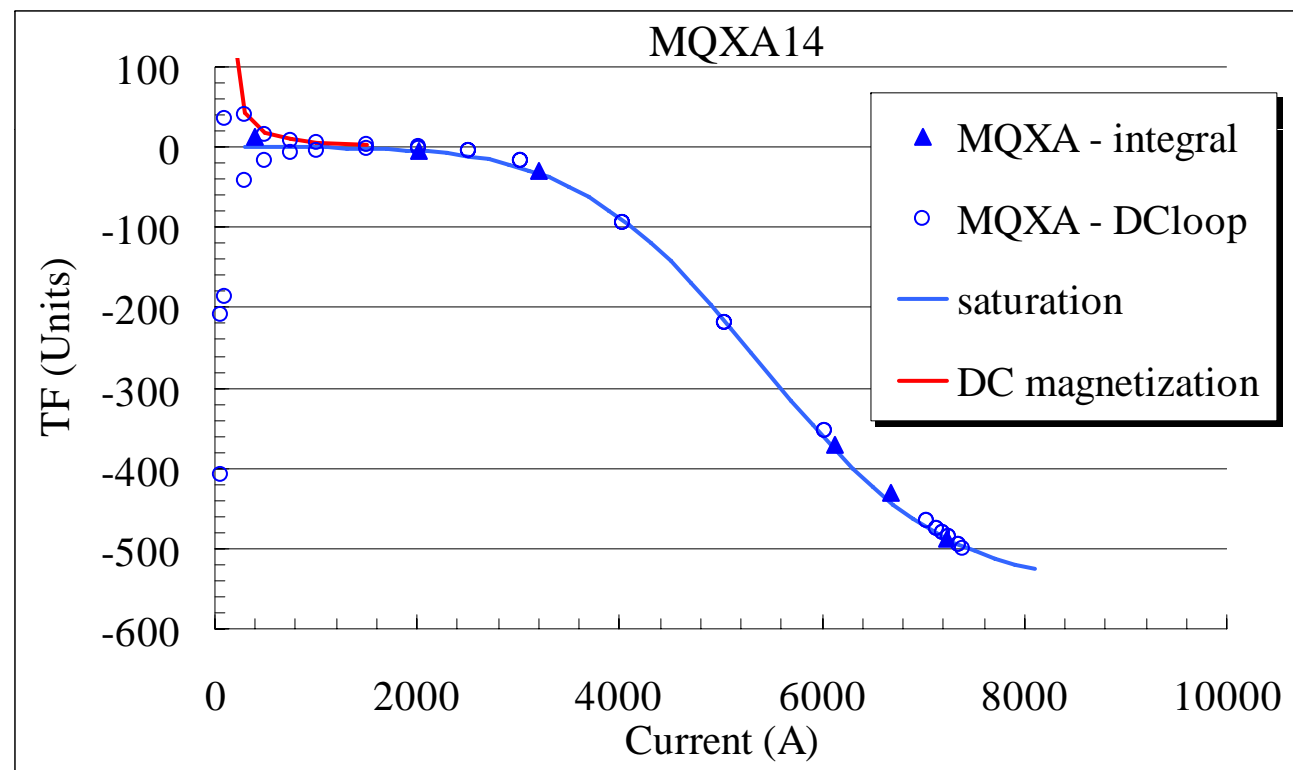
- Error saturation: 6.1 units
- Error magnetization: 1.8 units





MAGNETIZATION AND SATURATION FIT

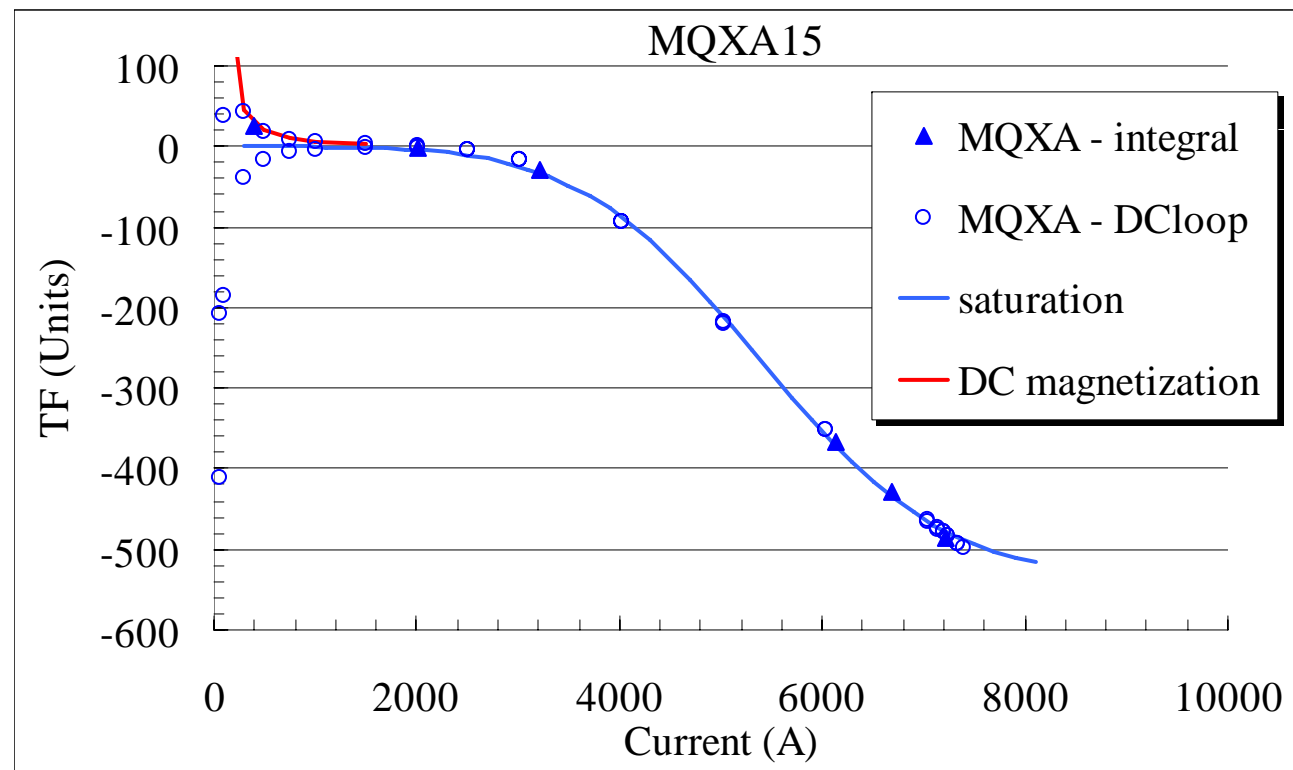
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- Error magnetization: 2.0 units





MAGNETIZATION AND SATURATION FIT

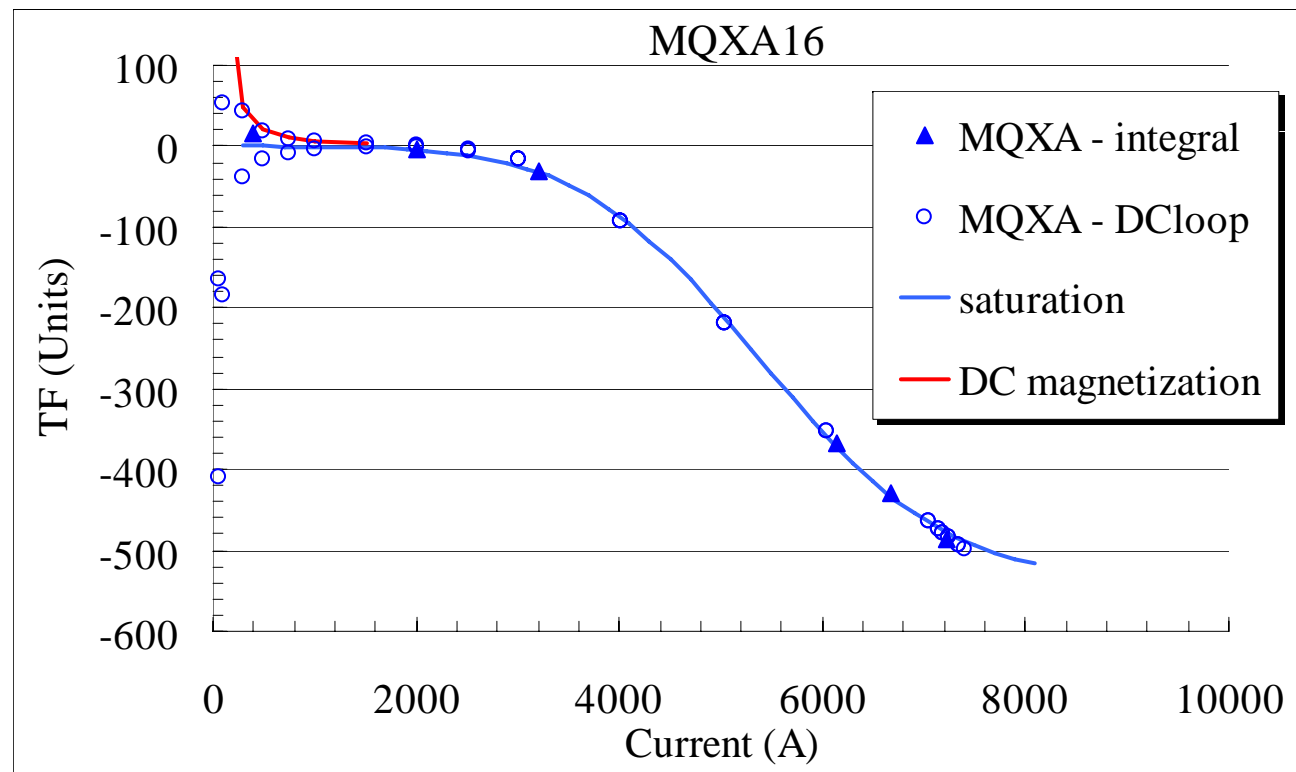
- Error saturation: 5.9 units
- Error magnetization: 2.3 units





MAGNETIZATION AND SATURATION FIT

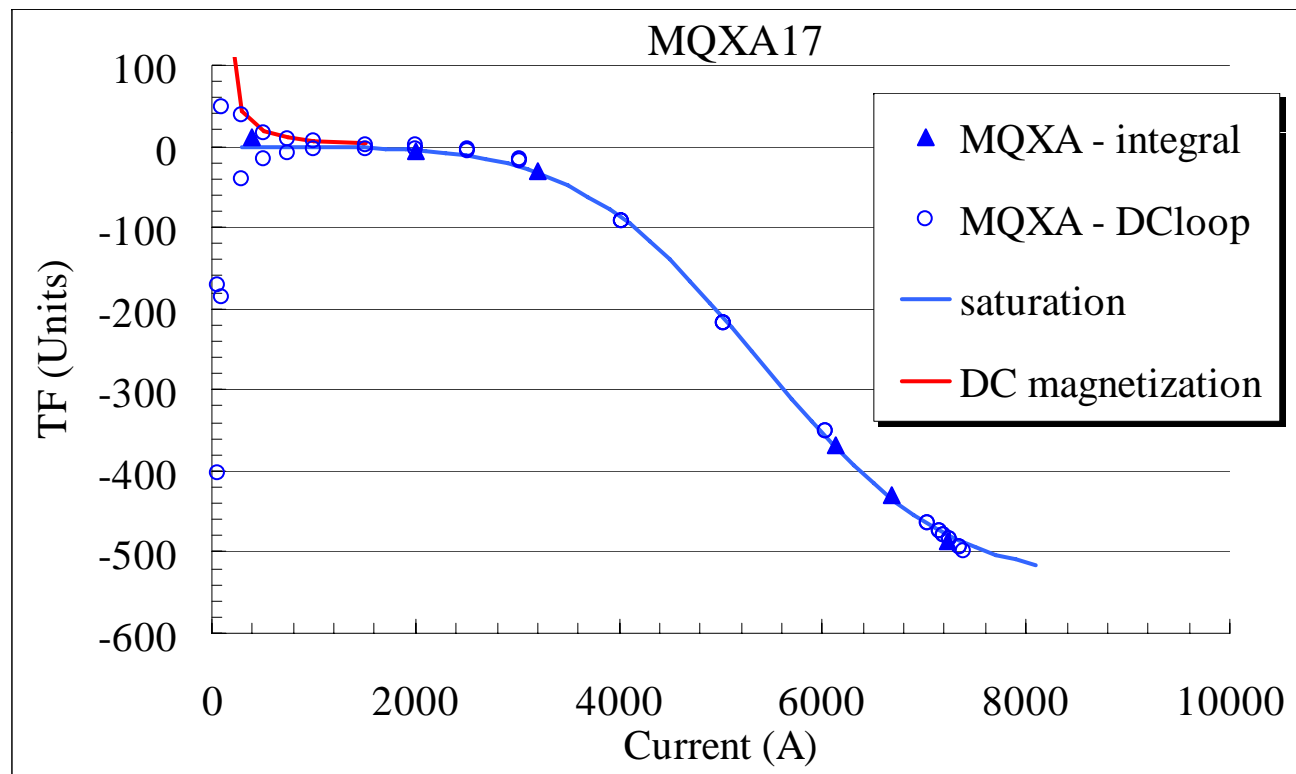
- Error saturation: 5.7 units
- Error magnetization: 2.5 units





MAGNETIZATION AND SATURATION FIT

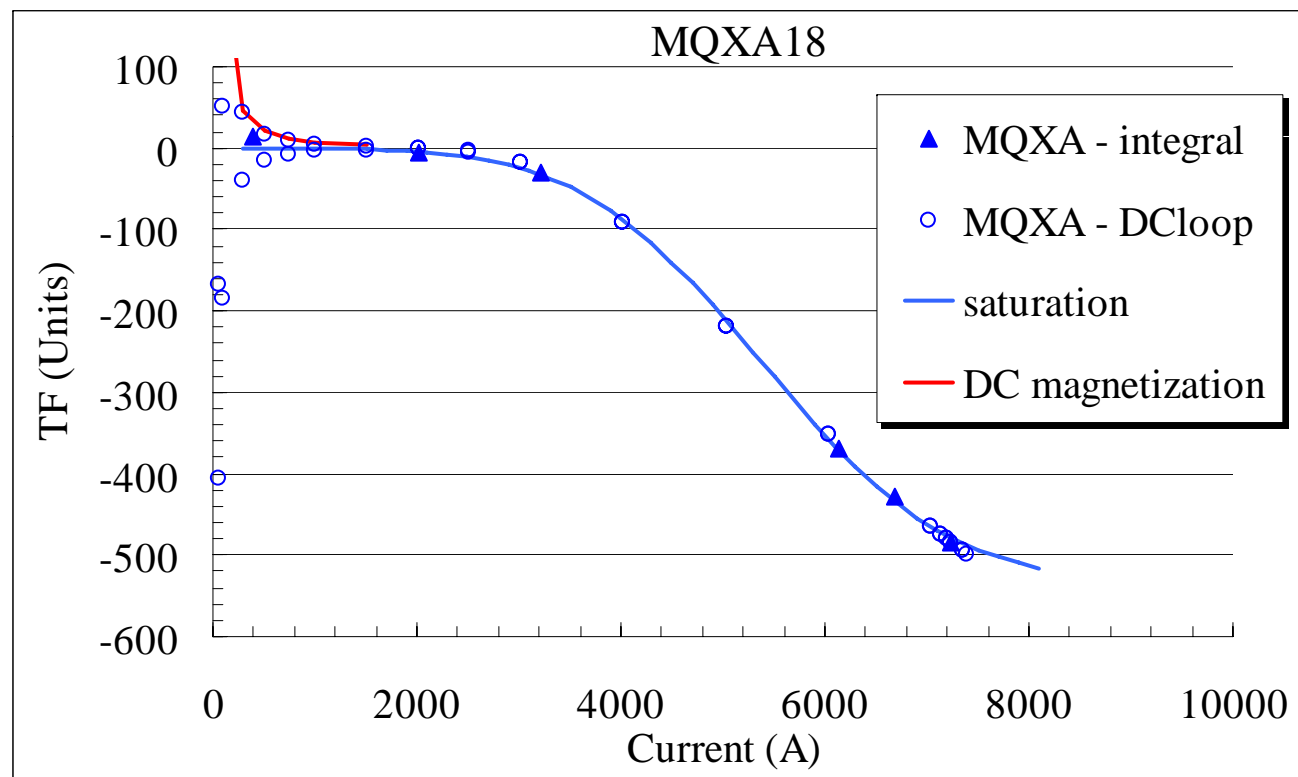
- Error saturation: 5.7 units
- Error magnetization: 2.2 units





MAGNETIZATION AND SATURATION FIT

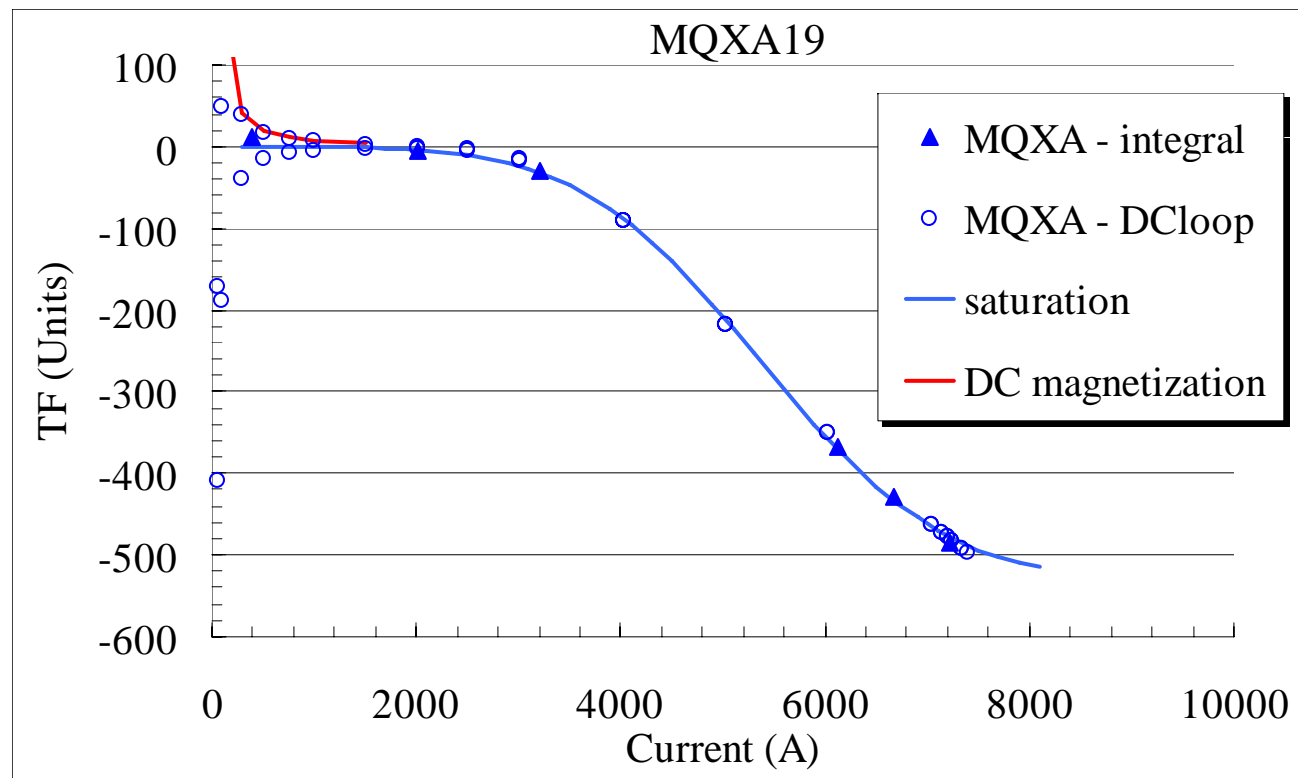
- Error saturation: 5.7 units
- Error magnetization: 2.3 units





MAGNETIZATION AND SATURATION FIT

- Error saturation: 5.4 units
- Error magnetization: 1.9 units





MAGNETIZATION AND SATURATION FIT

- Geometric: average up-down at 1500 A
- Saturation: erfc fit $I_0 \sim 5300$ A, $\sigma \sim 540$ units
- Magnetization: exp fit with $q=1$, $p \sim 3.5$

- Data of MQXA1 missing !

- We are still waiting for more data on MQXB ...