

GENERAL INFORMATION/SPECIFICATIONS

This system, the "MOKE CUSTOM HIGH TEMPERATURE UHV 3 WAY BORE SYSTEM with 3 split super-conducting coils in the x, y and z directions" is based on the original drawing "MOKE Drawing Quantum cooler UMi5".

It is designed with four chambers and two flow loops:

Chambers:

- Main vacuum chamber for LHe/Magnet vessel
- UHV six way cross bore
- LHe/Magnet vessel
- LN2 reservoir for heat shield cooling

Flow Loops:

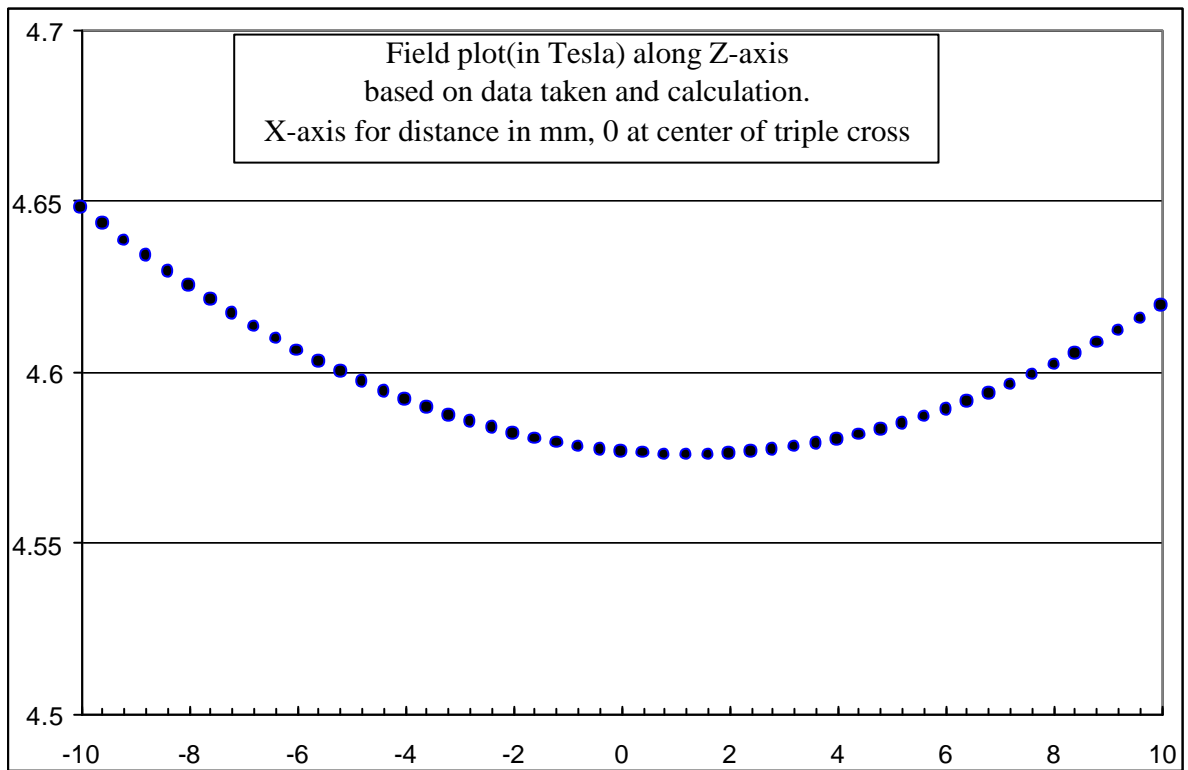
- UHV bakeout flow loop around the main vertical bore
- LHe cooling flow loop around the main vertical bore

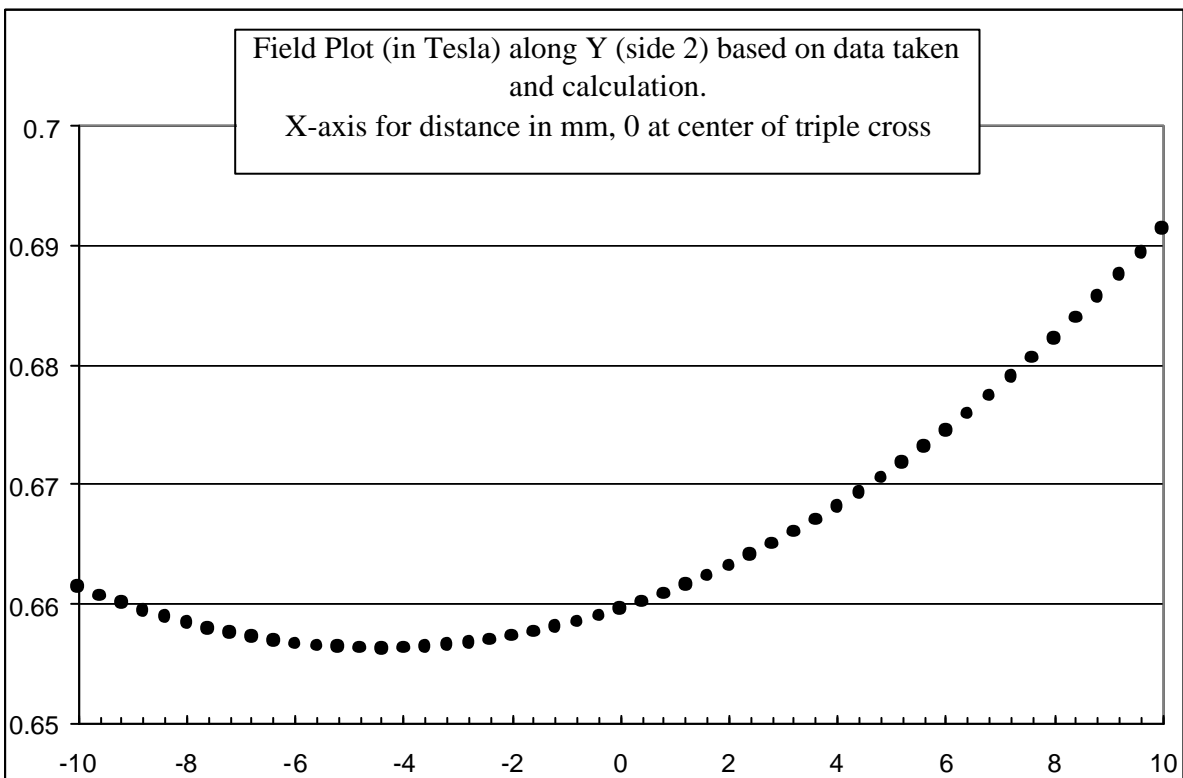
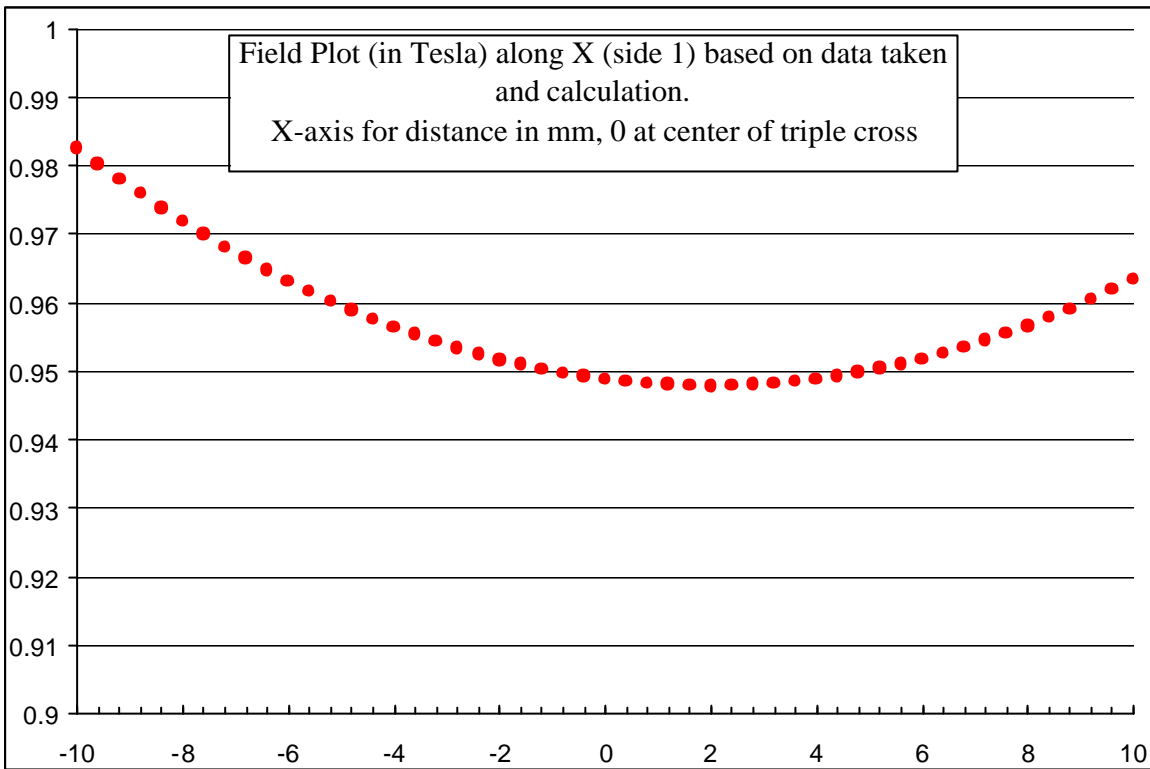
The system is designed for MOKE measurement, and carefully assembled and tested for maximum performance at QUANTUM TECHNOLOGY CORP.

SPECIFICATIONS:

- VERTICAL HEIGHT: 41 inches
- BORE TEMPERATURE: 200 °C
- VERTICAL z coil to produce: 4.57 Tesla nom. (see coil design/performance chart on next page.)
- HORIZONTAL side coil 1 to produce 0.81 Tesla nom. (see coil design/performance chart on next page.)
- HORIZONTAL side coil 2 to produce 0.66 Tesla nom. (see coil design/performance chart on next page.)
- MOKE SYSTEM ACCESS: 6 way access to magnetic field center without windows (UHV or air-bore)
- VERTICAL ACCESS: 2.75 inch free diameter
- HORIZONTAL ACCESS: 0.9 inch free diameter
- CURRENT LEADS: VAPOUR COOLED 3 PAIRS EACH NOMINAL
- POWER SUPPLY SYSTEM: 3 POWER SUPPLIES 500A EACH
- POWER SUPPLY CONTROL SYSTEM: 12 Current reversal switches to allow connecting current in any direction on all three coils simultaneously.
- LOAD DISSIPATION PROTECTION: All 3 coils to prevent excessive voltages
- POWER SUPPLY CONTROL: All 3 axes simultaneous linear control of field.
- INTEGRATION OF 3 AXIS POWER SUPPLY CONTROL WITH MOKE SYSTEM.
- TEMPERATURE SENSORS: For monitoring shield temperature
- TEMPERATURE SENSORS: For monitoring super-conducting magnet temperature
- LEVEL SENSOR : Supplied with MOKE system
- MOKE system supplied assembled and tested

Coil Design/Performance Chart							
	B/I (design)	# of turn (design)	spec. field (design)	act. I (before Quench)	act.. # of turn	Inductance Measured	Resistance @RT
Main Coil	0.122 Tesla/Amp	20316 turns	4.97T	39.12A	20510 turns	115.3H	4.116 kΩ
					21280 turns		
Side Coil 1	0.024 Tesla/Amp.	11086 turns	0.996T	33.06A	11086 turns	26.53H	1.862 kΩ
					11086 turns		
Side Coil 2	0.024 Tesla/Amp.	11086 turns	0.996T	29.95A	11086 turns	20.54H	1.820 kΩ
					8869 turns		





Warranty

QUANTUM TECHNOLOGY CORP., warrants this system for One year from the date of shipment. During this warranty period, any defect caused by the material or the workmanship shall be repaired by QUANTUM TECHNOLOGY CORP., without any charge, except cost of freight.

The warranty, however, does not cover the defect due to improper handling, operation, misuse, or modification without written approval/instruction issued from QUANTUM TECHNOLOGY CORP.

LIMITATION OF LIABILITY: QUANTUM TECHNOLOGY CORP., its employees, contractors, agents or representatives shall not be liable for incidental, consequential, special damages or late delivery. Claims for damages under the written warranty shall not exceed 10% of the total paid. QUANTUM TECHNOLOGY CORP., shall not be responsible for the cost of cryogenics or other supplies consumed. No other guarantees or liabilities expressed or implied exist. In no event shall the liability of QUANTUM TECHNOLOGY CORP., exceed the total amount of payments received by QUANTUM TECHNOLOGY CORP.