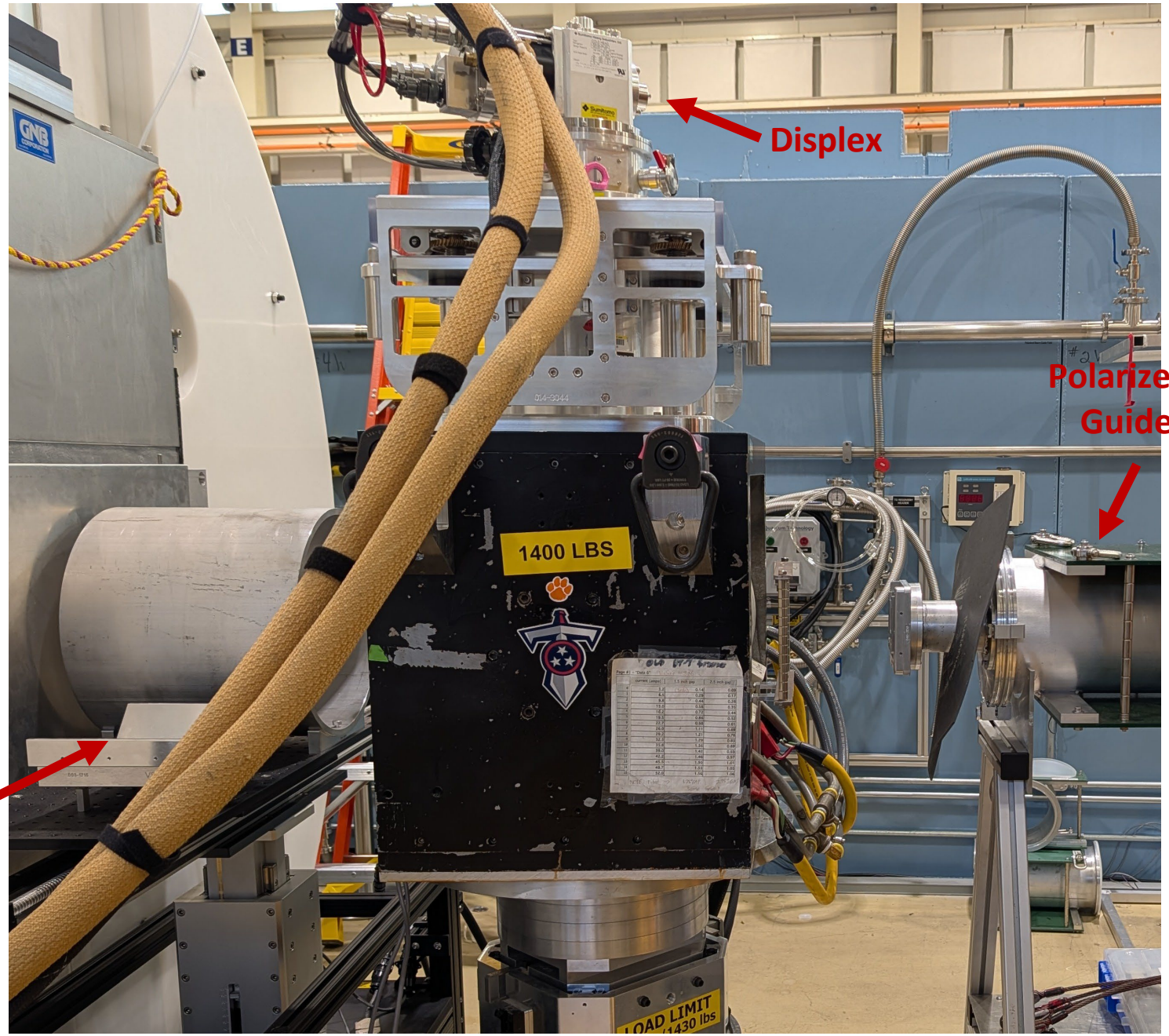
High Field Setup

≤ 1.6T

Rev. 9/16/26

Primary equipment: Titan Magnet



Setup Configuration: Titan and Solenoid

- Titan Magnet
  - Huber: 5 ¾” spacers below top plate
  - Vertical Elevator translation: motor #71; 4.25” total travel
    - Calibration: **3.92 mm** in ChamberHuberStage = **1 mm** of actual vertical travel
  - Magnet mumetal 3.75” from solenoid
  - Requires in-house water cooling
    - Power supply is interlocked using water flow sensor. Max. current for magnet is 52 A; ≈1.53 Tesla in Titan magnet
- 3He Shielded Solenoid:
  - Solenoid cradle: 2 rows (1.1”) from downstream opt. bench edge
  - Solenoid vertical translation: motor #67; Beam ht (ctr): 49.125” from floor
  - 13" between alignment crosshair and solenoid center

Setup Configuration: Power Supply

- Walker Power Supply (Green)
  - Water cooling series order: supply-> power supply in -> power supply out-> coils (the two in/out ports are interchangeable) -> return
  - Remote controlled using adam2041 voltage supply. Maximum voltage of X produces Y% output of 65 W power supply
- New Power Supply (Gray)
  - Single cable for power and interlock from supply to magnet
  - Remote controlled through NICE: TBD

Calibration Curve (high field to low)

Voltage (adam4021)	% on 65W P.S.	Magnetic field
7.8	79.8	15.3 kG (1.53 Tesla)
7.4	75.7	15.0 kG (1.50 Tesla)
3.8	38.7	9.9 kG
3.7	37.6	9.7 kG
3.5	35.6	9.0 kG
2.0	20.2	5.3 kG
1.9	19.1	4.99 kG
1.0	9.9	2.64 kG
0.95	9.3	2.49 kG
0.9	8.9	2.40 kG
0.4	3.7	1.04 kG
0.2	1.6	0.51 kG
0.1	0.6	250 G
0.05	0.1	113 G
0.045	--	101 G
0.04	--	88 G
0	--	73 G
-0.06 (requires manual reverse)	--	26 G

