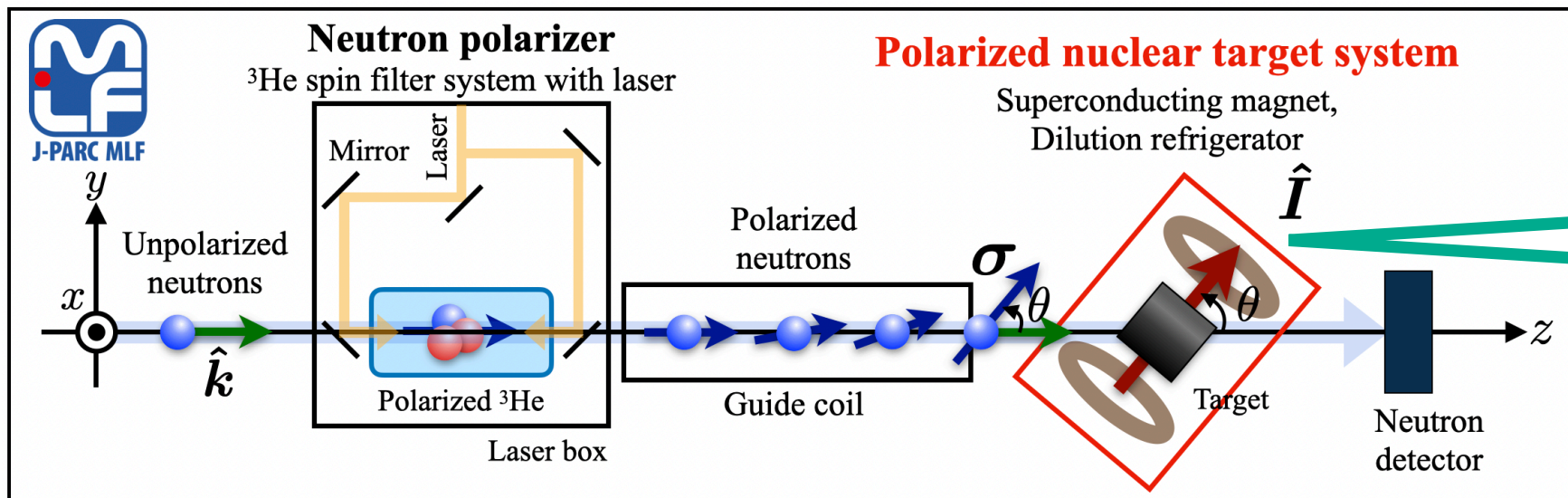


# Development of a Cryogenic insert for polarized nuclear target for NOPTREX Phase-1 Experiment



- ◆ Purpose: **Search for the T-violation beyond the Standard Model**
- ◆ NOPTREX Phase-1 Experiment: **Our first step** of the T-violation search

Top view of the Experimental setup



Phase-1 exp. will be performed **in Jan. 2026!**

- ◆ Development of a new Cryogenic Insert:
  - Cooling  $< 0.1$  K **with a Dilution Refrigerator**
  - **Polarization by DNP: La polarization  $\sim 35\%$**
  - First Cooling test of DR: **Achieved  $\sim 50$  mK**
  - Next: cooling tests under heat load conditions (microwave, beam)

