The both-end readout system for the KOTO CsI calorimeter

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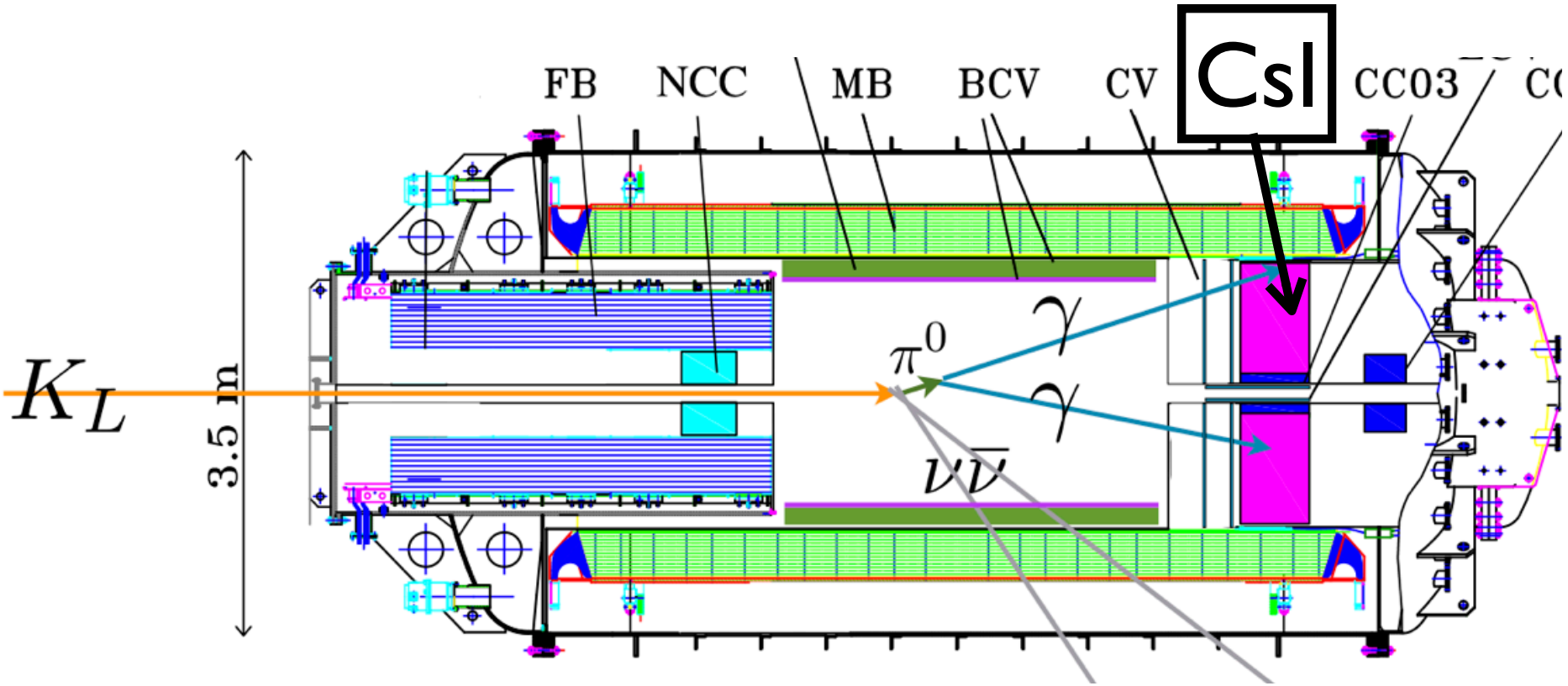
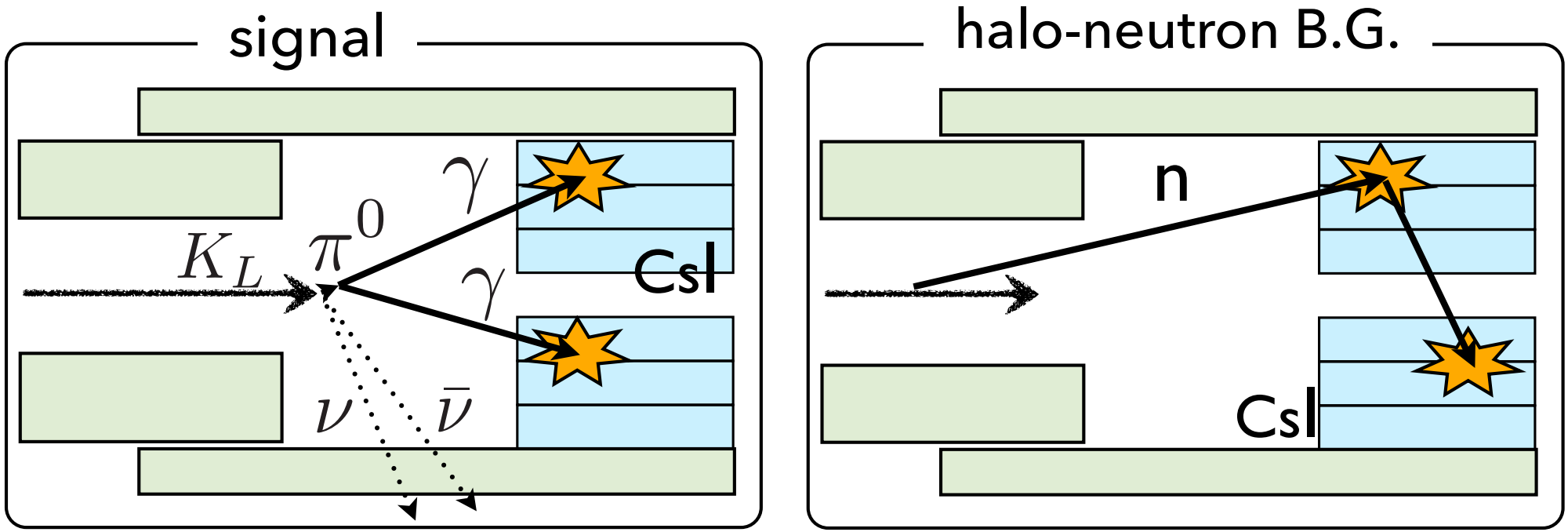
The KOTO experiment



- Search for the rare decay $K_L \to \pi^0 \nu\bar{\nu}$ ($BR_{SM}=3\times10^{-11}$)
  @J-PARC (Tokai)
- Signal : 2γ@CsI + nothing@other detectors

neutron B.G.

One background source : beam-halo neutrons



Already we reduced neutron B.G. to 1/100.

We need more reduction by a factor 10.

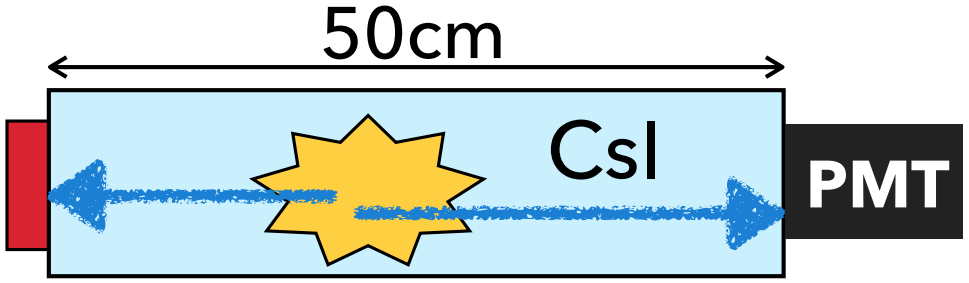
→ **this project (the both-end readout system)**

The both-end readout system

- Calorimeter (2716 pure CsI)

  Current : PMT only

  → New : PMT + **MPPC**



n/γ separation

✓ We need a front-end circuit for MPPCs.

- Signal readout part
  (how to connect MPPCs, amplifier, etc.)
- **Control & monitoring part**
  (monitoring dark current of MPPCs, etc.)

My work! I'll talk about it.