

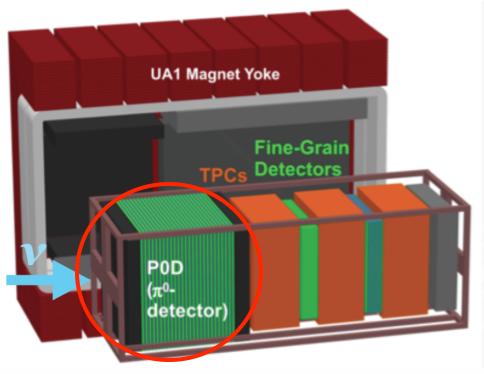
The contents of this presentation have not been fully discussed with all relevant parties including: T2K-EC and the U.S. Department of Enegy. Thus, they should be considered as initial discussions without any commitments or decisions.

ND280 Upgrade and P0D

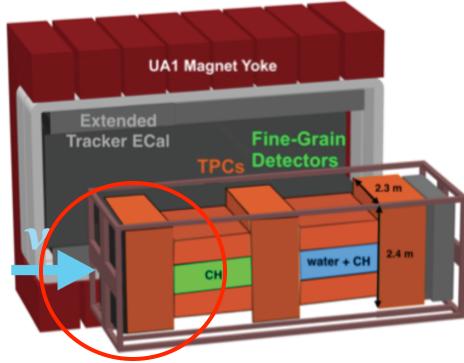
- The ND280 upgrade approved by the collaboration in February 2017 requires removal of P0D
 - The removal and decommissioning of P0D can occur in 2020 or 2021 depending on the readiness of the new detectors
 - Recycle TFB boards
 - Details of the procedure and responsibilities need to be discussed in the T2K-EC, T2K-US and DOE
 - Possibility of keeping the P0D USECAL in place is under discussion
 - Necessity of an ECAL in front of the upstream TPC to tag and shield incoming particles, and detect backward going particles
 - According to the P0D experts, USECAL is essentially maintenance free

T2K ND280 Upgrade

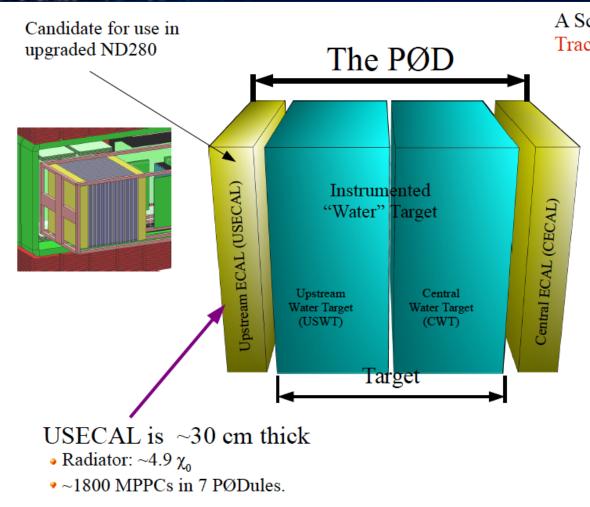
Current ND280



Possible upgraded ND280



P₀D



A SciBar+WLS fiber Tracking ECal

> 10,400 channels 17 mm thick scintillator layers

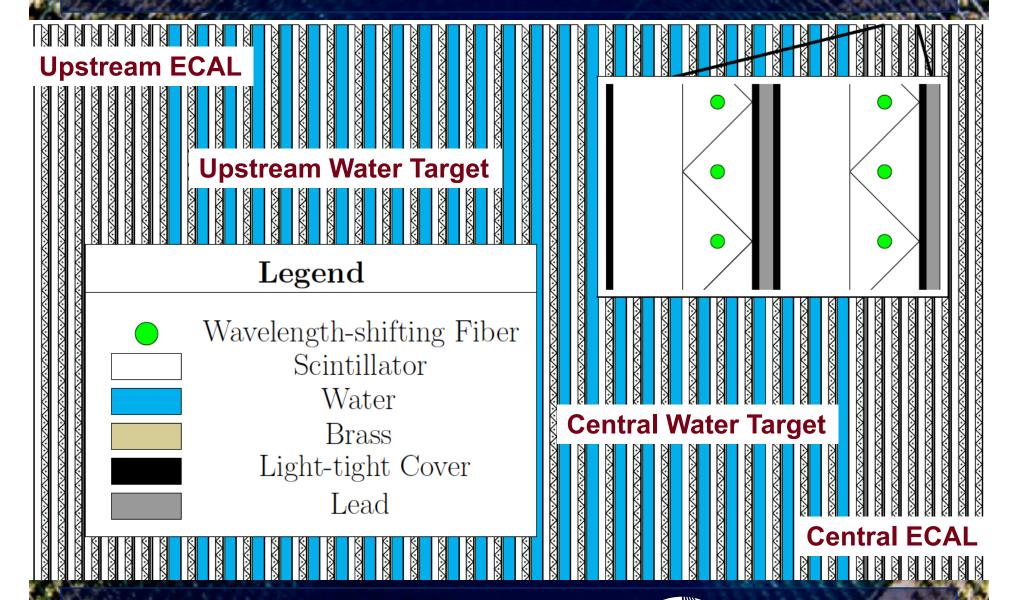
USECal Mass: ~3t includes Pb radiators



19 April 2017

McGrew

Schematics of P0D





US Participation in T2K beyond Mar. 31, 2020

- US participation in T2K for the 4-year period (Apr. 1, 2016 – Mar. 31, 2020) was approved by DOE in 2016
 - Approval of the full proposed amount
 - Contribution to the international common funds
 - Funds for maintenance and operation of the US responsible system components
- Next 4-year proposal to DOE needs to be submitted to DOE in early September 2019
 - What will be the scope of the proposal?
 - Could include M&O of P0D US ECAL
 - Which US institution/PI will continue participating in T2K?

FY20-FY23 Proposal Possible Scope

- Continuing US participation in T2K
 - Participate in data taking and analysis
 - Continue making intellectual contributions
 - Maintain and operate P0D USECAL
 - Contribute to the overall upgraded detector M&O
 - Detector expert shifts, etc.
- The expected level of US participation:
 - About 75% of the current effort (Based on a recent informal survey)
- → Note that there is no guarantee that this proposal will be approved by DOE

