

EUROnu Super-Beam:

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Status of WP2

- 18 months into the project: half way through!
- We met the deliverables/milestones so far
- Good progress in physics studies towards establishing a baseline
- Simulation tools in hand
- Engineering effort in the horn
- Slow overall progress towards a CDR!
- The next 12 months are crucial to meet our goal

Overall schedule concept

2009: establish viable baseline

2010: preliminary conceptual design

2011: integrated conceptual design

Deliverables

Deliverable	Delivery date (months)	
Requirements for proton driver	6	
Target and Collection design report	30	
Target and Collection integration	36	
Beam characteristics	36	
Final report	48	

Milestones

Milestone	Delivery date (months)	
Proton driver report	12	
Prel. Design of Target and Collection	24	
1st Target and Collection integration drawings	24	
1st Est. of Nu Beam Intensity	24	
Final Target and Collection integration drawings	36	
Design of target station	40	
Report on Nu Beam Intensity	42	

How can we speed progress

- For the moment we rely on a sequential approach: target, horn, then integration, then all the rest
- Top- down approach: Suggestion from costing exercise
- For instance, try to define target station from top down and defining a WBS
- Similarly for the target horn integration: can we start now designing the mechanical support system with the services
- Safety, radioprotection ?
- Target replacement system
- Beam target interface
- Names ?

Still open questions

- Target: separate target-horn or one piece ?
- Reflector: why should we remove it ?
- Can we arrive at a decision by the end of summer ?

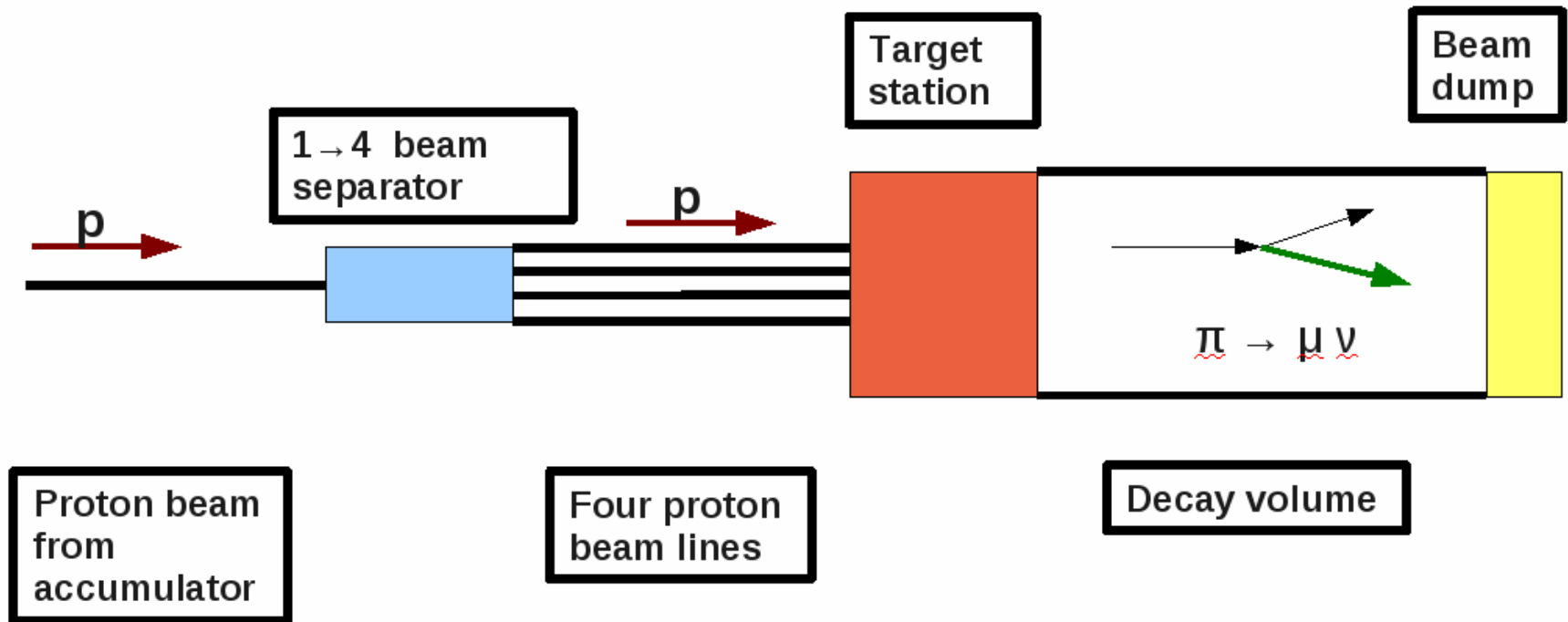
Milestones

- Need to define reasonable milestones for the next 12 months
- Should we start from the Work program and add/remove items and set a completion date ?

SPL

- Recent change of line at CERN
- Still trying to understand the situation and the impact on US
- A superbeam continues to be the most realistic short term facility for neutrino studies
- Even without SPL, NF needs a similar proton driver

Schematic of the beam-target section

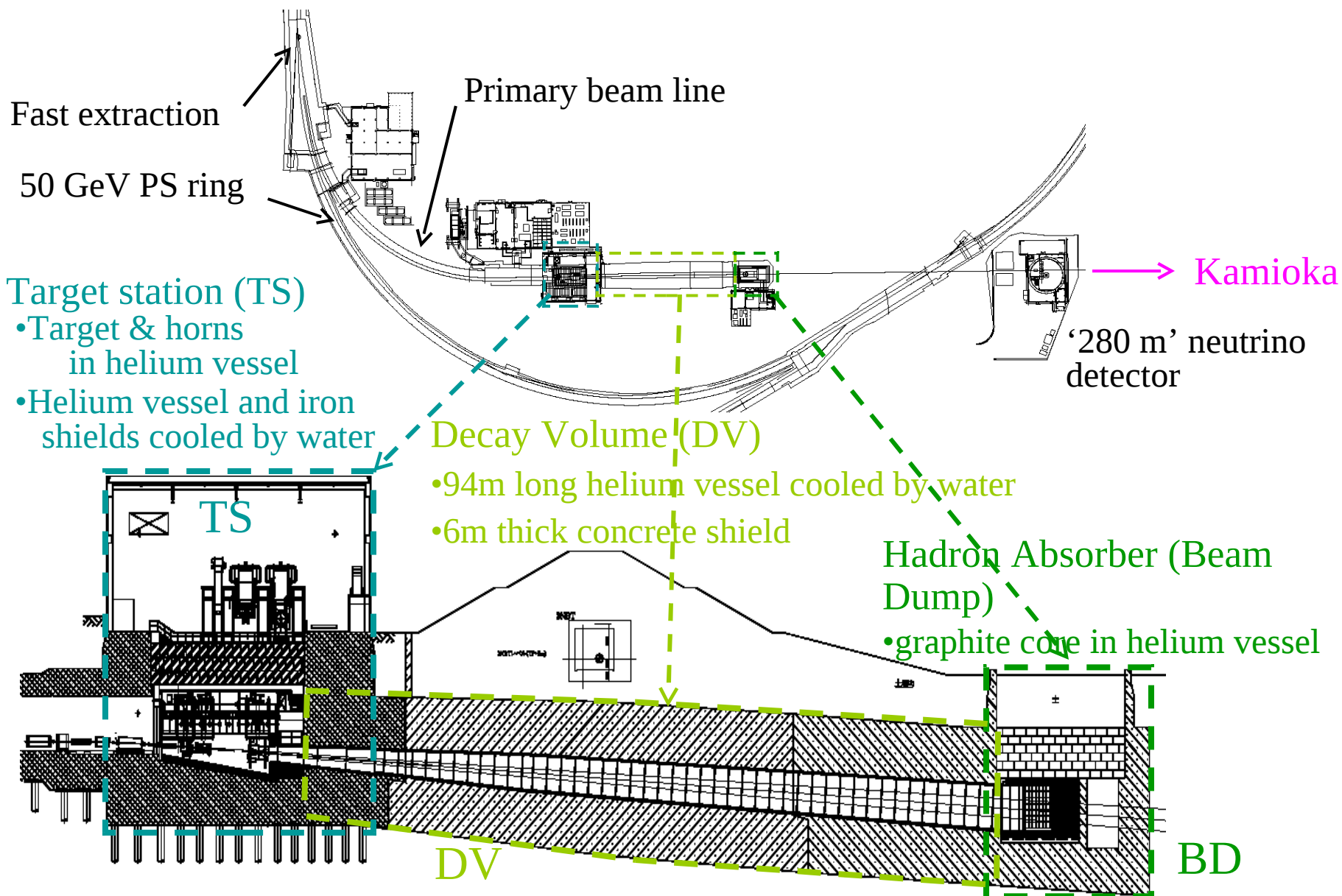


Preliminary breakdown structure

- 1 Proton Driver
 - Same as Neutrino Factory
 - Based on SPL design (LP-SPL 481 MCHF x 1.3)
 - Includes Accumulator ring (not Compressor)
 - 2 Beam Target Interface
 - 3 Target Station
 - Facility
 - Target
 - Collector
 - Target replacement system
 - Cooling
 - 4 Decay tunnel
 - 5 Beam Dump
 - 6 Near Detector (o(30) M€, cf Paul presentation)
 - 7 Far Detector (o(600) M€)
 - Not studied in this WP
 - Cf LAGUNA
- What we need to cost

160M\$

T2K Secondary Beam Line



T2K Target area

