CONVENTIONAL-TYPE TARGET FACILITY FOR THE NEUTRINO FACTORY

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CONCEPTUAL DESIGN FOR NEUTRINO PRODUCING RESEARCH FACILITY

- CONVENTIONAL FACILITIES
- RADIATION HDLG. FACILITIES

INITIAL ASSUMPTIONS:

- SYST. AVAIL. IS 10^7 sec ≡ 1 OP-YR
- ? TARGET LIFE: ≤ 10s OF HOURS
- ? CATEG. 3 NUCLEAR FACILITY
- 16 GeV BEAM
- 15 Hz
- 3×10^{13} p/pulse
- ? 4 MW (1.5 MW)

- WATER COOLING FOR MAGNETS, BEAM DUMPS, OTHER
- DIAGNOSTICS
- BEAM DUMPS - SIZE, LOCATION
- WASTE HDLG/DISPOSAL:
  - ACTIVATED TARGETS, STRUCTURES, WINDOWS, T_2 RECOVERY/STORAGE

THE FOLLOWING INFORMATION IS NEEDED:

- OVERALL PRE-CONCEPTUAL LAYOUT
- NEUTRONICS - ESTIMATES OF NEUT/GAMMA PROFILES
- MAGNETS - SIZE AND LOCATION
  - FIELD ON AXIS
  - ALLOW. NUCLEAR HTG
  - TIME AVERAGED HTG
  - PEAK HEATING DURING PULSE
- ELECTRICAL PWR FOR MAGNETS, CRYO, OTHER
- CRYO - He, N
- VACUUM - LEVEL IN LINES, LOCATION OF WINDOWS

REQUIRES CLOSE COORDINATION WITH THE TARGET SYST TO ENSURE THAT ALL SUBSYST REQ'MTS ARE INCORPORATED

- SHIELDING, CRYOGENICS, VACUUM, WATER COOLING, ELECTRICAL, ...
- SUBSYST AND COMPONENT LIFETIMES, TARGET FACILITY AVAILABILITY
- ARRANGEMENT OF LABORATORIES, OFFICES, EXPERIMENTAL AREAS
- RH EQUIPMENT TO MAINTAIN THE TARGET SYST AND RELATED SUBSYSTS