

October 28, 2002

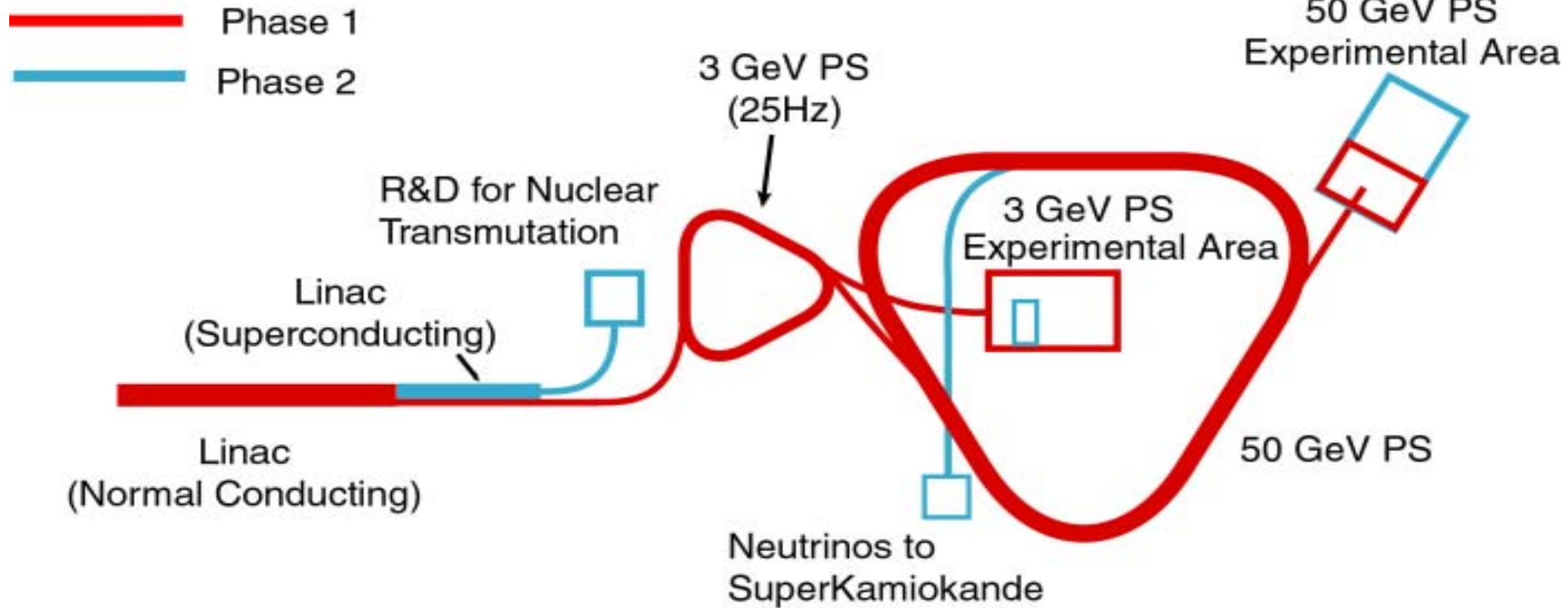
# Project Overview

**Shoji Nagamiya**  
**KEK/JAERI**

# Expected View at the Completion



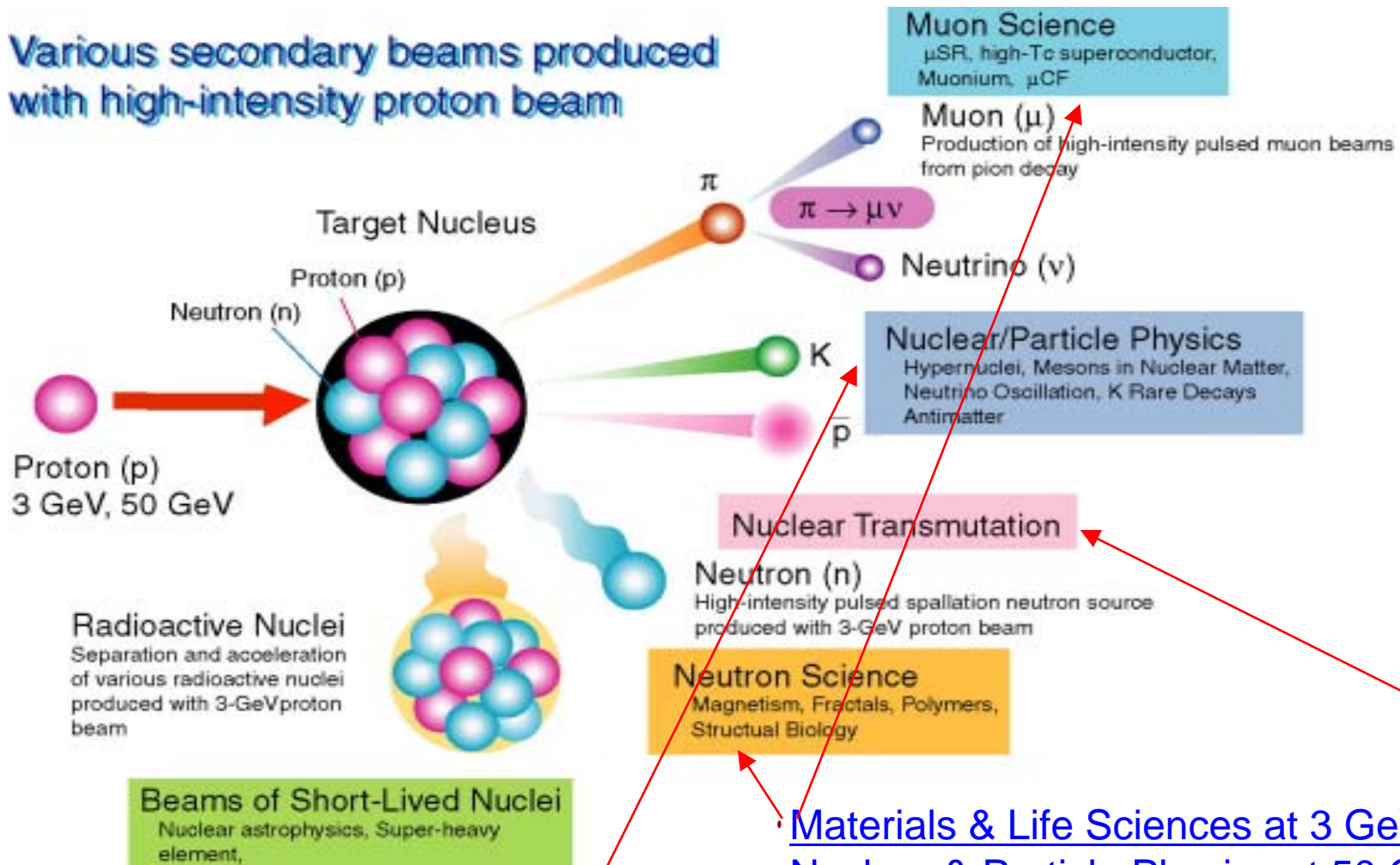
# Phase 1 and Phase 2





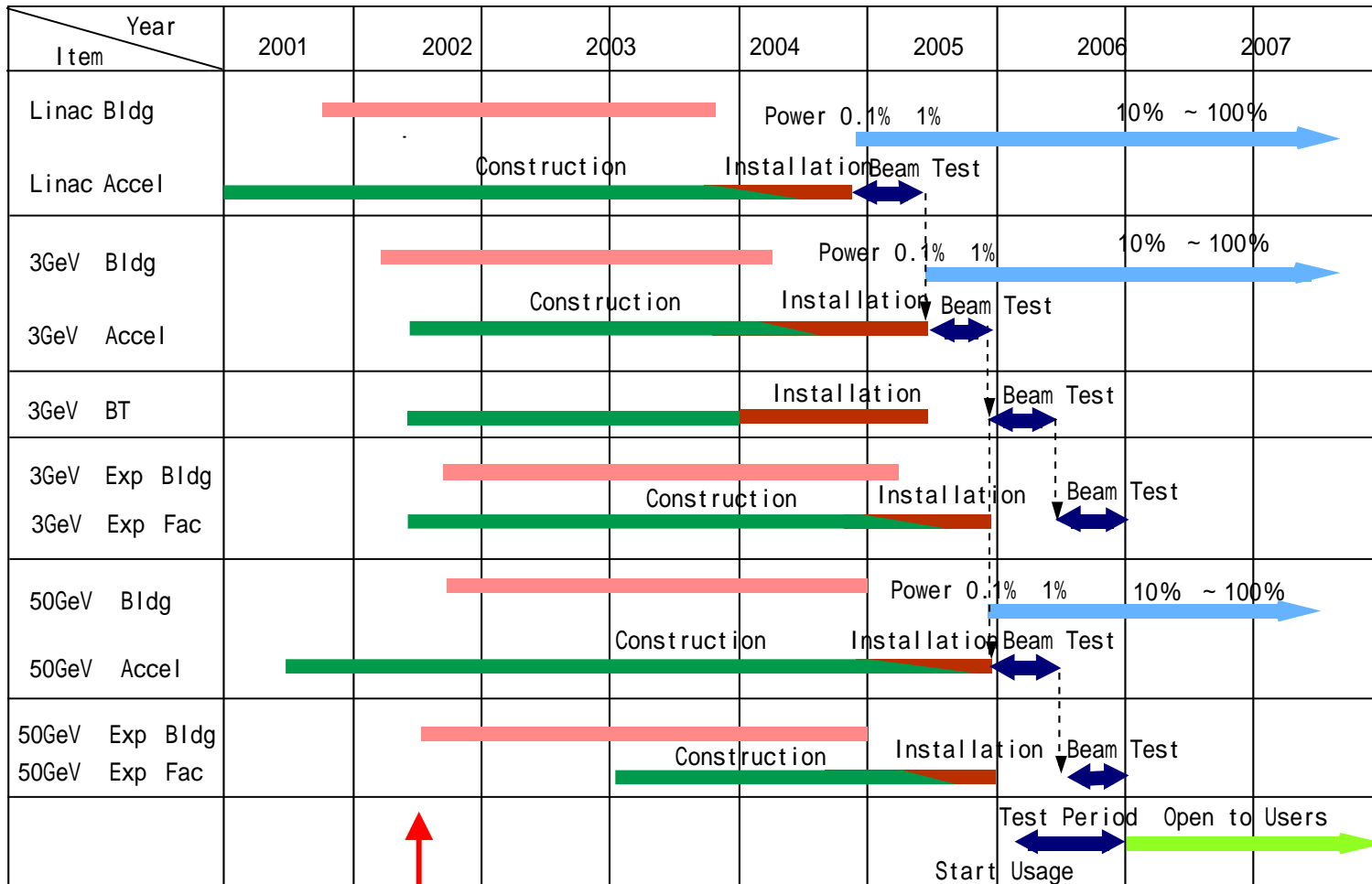
# Three Goals at this Facility

Various secondary beams produced with high-intensity proton beam



- [Materials & Life Sciences at 3 GeV](#)
- [Nuclear & Particle Physics at 50 GeV](#)
- [R&D toward Transmutation at 0.6 GeV](#)

# Construction Schedule & Commissioning

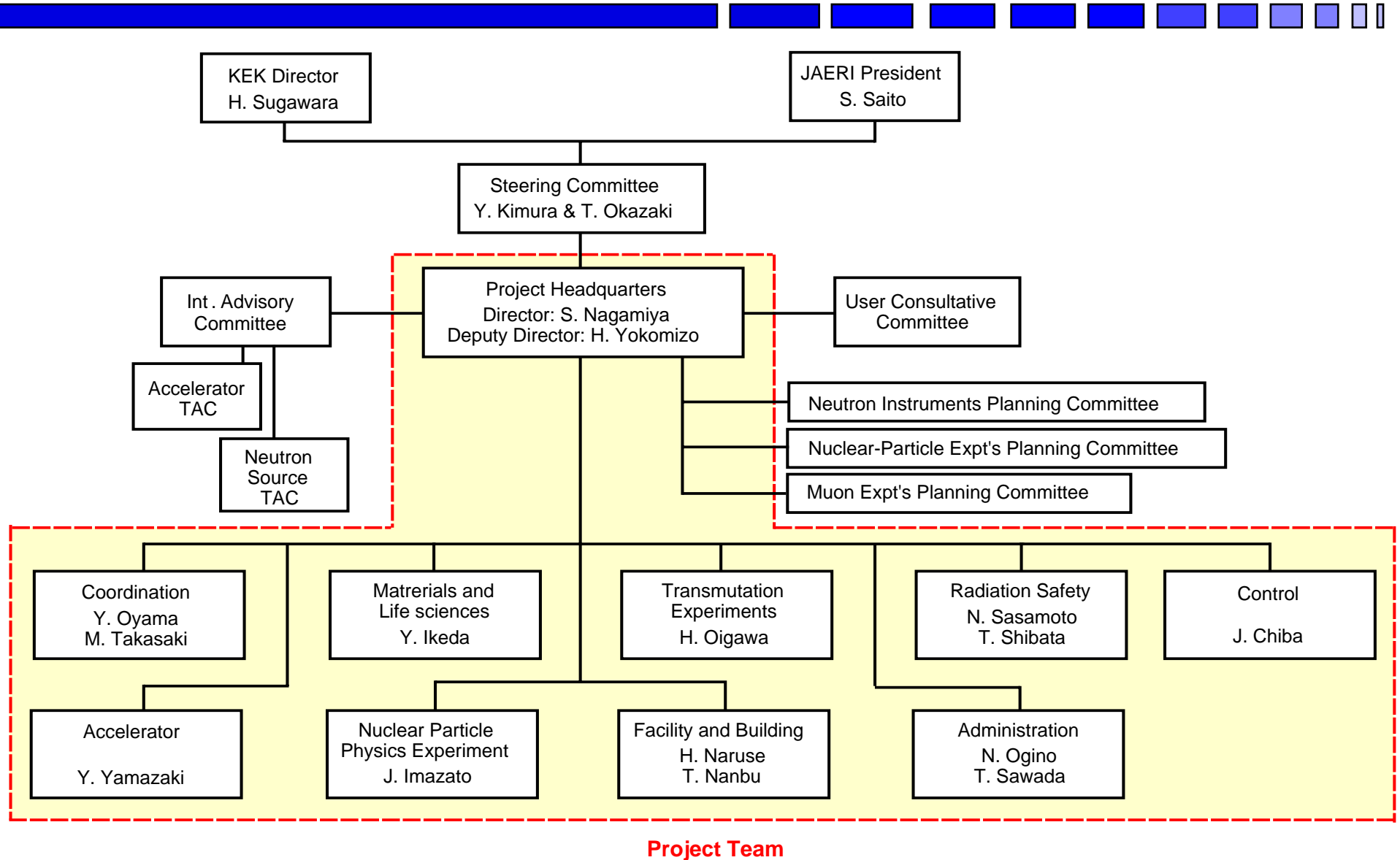


Now

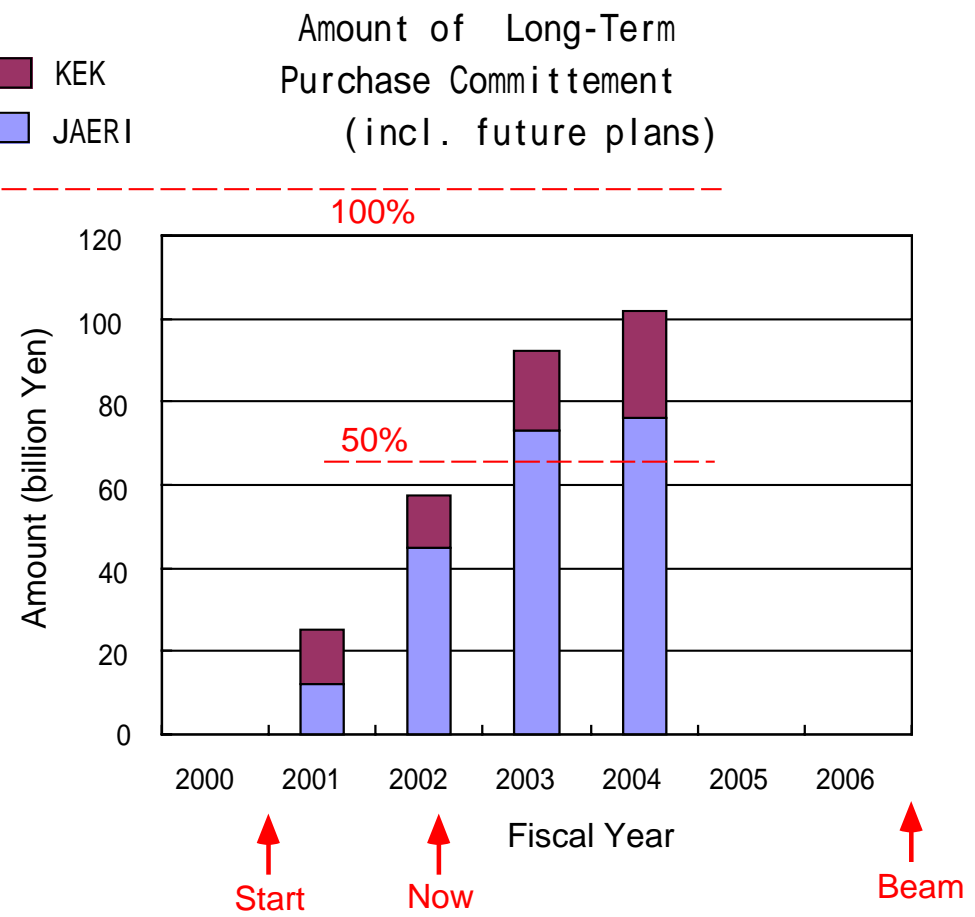
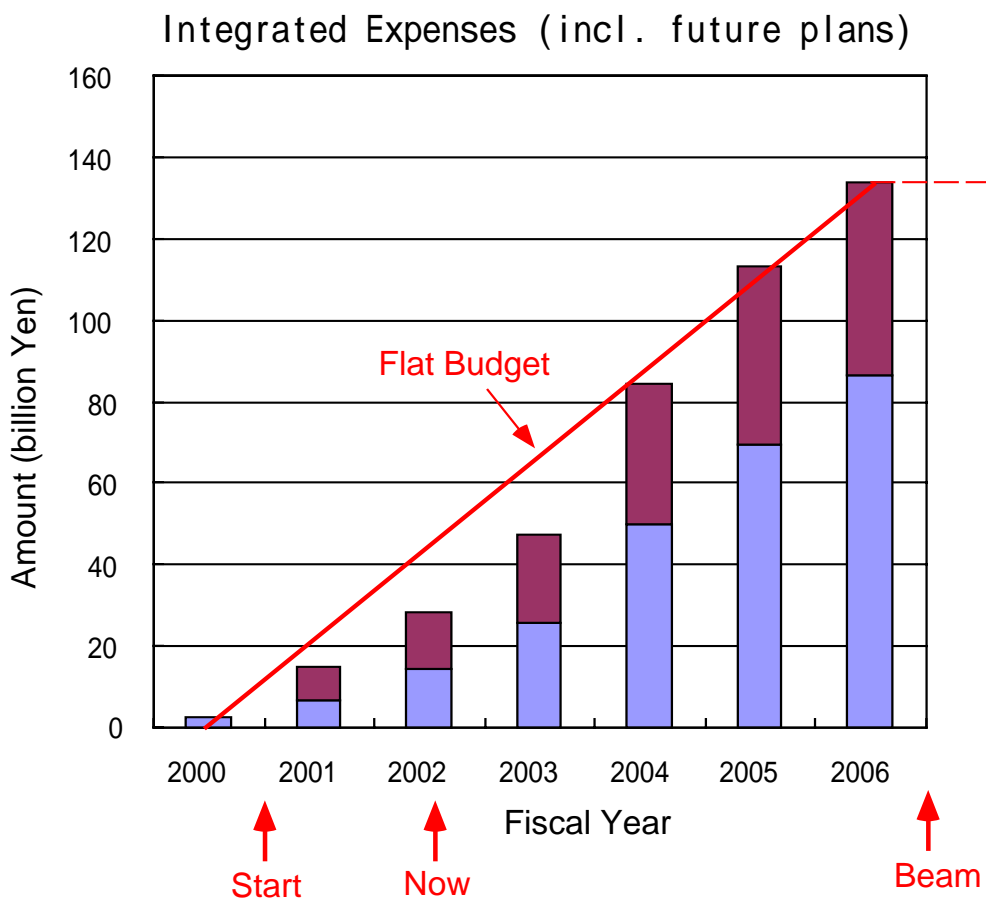
Two Big Phase 2 Projects

- Neutrino (Budget request sent to MEXT)
- Transmutation

# Organization for Construction

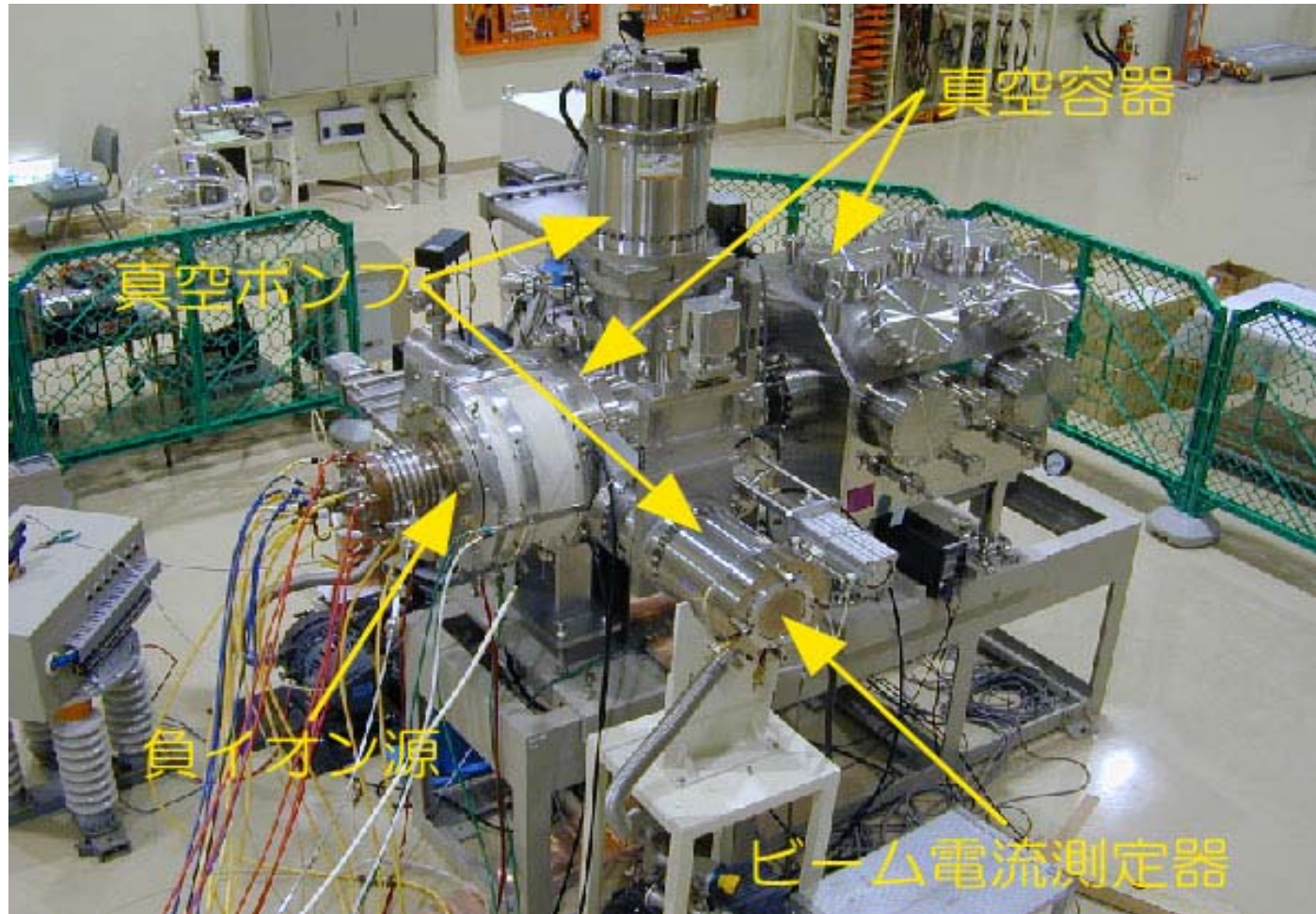


# Construction Budget for Phase 1



# H<sup>-</sup> Ion Source

70 mA の電流値を達成 (spec=60mA)





# RFQ and DTL



RFQ with  $-$ mode stabilizing loop



DTL with quadrupole magnet imbedded

# Magnet for 3 GeV





# Vacuum Chambers



(直径200, 長さ650 × 3mm)

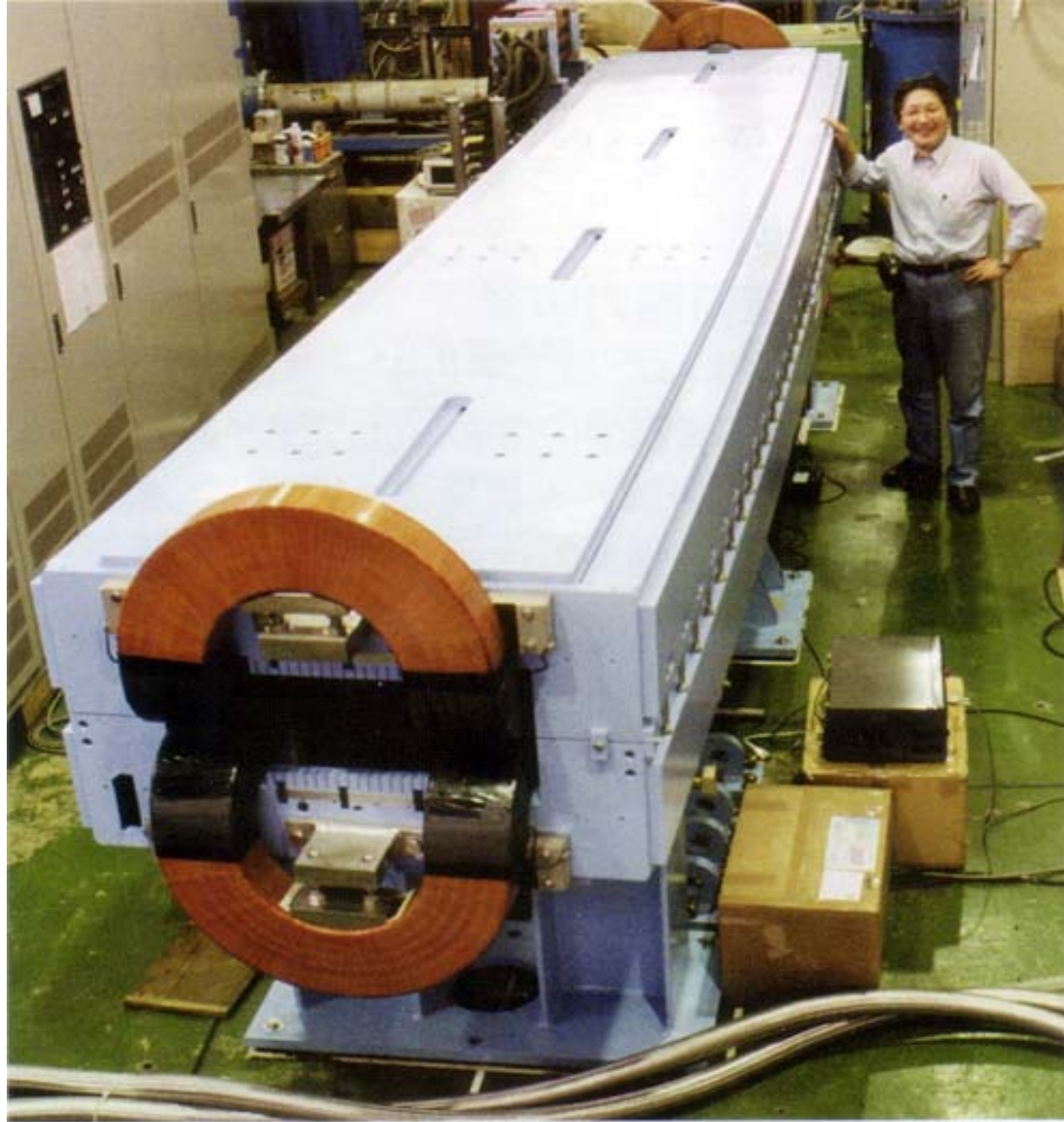
## Ceramic Tube

- メタライズとロウ付けで接合  
強度270MPaを達成
- セラミックダクトにTiフランジ  
接合に成功

Ti ベロー



# 50 GeV Magnet





# Ground Breaking Ceremony



June, 2002



# Linac Area (Left) and 3 GeV Area (Right)



# Bridge and Road for Construction Work





# Walking Road and Park for Local Village

(平成14年6月6日撮影)



245号から晴嵐の碑への道路



晴嵐の碑周辺の広場



# Multipurpose Facility



- The facility is optimized for neutron scattering and “R&D” for transmutation
  - Neutron scattering: pulsed beams
    - Our facility ... 25 Hz at 1 MW (SNS ... 60 Hz at 2 MW)
  - Transmutation: CW beams with a few 10 MW
    - Our facility ... only for R&D (but R&D is needed now)
- Important elements for the “joint” project
  - KEK is strong for particle and nuclear physics
  - Both institutions are strong for neutron physics
  - JAERI is strong for transmutation
    - Multipurpose facility
- Japan can support up to one high-intensity proton accelerator but not two