

# High-Intensity Hadron Facility (KEK/JAERI joint project)

The High Intensity Hadron Facility project is a joint proposal combining the Japan Hadron Facility (JHF) project at KEK and the Neutron Science Project (NSP) at JAERI (Japan Atomic Energy Research Institute) which were originally two separate projects at two different locations. KEK and JAERI had agreed to jointly pursue the construction of the high-intensity proton accelerator complex.

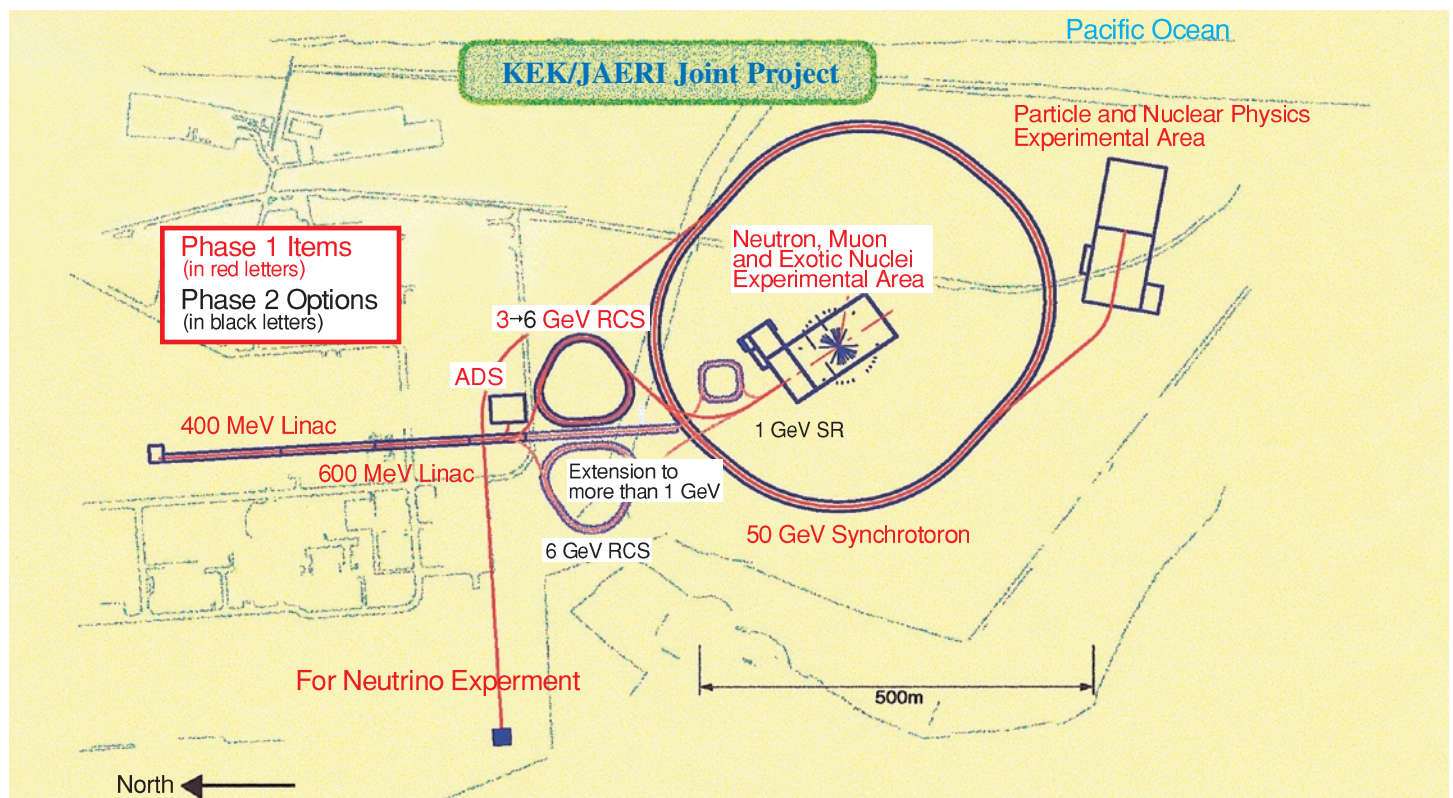
The accelerator configuration of the joint project consists of

- a 400 MeV normal-conducting proton linac,
- a 600 MeV superconducting linac, (from 400 to 600 MeV),
- a 3 GeV synchrotron(3GeV PS) with  $330\mu\text{A}$  (corresponding to 1MW),
- a 50 GeV synchrotron(50GeV PS) with  $15\mu\text{A}$  (corresponding to 0.75 MW).

Research fields to be covered are;

(1) particle and nuclear physics, (2) materials science and biology utilizing spallation neutron source, (3) muon and radioactive nuclear beam, and (4) test experiments for nuclear waste transmutation.

The proposal was submitted to the government this year and the expected completion of the construction is as early as year 2005.



## *What are the Particle Physics Topics ?*

Particle physics programs at the 50GeV PS are, for instance,

- (1) Long baseline neutrino oscillation experiments (in particular,  $\nu_\tau$  appearance, after K2K),
- (2) Rare K decays and CP violation studies, and
- (3) Muon lepton flavor violation with a high intensity muon source.