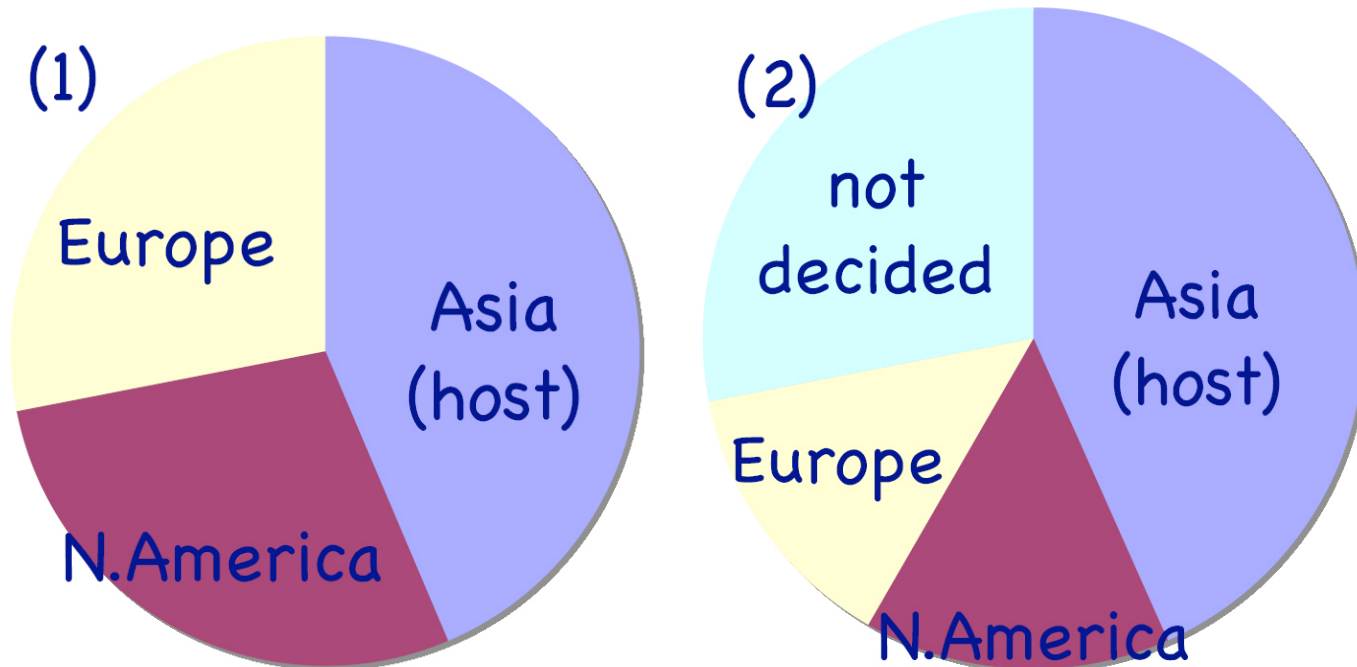


Asian Contribution to ATF2

Budget Sharing Plan

- Total demand ≈ 4 Oku¥ (Oku¥ \approx M\$)
- Infrastructure (floor refurbishment, shielding) ≈ 0.6 Oku¥
- Try to share the rest roughly **equally** by 3 regions
- Operation cost (incl.ATF) ~ 1.5 Oku¥/year to be paid by KEK



Work List

(1) Optics, tuning and commissioning

1-1 Optics design

- design
- tuning method
- tolerances of magnets, power supplies etc.
- beam diagnosis
- wakefield estimation at the ATF2 beam line;
with Q-BPMs(20mm dia.), IP-BPM(5mm dia.), Q (32mm dia.)

1-2 Control system by KEK

- system design (present ATF control system : V-system)
- GAN (Global Accelerator Network) ?

1-3 Intra-train feedback system

- FONT4 by UK
- Feedforward from DR to EXT for jitter control by UK (?)

(2) Magnets

2-1 Design, construction and field measurement

- All the magnets have 32mm full aperture, at least.
- Quadrupoles 22, Bends 4, Sextupoles 5, Octupoles 3
- Baseline layout: transfer line: Quadrupoles 5, Bends 6
- Optimal layout: Chicane (4 bends)
 - 27(22) Qs of 20cm length by IHEP (China)
 - final doublet (2 Qs) by IHEP
 - 10(8) Bends of 1m length (?)
 - Sextupoles (?)
 - Octupoles (?)

2-2 Power supplies (?)

2-3 Vacuum system (?)

2-4 Fast kicker for the ILC like beam by SLAC or VLEP

bunch spacing 2.8nsec to 150-300nsec

(3) Alignment and supports

3-1 Alignment system

- Laser tracker system by KEK
- monitoring/stabilization system (UK?)

3-2 Support system

- rigid support on the floor by KEK
- magnet movers by SLAC
- active stabilization of final doublet by KEK

3-3 Ground motion measurement by KEK

modeling the GM at ATF2 for simulation

(4) Instrumentation

4-1 Cavity-BPMs

- Q-BPMs with 100nm resolution by PAL (Korea)
- electronics of Q-BPMs by SLAC
- IP-BPM with 2nm resolution by KEK(?)

4-2 Laserwire system by UK

- one system for three directional measurements at upstream of the final focus system
- one system at IP (commissioning)

4-3 Shintake monitor by Tokyo univ.

half wavelength of YAG,

- desire a compact design compatible with the IP-BPMs

4-4 Others

- screen monitors by KEK
- wire scanners by KEK
- $4\mu\text{m}$ diameter carbon wire scanner at IP by SLAC(?)
- conventional BPMs by KEK(?)
- Beam loss monitor etc.

(5) Conventional facility by KEK

5-1 Floor construction, water circulation, air-conditioning

5-2 Radiation safety (Personnel protection)

5-3 Environment monitors (temp., atm. pressure, tilt-floor et.)

(6) Optional facility

6-1 Laser cavities and collision with laser at FP LLNL(?)