Future collaboration at ATF

some ideas and issues for discussion

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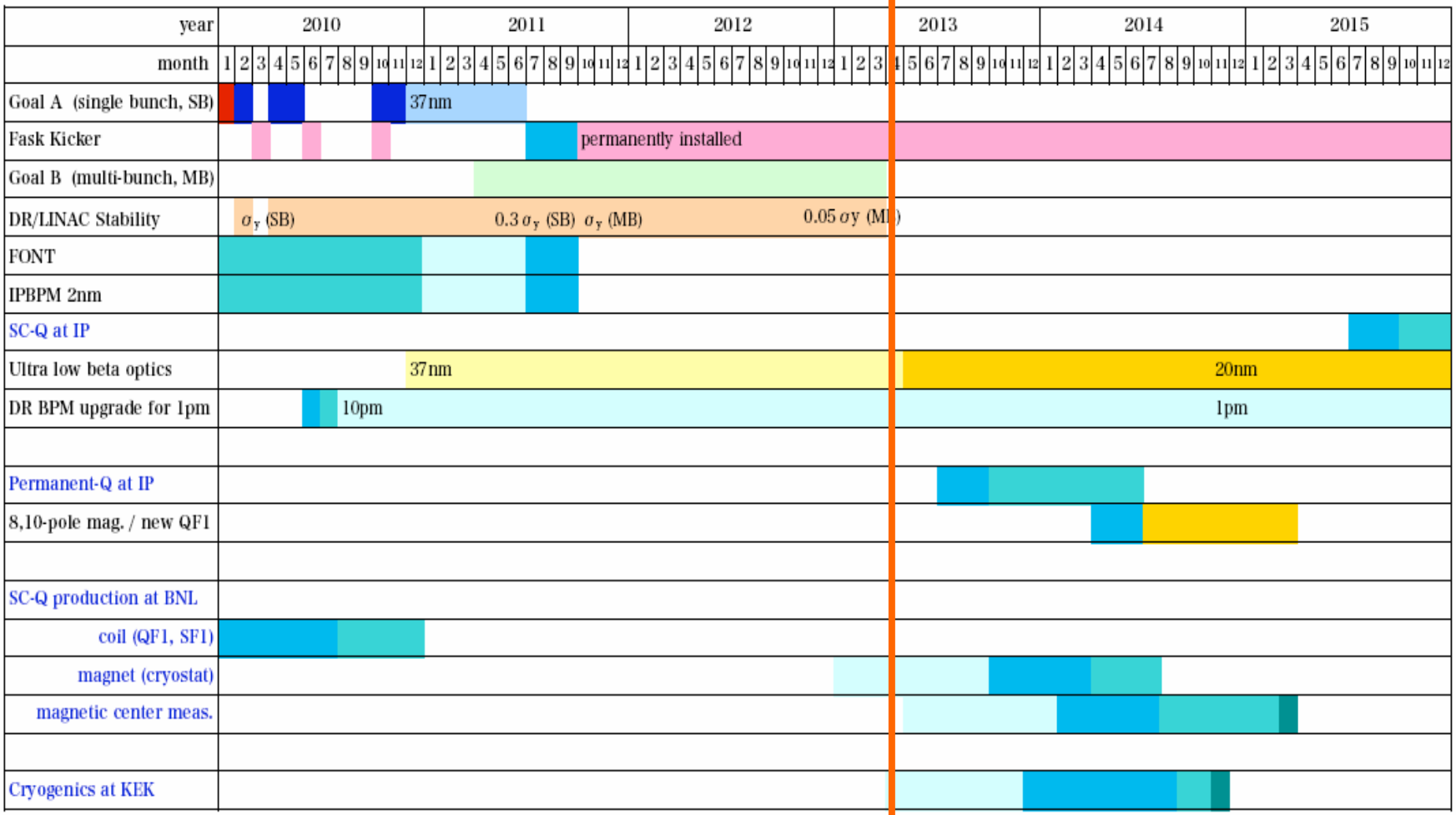
10th ATF2 project meeting, KEK 2 July 2010

Tentative research schedule for 2010-2015

➔ R&D for ILC (and CLIC)

not funded, to be reviewed



T. Tauchi

Two main questions (beyond 2012)

1) Should ATF remain a dedicated R&D facility for linear colliders ILC & CLIC ? Can it evolve to support broader science goals ?

2) Should our international collaboration evolve towards deeper enhanced support and participation, and how ?

➔ Will depend on definiteness of LC plans

➔ Choice for (1) influences (2)

ATF / ATF2 beyond 2012

A) Dedicated facility for continued R&D and training in linear collider design and operation

+ Direct connection to major flag-ship project ⇒ structured, coherent program
+ Support from HEP motivated physicists able to pursue accelerator work
– Vulnerable whenever LC (and HEP) program comes under pressure

➔ Organizational model of HEP experiments may be considered

B) Multi-purpose facility for beam physics and instrumentation with basic and applied goals

+ Broader community may bring more interest, support and funding
– Availability of excellent beam conditions for many different users may require a larger, more structured, professional support organization
⇒ could the flexibility and inventiveness of the present operation be kept ?

➔ Organizational model of synchrotron light sources, large telescopes ?

Organizational model of HEP experiments

1) Treat ATF / ATF2 research facility as an experiment in which not only the construction, but also operation and maintenance are supported by the entire collaboration ?

2) Departure from ICFA guidelines from 1980 and 1993 ?

"operating laboratories should not require experimental groups to contribute to the running costs of the accelerators or colliding beam machines nor to the operating costs of their associated experimental areas".

3) As in HEP experiments, participating institutes would not only use the research environment to pursue their research but would contribute person-power and funding to support the operation.

But how ?

- software management and development ?
- electricity and other consumables ?
- hardware maintenance and upgrade ?
- staffing of beam operation, professional operation staff ?

4) The management & organizational structure would evolve, also the signed MoU, maybe publication policy, in proportion to contributions

Organizational model of user-oriented facility

1) Present ATF / ATF2 has a central support structure within the host organization at KEK, though it also has many features of HEP experiments (mainly because most researchers originate from HEP)
2) In case of a broadened science and application program, should a dedicated professional organization become responsible for all operation, maintenance and some of the upgrades ?
3) Who would pay for that ? Should a departure from ICFA guidelines also be considered in form of user contributions to costs
4) The management & organizational structure would also evolve, as well as the signed Memoranda of Understanding and publication policy

➔ there's some experience in synchrotron light sources and other international multi-user research facilities which can be learned from

My preferred scenario: A + some of B

1) Keep ATF / ATF2 as facility for continued R&D and training in linear collider design and operation, to support ILC and CLIC projects
2) Organize as HEP experiment, with contributing stake-holders sharing responsibilities for programs and operation in the form of tasks and funds for general interest purposes
3) Consider more basic beam operation by dedicated staff
4) Openness to host other experiments with different science goals and applications, for a fraction of the beam time, in which case the collaboration would serve as provider

➔ International workshop in 2011 on the future usage of the ATF / ATF2 low emittance nano-scale beam ?

➔ Could be organized with working groups discussions and meetings over an extended period and conclusions at a final meeting at KEK