

# Homeworks and Goals of the meeting

T.Tauchi

Third ATF2 Project Meeting, 18 December, 2006

Homeworks assigned  
at  
the 2nd ATF2 Project  
Meeting

# I . **Production and Installation Policy; M.Ross**

## I-1 **Magnet and Support session; C.Spencer, R.Sugahara**

- (1) New 5 Sextupoles with 190mm s-band BPMs
- (2) New 3 Bends with less sextupole components
- (3) QC3 for QD0, QF1 with s-band BPMs, No octupole
- (4) QD6 with hole for the LW signal, simulation by RHUL

## I-2 **Power Supply session; P.Bellomo, M.Kumada**

- (1) Prototype system for continued testing until August
- (2) remote and local on/off control of each module
- (3) CAD file (DXF format) of ATF area for the PS location

## I-3 **Monitor, feedback/feedforward session; Y.Honda**

- (1) Locations of FONT and LWs (laser hut)
- (2) LW : Background from a IPBSM collimation ?
- (3) IPBSM : 2-3m long space behind the dump
- (4) QBPM in QEA-magnet, and design of s-band BPM

## II. Major Discussion Issues;

### II-1 Optics and Layout; A.Seryi

- (1) Layout for construction (=location and strength of bends & position of dump) should be fixed before end of June
- (2) Several modifications still need to be checked, e.g. drift after the dump, space between B5 & QD6, spacing in FD for final design of the sextupoles and BPMs, location of collimator and its effect be studied
- (3) Mark will collect all the information and put them in the MAD file which can be used for drawing the detailed configuration, i.e. three dimensional drawings.
- (4) more advanced method of skew quadrupole correction
- (5) need to develop tuning and correction methods with higher order knobs as well

## II-2 IP Configuration; P.Bambade

- (1) Final Doublet layout : T.Okugi ↔ C. Spencer ↔ A.Jérémie  
is and must become detailed
- (2) check for NO enhancements of lower frequency drifts
- (3) check stabilization with 4 FFTB movers (and suitable loads on top) : measurements, simulation
- (4) Modify support base of FFTB movers  
→ thinner by 8 cm (+ some margin...)
- (5) Conventional support of IPBSM (Shintake monitor) to be designed
- (6) MonALiSA : where are reference points on the IPBSM and FD system, where we need a room (30-50cm) above either?

## II-3 Commissioning Detailed Plan; T.Okugi (F.Zimmermann)

- (1) New 5 stripline BPMs with "90°" phase
- (2) 4 screen monitors, which are present ones.
- (3) 2 ICTs (Integrated Current Transformers).
- (4) collimator at SF5 with 5cm long bellows at both ends **No**
  - background for LWs to be checked by simulation
  - movable in X and Y (15mm min. diameter) ?
- (5) QD6 ; hole for the LW signal
  - QBPM as well
  - 50mm diameter from the LW,  
while 24mm aperture at the upstream magnets
- (6) 2 s-band BPMs at both sides of the last Bend; location ?
- (7) A carbon wire scanner between QD0 and IP; location ?
- (8) Urakawa BSM just downstream of IP; location, when ?

## II-4 Scheduling Strategy; G.Blair

- (1) Where to put FONT and feedforward?
- (2) What type of BPM and where ? - dedicated stripline BPMs?
- (3) How to handle multi-bunch operation in IP-BPMs
- (4) LW : First installation of laser hut; 2nd, first stage of light transport system; 3rd, add IP's as project progresses
- (5) LW : where is a micron-size IP ? New idea
- (6) IPBSM : beam size  $> 360\text{nm}(V)$  and  $1800\text{nm}(H)$  by LW mode ?
- (7) installation of IPBPM after the first commissioning
- (8) New funding is being sought for some; outcome expected at the end of 2006
- (9) General schedules will be drafted and gathered in time for the next ATF2 meeting.

## II-5 ATF Operation During Construction and Extraction Line Modification; P.Burrows

- (1) Needs more detailed schedule for ATF2 installations in order to optimise ATF operations + ATF2 installation and minimize overall downtime
- (2) Need to collect requests for space in ATF2 beamline:  
feedback/feedforward, upstream LW IP?,  
cavity BPMs (NanoBPM, IP BPM), MonaLISA ...  
so that optics design can be finalised



# Meeting Plan

# Production and Installation Policy, 1–3

we would like to hear and discuss on the policy or strategy for completion of ATF2 project as well as present status from major sub-groups.

## 1. Instrumentation (2.6h), P. Burrows and T. Tauchi

FONT, Feedforward, QBPM electronics, LW/BSM signals and backgrounds, Shintake monitor (BSM), IPBPM and Nano pattern target at IP

## **2. Magnet, mover and alignment (2h), C. Spencer and R. Sugahara**

dipoles, sextupoles and modification of QC3 for FD, magnetic field measurement of Qs, support system, LW beam at QD6, a new adjustable permanent Q

## **3. Power supply (0.6h), B. Lam and M. Kumada**

progress, schedule, responsibilities, magnetic field stability

# Discussion Sessions, 1–6

## 1. Conventional facilities and construction schedule ( 1h ), N. Terunuma

(1) conventional facility – radiation safety, floor plan ( beam line, utilities, concrete shields and laser huts )

(2) construction of ATF2 beam line and re-configuration of ATF extraction line

## Re-Location of existing devices ( 1h ), Y. Honda

suggested layout, LW layout, nanoBPM triplet, feedback kickers for FONT

### **3. Optics and Commissioning ( 2 x 2 h), A. Seryi, R. Tomas, T. Okugi and S. Kuroda**

(1) New extraction line tuning (coupling and dispersion correction), (2) Recent ATF2 FF optics, (3) BBA and optics diagnostics, (4) Beam size tuning without Shintake monitor, (5) Final beam size tuning, (6) International collaborations.

### **4. IP configuration (2.5h ), A. Jeremie and P. Bambade**

Rigid support for BSM, GM measurement at the ATF, CERN CLIC table performance, vibration correction, Monalisa and FFTB mover performance

## 5. Scheduling (2h), G. Blair

for FONT, MonaLisa, Stable(CLIC) Table, Laser-wire, nBPM, IPBPM and IPBSM etc. about 12 minutes to each sub-component, and about 30 minutes for discussion of the global schedule and to highlight any scheduling conflicts

## 6. Budgets ( 2h, closed session), J. Urakawa,

### A. Seryi and T. Tauchi

Budget plan at KEK, IHEP, PAL, SLAC, FNAL, EU, CERN, DESY, UK, LAL, LAPP etc.

# Summaries

**Conveners are asked for summaries at each sessions.**

**11:20->12:20**  **Summaries and Conclusions** (Convener: Andrei Seryi (SLAC) , Toshiaki Tauchi (KEK) )

Description:

summaries of each sessions by the conveners

11:20	  	Conventional facilities and construction schedule (05')	Nobuhiro Terunuma (KEK)
11:25	  	Re-location of existing devices (05')	Yosuke Honda (KEK)
11:30	  	Instrumentation (05')	Toshiaki Tauchi (KEK)
11:35	  	Magnet, mover and alignment (05')	Ryuhei Sugahara (KEK)
11:40	  	IP configuration (05')	Philip Bambade ( <i>Laboratoire de l'Accelerateur Lineaire (LAL)</i> (IN2P3) (LAL))
11:45	  	Optics and Commissioning (10')	Toshiyuki Okugi (KEK) , Andrei Seryi (SLAC) , Rogelio Tomas (CERN)
11:55	  	Conclusions (25')	Andrei Seryi (SLAC) , Toshiaki Tauchi (KEK)

# Agenda

available at the Indico server;

<http://ilcagenda.cern.ch/>

- Machine Design

  - R&D

    - ATF2 Project


      - Third ATF2 Project Meeting

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 **Third ATF2 Project Meeting** from Monday 18 December 2006 (09:00) to Wednesday 20 December 2006 (12:20) at KEK ( meeting room, 1F, 3-gokan ) chaired by: Toshiaki Tauchi (KEK) , Andrei Seryi (SLAC)


**Description:** Status reports, detailed plan in 2007  
[Monday 18 December 2006](#) | [Tuesday 19 December 2006](#) | [Wednesday 20 December 2006](#)
















### Monday 18 December 2006 [top](#)

09:00->09:30  **Registration** (Convener: Tomiko SHIRAKATA (KEK) , Hiromi Sasaki (KEK) )  
Description: registration fee 1,000yen, Banquet fee 3,000yen

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- 09:30->10:00  **Introduction** (Convener: Andrei Seryi (SLAC) )
  - 09:30    Meeting (10') (  Minutes;  Slides  ) Junji Urakawa (KEK)
  - 09:40    Homeworks and goals of the meeting (20') Andrei Seryi (SLAC) , Toshiaki Tauchi (KEK)

10:00->11:00  **Conventional facilities and construction schedule** (Convener: Nobuhiro Terunuma (KEK) )  
11:00 coffee break

- 11:20->12:20  **Re-Location of existing devices** (Convener: Yosuke Honda (KEK) )
  - 11:20    Layout draft to start with (10') Yosuke Honda (KEK)
  - 11:30    LW layout (10') Grahame Blair (Royal Holloway)
  - 11:40    nanoBPM triplet (10') Stewart Boogert (Royal Holloway, University of London)
  - 11:50    Possible location for feedback kickers (10') Toshiyuki Okugi (KEK)
  - 12:00    FONT and feedforward instruments (10') Glen White (SLAC)

# Goals

- Fully prepared hardwares and softwares ( confirmation )
- Consensus of Schedules ( installation and commissioning )
- International organizations ( beam tuning/commissioning etc.)

# Banquet, 18:30-20:30, 19th December

## Application and cancellation by 13:00, 19th December

四季を楽しむ和食処

# 割烹 一の天

Japanese Restaurant ICHINOYA

四季折々の採れたて山野菜と  
海鮮市場直送の新鮮な魚介類を  
板前達が真心込めて料理致します。



茨城県つくば市の和食料理店「割烹 一の矢」へようこそ。法事・宴会・七五三 無料送迎いたします。  
会席料理・海鮮料理・刺身・活うなぎ・寿司・天婦羅など、心を込めた和食料理の数々をご提供いたします。  
筑波学園都市の中でも最大規模の飲食店を誇り、家族連れでも、友人同士でも楽しめる御座敷席、テーブル席、  
完全個室の大・小12室、最大150名までの宴会場を御用意しております。  
鮮度の良い海鮮料理、四季折々の旬の素材をごゆっくりお楽しみください。

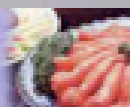
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店内料理



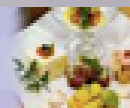
ご宴会プラン

特別プラン



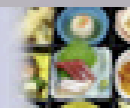
お祝いプラン

特別プラン



御法要プラン

特別プラン



仕出し料理

