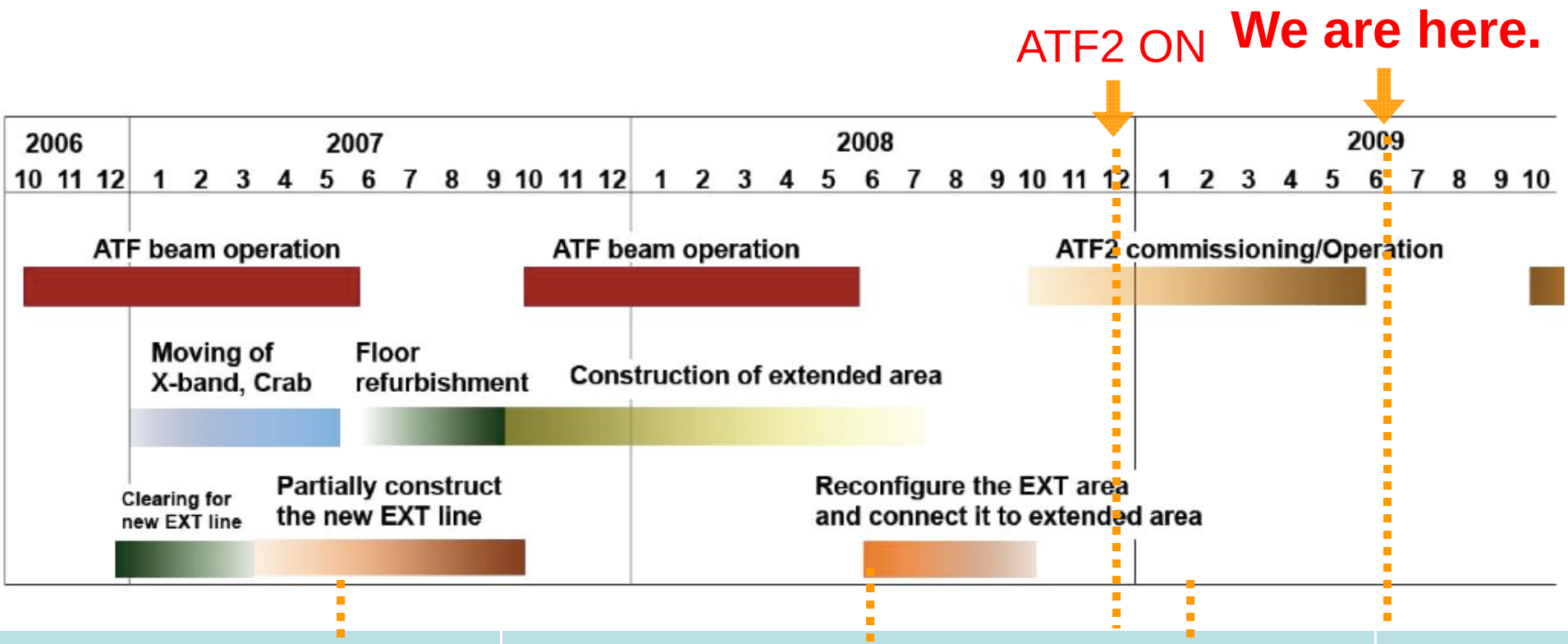
ATF2 commissioning schedules (until JFY2010)

Keep good collaboration and nice relationship, then make wonderful progress.



2009							2010											2011		
6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
Complete high beta optics.							Complete nominal optics.													
							Detect γ from interference monitor, then confirm first milestone 70nm													
Preparation of laser-wire, Upgrade of																		**Confirm design demagnification, resulting in a nominal 35 nm beam size at IP.**		
Interference Monitor,							Develop many tuning tools and												Stabilize	
Upgrade of DR BPM							techniques to confirm beam quality in												beam	
circuit and so on.							Damping ring and at ATF2 beam-line.												orbit	

There are lots of research programs at ATF.

ATF includes beam source developments, damping ring activities, ATF2 research programs and training for young researchers.

Hardware development:

Hardware system development with beam should be smoothly on-going and we can make the priority if necessary.

Also, hardware system development without beam should be accepted if it does not conflict with other research programs.

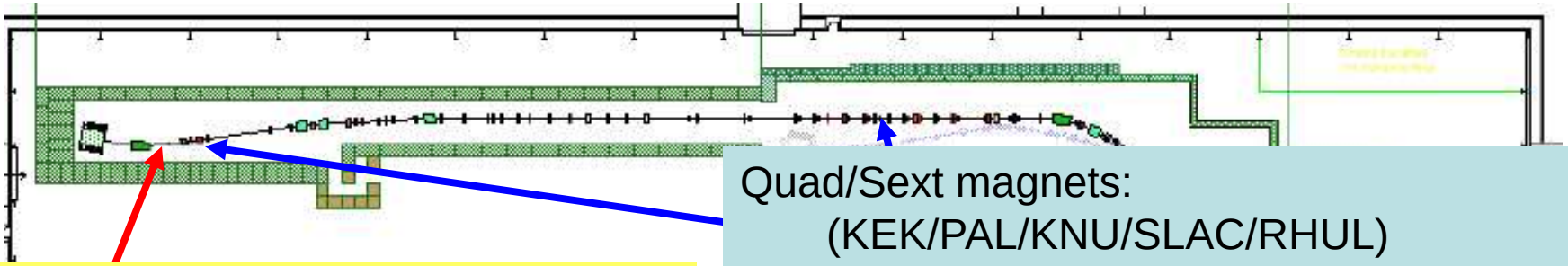
Ask ATF-TB to get approval.

At present, ATF2 critical issues with beam are to set-up

BPM system,
laser-wire system,
interference monitor system
and OTR monitors
with precise calibration and reference.

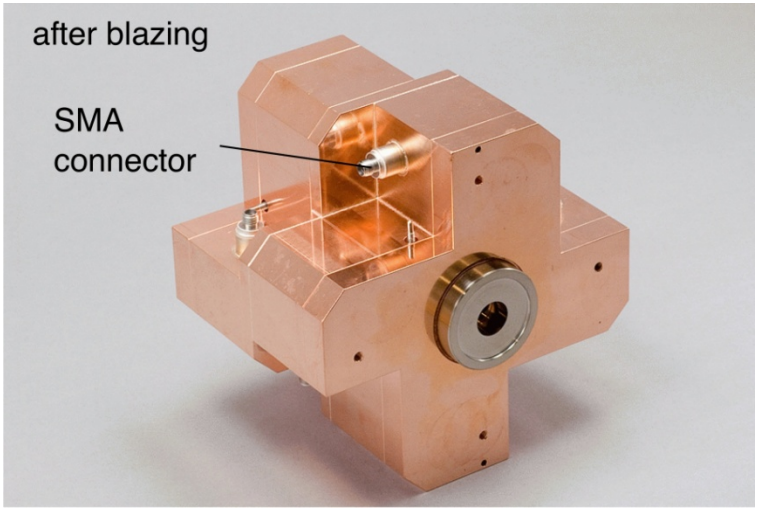
There are other many issues which we have to consider.

Ex. ATF2 beam-line with Cavity BPM



IP-BPM: (KEK/KNU/RHUL)
- Target resolution: 2nm
- Achieved resolution: 8.7nm
- 1 or 2 units

Quad/Sext magnets:
(KEK/PAL/KNU/SLAC/RHUL)
- Target resolution: 100nm
- Achieved resolution: 17nm
- **Total 38 units**
- C-band 34(PAL)、S-band 4(KNU)



New optics and stabilisation demonstrations

Software system including the flight simulator , also usual software tools for operation and beam tuning including the upstream beam lines are essential to make visible progress.

ATF2 Optics studies with alignment errors are also essential to achieve our main goal.

Precise realignment is necessary with detail information from the optics study group.

Necessary Deliverables from TF for BDS and DR

Test Facility	Deliverable	Date
Hardware development, Optics and stabilisation demonstrations:		
ATF	Demo. of reliable operation of fast kickers meeting the specifications for the ILC damping ring.	2010
	Generation of 1 pm-rad low emittance beam	2009
ATF2	Demo. of compact Final Focus optics (design demagnification, resulting in a nominal 35 nm beam size at focal point).	2010
	Demo. of prototype SC and PM final doublet magnets	2012
	Stabilisation of 35 nm beam over various time scales.	2012
Electron cloud mitigation studies:		
CESR-TA	Re-config. (re-build) of CESR as low-emittance e-cloud test facility. First meas. of e-cloud build-up using instrumented sections in dipoles and drifts sections (large emittance).	2008
	Achieve lower emittance beams. Meas. of e-cloud build up in wiggler chambers.	2009
	Characterisation of e-cloud build-up and instability thresholds as a func. of low vertical emittance (≤20 pm)	2010
DAΦNE	Fast kicker design and pulser reliability check	2010
	Characterisation of e-cloud build-up and instability thresholds	2010
SLAC/LLNL	Fast kicker pulser development	2010

This is ILC GDE request.

Need a balanced coordination within limited machine time, man power, budget for visible progress.

Exchange of the knowledge from many research activities makes a nice synergy.

Keep good collaboration and nice relationship at ATF,
then make wonderful progress.