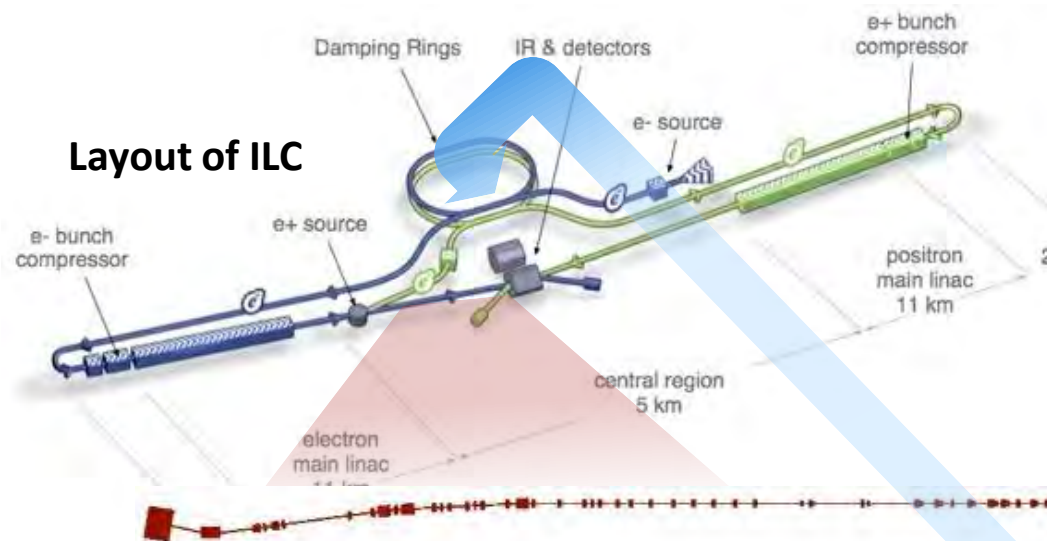


ATF/ATF2: Accelerator Test Facility



Develop the nanometer beam technologies for ILC

■ Key of the luminosity maintenance

■ 7.7 nm beam at IP (ILC250)

ATF2: Final Focus Test Beamline

Goal 1: Establish the technique for small beam

Goal 2: Stabilize beam position

	Vertical	Horizontal
ILC500	5.9 nm	474 nm
ILC250	7.7 nm	516 nm



KEK-ATF2での国際協力によるナノビーム試験



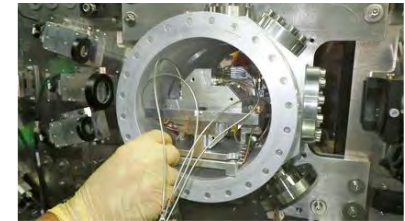
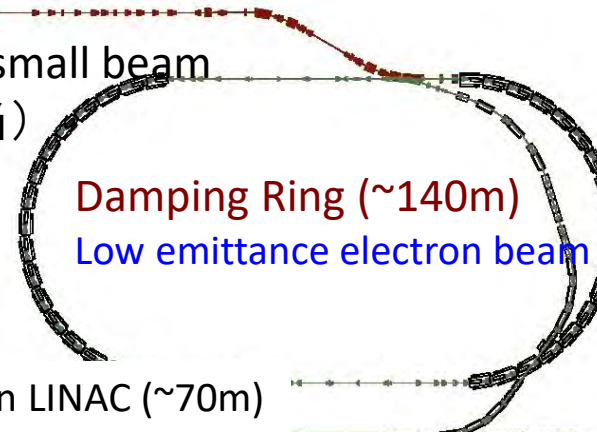
ATF2: Final Focus Test Beamline

Goal 1: Establish the technique for small beam

37nm (250GeV ILCの7.7nm相当)

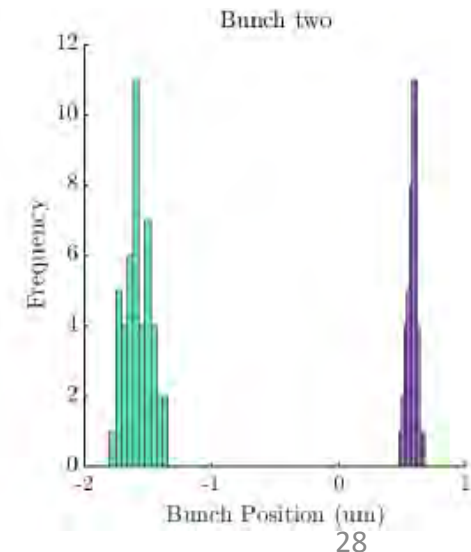
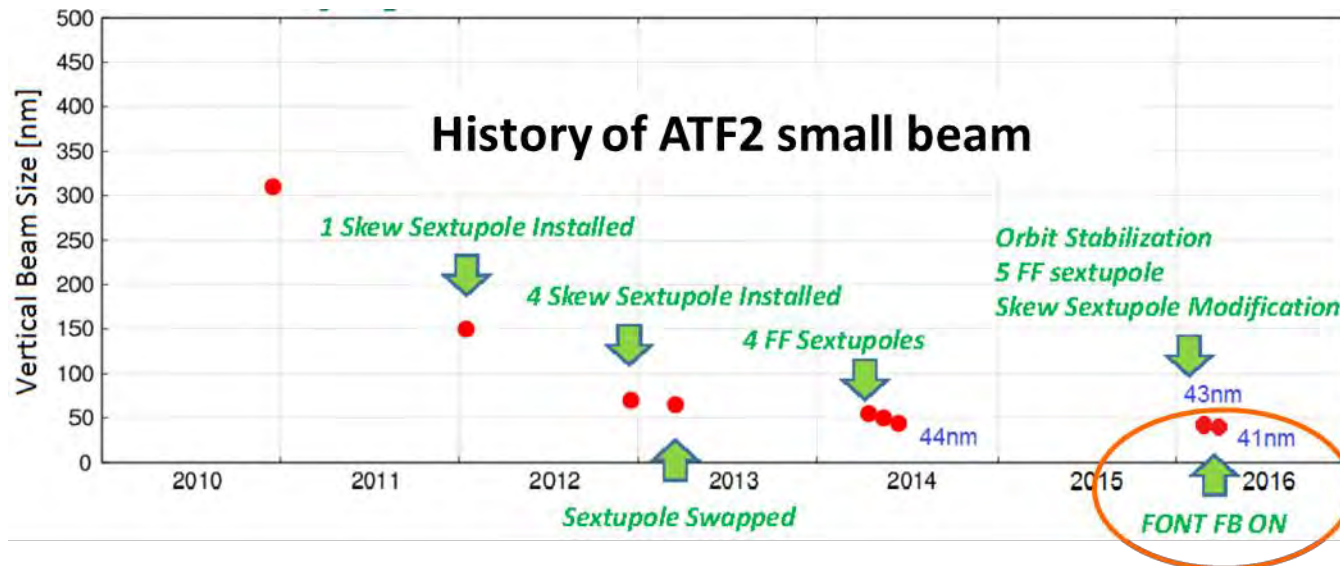
Goal 2: Stabilize beam position

300ns以内にフィードバック



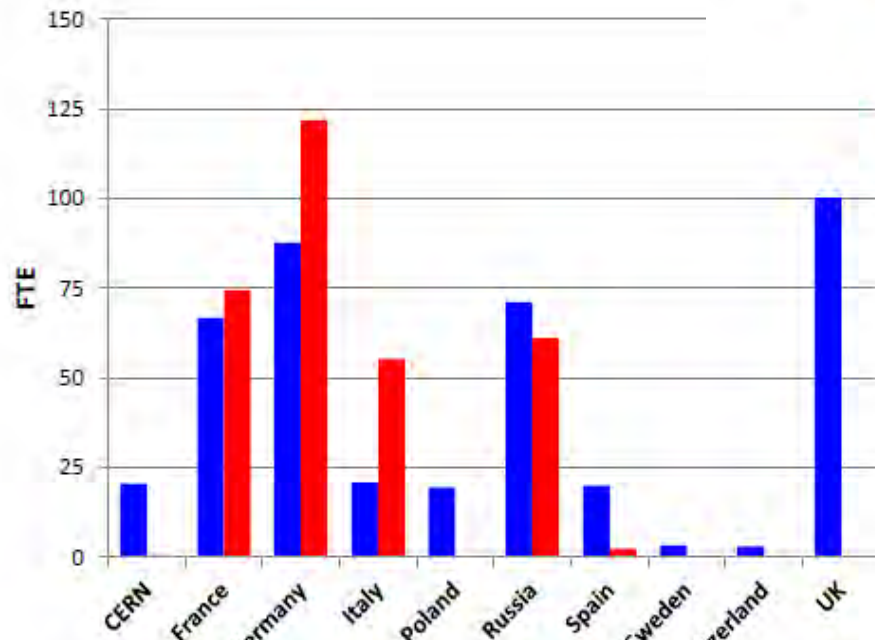
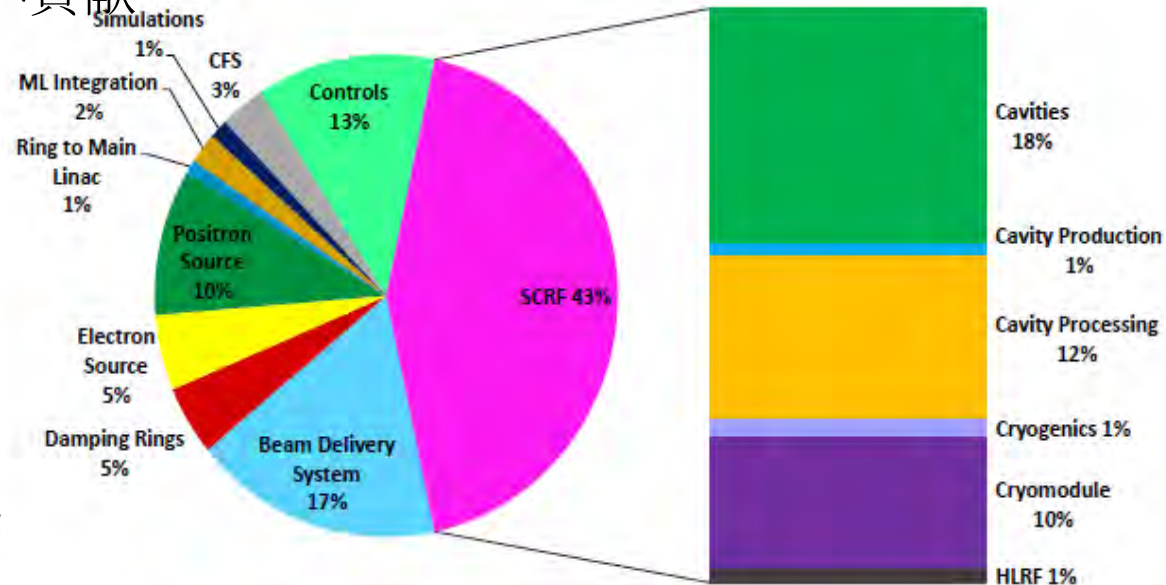
133nsでフィードバック
安定度はBPMの分解能で制限

Bunch	Position jitter (nm)	
	Feedback off	Feedback on
1	106 ± 16	106 ± 16
2	96 ± 10	41 ± 4



欧州 ILC 準備プラン

ILCへのこれまでのヨーロッパ貢献



欧州 ILC 準備プラン

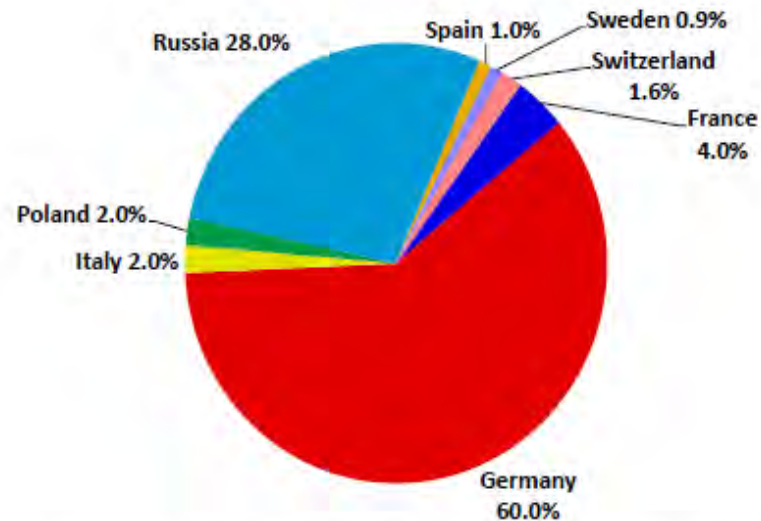


Figure 6: Countries contributing to the European XFEL total project costs.

	Germany DESY	France CEA IPNO		Italy Elettra INFN-LASA		Poland IFJ-PAN	Spain ESS Bilbao	Sweden ESS Uppsala		UK STFC
RF systems				✓			✓	✓		
LLRF									✓	
Cryomodules		✓	✓							
SCRF Cavities		✓	✓		✓					✓
Power Couplers		✓	✓							
HOM couplers										
Frequency Tuners		✓	✓							
Cold Vacuum		✓	✓					✓		
Cavity String Assembly		✓	✓							
RF Tests (Cavities)	✓									✓
RF Tests (Cryomodules)		✓	✓			✓		✓	✓	

Table 3: Responsibility matrix for the cryomodule production and testing for the ESS.

欧州 ILC 準備プラン



Figure 7: The European countries with current ILC-related activities in the accelerator (blue), detectors (cyan), or both (orange).

	CERN	DESY	Czech Republic	France	Germany	Italy	Israel	Netherlands	Norway	Poland	Serbia	Spain	UK
Vertexing	✓	✓	✓	✓	✓	✓				✓		✓	✓
Tracking	✓	✓		✓	✓			✓				✓	✓
Calorimetry	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓
MDI	✓	✓							✓				✓
System Integration	✓	✓		✓								✓	

Table 6: An overview of present activities in the area of ILC-related detector R&D and integration in Europe.