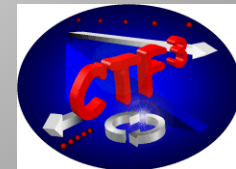


CLIC Test Facility - CTF3

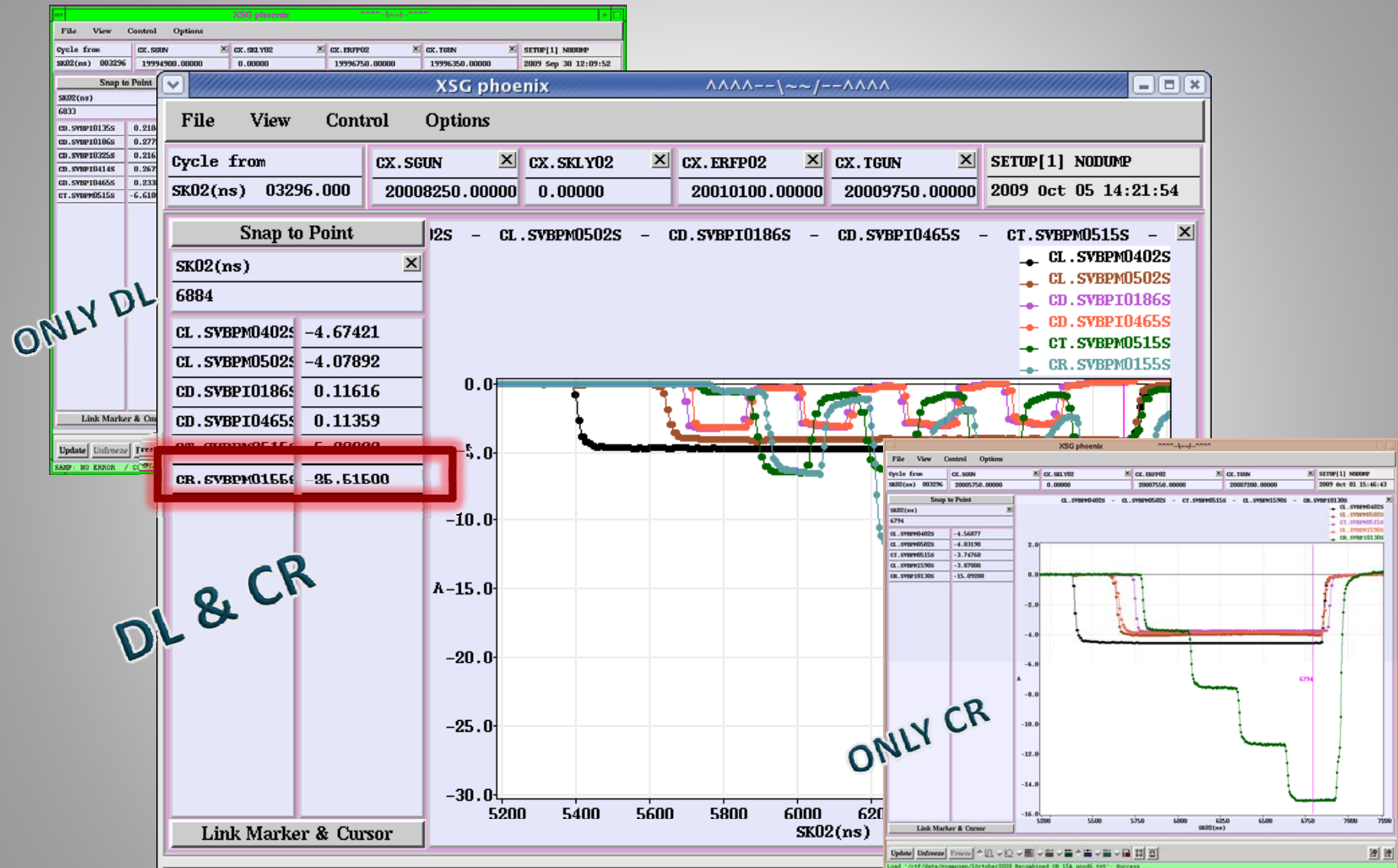
Andrea Ghigo for the CLIC Collaboration



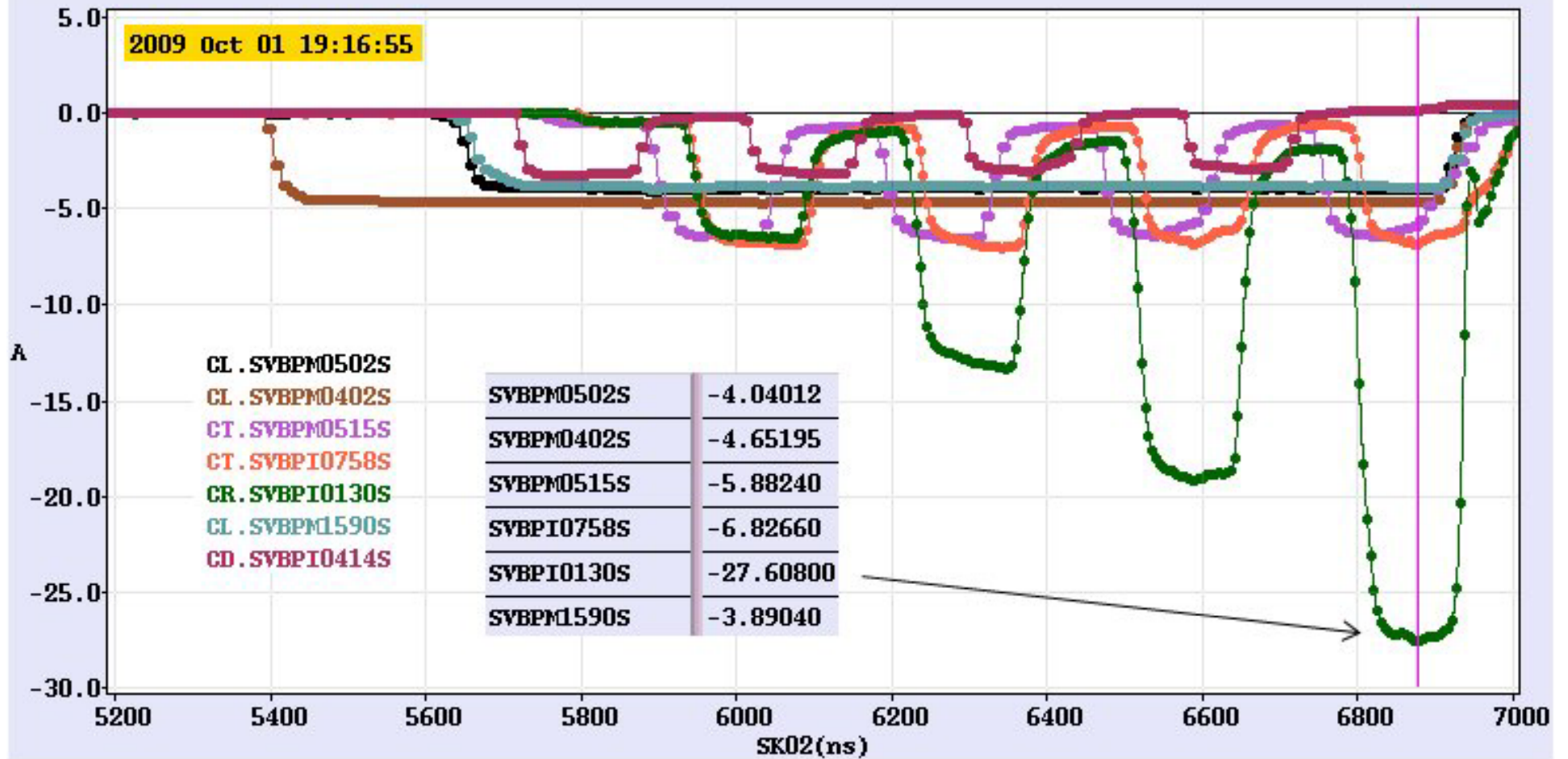
NTA Meeting Pisa 29 Settembre 2010



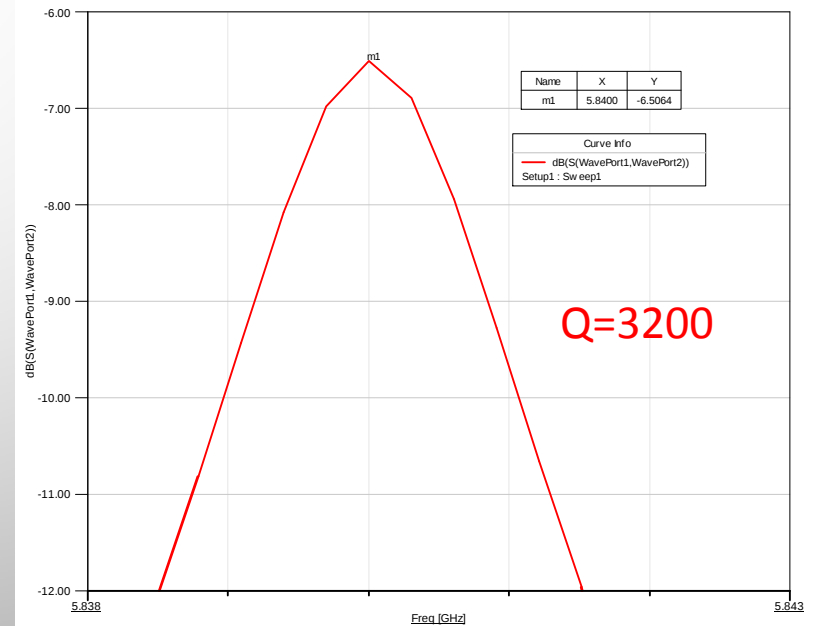
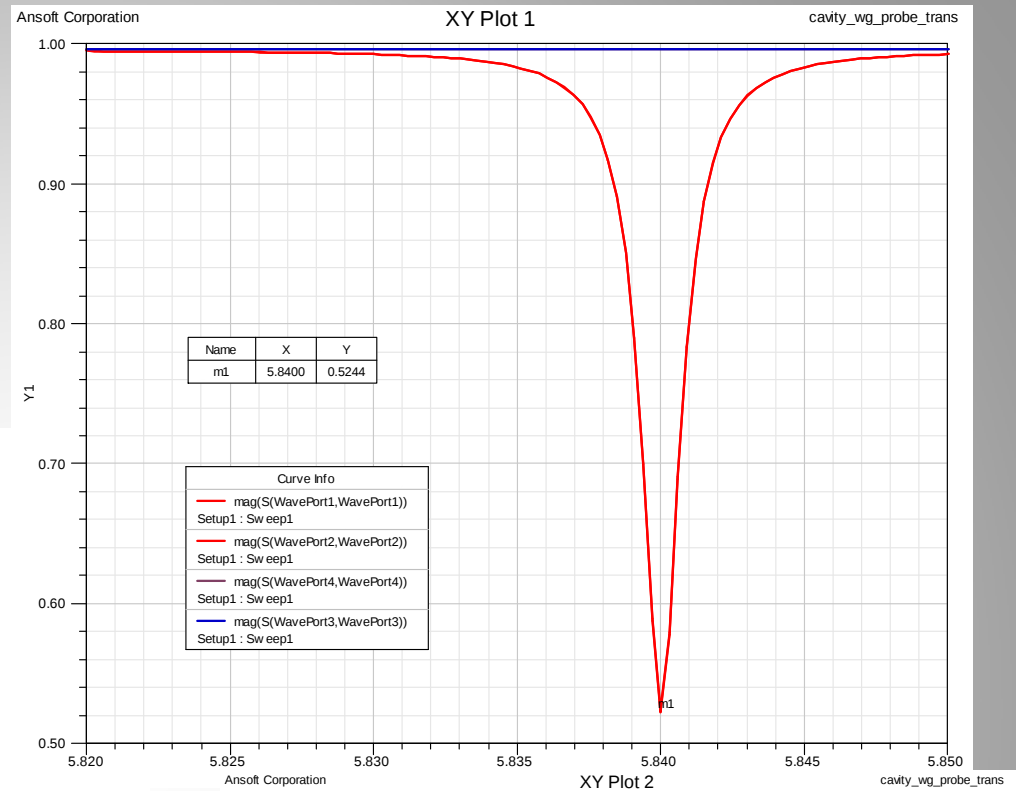
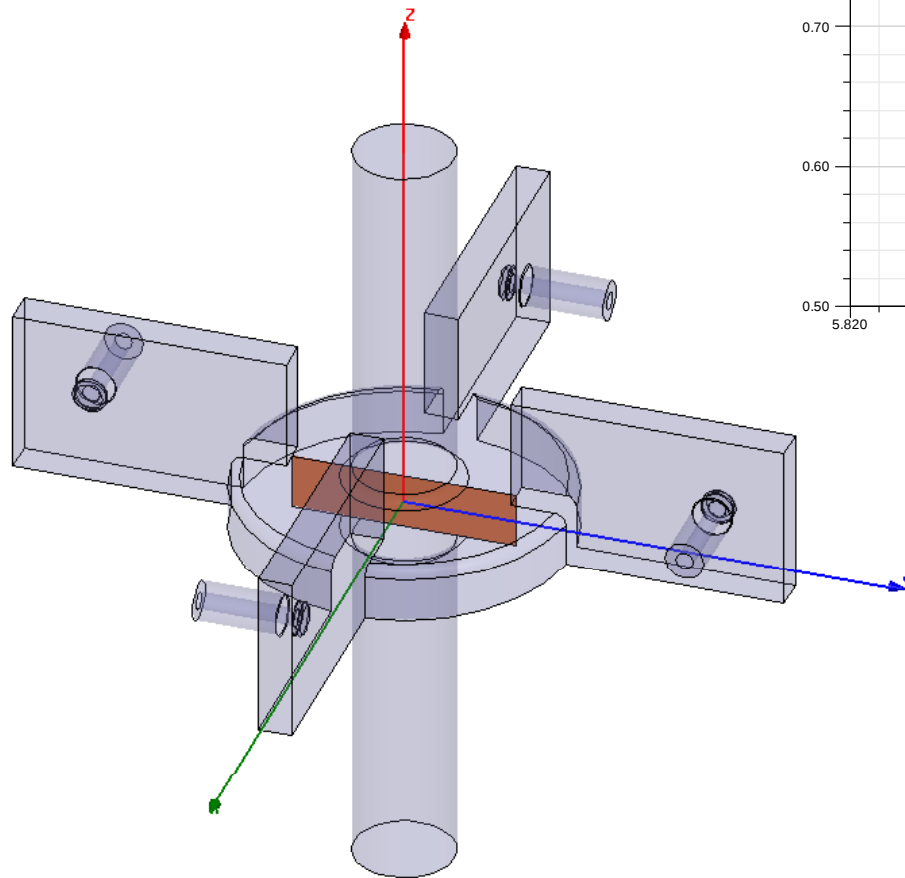
Delay loop & combiner ring: THE recombination



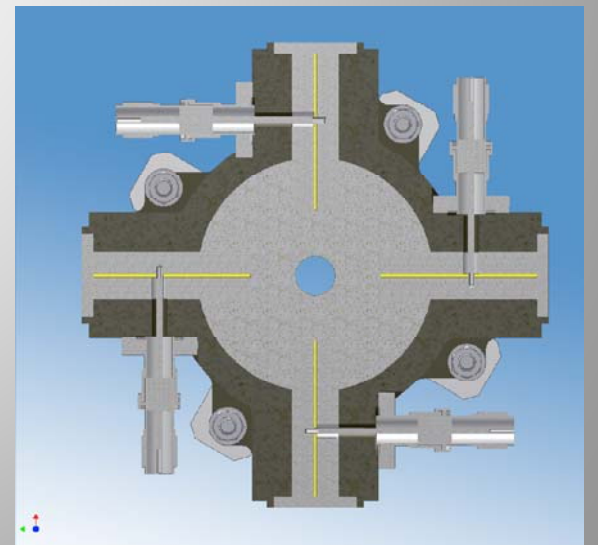
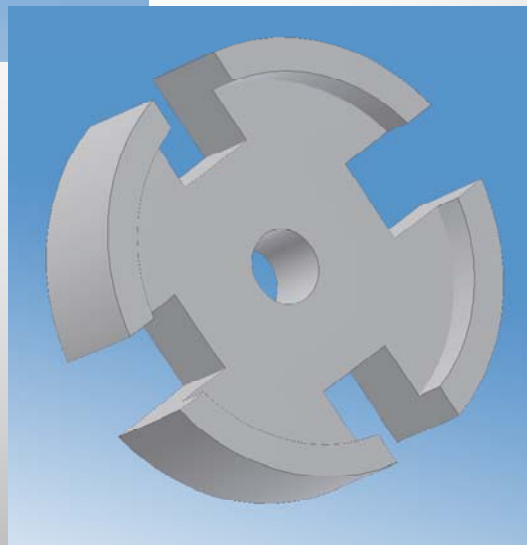
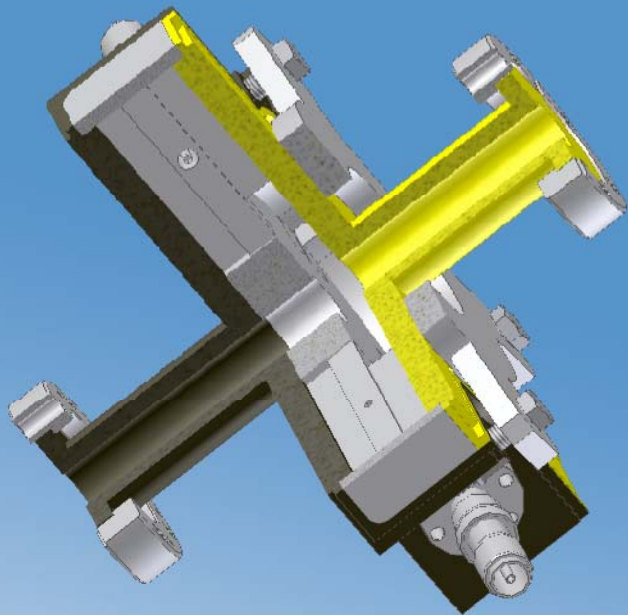
2009 Oct 01 19:16:55



Beam Position Monitor RF Design (HFSS)

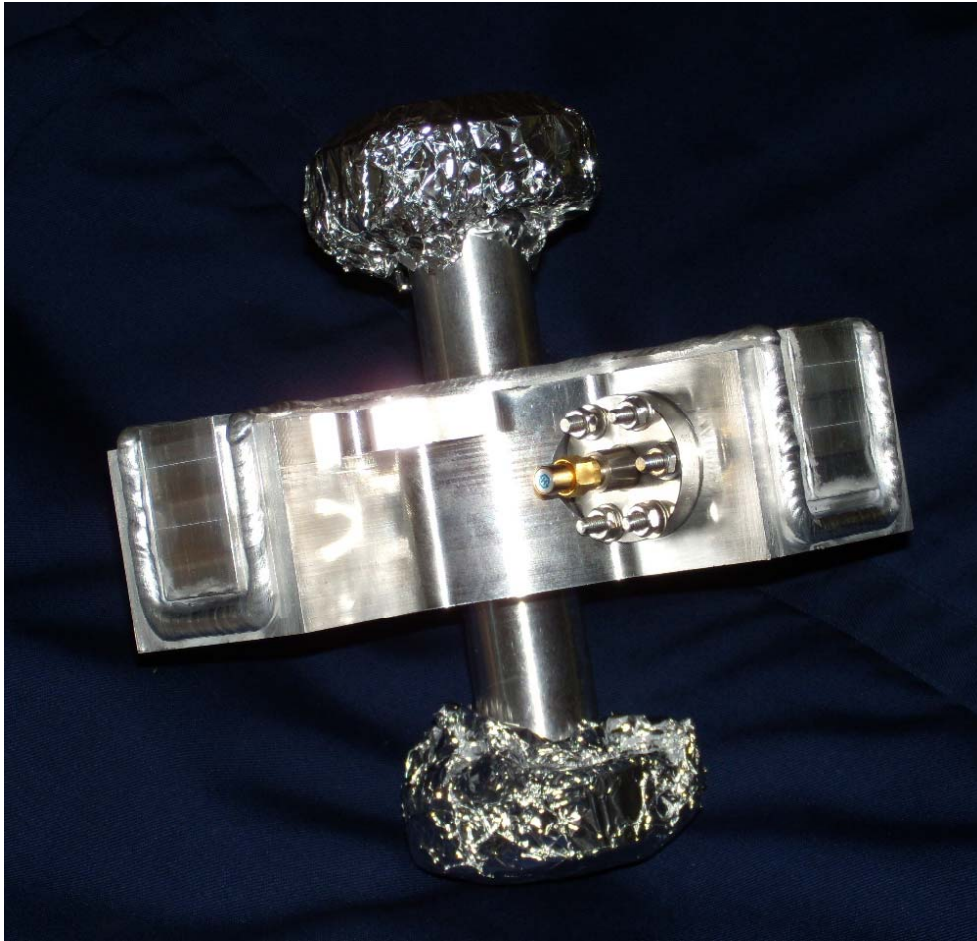


Beam Position Monitor RF Mechanical drawings





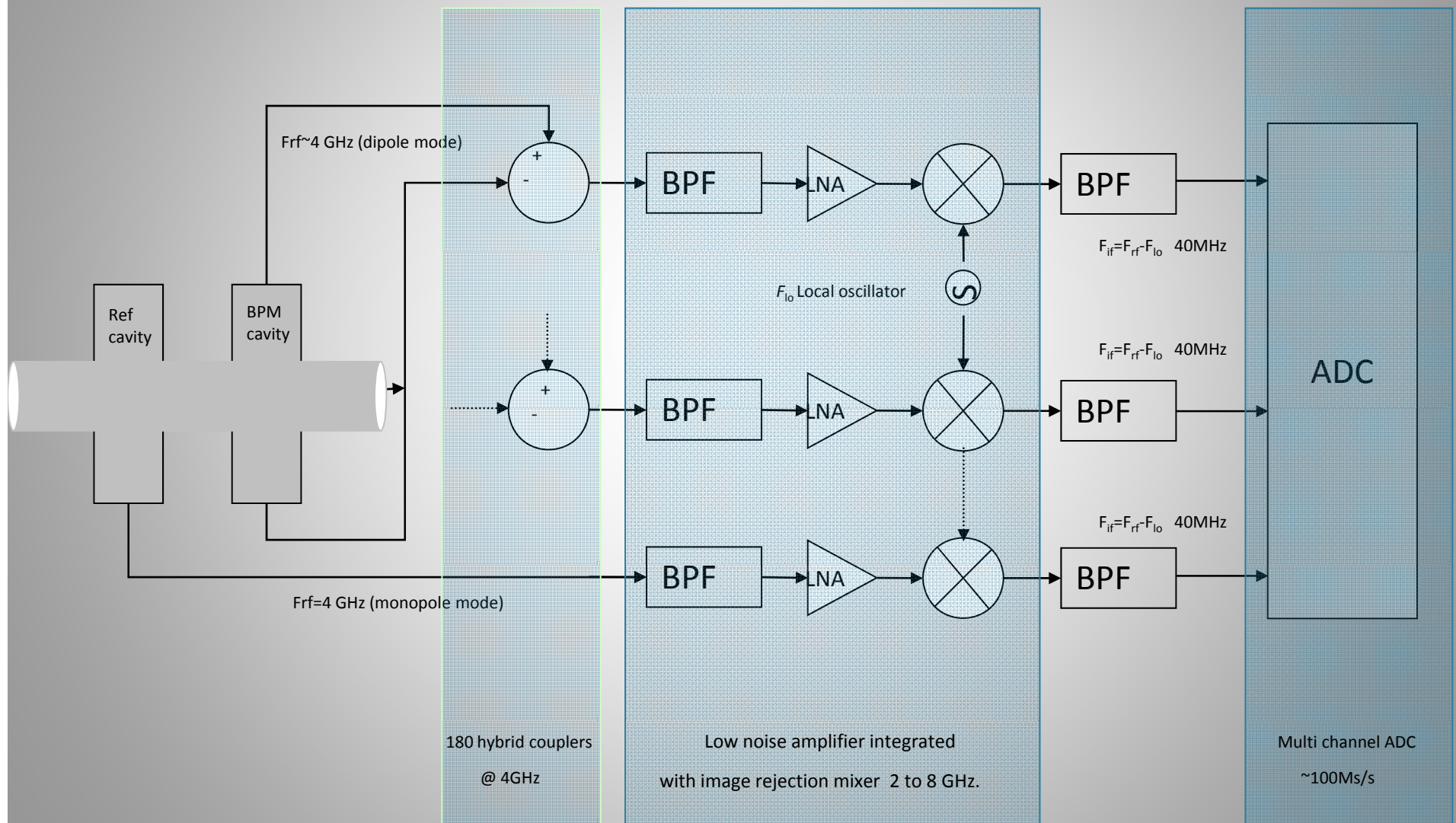
Beam Position Monitor RF 2010



**Beam Position Monitor RF
2010**



Schema del sistema di acquisizione segnali RF BPM



2 TO 8 GHz LOW-NOISE RECEIVER FRONT END

MODELS: ARM0206L02A, ARM0206L02B AND ARM0206L02D

FEATURES

- RF/LO frequency..... 2 to 8 GHz
- Conversion gain 30 dB typical
- Noise figure..... 2 dB typical



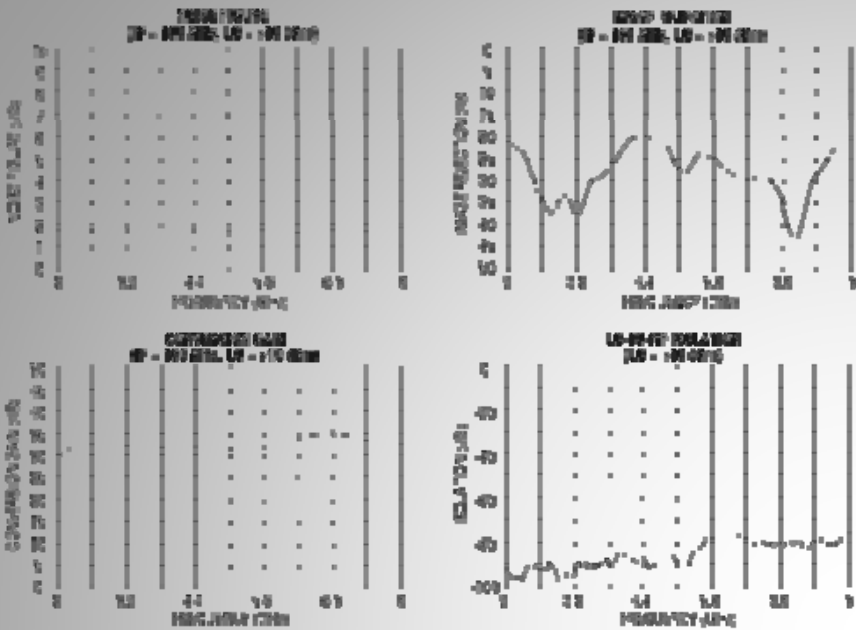
MITTEQ's Model AR Series offers state-of-the-art low-noise amplifiers integrated with our ultra-small image rejecter mixers to provide a complete receiver front-end assembly. This device comes in a nonhermetic housing, however a hermetically-sealed housing is available for extreme environmental conditions.

ELECTRICAL SPECIFICATIONS

INPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
RF frequency range		GHz	2		8
RF VSWR (RF = -10 dBm, LO = +10 dBm)		Ratio		2.5:1	
LO frequency range		GHz	2		8
LO power range		dBm	+10		+13
LO SWR 1:1.0 - +10 dBm		Ratio		2.5:1	
IOVDD	+11 VDD	mA		100	
	+1 VDD	mA		60	
TRANSFER CHARACTERISTICS	CONDITION	UNITS	MIN.	TYP.	MAX.
Conversion gain (Noise F)		dB	27	30	
Single-sideband noise figure at 40°C	-30	dB		2	4.1
Image rejection (Noise F)		dB	15	20	
LO-to-RF isolation		dB	40		
LO-to-F isolation		dB		60	
RF-to-F isolation		dB		60	
Output noise at 1 dB compression		dBm		+4	
Output 1-dBm 3-dB noise intercept point		dBm		+16	
OUTPUT PARAMETERS	CONDITION	UNITS	MIN.	TYP.	MAX.
F frequency range	ANALOG/LO	dBm	00		+10
	ANALOG/LO	dBm	00		00
	ANALOG/LO	dBm	00		000
F VSWR RF = -10 dBm, LO = +10 dBm		Ratio		2.1	



ARM0208LC2C TYPICAL TEST DATA

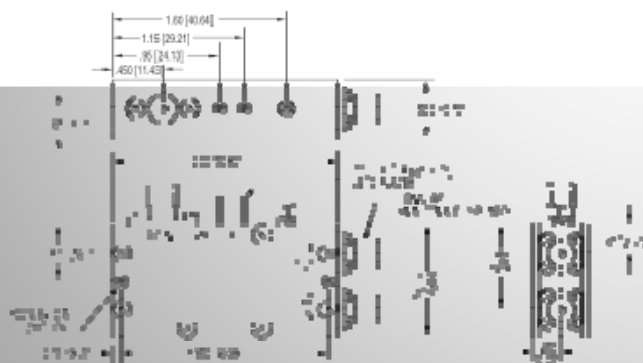


Investment Corporation	-01 0
Operating Corporation	-04 to -09 C
Private Corporation	-01 to -09 C

1 Unit is spent for PC & LD services.

MS16: Test data reported at 25 °C unless noted. *U.S. units* indicate *liters* per gallon and *tablets* per gallon.

OUTLINE DRAWING



ਉਹਨਾਂ ਨੇ ਕਿਹਾ ਕਿ "ਜਦੋਂ ਸੰਸਦ ਨੂੰ ਭਰਤੀ ਕੀਤਾ ਜਾਵੇ, 1998 ਈ. ਹੋਵੇਗਾ."



100 Davids Drive, Hauppauge, NY 11788 • TEL: (631) 436-7400 • FAX: (631) 436-7430 • www.miteq.com

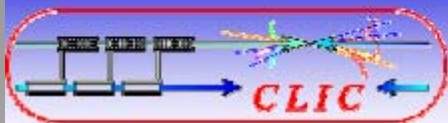
IMAGE REJECTION MIXER PRODUCTS

Il costo del Mixer mod. ARM0208LC2B
è di € 3.370,00 /cad (IVA esclusa)
con consegna in 12-14 settimane,
trasporto presso la Vostra Sede di
Frascati incluso.

Restando a disposizione per ogni ulteriore chiarimento o informazione, con l'occasione Le porgo i più cordiali saluti.

Alessandro Zilanti

Sematron Italia Srl

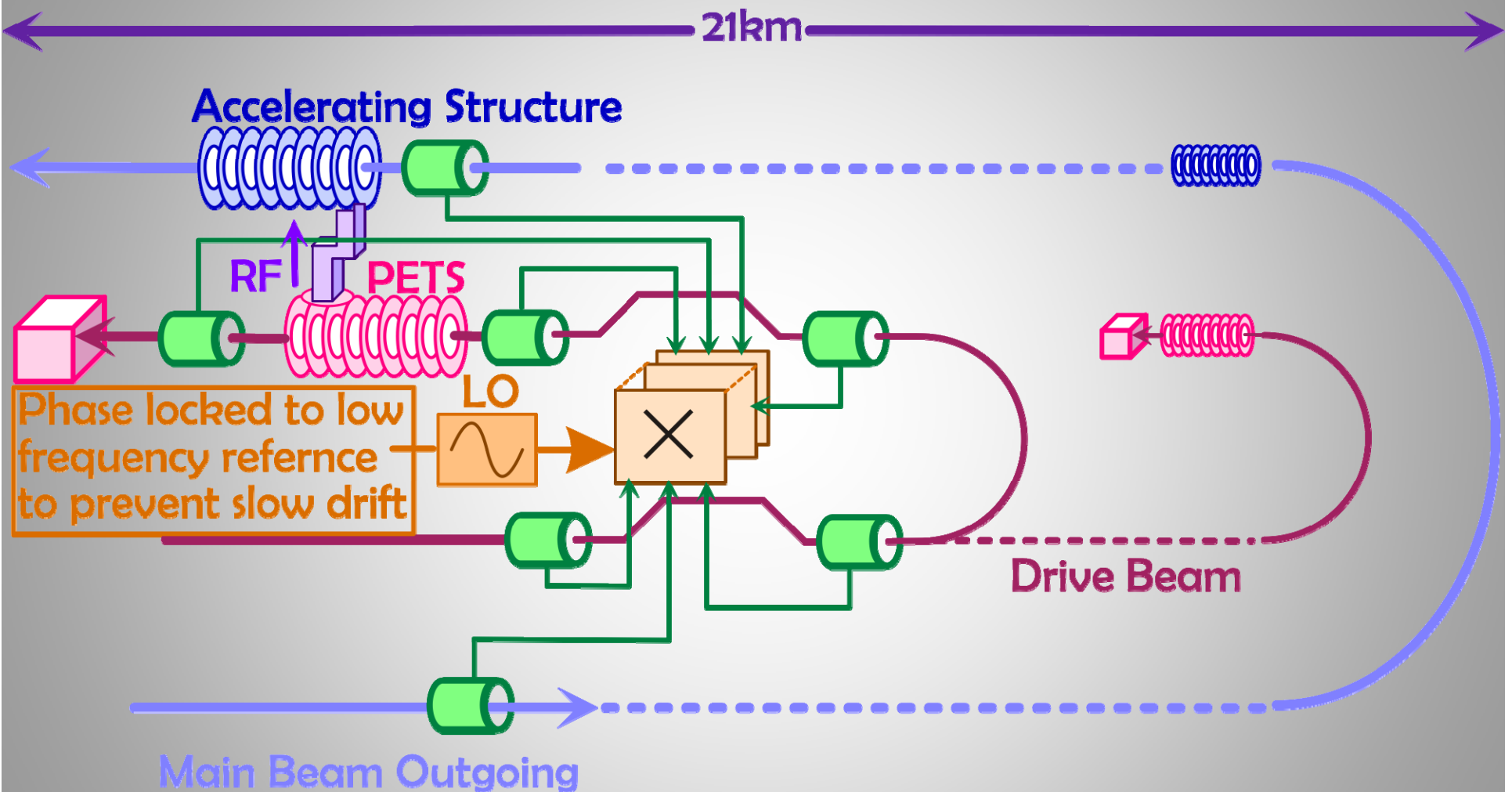


Energy and phase stability requirements in CLIC

- Drive beam phase jitter leads to luminosity drop.
- $\Delta\phi$ at 1 GHz causes 12 $\Delta\phi$ at 12 GHz!
- Requirement at 1GHz (order of magnitude):
 - drive beam phase jitter $< 0.02^\circ$ (3.5E-4 , 50 fs)
 - drive beam energy jitter $< \mathcal{O}(1\text{E-4})$(With a feed-forward, this may be relaxed by a factor 10!)
- Requirement at 12GHz (order of magnitude):
 - drive beam phase jitter $< 0.2^\circ$ (3.5E-3 , 50 fs)
 - drive beam energy jitter $< \mathcal{O}(1\text{E-4})$

See: Erk Jensen, 4th CLIC Advisory Committee (CLIC-ACE)

CLIC: feedback di fase Drive Beam – Main Beam





Phase monitor development



Task 5. Drive Beam Phase Control

1. Design, build and test a low-impedance RF beam phase monitor with a resolution of 20 fs
2. Design, build and test an electro-optical phase monitor with a resolution of 20 fs

Fabio Marcellini, INFN

Beam Phase Monitor for CLIC and CTF3: pick-up design

WG3: 15-Oct-2009, 16:00
in 40-S2-C01

Overview of the Phase Measurement System at SLS/PSI

WG3: 15-Oct-2009, 11:30
in 40-S2-C01

This Presentation

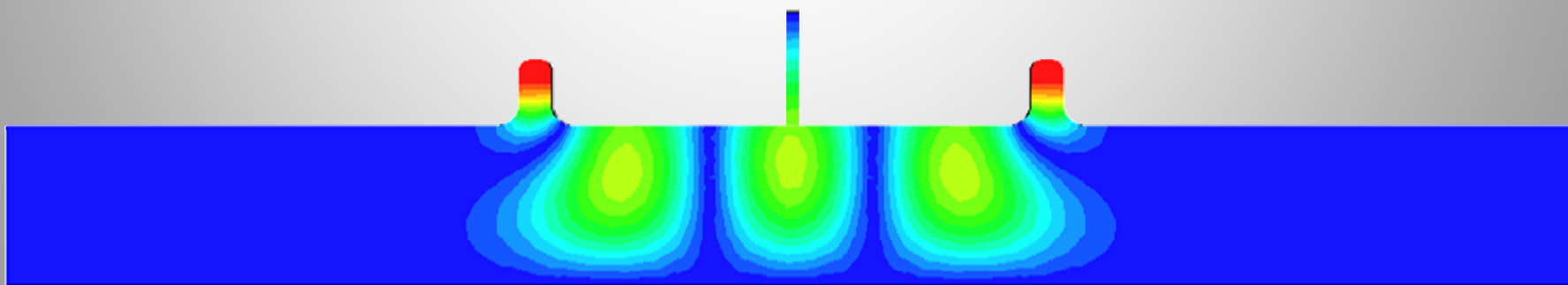
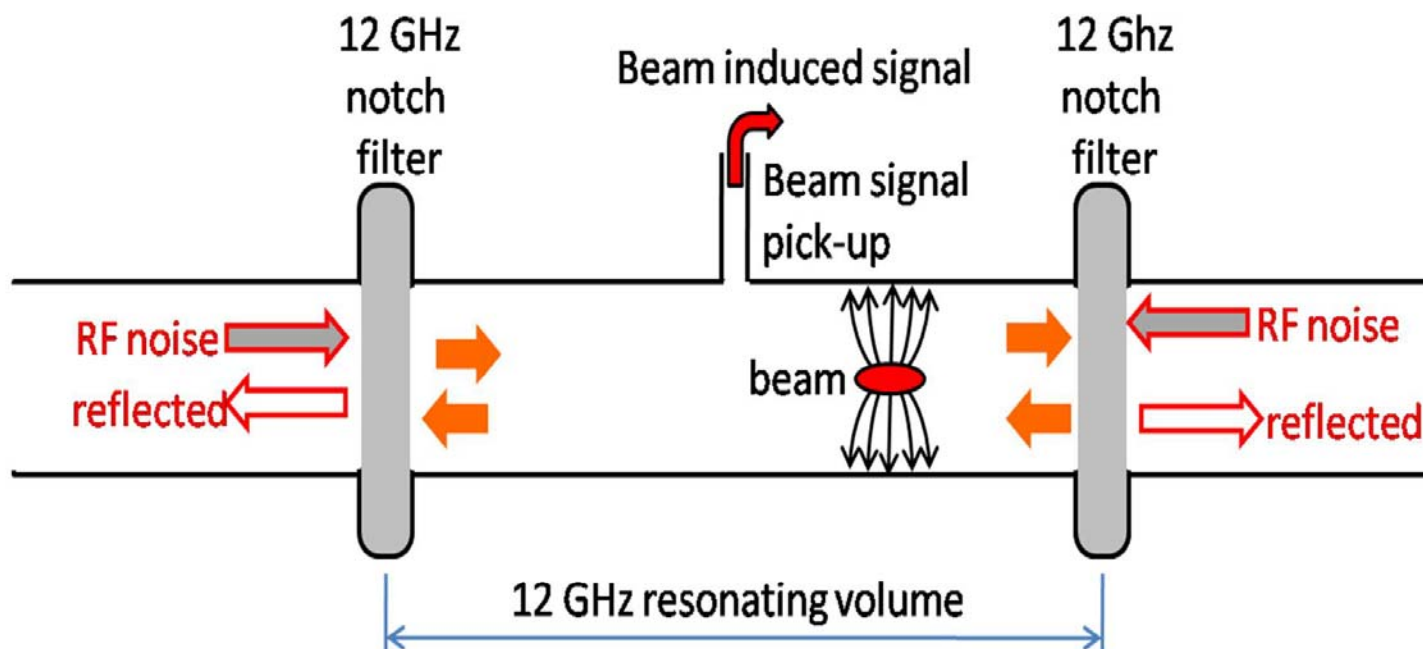
Sub-task 1: CERN will design report of electromagnetic monitor. CERN will design report of electromagnetic monitor. CERN will design report of electromagnetic monitor.

Sub-task 2: The implement prototype detector and electronics. existing facilities at PSI.

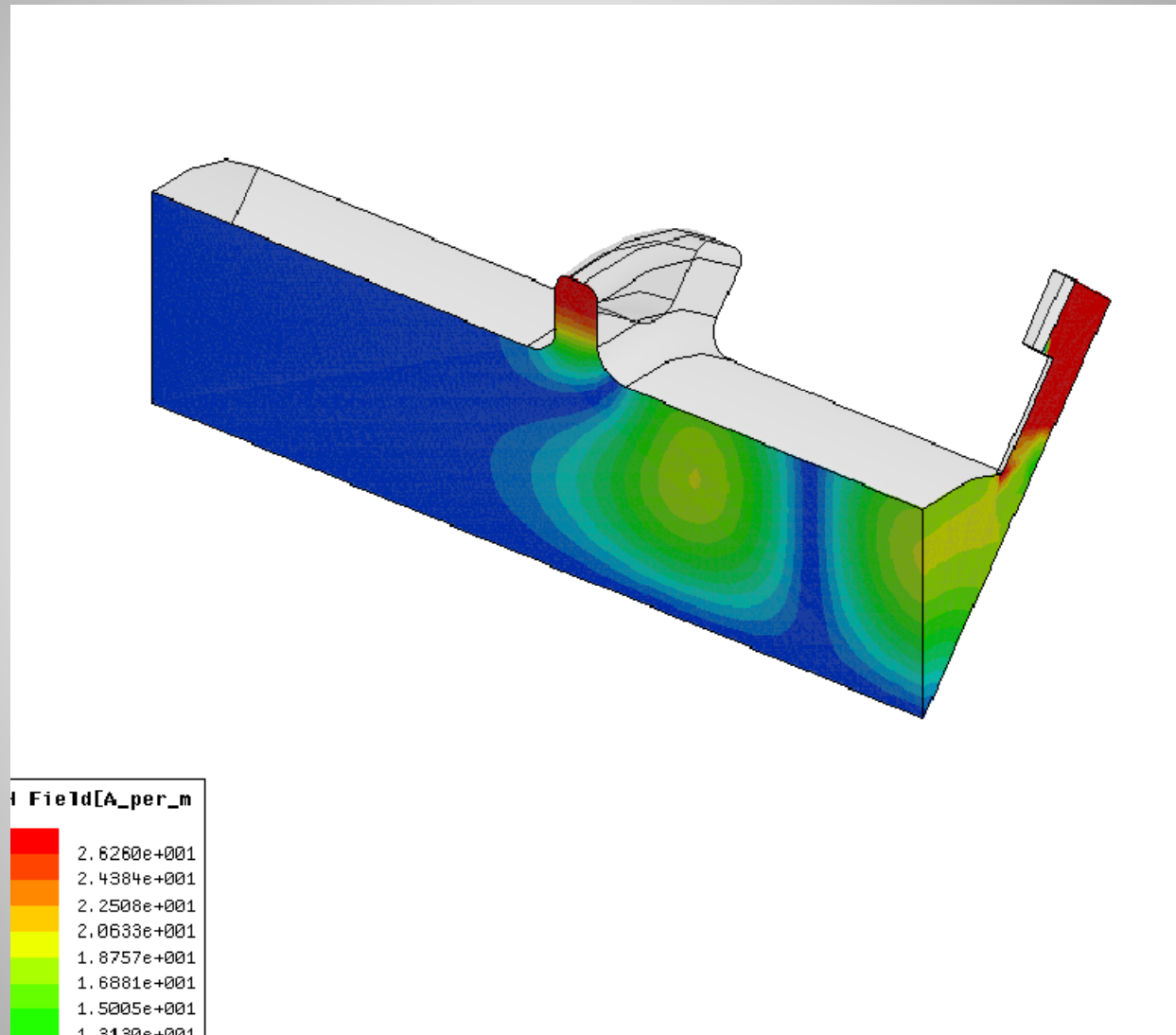
Ready for beam tests in 2012

A. Andersson 2009-10-14

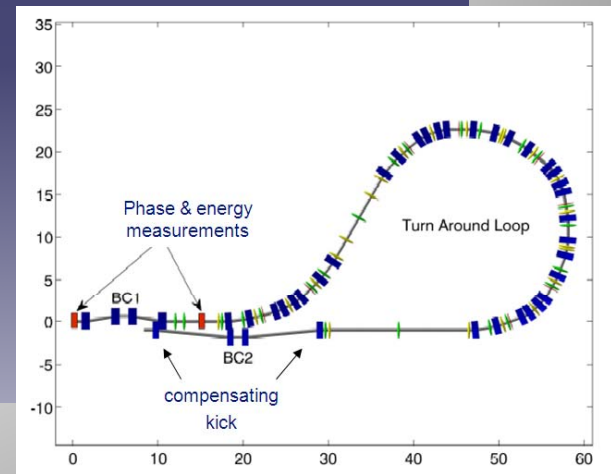
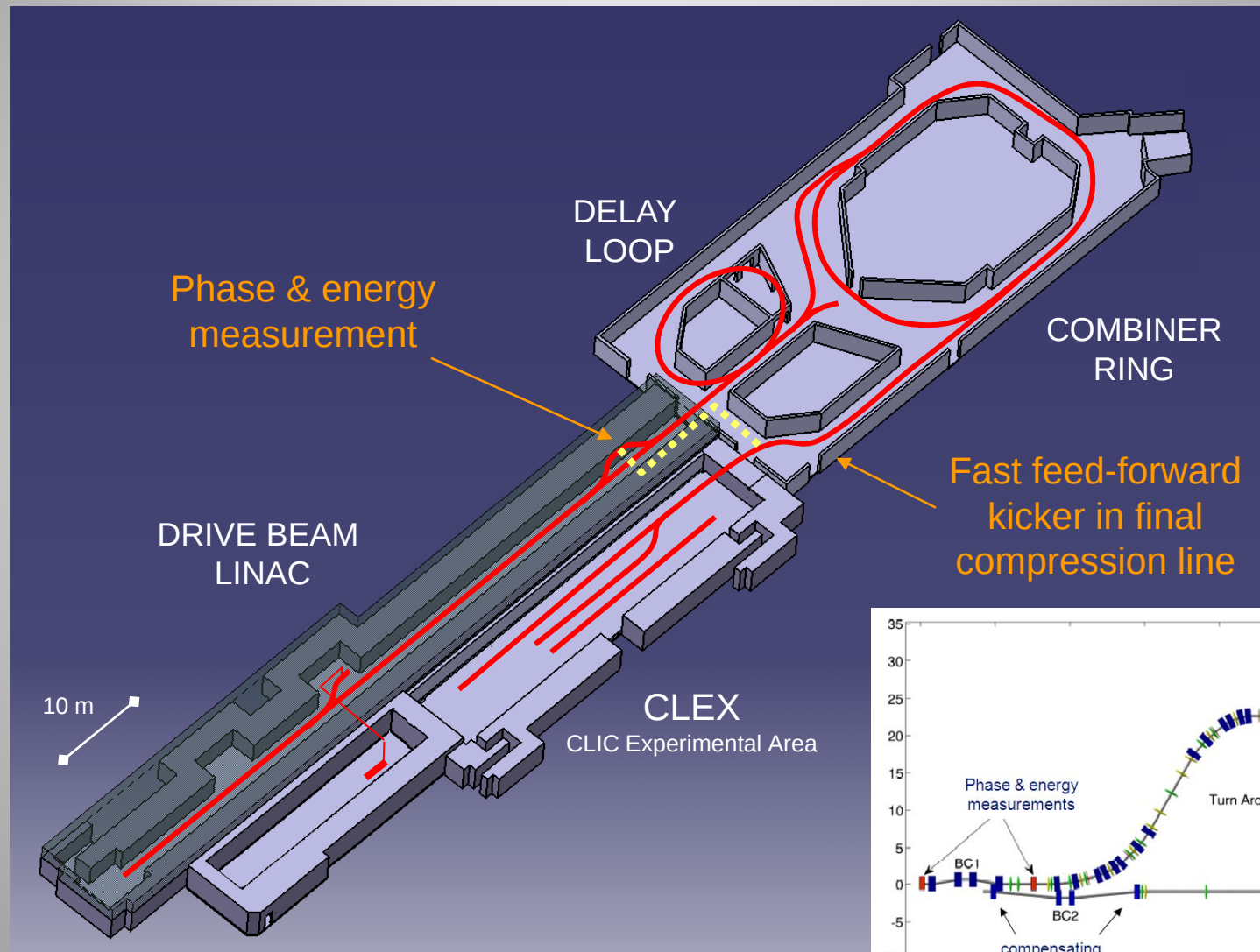
Monitor di fase finanziato in EUCARD FP7



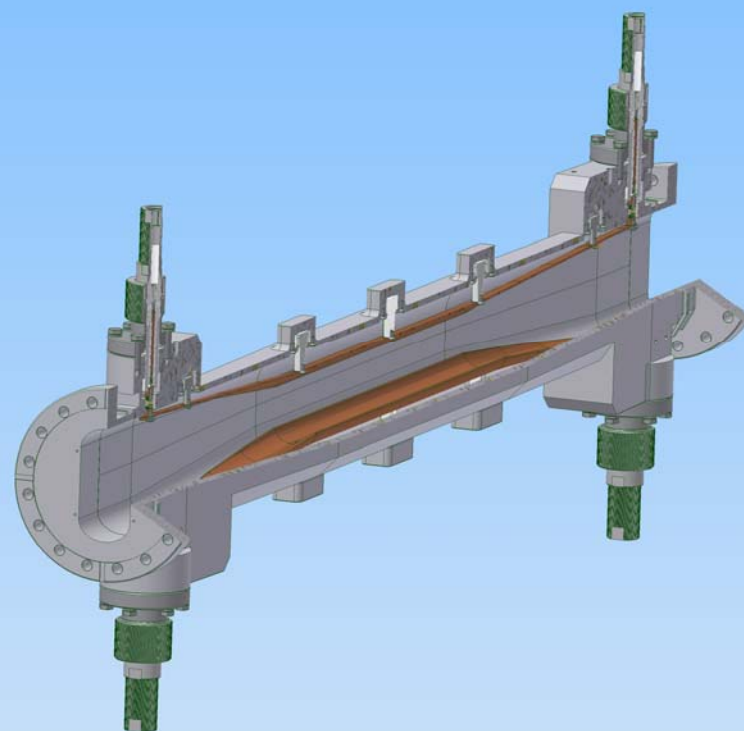
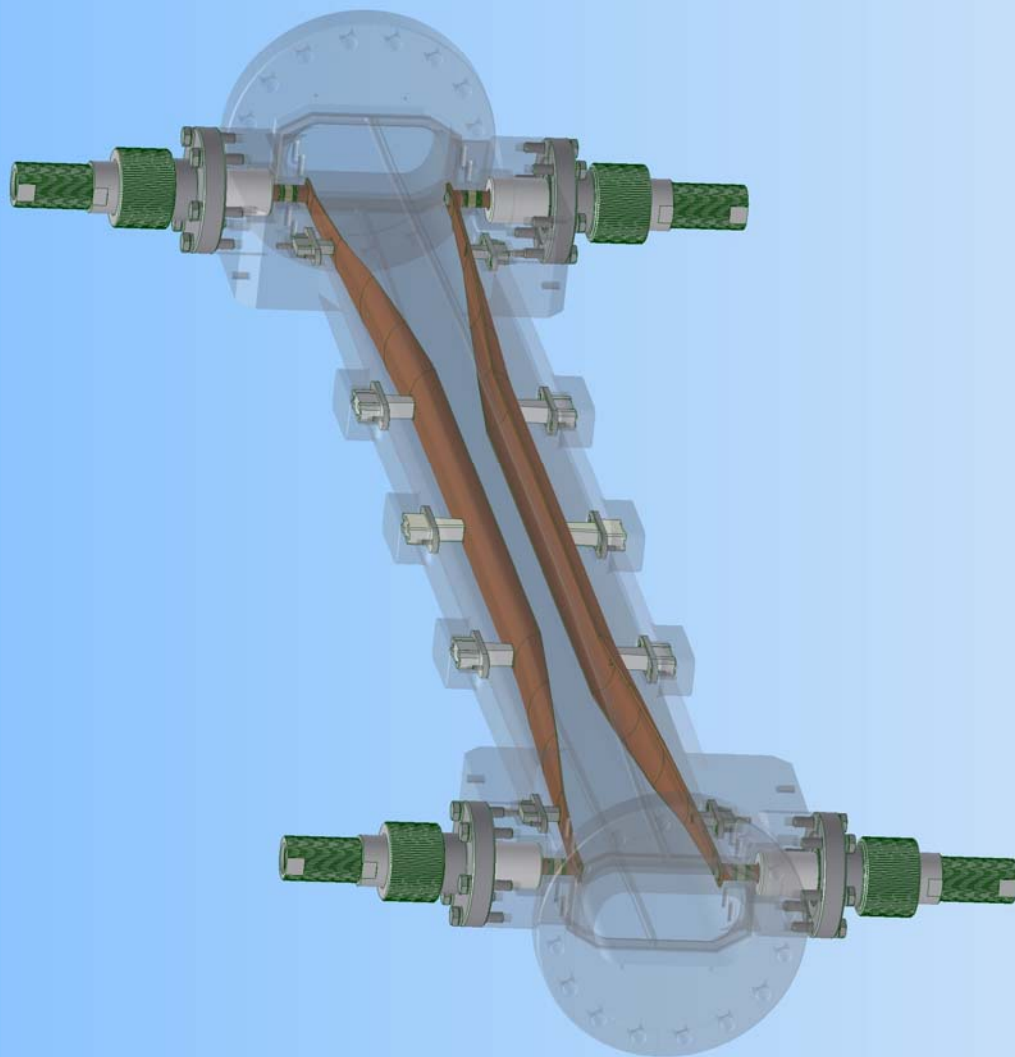
Monitor di fase finanziato in EUCARD FP7

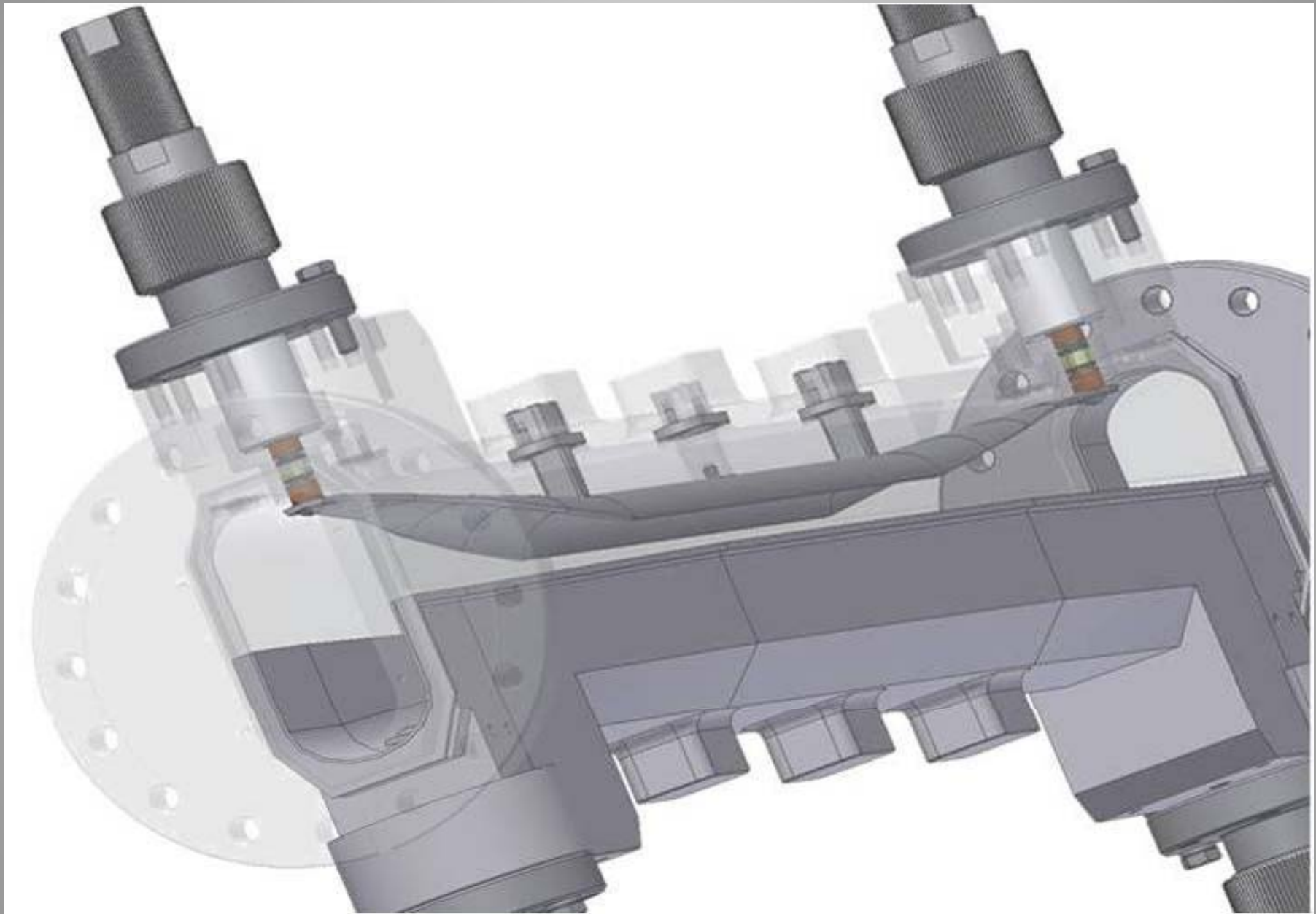


Phase stability measurements & feed-forward



DAFNE Kicker







International Workshop on Linear Colliders 2010 (ECFA-CLIC-ILC Joint Meeting)

from **Monday 18 October 2010 (08:00)**
to **Friday 22 October 2010 (19:00)**
Europe/Zurich
at **CERN and CIG (International Conference Centre)**
chaired by: **Dr. Francois Richard**
support: lc2010-lc@cern.ch

Description: Please also visit

[The official conference site](#)

[Accelerator Working Groups](#)

[ECFA Working Groups](#)

[Monday 18 October 2010](#) | [Tuesday 19 October 2010](#) | [Wednesday 20 October 2010](#) | [Thursday 21 October 2010](#) | [Friday 22 October 2010](#) |

Monday 18 October 2010

[top](#) ↑

08:30 Registration (3h00) (CERN ([Pas Perdue](#)))

09:00->12:00 **SiD at CLIC and ILC** (CERN ([40-S2-D01](#)))

13:30->18:00 **Plenary Session** (CERN ([Main Auditorium](#)))

13:30	The LC Roadmap (30')	Rolf Heuer (CERN)
14:05	Physics prospects (30')	Raman Sundrum (JHU)
14:40	R&D on Detectors (30')	Jean-Claude Brient (LLR Palaiseau)
15:10	coffee break (20')	
15:30	Status of ILC (GDE) (30')	Nick Walker (DESY)
16:05	Status of CLIC (30')	Jean-Pierre Delahaye (CERN)
16:40	Status of Detector concepts (1h00')	
	• SiD (20')	Andy White (Univ. Texas, Arlington)
	• ILD (20')	Henri Videau (L.L.R.)
	• Detector studies for CLIC (20')	Marcel Stanitzki (HAL)

14:00->18:00 Accelerator plenary session

14:00	ILC SRF Update (20')	Akira Yamamoto (KEK)
14:25	CLIC structure results (20')	Walter Wuensch (CERN)
14:50	Flash results (20')	John Carwardine (ANL)
15:15	CTF3 results (20')	Frank Tecker (CERN)
15:40	ATF2 results (20')	Toshiaki Tauchi (KEK)
16:00	Coffee break (30')	
16:30	CESR-TA results (20')	Mark Palmer (Cornell Univ.)
16:55	CLIC CDR status (20')	Hermann Schmickler (CERN)
17:20	CLIC TDR plans (20')	Roberto Corsini (CERN)
17:45	ILC status and plans (20')	Marc Ross (FNAL)

16:00->18:00 ECFA Parallel sessions (CICG)

16:00	Loopverein (1h30')	
16:00	gamma-gamma (1h30')	
16:00	Generators (1h30')	
16:00	Detector Performance & software tools + Detector integration with MDI (1h30')	
16:00	MDI Polarisation gamma-gamma tools (1h30')	
	• SiD Push-pull Plans (30')	NN
	• ILD Push-pull Plans (15')	NN
	• Push-pull Discussion (30')	all

Wednesday 20 October 2010[top↑](#)**08:30->12:30 ECFA Parallel sessions (CICG)**

09:00	Higgs, SUSY + Cosmology (1h30')	
09:00	Top/QCD, EW + Alternative (1h30')	
09:00	Tracking/Vtx (1h30')	
09:00	Calo (1h30')	
09:00	MDI Polarisation gamma-gamma tools (1h30')	
	• Joint with Accelerator Working Group 5 (Interaction Region, MDI, ATF2) (1h30')	
10:30	Coffee break (30')	
11:00	Higgs, SUSY + Cosmology (1h30')	
11:00	Top/QCD, EW + Alternative (1h30')	
11:00	Tracking/Vtx (1h30')	

NTA-CLIC

Richieste per 2011

Missioni Italia	Missioni Estero	Consumo	Inventariabile	Costruzione apparati	Totale
1	22	6	2	120 80	151 111

Missioni estere:

Turni misure Combiner Ring

Partecipazione a IPAC11 (3)

Partecipazione a riunioni di collaborazione

Meeting per la stesura CLIC Conceptual Design

Apparati: 2 Kickers per feedback di fase

Consumo: Filtri per RF-BPM