

# FCC RF R&D Coordination Meeting 1

Olivier Brunner, 14/10/2015

# Agenda of the day

- Introduction (O. Brunner) 10'
- Report from coordinator (E. Jensen) 10'
- Progress reports from all task leaders 20'
- Report from fellow activities 5'
- Specific reports
  - Feedback from SRF 2015 (S. Aull) 10'
  - Report from the CERN-LNL-STFC Collaboration (P. Chiggiato/S. Calatroni) (15')
  - HEKWC for FCC info/status (I. Syratchev) (15')
- Tour de table 15'
- AOB 5'

Indico: <https://indico.cern.ch/event/446209/>

Next meetings:            November 11



December 9

# e group

## E-group members:

- Erk Jensen
- Olivier Brunner
- Michael Benedikt
- Frank Zimmermann
- Karl Schirm
- Walter Venturini Delsolaro
- Sarah Aull
- Giovanna Vandoni
- Francesco Bertinelli
- Frank Gerigk
- Igor Syrathev
- Rama Calaga
- Sergio Calatroni
- Paolo Chiggiato



- Wolfgang Hofle (!)
- Karppinen, Mikko
- Volker Mertens
- Guillaume Rosaz
- Daniel Schulte
- Alick Macpherson
- Steffen Doebert
- Ofelia Capatina
- Gerry Mcmonagle

# New concerning the RF R&D work package

## RF R&D WP description: EDMS...

#		name	topics / objectives
WP 1	Collaboration Agreement "KE2722/BE/FCC"	P. Chiggiato	- 6 GHz: Nb/Cu performances + diagnostics - 800 MHz: fabrication of seamless cavities - 400 MHz: feasibility study (fabrication)
WP 2	Cavity Design (+cavity impedance and HOMs)	R. Calaga	- 400 MHz: low loss factor cavities for FCC-ee - 800 MHz: for 2 <sup>nd</sup> harmonic system
WP 3	Cavity Material and Performance	W. Venturini	- Preparation, diagnostics & measurements @ CERN - Bulk Nb, Nb/Cu & Nb <sub>3</sub> Sn at low frequencies
WP 4	Cavity Fabrication	K. Schirm	- Collaboration with JLab? BINP? Mainz?? - High velocity forming of cavities (EN/MME)
WP 5	Cryomodule Challenges	K. Schirm	- CM design & architecture (SPL?, JLab, CEA Saclay) - CM assembly (CEA Saclay) - Auxiliaries (tuning, FPC, etc)
WP 6	LLRF System	W. Hofle	-Fast cavity feedbacks, cavity trip handling, impedance mitigation
WP 7	High Efficiency Power Systems		-Super-efficient klystrons

### To be added/detailed:

- Crab cavity WP description for FCC-hh – how do we integrate it?
- WP 5: Coll with CEA Saclay, Jlab?  
SPL CM activities?

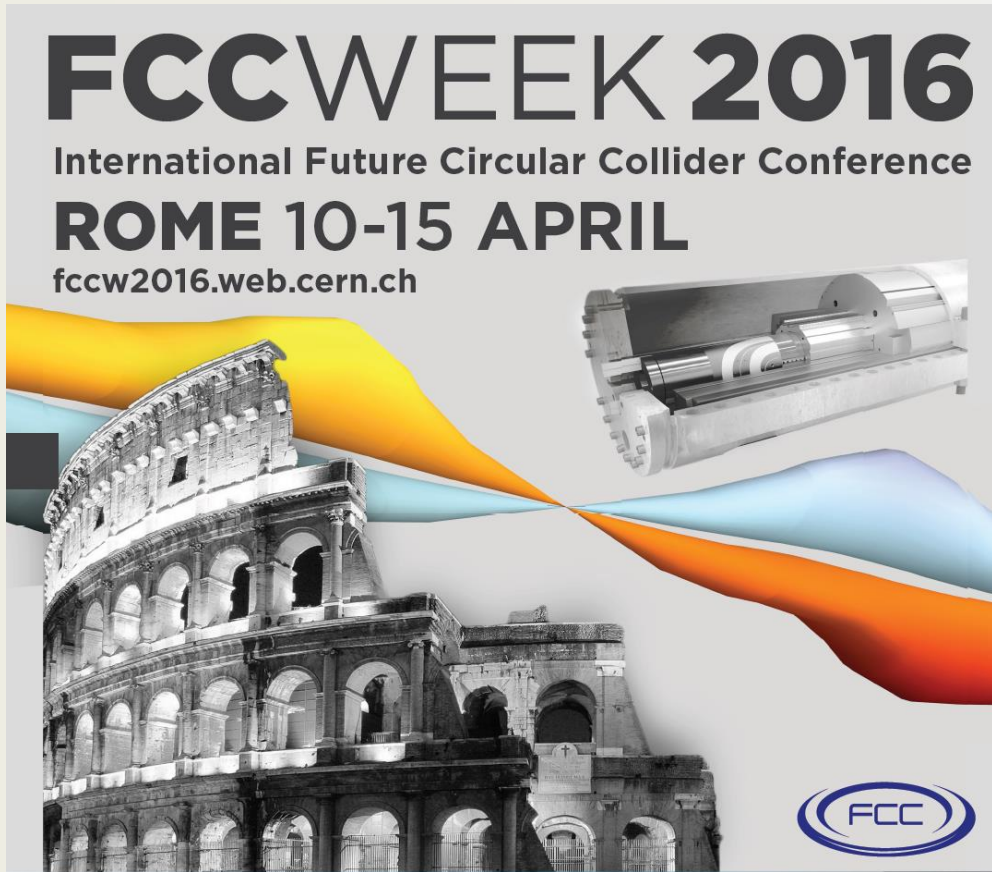
FCC Week  
FCC WEEK

# FCCWEEK 2016

International Future Circular Collider Conference

**ROME 10-15 APRIL**

[fccw2016.web.cern.ch](http://fccw2016.web.cern.ch)



- Similar format as in Washington (day 1 & 5 plenary sessions, day 2,3 & 4, // sessions)
- The draft RF R&D program should be ready for the next FCC coordination meeting (end of October)
- The list of participants will be prepared in parallel

**WP leaders: please send your proposals by mid-October!**

# Academic Training on FCC

- **Program based on 7-8 lectures/hours**, order can still be arranged:
  - Physics, Accelerator I, Accelerator II, CE & technical infrastructure, Accelerator technologies, SC magnets, SRF, Detectors I, Detectors II
- Dates (in discussion):
  - first week of February ?
- Speakers:
  - Physics, accelerator hh, accelerator ee, infrastructure & CE, technologies – SCM, SRF, Detector hh, detector ee



# Fellow & PHD student requests

- WP1 COLLABORATION AGREEMENT “KE2722/BE/FCC”
- WP2 CAVITY DESIGN
- WP3 CAVITY MATERIAL AND PERFORMANCE  
1 Fellow (50%) for EN/MME: (FIB-SEM dual beam technique for Thin Films in SRF) (approved in April)
- WP4 CAVITY FABRICATION
- WP5 CRYOMODULE CHALLENGES
- WP6 LLRF SYSTEM  
1 Fellow for RF/FB or RF/MK: (testing of the super-efficient klystron) (new)
- WP7 POWER SYSTEM

