



WP12: Innovative RF Technologies

Co-ordinators:

Peter McIntosh (STFC Daresbury Laboratory)

Wolf Dietrich-Moller (DESY)

Juliette Plouin (CEA)



- EUCARD-2 officially started on 1st May 2013.
- Formal funding of collaborator contributions has been initiated:
 - Supporting Staff, Consumables, Prototypes and Travel.
- EUCARD-2 Website is live at:
 - <http://eucard2.web.cern.ch/EuCARD2/index.html>

Beneficiary short name ^a (all costs in €)	Task	Person-Months	Monthly personnel costs	Personnel direct costs	Personnel indirect costs	Consumable and prototype direct costs	Travel direct costs	Material and travel indirect costs	Total direct costs	Total indirect costs	Total costs (direct + indirect)	EC requested funding
CEA	12.1	3	6082	18,245	11,494		10,000	0	28,245	11,494	39,739	12,161
DESY	12.1	3	6087	18,262	10,957		10,000	6,000	28,262	16,957	45,219	12,168
STFC	12.1	5	6404	32,019	33,620	0	10,000	0	42,019	33,620	75,639	18,092
CEA	12.2	36	6082	218,936	137,930	140,000	10,000	0	368,936	137,930	506,866	228,372
CERN	12.2	12	9156	109,866	65,920	110,000	10,000	72,000	229,866	137,920	367,786	74,280
HZB	12.2	26.4	6087	160,704	120,528	60,000	10,000	0	230,704	120,528	351,233	142,806
Grenoble INP	12.2	10	6082	60,816	36,489	125,000	0	75,000	185,816	111,489	297,305	107,074
CEA	12.3	30	6082	182,447	114,942	165,000	4,000	0	351,447	114,942	466,389	259,790
CERN	12.3	4	9156	36,622	21,973		12,500	7,500	49,122	29,473	78,595	12,500
PSI	12.3	34	9156	311,288	62,258	45,000	4,000	9,800	360,288	72,058	432,346	266,325
ULANC	12.3	36	5005	180,180	108,108	30,000	23,000	31,800	233,180	139,908	373,088	172,367
UNIMAN	12.3	22	6404	140,883	84,530	12,500	4,000	9,900	157,383	94,430	251,813	116,338
STFC	12.3	5	6404	32,019	33,620		2,000	0	34,019	33,620	67,639	25,147
UU	12.3	5	6714	33,570	20,142			0	33,570	20,142	53,712	24,815
DESY	12.4	24	6087	146,095	87,657	36,000	4,500	24,300	186,595	111,957	298,552	105,292
UNIMAN	12.4	21	6404	134,480	80,688	18,000	12,600	18,360	165,080	99,048	264,127	103,257
UROS	12.4	18	6087	109,571	65,743	22,500	11,250	20,250	143,321	85,993	229,314	89,647
DESY	12.5	6	6087.285833	36,524	21,914	74,000	12,500	51,900	123,024	73,814	196,838	76,951
HZB	12.5	10	6087	60,873	45,655	45,000	9,000	0	114,873	45,655	160,528	71,853
HZDR	12.5	14	5775	80,850	93,786	0	10,000	0	90,850	93,786	184,636	78,025
NCBJ	12.5	36	1927	69,389	41,634	69,000	18,500	52,500	156,889	94,134	251,023	98,134
STFC	12.5	22	6226	136,972	143,821	50,000	10,000	0	196,972	143,821	340,793	84,606
Totals:		382.4		2,310,612	1,443,408	1,002,000	197,850	379,310	3,510,462	1,822,718	5,333,179	2,180,000

12.1

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Milestone	Title	Beneficiary	Date	Comments
MS87	Fundamental SRF Thin Film physics report	CEA	M48	Final Activity Report
MS84	Deposition test facility designed at CEA.	CEA	M40	Facility designed and validated
MS78	Characterisation test facility implemented at HZB	HZB	M30	Facility implemented and validated
MS88	Report summarising the results obtained in characterising the various new thin film technologies developed, which include both multilayer and monolayer techniques	CEA	M48	Final Activity Report
MS81	RF design CLIC_DDS_B	UNIMAN	M36	Activity Report.
MS86	RF design of fully interleaved structure and CLIC SW study.	UNIMAN	M45	Activity Report. Concluding final report
MS76	High power RF components fabricated and tested at low level	CEA	M24	Prototype completed and validated
MS74	Design concept RF front end	PSI	M12	Activity Report
MS77	Phase stabilisation experiment design	ULANC	M24	Activity Report
MS79	Crab cavity electromagnetic design	ULANC	M30	Activity Report
MS82	Completed coupled cavity simulations of 8-cavity module	UNIMAN	M36	Activity Report
MS80	Demonstrated operation of improved deposition system, Pb layers of 1 µm in thickness.	NCBJ	M30	Report on sample characterisation
MS73	Commissioning of the SAPI for operation with metal photocathodes	STFC	M8	Publication report
MS75	Investigation of quantum yield and energy spectrum of the electrons, emitted from the metal photocathode surface in SAPI	STFC	M18	Intermediate scientific report
MS83	Manufacturing and commissioning of the photocathode transport system	STFC	M36	Technical design report
MS85	Investigation of the brightness of different metal photocathodes in a S-band NCRF gun	STFC	M42	Scientific report

Task 12.2

Task 12.3

Task 12.4

Task 12.5

Deliverable	Title	Beneficiary	Date	Comments
D12.1	Deposition test facilities implemented and verified at CERN and INPG.	CERN	M18	Report
D12.5	First resonator deposited and qualified at CERN.	CERN	M36	Report
D12.10	Cavity deposited and qualified at CEA.	CEA	M48	Report
D12.2	Initial progress report of task 12.3.	CERN	M18	Report
D12.6	Intermediate progress report of task 12.3.	CERN	M36	Report
D12.11	Final report of task 12.3.	CERN	M48	Report
D12.3	Design of electronics for XFEL HOM diagnostics.	DESY	M18	Report
D12.7	Completed characterisation of HOMs in the 8-cavity XFEL 3HC module.	UNIMAN	M36	Report
D12.12	Report on characterisation of HOMs in XFEL coupled 3HC cryomodule.	UNIMAN	M48	Report
D12.4	Scientific report on photocathode R&D.	STFC	M18	Report
D12.8	Optimised procedure for microdroplets flattening with an UV laser.	NCBJ	M36	Report
D12.9	Pb/Nb plug photocathodes measurements and characterization.	HZDR	M42	Report
D12.13	Results of DAC implementation in SRF guns.	HZB	M48	Report

Task 12.2

Task 12.3

Task 12.4

Task 12.5



EUCARD-2 Reporting

- EU Reports Required: Fewer than EUCARD!

No	Type	From Month	To Month	End of reporting period	Notes
1	Internal Activity Report	1	12	30.04.2014	
	Period 1 Activity Report	1	18	30.10.2014	updated IAR
2	Mid Term Activity Report	19	24	30.04.2015	
3	Period 2 Activity Report	19	36	30.04.2016	
4	Period 3 Activity Report	37	48	30.04.2017	

- **Structure:** 1 report/year
 - plus updating of the 12-month report to become the Period 1 Report).
- **Deadlines** (for each report):
 - **Input from Task Leaders to WP Coordinators** **Y+10** **10 May**
 - Input from WP Coordinators to Project Coord. **Y+20** **20 May**
 - Draft submitted to Steering Committee **Y+30** **30 May**
 - Draft approved by GB at Annual Meeting **~10 June**
 - Report submitted to EC (when required) **Y+60** **30 June**
- **Size:**
 - Inputs from Task Leaders: maximum 2 pages, including 1 or 2 pictures, graphs, tables.
 - Inputs from WP coordinators: input from Tasks (between 8 and 12 pages) plus an executive summary.

- Propose to host WP12 Annual Review meetings @ ~Y-30 (April 1st 2014, 15, 16 and 17) to fulfil co-ordination and reporting requirements.
 - Dates/locations to be confirmed in consultation with Task coordinators.

- Let's get started!





Thank you for all your on-going support in delivering a High Impact Innovative RF Programme.