



APD
Accelerator Physics and
synchrotron Design



CERN, 1-2 March 2007

ECL2



remarks & workshop organization

- HHH LUMI'06 workshop → e-cloud may be problem for **new LHC injectors** (PS2, SPS w PS2)
- Fritz proposed solution: “**e-cloud killler**” based on enamel coating; contacts in Germany
- **EUROTeV** WP3 ECLOUD task committed to developing solutions against e-cloud for **ILC and CLIC**; new code & new cure: slots
- **CARE-HHH, CARE-ELAN** supportive
- wide resonance from **outside community**

ECL2 Organizing Committee:

Fritz Caspers (CERN),

Oleg Malyshev (ASTeC),

Mauro Pivi (SLAC),

Walter Scandale (CERN),

Daniel Schulte (CERN),

Rainer Wanzenberg (DESY),

Frank Zimmermann (CERN)

ECL2 Workshop Secretary:

Muriel Macchi (CERN)

workshop structure

28.02.	tour of NEG facility
01.03.	overview & simulations
morning	technological solutions I
01.03.	technological solutions II
afternoon	simulation codes + analysis
02.03.	beam measurements I
morning	beam measurements II
02.03.	impedance issues
afternoon	studies, designs, & plans

short coffee (25 min.) and lunch breaks (~1 h);
welcome drink, self-financed dinner

Wednesday 28 February 2007

Time	Event	Organizer
17:30	NEG Coating Laboratory Visit	Paolo Chiggiato, & Pedro Costa Pinto
19:00	Welcome Drink	Muriel Macchi, HHH

Thursday 1 March 2007, 09:00-10:50

Session 1: Overview & Simulations, Chair: Daniel Schulte

Time	Talk	Speaker
09:00	Welcome, Motivation & Objectives	Steve Myers
09:10	Remarks & Organization	Fritz Caspers, Frank Zimmermann
09:20	Update on e-cloud simulations for LHC injectors & grooves	Marco Venturini
09:50	e-cloud instability in SPS & SPS+	Giovanni Rumolo
10:20	e-cloud suppression for the ILC damping ring and tests in PEP-II	Mauro Pivi

Thursday 1 March 2007, 11:15-12:45

Session 2: Technological Solutions I, Chair: Fritz Caspers

Time	Talk	Speaker
11:15	Experience with Clearing Electrodes at AA and EPA	Alain Poncet
11:45	Vitreous enamel - an efficient material component	Joerg Wendel, Peter Hellmold
12:15	Vitreous enamel - foundations, production, applications and CERN tests	Franz-Josef Behler

Thursday 1 March 2007, 14:15-15:45

Session 3: Technological Solutions II, Chair: Mauro Pivi

Time	Talk	Speaker
14:15	NEG Coating	Paolo Chiggiato
14:45	SEY and Clearing Studies at KEKB	Yosuke Suetsugu
15:15	How the e- Cloud may affect the ILC Vacuum Design	Oleg Malyshev

Thursday 1 March 2007, 16:10-19:00

Session 4: Simulation code development, results, and analytical treatments, Chair: Marco Venturini

Time	Talk	Speaker
16:10	Simulations of grooves, slots & build up with Faktor2	Warner Bruns
16:40	Coupled e-ion maps & extracting the molecular desorption yield	Ubaldo Iriso
17:10	Maps for Electron Cloud in LHC Dipoles	Theo Demma
17:30	Simulation progress and plans at Rostock/DESY	Gisela Poeplau, Aleksandar Markovik
18:00	Discussion	Convener: Elena Shaposhnikova

Friday 2 March 2007, 09:00-10:30

Session 5: Beam measurements I, Chair: Wolfram Fischer

Time	Talk	Speaker
09:00	Clearing voltages & Solenoids at SPS damper pick up	Wolfgang Hofle
09:30	Experimental results with NEG coating in the	Adriana Rossi
10:00	Sparking of SPS el.-stat. septa in presence of e- cloud	Karel Cornelis

Friday 2 March 2007, 10:55-12:25

Session 6: Beam measurements II, Chair: Gianluigi Arduini

Time	Talk	Speaker
10:55	Clearing electrodes in DAFNE	Mikhail Zobov
11:25	e-cloud observations & cures at RHIC	Wolfram Fischer
11:55	Heat load in ANKA s.c. undulator	Sara Casalbuoni

Friday 2 March 2007, 13:25-15:25

Session 7: Impedance Issues, Chair: Erk Jensen

Time	Talk	Speaker
13:25	Impedance of clearing electrodes with GdfidL	Warner Bruns
13:55	Impedance of clearing electrodes with HFSS	Tom Kroyer
14:25	Attempt to Measure the Influence of NEG Coating on Impedance	Thomas Perron
14:55	Resistive Wall Wakes and Clearing Electrodes	Rainer Wanzenberg

Friday 2 March 2007, 15:25-19:00

Session 8: Studies, designs and plans, Chair: Frank Zimmermann

Time	Talk	Speaker
15:25	Electron Cloud Studies at CESR-c and CesrTA	Mark Palmer
15:55	Resonator e-cloud measurements	Ubaldo Iriso
16:25	Coffee break	
16:50	Discussion	
18:00	Possibly Short Summaries by Session Chairs	

28 talks in total!

***all talks are 20 min. long, followed
by 10 min. for discussions;***

***except 5 talks which are only
10 min. long***

please stay within your time

session chairmen

please

- try to keep talks within the time scheduled!
- prepare a brief summary with observations, open questions, key points, proposals, etc. for the last session

key questions

(1) what is best hardware solution against e-cloud?

- for new PS2, ILC DR, CLIC DR?
- for old SPS ring, for LHC?

options: NEG, enamel, grooves, slots, conventional electrodes, air-baked Cu,...

(2) which experiments could test the dependence of e-cloud on beam energy for the same ring? Can this be tested in other (than SPS) rings?

(3) should we worry about the scaling of e-cloud instability with energy (in the SPS) if we don't observe problems during the ramp for LHC beam?

proceedings

we plan to publish **paper proceedings**;
no page limit (even 1 page may suffice);
EPAC/PAC/APAC JACOW format;
please submit your contribution by **April 15**

programme and talks are
posted in INDICO

<http://indico.cern.ch>

then search under workshops for “ECL2”,
or directly at

<http://indico.cern.ch/conferenceDisplay.py?confId=11937>

*all speakers: please upload your presentations
to the INDICO server!*

**ECL2 is dedicated to the memory of
Francesco Ruggiero (1957-2007)**

