

**CARE-HHH-APD  
LHC-LUMI-06 workshop**



**Report of Contributions**

Contribution ID: 0

Type: **not specified**

## Introductory remarks

*Monday 16 October 2006 09:30 (5 minutes)*

**Author:** FUSTER VERDU, Juan (IFIC)

**Presenter:** FUSTER VERDU, Juan (IFIC)

**Session Classification:** IR upgrade I (morning)

Contribution ID: 1

Type: **not specified**

## Status of LHC upgrade

*Monday 16 October 2006 09:35 (20 minutes)*

**Authors:** ZIMMERMANN, Frank (CERN); SCANDALE, Walter (CERN)

**Presenters:** ZIMMERMANN, Frank (CERN); SCANDALE, Walter (CERN)

**Session Classification:** IR upgrade I (morning)

Contribution ID: 2

Type: **not specified**

## **CMS perspective of upgrade**

*Monday 16 October 2006 09:55 (20 minutes)*

**Author:** NASH, Jordan (CERN)

**Presenter:** NASH, Jordan (CERN)

**Session Classification:** IR upgrade I (morning)

Contribution ID: 3

Type: **not specified**

## **ATLAS perspective of upgrade**

*Monday 16 October 2006 10:15 (20 minutes)*

**Author:** GRAFSTROM, Per (CERN)

**Presenter:** GRAFSTROM, Per (CERN)

**Session Classification:** IR upgrade I (morning)

Contribution ID: 4

Type: **not specified**

## **Consideration on LHC upgrade from US perspective**

*Monday 16 October 2006 10:35 (20 minutes)*

**Author:** STRAIT, Jim (Fermi National Accelerator Laboratory (FNAL))

**Presenter:** STRAIT, Jim (Fermi National Accelerator Laboratory (FNAL))

**Session Classification:** IR upgrade I (morning)

Contribution ID: 5

Type: **not specified**

## Discussion

*Monday 16 October 2006 10:55 (15 minutes)*

**Session Classification:** IR upgrade I (morning)

Contribution ID: 7

Type: **not specified**

## **Nb3Sn large aperture large gradient**

*Monday 16 October 2006 12:00 (20 minutes)*

**Author:** SEN, Tanaji (FNAL)

**Presenter:** SEN, Tanaji (FNAL)

**Session Classification:** IR upgrade I (morning)



Contribution ID: 9

Type: **not specified**

## NbTi pushed

*Monday 16 October 2006 12:20 (20 minutes)*

**Author:** TAYLOR, Thomas (CERN)

**Presenter:** TAYLOR, Thomas (CERN)

**Session Classification:** IR upgrade I (morning)

Contribution ID: **10**

Type: **not specified**

## **Development of Nb<sub>3</sub>Sn model quadrupoles in the US**

*Monday 16 October 2006 11:40 (20 minutes)*

**Author:** SABBI, Gianluca (Fermilab)

**Presenter:** SABBI, Gianluca (Fermilab)

**Session Classification:** IR upgrade I (morning)

Contribution ID: **11**

Type: **not specified**

## **Insertion solutions from parametric study**

*Tuesday 17 October 2006 09:30 (20 minutes)*

**Author:** KOUTCHOUK, jean-pierre (AT-MCS)

**Presenter:** KOUTCHOUK, jean-pierre (AT-MCS)

**Session Classification:** IR upgrade II (morning)

Contribution ID: 12

Type: **not specified**

## **D0 and its integrability**

*Tuesday 17 October 2006 09:50 (20 minutes)*

**Author:** STERBINI, Guido (CERN)

**Presenter:** STERBINI, Guido (CERN)

**Session Classification:** IR upgrade II (morning)

Contribution ID: 13

Type: **not specified**

## **Q0 with $I^*=13$ m**

*Tuesday 17 October 2006 10:10 (20 minutes)*

**Author:** LAFACE, Emanuele (CERN)

**Presenter:** LAFACE, Emanuele (CERN)

**Session Classification:** IR upgrade II (morning)

Contribution ID: 14

Type: **not specified**

## Integrability of Q0 in experiments

*Tuesday 17 October 2006 10:30 (20 minutes)*

**Author:** LIMON, Peter J. (Fermi National Accelerator Laboratory (FNAL))

**Presenter:** LIMON, Peter J. (Fermi National Accelerator Laboratory (FNAL))

**Session Classification:** IR upgrade II (morning)

Contribution ID: 15

Type: **not specified**

## Discussion

*Tuesday 17 October 2006 10:50 (30 minutes)*

**Session Classification:** IR upgrade II (morning)

Contribution ID: **16**

Type: **not specified**

## **IR upgrade web site**

*Tuesday 17 October 2006 11:50 (20 minutes)*

**Author:** TOMAS, Rogelio (CERN)

**Presenter:** TOMAS, Rogelio (CERN)

**Session Classification:** IR upgrade II (morning)



Contribution ID: 17

Type: **not specified**

## Parametric tool for insertion ranking

*Tuesday 17 October 2006 12:10 (20 minutes)*

**Author:** TODESCO, Ezio (CERN)

**Presenter:** TODESCO, Ezio (CERN)

**Session Classification:** IR upgrade II (morning)

Contribution ID: **18**

Type: **not specified**

## Wire compensation

*Tuesday 17 October 2006 12:30 (20 minutes)*

**Author:** DORDA, Ulrich (Technische Universitaet Wien (TU))

**Presenter:** DORDA, Ulrich (Technische Universitaet Wien (TU))

**Session Classification:** IR upgrade II (morning)

Contribution ID: **19**

Type: **not specified**

## **Long-range beam-beam compensation test at RHIC**

*Tuesday 17 October 2006 12:50 (20 minutes)*

**Author:** FISCHER, Wolfram (BNL)

**Presenter:** FISCHER, Wolfram (BNL)

**Session Classification:** IR upgrade II (morning)

Contribution ID: 20

Type: **not specified**

## Discussion

*Tuesday 17 October 2006 13:10 (30 minutes)*

**Session Classification:** IR upgrade II (morning)

Contribution ID: 21

Type: **not specified**

## Crab-cavity optics

*Tuesday 17 October 2006 15:10 (20 minutes)*

**Author:** TOMAS, Rogelio (CERN)

**Presenter:** TOMAS, Rogelio (CERN)

**Session Classification:** IR upgrade II (afternoon)

Contribution ID: 22

Type: **not specified**

## Crab cavities

*Tuesday 17 October 2006 15:30 (20 minutes)*

**Author:** CALAGA, Rama Buchi Rao

**Presenter:** CALAGA, Rama Buchi Rao

**Session Classification:** IR upgrade II (afternoon)

Contribution ID: 23

Type: **not specified**

## **Technological aspects of crab cavities**

*Tuesday 17 October 2006 15:50 (20 minutes)*

**Author:** TUCKMANTEL, Joachim (CERN)

**Presenter:** TUCKMANTEL, Joachim (CERN)

**Session Classification:** IR upgrade II (afternoon)

Contribution ID: 24

Type: **not specified**

## **Beam-beam effect with an external noise in LHC**

*Tuesday 17 October 2006 16:10 (20 minutes)*

**Author:** OHMI, Kazuhito (KEK)

**Presenter:** OHMI, Kazuhito (KEK)

**Session Classification:** IR upgrade II (afternoon)



Contribution ID: 25

Type: **not specified**

## Discussion

*Tuesday 17 October 2006 16:30 (30 minutes)*

**Session Classification:** IR upgrade II (afternoon)

Contribution ID: 26

Type: **not specified**

## **Head-on compensation with e-lenses (time, risk, performance)**

*Tuesday 17 October 2006 17:30 (20 minutes)*

**Author:** SHILTSEV, Vladimir (Fermilab)

**Presenter:** SHILTSEV, Vladimir (Fermilab)

**Session Classification:** IR upgrade II (afternoon)

Contribution ID: 27

Type: **not specified**

## Cryogenic Limits

*Wednesday 18 October 2006 09:30 (20 minutes)*

**Author:** TAVIAN, Laurent (CERN)

**Presenter:** TAVIAN, Laurent (CERN)

**Session Classification:** IR ranking

Contribution ID: 28

Type: **not specified**

## Discussion

*Tuesday 17 October 2006 17:50 (30 minutes)*

**Session Classification:** IR upgrade II (afternoon)

Contribution ID: 29

Type: **not specified**

## Technological issues for ranking

*Wednesday 18 October 2006 09:50 (20 minutes)*

**Authors:** ZIMMERMANN, Frank (AB/ABP); SCANDALE, Walter (CERN)

**Presenters:** ZIMMERMANN, Frank (AB/ABP); SCANDALE, Walter (CERN)

**Session Classification:** IR ranking

Contribution ID: **30**

Type: **not specified**

## Discussion

Contribution ID: 31

Type: **not specified**

## Conclusions for IR ranking (1)

*Wednesday 18 October 2006 10:40 (30 minutes)*

**Author:** SHILTSEV, Vladimir (Fermilab)

**Presenter:** SHILTSEV, Vladimir (Fermilab)

**Session Classification:** IR ranking

Contribution ID: 32

Type: **not specified**

## Physics potential of PS2 and PS+

*Wednesday 18 October 2006 11:40 (20 minutes)*

**Author:** BLONDEL, Alain (Departement de Physique Nucleaire et Corpusculaire (DPNC))

**Presenter:** BLONDEL, Alain (Departement de Physique Nucleaire et Corpusculaire (DPNC))

**Session Classification:** IR ranking



Contribution ID: **33**

Type: **not specified**

## Injector goals

*Thursday 19 October 2006 09:00 (15 minutes)*

**Author:** SCANDALE, Walter (CERN)

**Presenter:** SCANDALE, Walter (CERN)

**Session Classification:** Injector upgrade (morning)

Contribution ID: 34

Type: **not specified**

## **Scenarios for the upgrade of the LHC injectors' complex**

*Thursday 19 October 2006 09:15 (30 minutes)*

**Author:** GAROBY, Roland (CERN)

**Presenter:** GAROBY, Roland (CERN)

**Session Classification:** Injector upgrade (morning)

Contribution ID: 35

Type: **not specified**

## **Physics potential pf PS2 & PS+ in regard to beta beams**

*Thursday 19 October 2006 09:45 (20 minutes)*

**Author:** BERNABEU, Jose (IFIC)

**Presenter:** BERNABEU, Jose (IFIC)

**Session Classification:** Injector upgrade (morning)

Contribution ID: 36

Type: **not specified**

## **Presentation of the FAIR synchrotrons SIS 100/300**

*Thursday 19 October 2006 10:05 (30 minutes)*

**Author:** SPILLER, Peter (GSI)

**Presenter:** SPILLER, Peter (GSI)

**Session Classification:** Injector upgrade (morning)

Contribution ID: 37

Type: **not specified**

## Discussion

*Thursday 19 October 2006 10:35 (15 minutes)*

**Session Classification:** Injector upgrade (morning)

Contribution ID: **38**

Type: **not specified**

## **Beam transfer aspects**

*Thursday 19 October 2006 11:50 (20 minutes)*

**Author:** GODDARD, Brennan (CERN)

**Presenter:** GODDARD, Brennan (CERN)

**Session Classification:** Injector upgrade (morning)

Contribution ID: 39

Type: **not specified**

## **RF constraints on gamma at transition in PS2**

*Thursday 19 October 2006 12:10 (20 minutes)*

**Author:** HANCOCK, Steven (CERN)

**Presenter:** HANCOCK, Steven (CERN)

**Session Classification:** Injector upgrade (morning)

Contribution ID: 40

Type: **not specified**

## **PS2: basic considerations & optics**

*Thursday 19 October 2006 11:20 (30 minutes)*

**Authors:** JOWETT, John (CERN); BENEDIKT, Michael (CERN)

**Presenter:** BENEDIKT, Michael (CERN)

**Session Classification:** Injector upgrade (morning)



Contribution ID: 41

Type: **not specified**

## Discussion

*Thursday 19 October 2006 12:50 (30 minutes)*

**Session Classification:** Injector upgrade (morning)

Contribution ID: 42

Type: **not specified**

## SPS Performance with PS2

*Thursday 19 October 2006 14:50 (20 minutes)*

**Author:** RUMOLO, Giovanni (CERN)

**Presenter:** RUMOLO, Giovanni (CERN)

**Session Classification:** Injector upgrade (afternoon)

Contribution ID: 43

Type: **not specified**

## Magnets for SPS+

*Thursday 19 October 2006 15:10 (40 minutes)*

**Author:** KIRBY, Glyn (CERN)

**Presenter:** KIRBY, Glyn (CERN)

**Session Classification:** Injector upgrade (afternoon)

Contribution ID: 44

Type: **not specified**

## **Pipetron approach for the LHC complex**

*Thursday 19 October 2006 15:50 (20 minutes)*

**Author:** SHILTSEV, Vladimir (Fermilab)

**Presenter:** SHILTSEV, Vladimir (Fermilab)

**Session Classification:** Injector upgrade (afternoon)

Contribution ID: 45

Type: **not specified**

## Discussion

*Thursday 19 October 2006 16:40 (1 hour)*

**Author:** SCANDALE, Walter (CERN)

**Presenters:** ZIMMERMANN, Frank (AB/ABP); SCANDALE, Walter (CERN)

**Session Classification:** Injector upgrade (afternoon)

Contribution ID: 46

Type: **not specified**

## Synthesis of the discussion

*Thursday 19 October 2006 17:40 (15 minutes)*

**Author:** ZIMMERMANN, Frank (AB/ABP)

**Presenter:** ZIMMERMANN, Frank (AB/ABP)

**Session Classification:** Injector upgrade (afternoon)

Contribution ID: 47

Type: **not specified**

## **Intensity limitations in the injectors & LHC**

*Friday 20 October 2006 09:00 (30 minutes)*

**Author:** ARDUINI, Gianluigi (CERN)

**Presenter:** ARDUINI, Gianluigi (CERN)

**Session Classification:** Intensity limitations (morning)

Contribution ID: 48

Type: **not specified**

## **Machine protection for PS2, SPS (LHC+)**

*Friday 20 October 2006 09:30 (20 minutes)*

**Author:** SCHMIDT, Rudiger (CERN)

**Presenter:** SCHMIDT, Rudiger (CERN)

**Session Classification:** Intensity limitations (morning)



Contribution ID: 49

Type: **not specified**

## Collimation for PS2, SPS, LHC

*Friday 20 October 2006 09:50 (20 minutes)*

**Author:** ASSMANN, Ralph (CERN)

**Presenter:** ASSMANN, Ralph (CERN)

**Session Classification:** Intensity limitations (morning)

Contribution ID: 50

Type: **not specified**

## **RF scenarios & longit. dynamics in SPS & LHC for 12.5 and 75 ns spacing**

*Friday 20 October 2006 10:10 (20 minutes)*

**Author:** SHAPOSHNIKOVA, Elena (AB/RF CERN)

**Presenter:** SHAPOSHNIKOVA, Elena (AB/RF CERN)

**Session Classification:** Intensity limitations (morning)

Contribution ID: 51

Type: **not specified**

## **Transverse feedback for LHC in coast (and for PS2/PS+ & SPS?)**

*Friday 20 October 2006 11:00 (30 minutes)*

**Author:** HOFLE, Wolfgang (CERN)

**Presenter:** HOFLE, Wolfgang (CERN)

**Session Classification:** Intensity limitations (morning)

Contribution ID: 52

Type: **not specified**

## **Experience with Tevatron feedback in coast**

*Friday 20 October 2006 11:30 (20 minutes)*

**Author:** SHILTSEV, Vladimir (Fermilab)

**Presenter:** SHILTSEV, Vladimir (Fermilab)

**Session Classification:** Intensity limitations (morning)

Contribution ID: 53

Type: **not specified**

## **e-cloud in PS2, PS+, SPS+**

*Friday 20 October 2006 11:50 (30 minutes)*

**Author:** FURMAN, Miguel (LBNL)

**Presenter:** FURMAN, Miguel (LBNL)

**Session Classification:** Intensity limitations (morning)

Contribution ID: 54

Type: **not specified**

## Discussion

*Friday 20 October 2006 12:20 (30 minutes)*

**Session Classification:** Intensity limitations (morning)

Contribution ID: 55

Type: **not specified**

## Discussion

*Friday 20 October 2006 14:20 (20 minutes)*

**Session Classification:** Intensity limitations (afternoon)

Contribution ID: 56

Type: **not specified**

## **Emerging recommendations for the LHC injection & Tentative conclusions of LUMI'06**

*Friday 20 October 2006 14:40 (20 minutes)*

**Authors:** ZIMMERMANN, Frank (AB/ABP); SCANDALE, Walter (CERN)

**Presenters:** ZIMMERMANN, Frank (AB/ABP); SCANDALE, Walter (CERN)

**Session Classification:** Intensity limitations (afternoon)



Contribution ID: 57

Type: **not specified**

## Space charge and electron cloud issues

*Friday 20 October 2006 15:30 (30 minutes)*

**Author:** FRANCHETTI, Giuliano (GSI)

**Presenter:** FRANCHETTI, Giuliano (GSI)

**Session Classification:** Intensity limitations (afternoon)

Contribution ID: 58

Type: **not specified**

## Discussion

*Friday 20 October 2006 16:00 (1 hour)*

**Session Classification:** Intensity limitations (afternoon)

Contribution ID: 59

Type: **not specified**

## **Spare (for GSI discussions)**

*Friday 20 October 2006 17:00 (1 hour)*

**Session Classification:** Intensity limitations (afternoon)

Contribution ID: **60**

Type: **not specified**

## Closure

*Friday 20 October 2006 18:00 (20 minutes)*

**Session Classification:** Intensity limitations (afternoon)

Contribution ID: **62**

Type: **not specified**

## **Low-gradient triplet magnets**

*Monday 16 October 2006 14:10 (20 minutes)*

**Authors:** BRUNING, Oliver (CERN); DE MARIA, Riccardo (CERN)

**Presenters:** BRUNING, Oliver (CERN); DE MARIA, Riccardo (CERN)

**Session Classification:** IR upgrade I (afternoon)

Contribution ID: **63**

Type: **not specified**

## Discussion

*Monday 16 October 2006 15:10 (20 minutes)*

**Session Classification:** IR upgrade I (afternoon)

Contribution ID: 64

Type: **not specified**

## Limits on chromaticity correction

*Monday 16 October 2006 16:00 (20 minutes)*

**Authors:** FAUS-GOLFE, Angeles (Instituto de Fisica Corpuscular (IFIC) UV-CSIC); DE MARIA, Riccardo (CERN); TOMAS, Rogelio (CERN)

**Presenters:** FAUS-GOLFE, Angeles (Instituto de Fisica Corpuscular (IFIC) UV-CSIC); DE MARIA, Riccardo (CERN); TOMAS, Rogelio (CERN)

**Session Classification:** IR upgrade I (afternoon)

Contribution ID: 65

Type: **not specified**

## Open midplane dipoles & crab cavity quadrupoles

*Monday 16 October 2006 16:20 (20 minutes)*

**Author:** GUPTA, Ramesh (BNL)

**Presenter:** GUPTA, Ramesh (BNL)

**Session Classification:** IR upgrade I (afternoon)



Contribution ID: **66**

Type: **not specified**

**(no title)**

Handling collision debris in quad. & dipole first option

**Author:** MOKHOV, Nikolai (FERMILAB)

**Presenter:** MOKHOV, Nikolai (FERMILAB)

Contribution ID: 67

Type: **not specified**

## **Energy deposition in the triplet as a function of distance to IP**

*Monday 16 October 2006 17:00 (20 minutes)*

**Author:** BROGGI, Francesco (INFN - LASA Lab.)

**Presenter:** BROGGI, Francesco (INFN - LASA Lab.)

**Session Classification:** IR upgrade I (afternoon)

Contribution ID: **68**

Type: **not specified**

## **Discussion**

*Monday 16 October 2006 17:20 (30 minutes)*

**Session Classification:** IR upgrade I (afternoon)

Contribution ID: 69

Type: **not specified**

## Handling collision debris in quad. & dipole first options

*Monday 16 October 2006 16:40 (20 minutes)*

**Author:** MOKHOV, Nikolai (FERMILAB)

**Presenter:** MOKHOV, Nikolai (FERMILAB)

**Session Classification:** IR upgrade I (afternoon)

Contribution ID: 70

Type: **not specified**

## Dipole first with chromaticity issues

*Monday 16 October 2006 14:30 (20 minutes)*

**Author:** DE MARIA, Riccardo (CERN)

**Presenter:** DE MARIA, Riccardo (CERN)

**Session Classification:** IR upgrade I (afternoon)

Contribution ID: 71

Type: **not specified**

## US dipole first optics

*Monday 16 October 2006 14:50 (20 minutes)*

**Author:** SEN, Tanaji (FNAL)

**Presenter:** SEN, Tanaji (FNAL)

**Session Classification:** IR upgrade I (afternoon)

Contribution ID: 72

Type: **not specified**

## Conclusions for IR ranking (2)

*Wednesday 18 October 2006 11:10 (30 minutes)*

**Author:** BRUNING, Oliver (CERN)

**Presenter:** BRUNING, Oliver (CERN)

**Session Classification:** IR ranking

Contribution ID: 73

Type: **not specified**

## PS2 Optics Considerations

*Thursday 19 October 2006 12:30 (20 minutes)*

**Author:** JOWETT, John (CERN)

**Presenter:** BENEDIKT, Michael (CERN)

**Session Classification:** Injector upgrade (morning)



Contribution ID: 74

Type: **not specified**

## Fast Ramping Magnets Design Issues

*Friday 20 October 2006 18:20 (1 minute)*

**Author:** KIRBY, Glyn (CERN)

**Presenter:** KIRBY, Glyn (CERN)

Contribution ID: 75

Type: **not specified**

## Decreasing the LHC Impedance with a Nonlinear Collimation System

*Friday 20 October 2006 18:25 (5 minutes)*

**Author:** RESTA LOPEZ, Javier (Institut fur Physik)

**Co-authors:** FAUS-GOLFE, Angeles (Instituto de Fisica Corpuscular (IFIC) UV-CSIC); SCHULTE, Daniel (CERN); ZIMMERMANN, Frank (AB/ABP)

**Presenter:** RESTA LOPEZ, Javier (Institut fur Physik)

Contribution ID: 76

Type: **not specified**

## **Compact Superconducting Magnets for the International Linear Collider**

*Friday 20 October 2006 18:30 (5 minutes)*

**Author:** WANDERER, Peter (BNL)

**Presenter:** WANDERER, Peter (BNL)

Contribution ID: 77

Type: **not specified**

## **Collective Instabilities and Collisional Effects for a 2D Model of a Beam in a Storage Ring**

*Friday 20 October 2006 18:35 (5 minutes)*

**Author:** TURCHETTI, Giorgio (U. Bologna)

**Co-author:** BENEDETTI, C. (U. Bologna)

**Presenter:** TURCHETTI, Giorgio (U. Bologna)