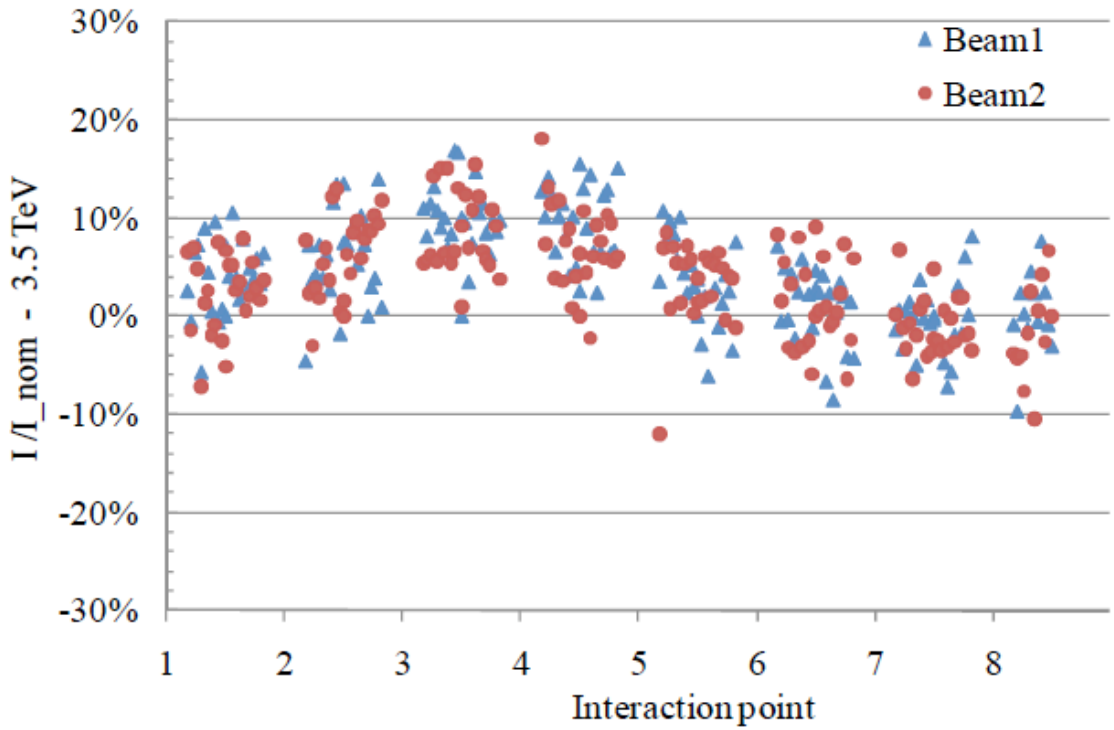
IPAC'10 Highlights

A.Valishev

Tevatron Dept. Meeting, 6/11/2010

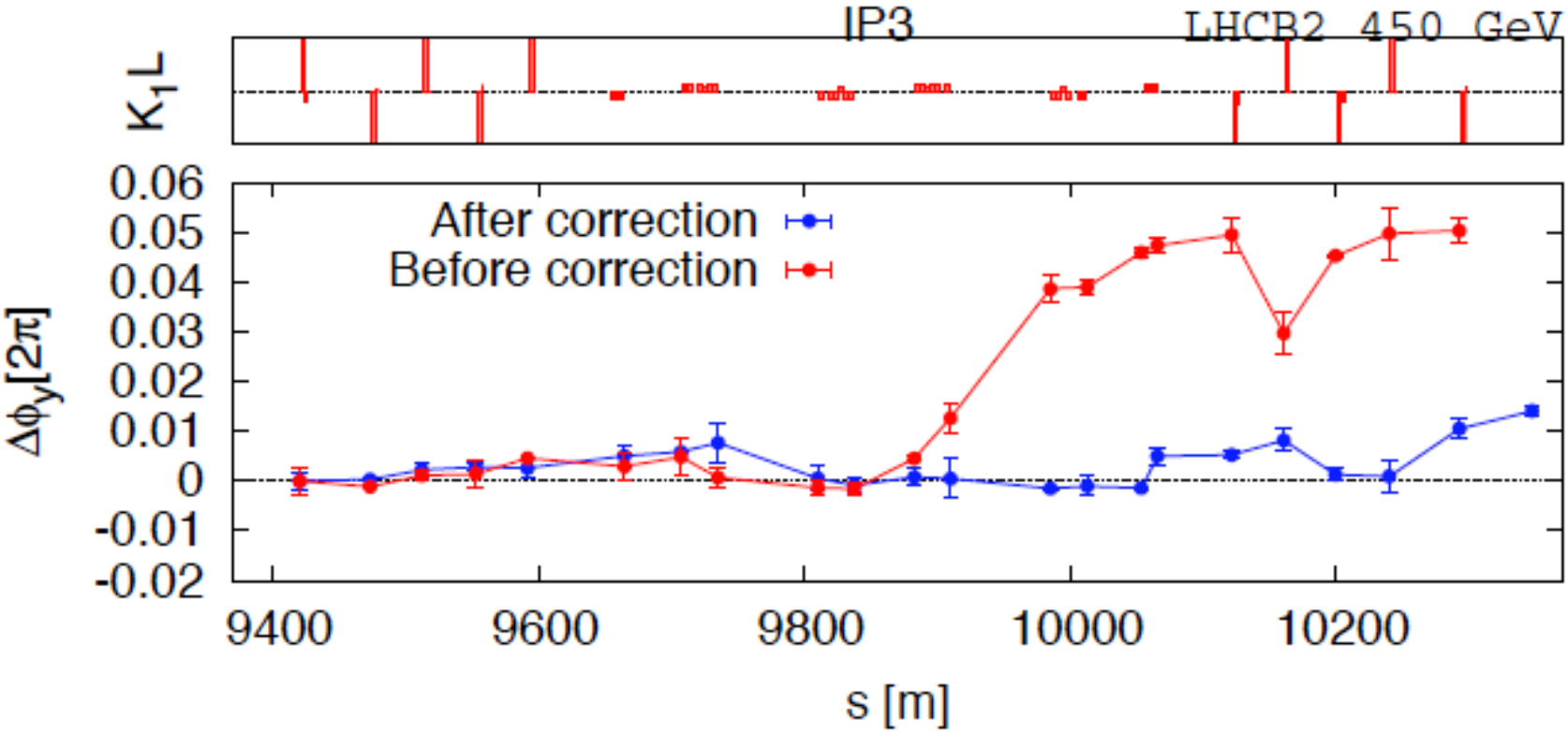
LHC

- S.Myers, LHC Commissioning and First Operation
  - Review of 9/19/08 accident
  - Repair
  - Operations review
- E.Todesco, THE MAGNETIC MODEL OF THE LHC IN THE EARLY PHASE OF BEAM COMMISSIONING



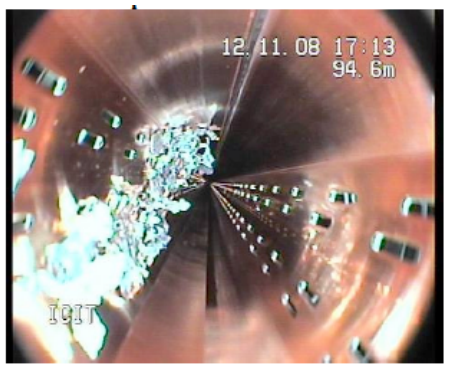
LHC

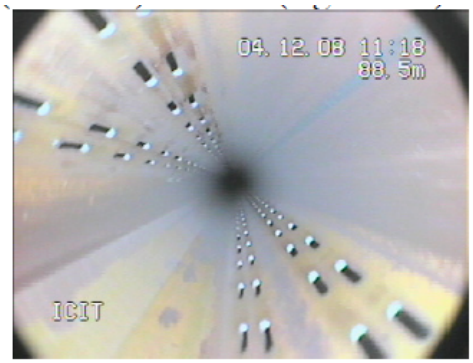
- R. Tomas, LHC OPTICS MODEL, MEASUREMENTS AND CORRECTIONS

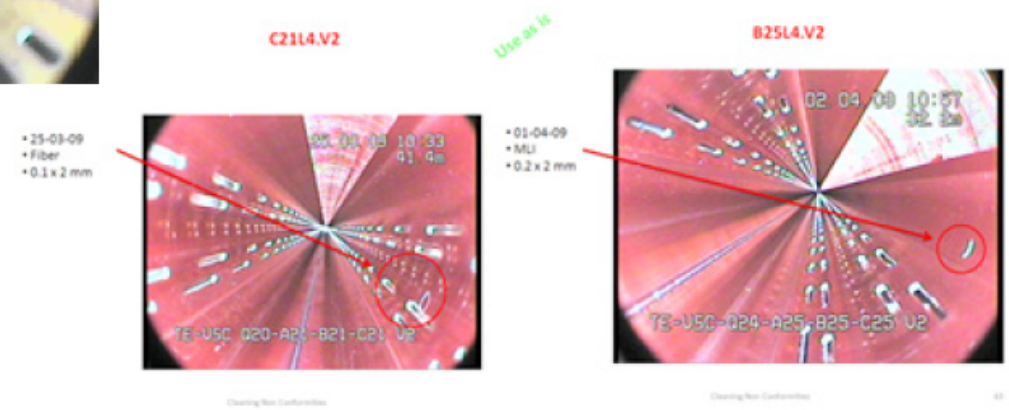


LHC

- R. Bartoldus, CHARACTERIZATION OF INTERACTION-POINT BEAM PARAMETERS USING THE pp EVENT-VERTEX DISTRIBUTION RECONSTRUCTED IN THE ATLAS DETECTOR AT THE LHC
- V.Baglin, RECOVERING ABOUT 5KM OF LHC BEAM VACUUM SYSTEM AFTER SECTOR 3-4 INCIDENT
- F.Zimmermann, INTERACTION OF MACRO-PARTICLES WITH LHC PROTON BEAM

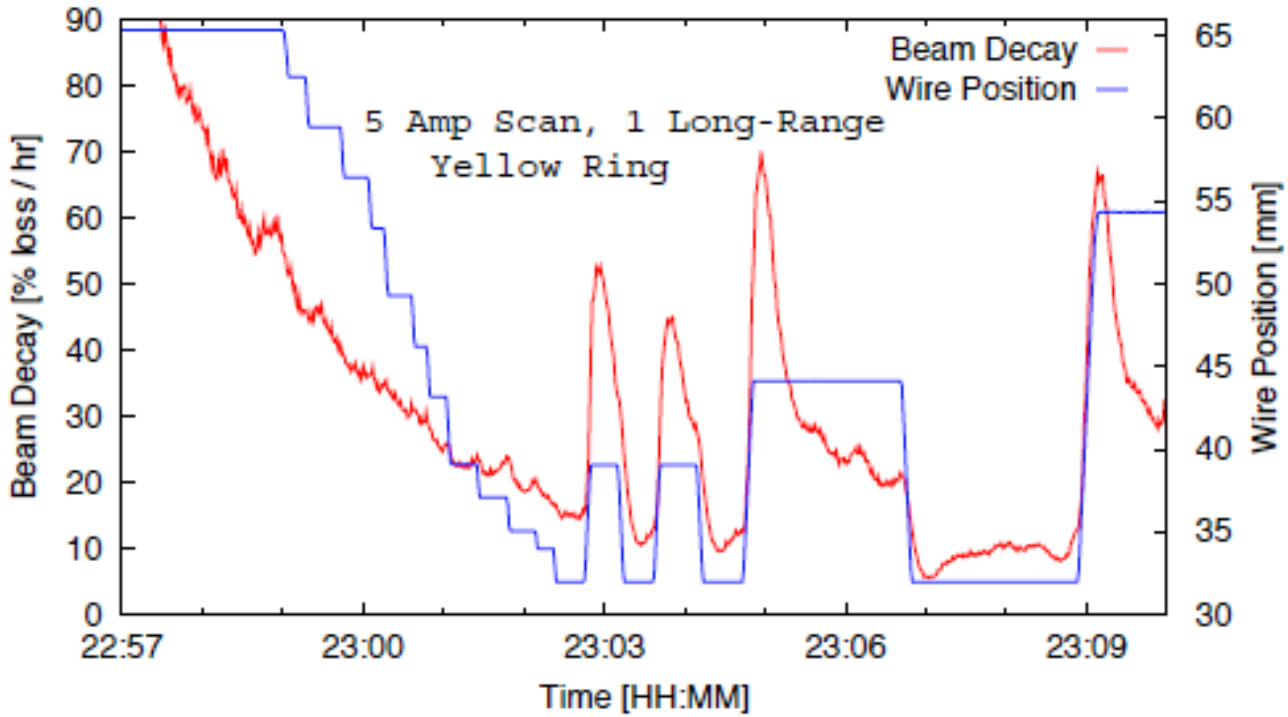






RHIC BBLR

- R.Calaga, RHIC BBLR MEASUREMENTS IN 2009



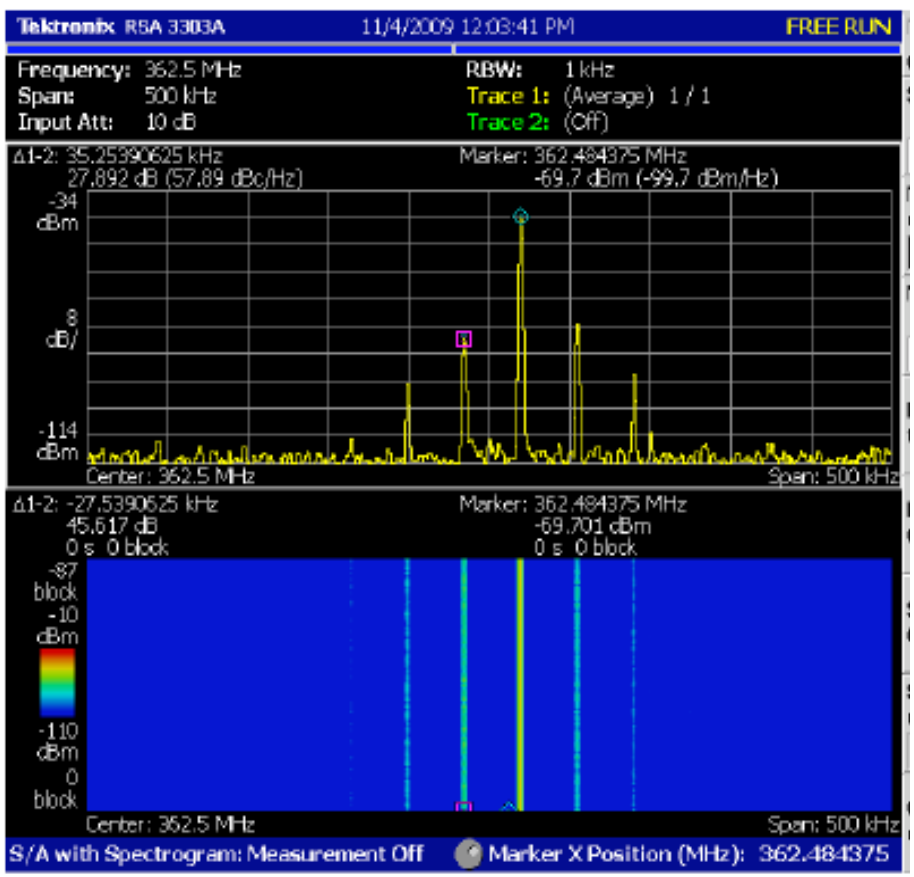
DAFNE and SuperB

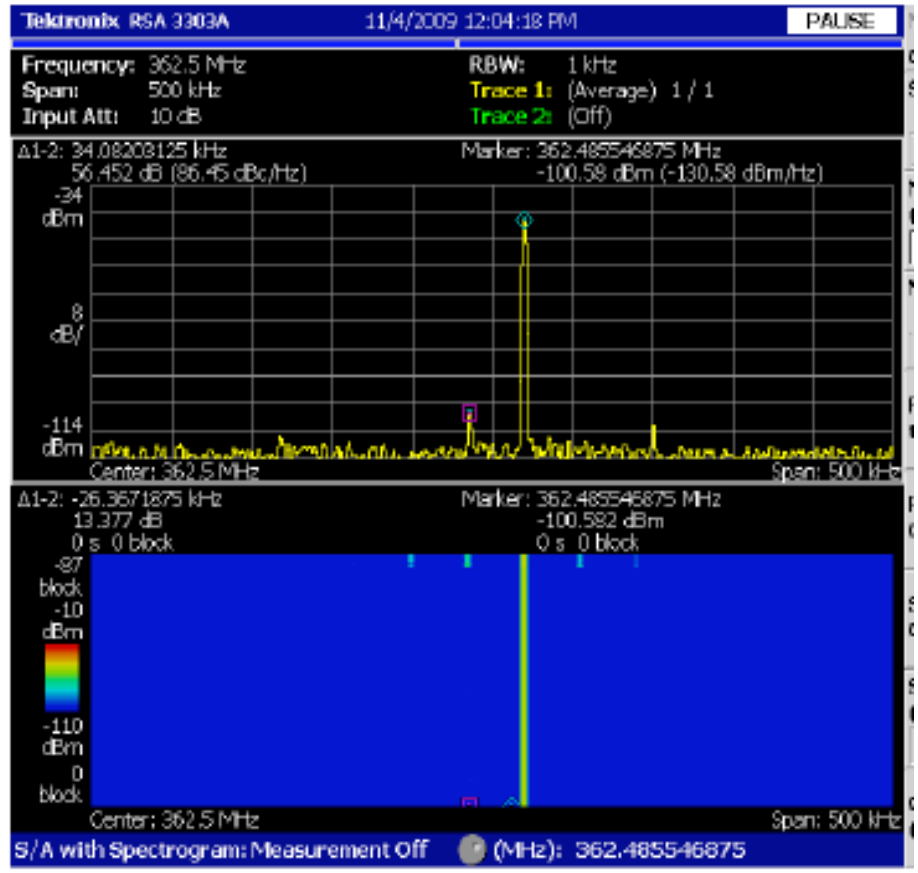
- M.Biagini, THE SUPER-B PROJECT ACCELERATOR STATUS
- M.Zobov, BEAM-BEAM INTERACTION IN NOVEL, VERY HIGH LUMINOSITY PARAMETER REGIMES

		Base Line		Low Emittance		High Current		τ-charm	
Parameter	**Units**	**HER (e+)**	**LER (e-)**	**HER (e+)**	**LER (e-)**	**HER (e+)**	**LER (e-)**	**HER (e+)**	**LER (e-)**
LUMINOSITY	$cm^{-2}\ s^{-1}$	**1.00E+36**		**1.00E+36**		**1.00E+36**		**1.00E+35**	
Energy	**GeV**	6.7	4.18	6.7	4.18	6.7	4.18	2.58	1.61
Circumference	**m**	1258.4		1258.4		1258.4		1258.4	
X-Angle (full)	**mrad**	66		66		66		66	
β_x **@ IP**	**cm**	2.6	3.2	2.6	3.2	5.06	6.22	6.76	8.32
β_y **@ IP**	**cm**	0.0253	0.0205	0.0179	0.0145	0.0292	0.0237	0.0658	0.0533
Coupling (full current)	**%**	0.25	0.25	0.25	0.25	0.5	0.5	0.25	0.25
Emittance x (with IBS)	**nm**	2.00	2.46	1.00	1.23	2.00	2.46	5.20	6.4
Emittance y	**pm**	5	6.15	2.5	3.075	10	12.3	13	16
Bunch length (full current)	**mm**	5	5	5	5	4.4	4.4	5	5
Beam current	**mA**	1892	2447	1460	1888	3094	4000	1365	1766
RF frequency	**MHz**	476.		476.		476.		476.	
Number of bunches	**#**	978		978		1956		1956	
Tune shift x		0.0021	0.0033	0.0017	0.0025	0.0044	0.0067	0.0052	0.0080
Tune shift y		0.097	0.097	0.0891	0.0892	0.0684	0.0687	0.0909	0.0910
Total RF Wall Plug Power	**MW**	16.38		12.37		28.83		2.81	

DAFNE

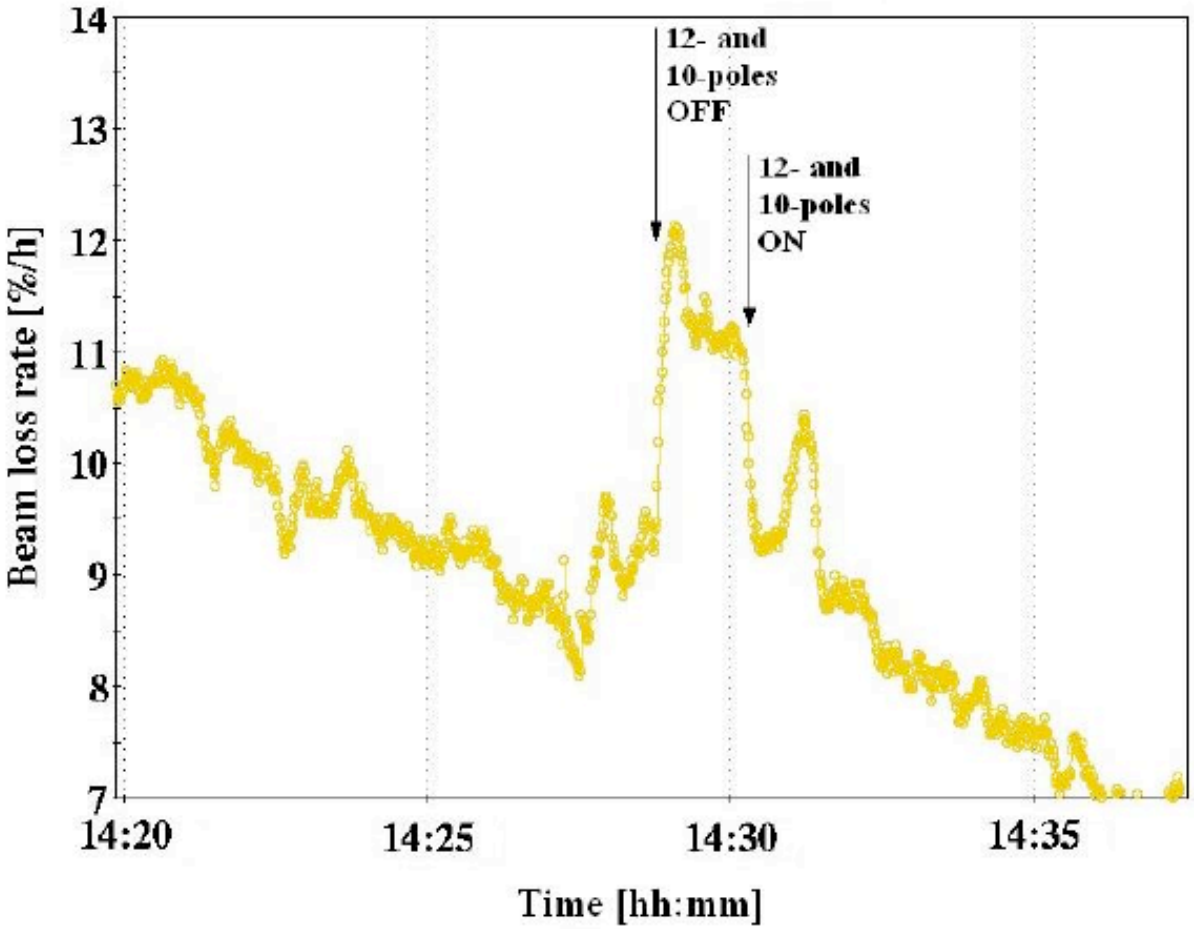
- A.Drago, SYNCHROTRON OSCILLATION DAMPING DUE TO BEAM-BEAM COLLISIONS





RHIC

- W. Fischer, RHIC PROTON BEAM LIFETIME INCREASE WITH 10- AND 12-POLE CORRECTORS



Misc

- Analysis of TBT data
  - A.Wolski, CALCULATION OF COUPLED LATTICE FUNCTIONS FROM TURN-BY-TURN TRAJECTORY DATA IN STORAGE RINGS
  - X.Huang, LATTICE CALIBRATION WITH TURN-BY-TURN BPM DATA
  - N.Malitski, APPLICATION OF MODEL INDEPENDENT ANALYSIS WITH EPICS-DDS
  - …
- K. Hirata, SOCIAL ASPECTS OF JAPANESE HIGH ENERGY ACCELERATORS