**BBLR MD 15.07.2009**

Compensation study at 120 GeV, with rms emittance of 7 micron, ~230 & 250 A optimized wire currents

Qx=0.31, Qy scanned

Find good compensation in general, but rather poor one bear Qy~0.25

Ideas:

* use bad tune to fine tune compensation (position, current)?
* Coast with several goals – LHC tunes, lifetime

9:00 try to go into coast.

First lifetime in coast excellent on LHC tunes with a single wire (for an emittance of 1.6 [wire scanner sigma\_y=0.6 mm] ) and currents used the situation corresponding to 120 nominal LR collisions in LHC and 18 sigma separation). Blow up was not functional.

Now coast including blowup, situation corresponding to 30 nominal LR collisions. About 0.8 hours lifetime over extended period of time. Maybe ~10 times better than over first 2 seconds?!

Switch wire off - lifetime infinitely good now

Another experiment – Qx=0.31, Qy=0.24

Lifetime with compensation – 0.34 h – reproducible, no coast

Lifetime without any wire 1.3 h – reproducible, no coast

Now go into coast:

Lifetime ~ 3 h with compensation

Restart the next night 16 July 1 am

Set up blow up again with help of Wolfgang

Guido notes that the last study was done with 8.5 sigma separation rather than 9.5 (sigma at wire different from sigma at wire scanner).

Nevertheless, first study is to redo the coast from the previous morning with exactly the same settings.