ISAC Operations Note

Title: Small energy change during E810 23Mg DRAGON run

Date: November 25th, 2008

Author: Marco Marchetto

DRAGON may request small energy change in step up to 20 keV/u. We are currently running TANK3 energies without the DTL BUNCHER3 (being unavailable) and using the HEBT bunchers to reduce the energy spread at DRAGON. So if a small energy change is requested here is the procedure.

1 - turn off the HEBT buncher that is on (remember which one because later you have to turn it on again, you may grab a snapshot);

2 - fiddle save the HEBT optics 1 page then change the HEBT:Q6, HEBT:Q7 and HEBT: Q8 to the PRAGUE optics (see the ISAC I OPEN office spreadsheet);

3 - get the field of the PRAGUE magnet for the request energy from the OPEN office;

4 - set the energy with DTL tank 3 as follow: looking at the PRAGUE harp set first the amplitude, then check the phase in order to have maximum acceleration (remember that when the beam moves toward the left side of the harp is accelerating meaning higher energy). After you check the phase you have to readjust the amplitude in order to maximize the current at HEBT1:FC0 (with the PRAGUE locked in field mode);

5 - restore the HEBT optics page 1 with the fiddle ;

6 - rescale the optics downstream the DTL up to DRAGON for the new energy using the "TUNE scaling HEBT to DRAGON";

7- send the beam to DRAGON and wait: they have to check the energy, then center the beam on DRA:XSLITC closed down to 1 mm;

RR	VT	TA	JA	MH	NH	SK	EL	EP	RAR	RS	RT	JW

ISAC Operations Note

Title: Small energy change during E810 23Mg DRAGON run

Date: November 25th, 2008

Author: Marco Marchetto

---

8 - once they report their energy measurement you have to set the buncher that was previously on (point 1);

9 - turn on the buncher (to turn on you have to lower the amplitude around 400 but then restore the previous amplitude, see grab screen if you took it);

12 - set the buncher phase in order to have the beam centered again on DRA:XSLITC: you should find two phases which center the beam, choose the one that gives maximum current on DRA:FCCH cup;

13 - check the buncher amplitude in order to maximize the beam current at DRA:FCCH;

14 - now you can deliver the beam to DRAGON.

RR	VT	TA	JA	MH	NH	SK	EL	EP	RAR	RS	RT	JW