Collider Run II Shot Setup Documentation

Created by Brian Drendel 3-24-04
Last Edit by Brian Drendel 4-5-05
Send suggestions and comments to ad-pbar-tuning-adminNOSPAM@fnal.gov (remove "NOSPAM")

Sequencer: Pbar
Collider Aggregate: **Run II Continue Shot Setup**
Previous Aggregate: Run II Finish Reverse Protons
Purpose of this Aggregate:
How to get back to stacking form here: Finish this aggregate and then run both the Run II Revert to Stack Lattice and the Run II Return to Stacking aggregates.

```
::: SET_ENUMERATED G:BIGSAV        .
::: INSTRUCT 220                   D
::: SET_SEQ FILE 72                .
      File #72 gates the core cooling for unstacking
      A:CBPON  SET DEVICE          .5                                ok
      A:CBPON  SET TIMER REFER     94                                ok
      A:CBPON  EVENT ENABLE                                          ok


      A:CBPOFF SET DEVICE          0                                 ok
      A:CBPOFF SET TIMER REFER     91                                ok
      A:CBPOFF EVENT ENABLE                                          ok

::: ACKNOWLEDGE                    .
```

```
::: CTLIT_DEVICE A:R4HLSC OFF      .
      Turns ARF4 off
::: CTL_DEVICE A:R4HLSC POSITIVE   .
      Changes ARF4 polarity setting to positive.
::: CHECK_DEVICE A:R4HLSC OFF      .
      Verifies that ARF4 is off.
::: SETIT_DEVICE A:EKIKTG 13.58491 .
::: SETIT_DEVICE A:EKIKM1 3.05     D
::: SETIT_DEVICE A:EKIKM1 3.075    .
::: SET_DEVICE A:EKIK A:EKIKP      .
::: SET_DEVICE A:EKIK +=4          .
::: CHECK_DEVICE I:HT702S SAVE_SET .
::: CHECK_DEVICE I:HT704S SAVE_SET .
::: CHECK_DEVICE I:VT701S SAVE_SET .
::: CHECK_DEVICE I:VT703S SAVE_SET .
::: SET_DEVICE I:HT702S -=0.34     .
::: SET_DEVICE I:HT704S -=0.52     .
::: SET_DEVICE I:VT701S +=0.45     .
::: SET_DEVICE I:VT703S -=0.00     .
::: SET_SEQ FILE 31                .
      File #31 moves the appropriate AP1/3 SEM grids in
      D:SM926  TURN DEVICE OFF                                       ok
```

```
      D:SM921  TURN DEVICE OFF                                    ok
      d:sm917  TURN DEVICE ON                                     ok
      D:SM917  TURN DEVICE OFF                                    ok
      D:SM913  TURN DEVICE OFF                                    ok
      D:SM909  TURN DEVICE OFF                                    ok
      D:SM906  TURN DEVICE OFF                                    ok
      d:sm900  TURN DEVICE ON                                     ok
      D:SM900  TURN DEVICE OFF                                    ok

::: SET_DEVICE A:R2CWFR A:RLLFS1   D
::: CHECK_DEVICE A:R1LLPS RESTORE  .
::: CHECK_DEVICE A:R1LLPS SETTING  .
::: CHECK_DEVICE A:R4MIPS RESTORE  .
::: CHECK_DEVICE A:R4MIPS SETTING  .
::: SET_DEVICE V:CASPBT =2         .
      Sets state V:CASPBT to 2 (Unstack Pbars).
::: SET_DEVICE V:CASPBT =3         .
      Sets state V:CASPBT to 3 (Transfer Pbars in the Main Injector).
::: SET_DEVICE V:CASPBT =4         .
      Sets state V:CASPBT to 4 (Accelerate Pbars in the Main Injector).
::: SET_DEVICE V:CASPBT =5         .
      Sets state V:CASPBT to 5 (Coalesce Pbars in the Main Injector).
::: SEQ_PGM REQUEST 4-bunch disp   .
      Starts P207 the Pbar longitudinal emittance calculation (Budlong).
::: SET_DEVICE V:PSHOOT 5          .
      Sets stat V:PSHOOT to 5 (Pbar Shot Setup complete).
ok  INSTRUCT 229                   .
```

```
   Pbar set up is complete. If requested, proceed to the dry shot
aggregate (not normally the case).
        Move immediately to 'Run II Prepare to Load Pbars.'

           The Tevatron can begin loading protons, now.

            Interrupt anywhere in this box to continue.
```

Collider Aggregate: **Run II Continue Shot Setup** has been completed.

Next Aggregate: Run II Prepare to Load Pbars

How to get back to stacking form here: Finish this aggregate and then run both the Run II Revert to Stack Lattice and the Run II Return to Stacking aggregates.