**GEOMETRY**: MB1 upstream, can be rotated around a central vertical axis; MB3 downstream, on the Padova support, can be translated transversally to the beam. Distance between MB1 and MB3  $\leq$  100 cm.

Default **BEAM MOMENTUM**: 200 GeV/c. **ACQUISITION RATE** : 1000 ev/spill @ 1 spill/16 sec =  $2 \cdot 10^5$  ev/h. Two possible **TRIGGERS**: 1) beam scintillator trigger (BT); 2) Autotrigger from 1 chamber only (AT) (selecting only correlated HTRG, i.e., *HH*+*HL*)

### 1) SYNCHRONIZATION

10K events/run (5 min, including chamber movements and TRB configuration)

| 1.1) 15 deg., ST = correct, correct+1, correct-1, phase scan at 1 ns step. |                       |  |
|--|-----------------------|--|
| Trigger= AT  | TOT= 75 runs, 6 h.    |  |
| 1.2) 0, 15, 25 deg., $ST = correct$ , phase scan at 1 ns step.             |                       |  |
| Trigger= AT and BT   | TOT=125 runs, 10 h.   |  |
| 1.3) 15 deg, $ST = correct$ , phase scan at 1 ns step.                     |                       |  |
| Trigger= alternative AT (selection HH+HL+H)                                | TOT= 25 runs, 2 h.    |  |
| 1.4) -15 deg, $ST = correct$ , phase scan at 1 ns step.                    |                       |  |
| Trigger= AT  | TOT= 25 runs, $2 h$ . |  |

GRANDTOT: 250 runs, 20 hours.

### 2) BTI ACCEPTANCE WINDOW (and DIMUONS).

100K events/run, Trigger = BT

| 2.1) Acceptance= standard | Angle= 0, 10, 20, 30, -10, -20, -30 deg                            |
|---------------------------|--|
|                           | (also useful for dimuon studies: run with and without backup-mode) |
| 2.2) Acceptance= $\pm 1$  | Angle= 0, 10, 20, 30 deg   |
| 2.3) Acceptance= $\pm 2$  | Angle= 0, 10, 20, 30 deg   |

GRANDTOT: 22 runs, 11 hours

### 3) DIMUONS

500k events/run, Trigger = BT

3.1) Angle = 15 deg., without and with backup-mode

GRANDTOT: 2 runs, 5 hours

### 4) Runs with IRON BRICKS

100K events/run, Trigger = BT

4.1) Beam momentum = 200, 50, 100, 30, 300 GeV/c Angle= 0 deg. (?) Runs with and without bricks.

GRANDTOT: 10 runs, 5 hours.

# 5) Tests with GAMMA SOURCE

100K events/run, Trigger = BT

5.1) Noise rate = 30 (if possible), 10, 3  $Hz/cm^2$ Angle = 0 deg (?), beam momentum = 200 GeV/c, NO iron bricks.

5.2) Noise rate =  $10 \text{ Hz/cm}^2$  WITH iron bricks Angle = 0 deg (?), beam momentum = 200 GeV/c.

GRANDTOT: 4 runs, 2 hours

# SUMMARY: (1) + 2(3) + 3(4) + 5(3) = 43 hours = 2 days.

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### WITH LOWER PRIORITY:

## 6) Other SYNCHRONIZATION runs

10K events/run (5 min/run)

In order of priority:

| 6.1) angles = 25, 0 deg, $ST$ = correct + | l, correct-1, phase scan at 1 ns step |
|---|---------------------------------------|
| Trigger = $AT$ and $BT$ .                 | TOT= 200 runs, 17 h                   |

- 6.2) angle = 30 deg, ST= correct, phase scan at 1 ns step. Trigger = AT and BT TOT= 50 runs, 4 h
- 6.3) angle = 20 deg, ST= correct, phase scan at 1 ns step. Trigger = AT and BT TOT= 50 runs, 4 h
- 6.4) angle = 10 deg, ST= correct, phase scan at 1 ns step. Trigger = AT and BT TOT= 50 runs, 4 h
- 6.5) angle = 5 deg, ST= correct, phase scan at 1 ns step. Trigger = AT and BT TOT= 50 runs, 4 h

GRANDTOT: 400 runs, 33 hours

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**NOTE**: runs at point 2.1), 4), 5) can be exploited for the DTTF test.