

DCH:

detector choices and
budget update for the
White paper

DCH-II parallel session
SLAC, 7 October 2009

Detector choices: what can we decide now

- Technology: material of DCH structure
 - **Carbon Fiber** is a mature technology and provides minimal thickness for given deformation
- Geometry
 - inner radius
 - the smaller the better physics-wise (recent summary by M. Rama in **superb-dch**)
 - serious concerns for the background levels: **more work is needed**
 - endplate shape
 - main driver is background distribution – again!
 - backward endplate hosts FEE → as flat as possible
 - more studies are needed (as shown in previous two talks)
- The DCH group should focus on background studies in the coming weeks
 - aim at having clear(er) picture by the LNF meeting in December

Detector budget update for the White paper

- Budget *update* (with respect to the SuperB CDR I assume) to be discussed at next TechBoard meeting this Friday
- Estimate in the CDR was extrapolated from the *BABAR* experience
- Terminology reminder:
 - EDIA = Engineering, Design, Inspection, Acceptance; **in man-months**
 - Labor, **in man-months**
 - M&S (Materials and Services) from external companies and vendors, **in 2007 kEuro**

What is in the CDR

Table 5-3: Super*B* detector budget.

| WBS | Item | EDIA mm | Labor mm | M&S kEuro | Rep.Val. kEuro |
|------------|--------------------|------------|-------------|--------------|-------------------|
| 1.2 | DCH | 113 | 104 | 2862 | 0 |
| 1.2.1 | System engineering | 24 | 0 | 50 | 0 |
| 1.2.2 | Endplates | 14 | 0 | 550 | 0 |
| 1.2.3 | Inner cylinder | 4 | 0 | 157 | 0 |
| 1.2.4 | Outer cylinder | 4 | 0 | 100 | 0 |
| 1.2.5 | Wire | 3 | 0 | 242 | 0 |
| 1.2.6 | Feedthroughs | 9 | 10 | 345 | 0 |
| 1.2.A | Gas System | 4 | 8 | 50 | 0 |
| 1.2.B | Test | 3 | 6 | 40 | 0 |
| 1.7 | Electronics | 286 | 213 | 5565 | 0 |
| 1.7.2 | DCH | 53 | 47 | 1203 | 0 |

- Can we do any better by December?