

Last update of schedule dates: 24-09-02

List of Milestones and Schedule Dates for the LHCb Calorimeters

| Detector (mechanics and optics) | | | |
|---|------------|------------------|-----------------|
| SPD/PS | TDR | milestone | schedule |
| end of optimization of engineering design (EDR) | 07-2001 | 03-2002 | achieved |
| start of serial production | 07-2001 | 06-2003 | 03-2003 |
| 10% of modules production | 07-2002 | 11-2003 | 08-2003 |
| 50% of modules production | 07-2003 | 06-2004 | 03-2004 |
| 100% of modules production | 07-2004 | 05-2005 | 02-2005 |
| end of supermodule assembly | 12-2004 | 10-2005 | 07-2005 |
| end of installation | 03-2005 | 01-2006 | 09-2005 |
| ECAL | TDR | milestone | schedule |
| end of optimization of engineering design (EDR) | 05-2001 | 03-2001 | achieved |
| start of serial production | 06-2001 | 01-2001 | achieved |
| 10% of stack assembly | 12-2001 | 03-2002 | achieved |
| 50% of stack assembly | 07-2003 | 07-2003 | 11-2002 |
| 100% of stack assembly | 08-2004 | 08-2004 | 08-2003 |
| end of module assembly (wall) | 11-2004 | 09-2005 | ??? |
| end of installation (frame) | 02-2005 | 01-2006 | 09-2005 |
| HCAL | TDR | milestone | schedule |
| end of optimization of engineering design (EDR) | 06-2001 | 03-2001 | achieved |
| start of serial production | 10-2001 | 05-2002 | achieved |
| 10% of mechanics assembly | 07-2002 | 02-2003 | 11-2002 |
| 50% of mechanics assembly | 07-2003 | 03-2004 | 07-2003 |
| 100% of mechanics assembly | 05-2004 | 06-2005 | 07-2004 |
| end of optics assembly | 06-2004 | 09-2005 | ??? |
| end of installation | 12-2004 | 01-2006 | 09-2005 |

| Electronics (chips and cards) | | | |
|---|------------|------------------|-----------------|
| SPD | TDR | milestone | schedule |
| end of optimization of engineering design (EDR) | 12-2002 | 04-2001 | achieved |
| readiness for production of ASIC (PRR) | | 03-2004 | 12-2003 |
| end of serial production of ASIC | 12-2003 | 10-2004 | 07-2004 |
| readiness for production of cards (PRR) | | 10-2004 | 07-2004 |
| 10% of cards production | | 02-2005 | 10-2004 |
| 50% of cards production | | 09-2005 | 06-2005 |
| end of acceptance tests | 09-2004 | 03-2006 | 12-2005 |
| end of installation and commissioning | 04-2005 | 09-2006 | 04-2006 |
| PS | TDR | milestone | schedule |
| end of optimization of engineering design (EDR) | 12-2002 | 04-2001 | achieved |
| readiness for production of chips (PRR) | | 12-2001 | achieved |
| start of serial production of chips | 07-2002 | 09-2004 | 06-2004 |
| readiness for production of cards (PRR) | | 07-2004 | 04-2004 |
| 10% of cards production | 12-2003 | 04-2005 | 01-2005 |
| 50% of cards production | 07-2004 | 08-2005 | 05-2005 |
| end of acceptance tests | 11-2004 | 03-2006 | 11-2006 |
| end of installation and commissioning | 04-2005 | 09-2006 | 05-2006 |
| ECAL/HCAL | TDR | milestone | schedule |
| end of optimization of engineering design (EDR) | 09-2002 | 04-2001 | achieved |
| readiness for production (PRR) of cards | | 06-2004 | 01-2004 |
| start of serial production (of cards) | 10-2003 | 09-2004 | 05-2004 |
| 5% (pre-series) of cards production | 11-2003 | 02-2005 | 10-2004 |
| 50% of cards production | 10-2004 | 07-2005 | 01-2005 |
| end of acceptance tests | 01-2005 | 03-2006 | 10-2005 |
| end of installation and commissioning | 04-2005 | 09-2006 | 04-2006 |

| Overall Integration | post TDR | milestone | schedule |
|---|-----------------|------------------|-----------------|
| EDR on support, frames, cabling and assembly procedures | 01-2003 | 06-2004 | 12-2003 |

| General LHCb Milestones: | | milestone |
|--|--|------------------|
| latest start of detector installation | | 07-2005 |
| finish installation and commissioning of sub-detectors | | 09-2006 |
| start commissioning of >1 sub-system | | 10-2006 |
| first beam | | 04-2007 |