Inventory for the magnet evaluation related activities (1/2)

Work-packages	Cryodipoles		SSS	
	MB	Spools	MQ	Lattice corrector
Definition of AP criteria	Done	Done	Done	To be completed (control of dynamic effects when trimming the corrector, orthogonality of the different correction knobs via FQ or misalignment)
Aperture Specification or alignment tolerances (for corrector) →Table published and communicated to AT	Done	Done	Not done[2)]	To be completed (control of dynamic effects when trimming the corrector, orthogonality of the different correction knobs via FQ or misalignment)
FQ specification → Table published and communicated to AT	Done	Done[1)]	Done	To be completed
Setting up of an FQ error table/error routine and final study/tracking based on the present production	Done Study needed on a4	Not critical	Not done (Ezio just contacted to produce a table)	On-going
When applicable and if allowed by hardware constraints, proposition of sorting algorithms.	Done	A priori not needed	Done	A priori not needed (except for MQT with bad performance)
Interface with AT to anticipate problems before cryostating or before collaring	Done	A priori irrelevant	Contact taken to minimize the TF spread between the 2 apertures, to sort versus cable type ..	A priori not needed (except for MQT with bad performance)
Preparation for MEB work :definition of ID cards (colour coding, FQ at which current, which parameters to be used? …), definition of template for geo shapes …	Done		On-going (work on geometry/alignment to be finalized)	
MEB work proper, I.e. slot assignment, 1 by 1 inspection of ID cards, feed-back loop …	On-going		Just started	

1): update possibly needed in view of the production
2):old spec. existing but further studies needed in view of the production

Inventory for the magnet related activities in ABP (2/2)

Work-packages	Insertion magnets						Triplets	
	MQM/MQTL	MQY	MQW	MBW	Cold D1..D4	Orbit corrector	MQX	Multipole corrector
Definition of AP criteria	Done	Done	Done	Done	Done	Done	Done	Not Done
Aperture or alignment spec.	Not done[2)]	Done[1)]	Done[1)]	Done[1)]	Done[1)]	Done	Done[1)]	Not Done
FQ specification	Not done	Not done	Production finished and looks OK	Production ongoing, looks not critical	Done (by US). Further look needed for D3/D4	Done for b3	Done (US)	Not Done
Final study/tracking based on the present production	Done (MQY looks very critical, D3/D4, MQTL and MQM's as well)					Not critical	Done but to be clarified (b4 in Q2)	Not Done
Proposition for Sorting algorithms	Done by AT/MEL during assembly but w/o consultation with ABP		A priori not needed except perhaps for the TF of MBW and the FQ and geometry of MQW		On going, case by case (e.g. b3 compensation between D1 and D2	A priori not needed	To be worked out	A priori not needed
Interface with AT	Not established		On-going		Established (special care to be brought to D3 and D4)	Established	Partially established	
Preparation for MEB work	Not yet started		On-going		Done for D1/D2. On-going for D3/D4	A priori not needed	Not yet started	
MEB work proper	Not yet started				On-going	Not yet started		

1): update possibly needed in view of the production
2): old spec. existing but further studies needed in view of the production

Priorities

- **MB's and spools**

→ Special tracking studies with ***enlarged systematic a4***.

- **SSS's and latice correctors**

→ Generation of the error routines and error tables with ***the measured field errors*** (e.g. b4 defined as systematic not uncertainty, octant 78 and 81 with b6 out of spec…)

→ Revision of the ***mechanical tolerances*** (race-track)

→ Document published with the ***FQ specification tables and the alignment tolerances*** of the ***lattice correctors*** (includimng criteria related to the orthogonality of the different corrector knobs) and comparison with the production.

- **S4's (MQM,MQTL and MQY)**

→ Revision of the ***mechanical tolerances*** (race-track).

→ Document published with the ***MQM, MQTL and MQY field quality specification*** and comparison with the production.

→ Establish contact with AT/MEL to inject AP criteria in the cryo-assembly of the S4's based on FQ and geometry aperture.

- **D1→D4**

→ Better understanding of the impact of D3/D4 on the DA (which multipole?)

- **Triplet and correctors**

→ Clarify FQ measurement in MQXB (possible problem of sign??), in particular ***study of the impact and correct-ability of b4***

→ Prepare slot assignment well-in advance (e.g. possible compensation between the 2 Q2's, strong interface with BNL and AT/MEL e.g. to prepare for IR8 the MQX's with worst FQ and geometry but best performance)

→ ***FQ Specification tables and alignment tolerances for the triplet corrector packages*** and ***nominal field requested based on the measured field errors.***

- **General comment**

→ All "final" tracking studies must be done with ***beta-beat and coupling*** and, when relevant, with closed orbit as well.