

Remarks about Cosmic Rays MWPC testing

The agreement is that we fully test with Cosmic Rays all the initial production batch of a given chamber type, using the ASDQ boards. We should specify the size of the batch, but could be e.g. 20%.

We should also assume that from April 2005 onwards the test will be done with the final boards, since by then an adequate supply will be available. The test of the chambers will be done in the two stations located in LNF and RM2. Limited testing facilities could exist in other centers.

The table below gives the number of chambers, the number of FE boards/ch, the proposed test station, the polarity and the availability of the final (CARIOCA) FE for testing. The sharing between LNF and RM2 is an educated guess and could be fine-tuned. In principle LNF tests its own chambers + those built in sharing with FE; RM2 tests all the FI chambers + the remaining ones from FE.

Tipo	No.	FE/camera	FE tot	TEST	POL	CARIOCA
M1R3	48	12	576	LNF	pos	
M1R4	192	3	576	LNF	neg	yes
M2R1	12	14	168	CERN		
M2R2	24	14	336	CERN		yes
M2R3	48	12	576	RM2	pos	
M2R4	192	3	576	PNPI		yes
M3R1	12	14	168	CERN		
M3R2	24	14	336	CERN		
M3R3	48	12	576	LNF	pos	
M3R4	192	3	576	PNPI		
M4R1	12	12	144	RM2	pos	
M4R2	24	6	144	RM2	pos	
M4R3	48	6	288	RM2	pos	yes
M4R4	192	3	576	PNPI		yes
M5R1	12	12	144	RM2	pos	
M5R2	24	6	144	RM2	pos	
M5R3	48	6	288	LNF		
M5R4	192	3	576	RM2	neg	50%
			6768			

For the moment I am only dealing with INFN requests for the test stations.

I assume that one station can accommodate at most 6 chambers. In this case the largest request will be 72 FE boards (all positive polarity). The smallest is for wire readout (18 FE boards negative). These figures could be reduced assuming that a minimum of 4 chambers is necessary (for the internal tracking). In that case we would have 48 FE pos boards and 12 FE neg boards per station.

It is also to be noticed that the negative polarity boards will never be needed in LNF, since they will use the CARIOCA. They will be needed by RM2 only in 2004 after FI has started the production.

Important things:

- Be sure that Potenza will provide the necessary number of boards with the correct polarity. We should not have problems on that side (the chips exist) and Giulio Auriemma is well aware of this fact
- Be sure to have a sufficient number of LVDS – ECL translators for the two test stations.
- We should also consider the requirements for the GEM.
- CERN has already got a number of boards.

Updated production plan

You are strongly encouraged to get MS Project

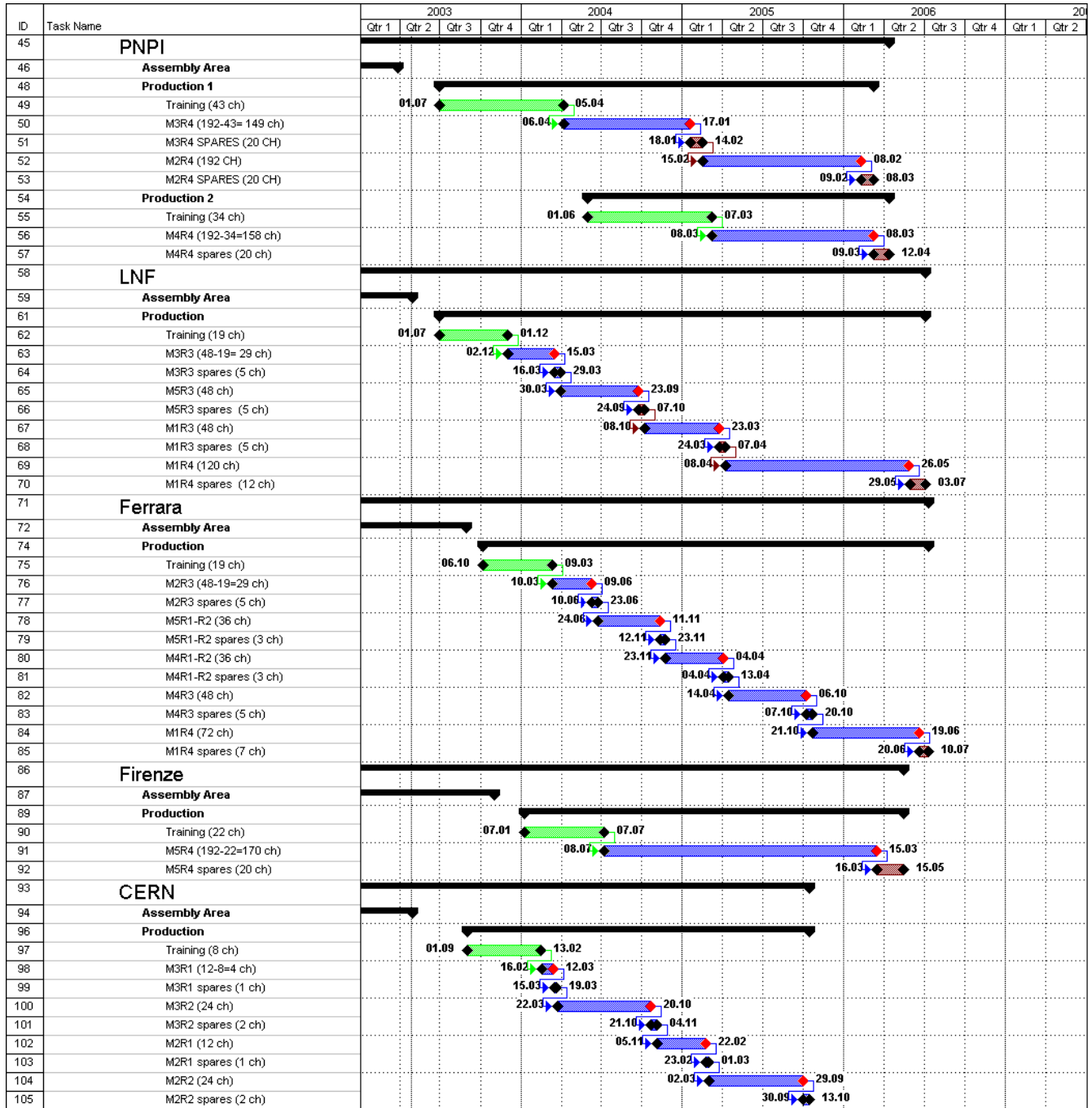
You can find the updated production plans on the new MUON WEB page. You will also find readable .gif files but this is just a backup solution. With MSP you can easily play change scenarios.

The last plan includes:

- The agreed sharing between INFN labs
- 3 different “realistic” calendars (INFN,CERN,Russia)
 - All have 4 weeks of holidays in August (maybe at CERN they have less ;0))
 - INFN and CERN calendars include Easter and Pasquetta
 - INFN has 25 april, 1 may, 1 november.
 - Russian Easter not included (need info)
 - Christmas
 - INFN from 21 dec to 6 jan
 - CERN from 21 dec to few days after 1 jan
 - Russia about 4 weeks
- Spares (10%)
- The “training” periods at startup are shown explicitly

The global production milestones have not been updated yet, also because the new plan brings some shift in the end of production that has to be discussed (see remarks at the end).

MWPC Production Schedule including spares and holidays



Here is a comparison of my estimated finish dates with those presented by Pierluigi at the EDR

	50% finished by	100% finished by	spare finished by	100% GC est
M3R3-LNF		feb.04	2 weeks later	mar.04
M2R3 - FE		lug.04	2 weeks later	jun.04
M3R1R2 - CERN		ago.04	3 weeks later	oct.04
M5R3 - LNF		ago.04	2 weeks later	sep.04
M3R4 - PNPI1	mag.04	ott.04	nov.04	jan.04
M5R1R2 - FE		nov.04	2 weeks later	nov.04
M1R3 - LNF		feb.05	2 weeks later	mar.05
M4R1R2 - FE		mar.05	2 weeks later	apr.05
M2R1R2 - CERN	mar.05	set.05	3 weeks later	sep.05
M4R3 - FE	giu.05	set.05	2 weeks later	oct.05
M2R4 - PNPI1	mag.05	ott.05	nov.05	feb.06
M4R4 - PNPI2	mag.05	dic.05	gen.06	mar.06
M5R4 - FI	mar.05	feb.06	apr.06	mar.06
M1R4 - LNF	set.05	apr.06	mag.06	may.06
M1R4 - FE	dic.05	mag.06	mag.06	jun.06

The biggest discrepancy is for PNPI. Perhaps I put in too many holidays? In any case we will quickly see the correction factors to be adopted as soon as the production starts.