

## SURVEY QUESTIONNAIRE

From : .....  
 To : **C. LASSEUR / EST-SU (see address below)**  
 Date : .....

### EXPERIMENT

NAME OF THE DETECTOR .....  
 NAME OF THE PEOPLE RESPONSIBLE .....  
 INSTITUTION .....  
 ADDRESS .....  
 E-MAIL .....  
 FAX .....

1.	Has your detector to be determined in the coordinate system of your experiment (i.e. in the data base of the off-line software)?	yes p	no p	1.0
2.	From the geometrical point of view, is your detector a single unit ?	yes p	no p	2.0
	If not, how many pieces are they ?	.....	.....	2.1
3.	Please give a description and / or a sketch of your detector plus some comments on the additional sheet.	.....	.....	3.0
4.	Is your detector independantly installed ?	yes p	no p	4.0
	If no, is it supported by another detector ?	yes p	no p	4.1
	- if yes, which one?	.....	.....	4.2
	- how is the relationship made :			
	- mechanically?	yes p	no p	4.3
	- by means of survey works ?	yes p	no p	4.4
5.	If independantly installed, has its determination in the coordinate system to be made step by step:	yes p	no p	5.0
	- in a laboratory or a factory ?	yes p	no p	5.1
	where and when ?	.....	.....	
	- in the surface assembly hall ?	yes p	no p	5.2
	- directly in the experimental area ?	yes p	no p	5.3

6.	For such a determination, have external reference marks to be created?	yes p	no p	6.0
	How many and where ? (please give some comments on the additional sheet)	.....	.....	6.1
	Are those marks still accessible for feasible surveying during installation and maintenance periods ?	yes p	no p	6.2
7.	What are the expected deformations of your detector ?	.....	.....	7.0
	Will these deformations be expected			
-	during the manufacturing ?	yes p	no p	7.1
-	during the installation ?	yes p	no p	7.2
-	during the assembly of the equipment ?	yes p	no p	7.3
-	during the transportation from the surface ? assembly hall to the experimental area ?	yes p	no p	7.4
-	during the operations ?	yes p	no p	7.5
-	during the maintenance ?	yes p	no p	7.6
-	during the opening and / or the closing of the detector ?	yes p	no p	7.7
8.	Are you making a prototype of your detector ?	yes p	no p	8.0
	If yes,			
	Is that prototype significant for the geometry ?	yes p	no p	8.1
	Where is the prototype built and when ?	.....	.....	8.2
	Is geometrical survey and / or positionnal data needed ?	yes p	no p	8.3
	Is that prototype tested in a beam ?	yes p	no p	8.4
	If yes, is a survey required ?	yes p	no p	8.5
	Where and when ?	.....	.....	8.6
9.	Do you plan to do a complete mounting of your detector before the assembly in the surface hall at CERN ?	yes p	no p	9.0
	If yes,			
	Where and when ?	.....	.....	9.1
	Will you require a survey for this operation ?	yes p	no p	9.2
10.	Concerning the positioning accuracy, please indicate :			
-	the internal accuracy of the fiducialisation (i.e. the link between the detecting elements and the external reference marks)	.....	.....	10.0
-	the external spatial accuracy of the different units composing the detector relatively to each other	.....	.....	10.1
-	the global spatial accuracy of the detector itself with respect to the theoretical beam line.	.....	.....	10.2

11.	Concerning the fiducialisation of the units, please indicate:			
	- where and when this operation will be held ?	.....	.....	11.0
	- will this operation be carried out during the construction of the units ?	yes p	no p	11.1
	- will this operation need a precise geometrical validation of the method and / or the equipment foreseen ?	yes p	no p	11.2
	- will this operation include the alignment and the monitoring system in case the positions of the units are verified permanently ?	yes p	no p	11.3
	- is a discussion on this subject needed with our service ?	yes p	no p	11.4
12.	Concerning the determinations made step by step (cf. §5.) :			
	- do you foresee survey operations continuously during the assembly ?	yes p	no p	12.0
	- if not, at what stage do you plan these operations ?	.....	.....	12.1
	- is a geometrical link between active position monitoring and alignment systems and survey data (i.e external reference marks) needed ?	yes p	no p	12.2
	- if yes, where, when and at what stage of the assembly (please give some comments on the additional sheet) ?	.....	.....	12.3
13.	Concerning the deformation of the detector (see § 7):			
	- do you plan geometrical measurements of the deformations (cross-check of the modelisation)	yes p	no p	13.0
	- if yes,			
	- will these measurements be made on single units on the total detector when fully constructed ?	.....	.....	13.1
	- where, when and at what stage of the assembly (please give some comments on the additional sheet) ?	.....	.....	13.2
	- what is the needed accuracy of the determination of deformations ?	.....	.....	13.3
	- has this determination to be carried out dynamically ?	yes p	no p	13.4

14.	Concerning the survey operations for all the aspects mentioned above			
-	what do you expect from the Survey Group ? (please give some comments on the additional sheet)	.....	.....	14.0
-	are there any operations which could be given to contractors ?	yes p	no p	14.1
-	if yes,			
-	which operations could be contracted ? (please give comments on the additional sheet)	.....	.....	14.2
-	how do you see the part of the Survey Group in cases ? (please give comments on the additional sheet)	.....	.....	14.3
-	would you require controls of the works made by the contractor ? (please give comments on the additional sheet)	yes p	no p	14.4
-	should the Survey Group make these ? (please give comments on the additional sheet)	yes p	no p	14.5
15.	Concerning all the geometrical measurements needed for your detector,			
-	do you plan to mention your requirements to the Survey Group at CERN ?	yes p	no p	15.0
-	if yes,			
-	when do you think it suitable to start a discussion ?	.....	.....	15.1
-	where do you think it more convenient to meet according to the schedule and the locations of constructions of your detector or of the single units ? (please give comments on the additional sheet)	.....	.....	15.2
16.	Concerning the geometrical maintenance works,			
-	do you plan geometrical measurements to be done every time the detector is in an opened position ? (please give some comments on the additional sheet)	yes p	no p	16.0
-	if yes, are these measurements likely to be done			
-	also in the intermediated opened position ?			
-	also during in a limited access time ?	yes p	no p	16.1
		yes p	no p	16.2

**COMMENTS**

*Please quote question number :*

Be kind enough to return this questionnaire to C. LASSEUR /EST-SU, CERN  
Tel. +41.22.767.47.77, Fax +41.22.767.34.56, E-Mail : Christian.Lasseur@cern.ch