

Required and Available Resources for the R&D Project “Instrumentation of the Very Forward Region”

General Situation of the Project

About 20 physicists from 8 laboratories are involved in the research work. In all laboratories dedicated working groups have been formed.

One group from IHEP Protvino and UC London left the collaboration. The reasons are mainly a lack of support by their home laboratories and no funding.

There are applications from several Russian institutions, which offer GaAs as a sensor technology for the forward calorimeters. Albeit this is an interesting new development, we feel, for the time being, that the project needs not an extension towards more technological options, but a deeper understanding of the current technologies. In addition, there is no or very small financial support available in these groups. In order to integrate these groups into the collaboration new sources of funding must be found.

Some people from the Orsay Lab expressed their interest to join us. We are waiting for more details of a possible participation.

In the following we give an overview of the sharing of responsibilities, the current status of personpower, laboratory equipment and requested or approved financial support.

Responsibilities

The following sharing of responsibilities is agreed within the laboratories. The items correspond to the milestones set in the report. In some cases several milestones are summarised in one item.

LumiCal Simulations

item	Cracow	Desy	Dubna	Minsk	Prague	Protvino	Tel Aviv
Realistic Calorimeter design	x				x		x
Comparison of two options	x						x
High statistics simulations	x						x
Physics background studies	x	x			x		x

LumiCal Mechanics Design, Alignment and Sensor Prototyping

item	Cracow	Desy	Dubna	Minsk	Prague	Protvino	Tel Aviv
Mechanics design	x	x			x		
Survey concept	x	x					x
Laser alignment system	x						
Silicon sensors	x				x		x
2× 15° prototype calorimeter	x	x			x	x	x

BeamCal Simulations

item	Cracow	Desy	Dubna	Minsk	Prague	Protvino	Tel Aviv
Optimisation of the segmentation		x	x	x			
Calibration		x	x	x			
Beam diagnostics		x				x	

BeamCal Sensor Prototyping

item	Cracow	Desy	Dubna	Minsk	Prague	Protvino	Tel Aviv
Studies on diamond sensors		x	x	x			

PhotoCal

item	Cracow	Desy	Dubna	Minsk	Prague	Protvino	Tel Aviv
MC simulations beam diagnostics		x				x	
Design and testbeam studies						x	

Personnel

About half of the 20 active physicists are senior scientists. Many of them are working a substantial fraction of their time for the project.

A summary of the available and expected postdocs and students in the different subprojects is given in the following table. The numbers with a (*) superscript are students foreseen to join the project in future. The others are already present.

	PostDocs	Ph. D. students	Diploma students
LumiCal		2	2+1*
BeamCal and PhotoCal	1	5+1*	2 + 2*
sum	1	7+1*	3 + 3*

Mechanical and Electrical Design and Workshops

In DESY, IHEP and JINR exist electronic and mechanics design divisions and workshops, to which requests are addressed in the different laboratories. These requests are under discussion now and we expect the necessary support. In NC PHEP BSU an electronics engineer is ready to work on the project. In the Cracow institutes and in Tel Aviv university the necessary support by designers and workshops is agreed within the laboratories.

Laboratory Equipment and Investments

The availability of laboratory equipment and a breakdown of the applied financial support for the next two years (in kEURO) is given in the following tables for each of the subprojects.

LumiCal

	Cracow	Prague	Tel Aviv
Basic laboratory equipment	x	x	x
Additional laboratory equipment requested	20	10	10
request for prototyping	20	10	20
sum	40	20	30

The support in Cracow is approved for the years 2004 and 2005. A new request depending on the needs to build the prototype will be done in 2005. Tel Aviv made a request to the funding agency for 2005/06.

BeamCal

	DESY	IHEP	JINR	NC PHEP	BSU
Basic laboratory equipment	x	x	x		x
Additional laboratory equipment requested	45	15	15		10
request for prototyping	90	15	20		20
sum	135	30	35		30

The financial requests for the additional laboratory equipment and the prototyping are addressed to the management of the respective laboratories or funding agencies and are subject of discussions. We expect the support necessary to go ahead with the project.