# Research Division Technical Resources Availability

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*...it would be good to understand the impact of the activities in the lab and the links they have to the resources of the lab....Next time the SC should have a map about this*

Last time I made a presentation about the many activities going on in the Research Division. There are at present 32 different experimental activities («sigle») out of which at least 20 have construction or R&D commitments that have an impact on the technical resources of the division

We can divide these activities into 4 main cathegories. A) Experiments that have relevant construction commitments or are based at LNF and therefore require a relevant support by the technical services and/or by «experiment technicians» B) Experiments with minor construction commitments that however require some non-irrelevant support because of particular (R&D) needs C) Experiments with little impact on the services D) Special cases

In cathegory A there are KLOE, ATLAS, ALICE, CMS, LHCb, NA62, SIDDHARTA, ROG and OPERA.

In cathegory B there are MU2e, G-2, Belle2, Bes3, Jlab12, PANDA, VIP, Etrusco, RDH, Beam4fusion

Cathegory C is irrelevant for today's discussion

In cathegory D there are Synchrotron Light activities, which have a dedicated Service consisting of 5 technicians, plus 2 technicians assigned specifically to two non-main stream activities

Obviously, assignment to these cathegories, in particular A and B, is somehow arbitrary and can vary along time, depending on the experimen't status

We can distinguish between the access to «experiment technicians» and that to the Design Unit (SPAS) and the Electronics and Automation Department (SEA)

Access to the latter services is ruled in the context of biannual meetings of a dedicated panel (CIF) which assigns these resources (as well as those of other Divisions) on the basis of priorities decided in agreement with the Director of the Lab

The basic rule is that approved experiments in construction/installation phase have priority with respect to R&D and not yet approved activities

In general this means that experiment of cathegory A are privileged

In the last semester the resource assignment has been in the proportion of approximately A-B : 65-35 for both SEA and SPAS

The main difference between the two units is that while SPAS is generally able to satisfy almost 100% of the requests, SEA has often to reject or delay some of them. In some cases the estimated manpower needs exceeds by a factor close to 2 the available one

As reported in my presentation at the last SC meeting the main problem is that there is a high degree of specialization in this Service, so that very often some specific competences are concentrated in only one or two personnel units. This implies that works cannot be parallelized

This is why some tasks that should in principle enter cathegory A have to be delayed (they are in competition with other cathegory A projects)

«Experiment technicians» duties are assigned generally on a yearly basis, however this is corrected «dynamically» when needed

At present, we have 16 FTE assigned to experiments of class A and 2 to class B, plus the 2 «special cases» mentioned before

We are reasonably surviving with this assignements however:

- There is a problem of people retiring without being replaced (3 this year, one of which is in the list above)
- We are facing a long period of constructions for the LHC upgrades for which there is a unresolved problem of both absolute numbers and of potential clashes between various activities
- There are 9 experiment in class A. This means that the average personnel assignment to these experiments is ~1.5, largely insufficient for these constructions needs

Clearly some «internal» adjustment is conceivable. For instance it is possible to move one personel unit from astroparticle to particle physics activities in a short term. However these are minor corrections

I see some clear critical points that are in my agenda and require to be discussed with the present and the future Director

- The Electronics Service needs an injection of a few (2) highly skilled personnel units
- We must have a plan to recover from retirements in all sectors
- We might consider some major reshuffling of the priorities and therefore in the assignment of manpower resources, by downgrading some nonstrategic activities. What is non strategic has to be decided by the Directorate. We are in a phase of change of management so we will know more in a few months from now
- At least, we have to have a plan to organize the forthcoming constructions periods. Priorities have to be set, following more stringent criteria with respect to the one used so far, that have to be agreed with the Director of the Lab