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The self-evaluation document and the presentations show for all scientific teams impressive scientific productivity. The number of projects is going down but is still too large in some areas, and some consolidation would be very helpful. There should be a higher threshold in the future for new projects plus a clearer process of accepting new ones. The committee welcomes the innovative attitude towards interdisciplinarity in data science, space science, society and teaching in line with the initial strategy of APC. The link between geo-sciences and high energy neutrinos and gravity waves is original, good science and high visibility and we believe it is worth expanding even at the cost of some resources (though it could also bring resources from additional channels). APC has also been very active in developing strong relationships with key international scientific centres.

In gravity and gravitational waves the opportunity of expansion is obvious considering the key role occupied by APC in LISA and the synergy with VIRGO, theory and with the SVOM and ATHENA projects for the multi messenger aspect. In the future the resources of the gravity group have to be expanded more than in other groups.

The APC theory group has very good visibility throughout, including in the more formal theory for which it received an important senior ERC grant. Links with other APC groups seem very effective and are increasing, particularly in its gravitation sector. Nevertheless, in the current scientific context the interactions of the theory group with the rest of APC could be further stimulated, e.g. by initiating a regular "gravity and/or multi-messenger lunch". Furthermore, one can identify a few theoretical directions of particular relevance to the lab's activities, which could be be either reinforced or established. We have in mind, for instance, theories of cosmological perturbations and large-scale structure formation (including numerical simulations) in connection with EUCLID, and nuclear-matter theory in connection with the recent LIGO-VIRGO observation of a neutron star merger through both gravitational waves and light.

For cosmology, the move of people from Planck to Euclid is good and the concentration of resources in the coming years on LSST and Euclid is also good. QUBIC seems to have now a more well-defined strategy and the site is secure. The original technique (providing spectral resolution capability) is interesting, especially considering the lack of perspective worldwide on the needed spectral energy distribution of foregrounds. This approach is different from the emphasis of most other groups working on large detector arrays. It is timely that a strategy on the next generation ground based CMB observatories is defined. The ASIC know-how could be an interesting contribution to Litebird. Last but not least the committee commends the strong implication of the cosmology group to the coordination efforts at the European level. In the high energy astrophysics group we welcome the involvement in SVOM and ATHENA and support the concentration of efforts on CTA and KM3NeT, the European ESFRI priorities. We welcome the reduction of projects with time. Concerning the balloon activity and UHECR, while the technological aspects, eg the collaboration with the US effort in long duration balloon flights, is clearly a promising activity, the scientific program is in need of better clarification. The high energy astrophysics interest is obviously boosted with the recent discovery of gravitational waves and the multi-messenger approach.

Neutrinos is a strength of APC in the French landscape. DCHOOZ is coming to a successful conclusion, while the future measurement of neutrino parameters is advanced with 3 different different experiments (KM3NeT, DUNE and JUNO). Clearly, more resources would be needed in order to have a substantial contributions in JUNO and DUNE. Promising design and R&D is being conducted for DarkSide and here again the need of a national and European strategy is urgent.

The relationship with the Paris Centre of Cosmological Physics is obviously an asset of the laboratory. Its activities in teaching with innovative methods (MOOC gravity, Teaching the Universe), plus the postdoc training are impressive. We encourage the synergies with the technical department of APC and other parisian labs for the construction of CMB detectors. Following the regrettable loss of Pierre Binetruy, it is urgent to identify a new PCCP executive director of comparable stature.

A good plan has been developed to move the FACe infrastructure to a new location, while modernising it at the same time. It is needless to stress the importance of data science for the future APC program and responsibilities (e.g. LSST, EUCLID, CTA and LISA)

The level of technical resources has been stable, but not sufficient to support the ambitions of the scientific program. It should be noted that APC has the lowest ratio of engineers to researchers in IN2P3. It is partly alleviated by the recruitment of non-permanent technical staff, but this introduces continuity problems and the danger of loss of expertise. Complementary contributions between the CNES CST and the laboratory technical departments on space projects could also alleviate the burden (eg. in ATHENA and LISA). Recruitment of instrumentalists in permanent positions would tighten the link between the researchers and technical departments.

The committee has heard of administrative challenges which are felt by both the researchers and the administrative department. They are induced by the fluctuating environment of general administration rules and procedures. Although this is not a specific APC problem, it is accentuated by the fact that APC is in a multi-agency environment, and a large fraction of its funds are coming from open calls (region, ANR, EU, etc). The next director should endeavour to limit the turnover of personnel.

Finally, there has a been a discussion on the procedure for accepting new projects. A possible solution is to establish an intermediate level between the CSP and the Scientific committee, formed

by the project and system management leaders of the APC projects who could conduct an examinination at regular intervals of the overall distribution of resources among the projects. For larger new projects the director could consult the scientific committee for their advice.