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ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE
CERN EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH

Action to be taken		*Voting Procedure*
For information and discussion	**FINANCE COMMITTEE** 325th Meeting **17 June 2009**	—
For information and discussion	**COUNCIL** 151st Session **18-19 June 2009**	—

FIVE-YEARLY REVIEW 2010

REPORT ON COMPARATOR RESEARCH INSTITUTIONS FOR FELLOWS

This report has been drawn up in the framework of the 2010 five-yearly general review of the financial and social conditions of members of the personnel. It identifies the comparator research institutions for fellows.

Further to discussion at the TREF meeting on 19 and 20 May 2009, the Management hereby submits this report to the Finance Committee and to the Council for information and discussion.

I.– INTRODUCTION

Annex A 1 of the Staff Rules states that:

"The purpose of the five-yearly review is to ensure that the financial and social conditions offered to fellows remain attractive compared to those in comparable research institutions".

Annex A 1 further specifies that the Director-General shall start the review procedure by submitting to Council:

"for information and discussion, a document identifying the research institutions from which the data will be collected".

This document identifies those institutions, from which data will be collected for the five-yearly review.

II.– BACKGROUND INFORMATION

CERN's Fellowship Programme offers young scientists and engineers (with qualifications ranging from post-graduate to post-doc) from Member State universities or equivalent institutions the opportunity to enhance their knowledge through participation in the activities of the Organization. Fellows are employed by the Organization for a limited period of time, typically two years. This appointment, which often constitutes a first employment opportunity, is considered as a great asset for pursuing a successful career in particle physics research or in applied science and engineering.

The previous five-yearly review (see CERN/2659) introduced significant changes into the Fellowship Programme, notably through the separation of the Fellowship Programme into two sub-programmes:

- The **Senior Fellowship Programme** is addressed to Ph.D. holders or those with at least four years of experience after their degree. The recruitment criteria are based on academic and research excellence, and candidates are ranked according to such criteria either by Member State Delegations for research physicists or by a CERN panel of experts for applied scientists. Fellows in theoretical or experimental particle physics have a free choice of the research topic that they wish to study, which provides an opportunity to enhance their knowledge through participation in the activities of the Organization.
- The **Junior Fellowship Programme** is for holders of at least a Technical Engineer degree (or equivalent) and at most a M.Sc. degree (or equivalent) with not more than four years of experience. The recruitment criteria match technical qualifications and skills with specific CERN activities. The programme emphasizes the concept of "on-the-job training".

The aim of these changes (see CERN/2659) was to "*harmonize CERN's payment levels when compared to other research establishments, as well as to optimize the use of available financial resources.*" The fellowship data since the introduction of these changes (Personnel Statistics presented at TREF, published at https://cern.ch/hr-info/stats/stats.asp) show at least a 20% increase in the total number of fellowships awarded since the introduction of this new scheme. Similarly, the junior fellowship category shows a steady increase and has stabilized at approximately one third of the CERN funded fellowships. The Management is satisfied with the results of these changes and the positive consequences it has had on the CERN Fellowship Programme.

An additional and important aim of the measures implemented was to facilitate EU and other external funding mechanisms. To this end, CERN has recruited 98 Marie-Curie Fellows under Framework Programme 6 and to date 28 Marie-Curie Fellows under Framework Programme 7. In addition, the success of CERN's proposal for the Marie Curie COFUND means that a third year of fellowship for 40 fellows recruited in 2009 will be funded by the European Commission. The Management is satisfied with this result and will continue its efforts to secure more Marie Curie funding in the future.

III. – CONSIDERATIONS FOR SELECTION OF COMPARATOR RESEARCH INSTITUTIONS

The previous five-yearly review (see CERN/2659) identified a number of research institutions that were deemed appropriate comparators for the purpose of data collection.

These institutions are the following: Deutsches Elektronen-Synchrotron (DESY), European Molecular Biology Laboratory (EMBL), the European Space Agency (ESA), the European Organisation for Astronomical Research in the Southern Hemisphere (ESO) and the European Union (EU).

As announced at the TREF Meeting held in March 2009, the CERN Management considers these institutions to still be relevant comparators.

1) The fellowship programmes in these institutions, as detailed on the organizations' websites, indeed bear several similarities with the CERN Fellowship Programme:

   - Young scientists can conduct research at DESY as fellows for two years with a possible extension for one additional year. Their programmes cover experimental, theoretical, accelerator physics and photon science. Their fellows participate in the HERA experiments, LHC experiments and future International Linear Collider accelerator and detector R&D projects.

- EMBL offers both pre-doctoral and post-doctoral fellowships. The pre-doctoral fellowship rates are quoted as being "*competitive by international standards*". Most postdoctoral fellows enter EMBL with external funding. Individual funding is obtainable from a number of international fellowship programmes including the European Commission's Marie Curie Fellowships.
- ESA's postdoctoral research fellowship programme aims to provide young scientists and engineers, holding a doctorate or the equivalent, with the means of doing research in space science, space applications or spacecraft technology. The fellowships, which are for one year (with a possible renewal for a second year), are meant to help the applicants continue research work. ESA differentiates between two kinds of fellowship: External Fellowships, which allow the holders to work in universities and Internal Fellowships for applicants who want to work on a research project inside the Agency.
- ESO awards several postdoctoral fellowships each year. The goal of these fellowships is to offer young scientists opportunities and facilities to enhance their research programmes by facilitating close contact between young astronomers, ESO's activities and its staff; the fellows work on a project of their choice which is related to ESO's research activities.
- EU: researchers who have completed their Masters degree (or equivalent) are eligible to apply for a Marie Curie Fellowship. The purpose is to give researchers the final boost they need to reach professional independence by providing them with the financial resources to undertake advanced training through research, or to acquire complementary skills at a European organization best suited to their professional needs.

  With regard to the relevance of the EU as a comparator, currently approximately one eighth of all fellows at CERN are funded through Marie Curie actions. This, combined with continued Marie-Curie successes such as COFUND, constitutes a strong argument for including the EU.

2) An additional consideration is that, in the light of the extensive modifications made to the Fellowship Programme under the previous five-yearly review, there is a strong argument for maintaining the same comparator institutions in order to ensure coherence and continuity. Changing comparators for the first review following the introduction of these new schemes could severely hinder our ability to accurately measure and compare their attractiveness following their introduction as of 1 July 2006.

III. – CONCLUSION

In the light of the above, the data for the five-yearly review of the social and financial conditions offered to fellows are to be collected from the following research institutions: DESY, EMBL, EU, ESA and ESO.

The three main reasons for this proposal are as follows:

- CERN must ensure that the financial and social conditions offered to fellows remain attractive compared to comparable research institutions.
- By the nature of their fellowship programmes, and given that, like CERN, they benefit from external EU financing mechanisms, these institutions are deemed comparable.
- This list is fully consistent with the previous five-yearly review, thus allowing consistent analysis of the impact of the measures introduced at that stage.

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