

The Early Career, Gender & Diversity Office at the LHCb experiment

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In September 2014, the LHCb collaboration created an office with a mandate to advise and assist on issues related to Early Career, Gender & Diversity (ECGD). This includes several activities within the collaboration: helping early-career physicists succeed, both within academia and outside high-energy physics; collating annual statistics on the gender balance in the collaboration; helping inform the collaboration about topics related to ECGD; listening to and advising colleagues who feel that they are the victims of harassment, discrimination, or other inappropriate behaviour. We discuss the activities of this office and experience gained during its first years of existence.

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1. The LHCb collaboration

LHCb is the smallest of the four large experiments at CERN's Large Hadron Collider (LHC). As of August 15, 2017, the LHCb collaboration consisted of about 1167 members from 73 institutes in 16 countries [1]. When surveyed in 2013, it was found that 46 different nationalities were represented amongst the members of the collaboration. As is typical for physics [2], unfortunately, women are grossly under-represented in the collaboration. An LHCb-internal study of the gender of LHCb scientists, performed in summer 2013, showed that at the time only 107 out of 824 scientists (i.e. 13 %) were female. The study also showed that the proportion of women in positions of leadership or responsibility, such as Physics Working Group Conveners, Project Leaders, members of the Editorial Board, Speakers' Bureau and upper management, was similarly low.

2. The Beginnings

In response to the findings of this study, the LHCb management appointed an "Equality and Diversity Task Force" to explore possible means towards improving the situation. The task force performed an internal survey amongst the members of the collaboration, to verify the results of the previous study regarding gender balance, but also to explore more generally questions regarding working conditions and collaboration culture. Special attention was given to issues related to the situation of younger collaborators. Topics studied included working hours and work-life balance; mentoring and career coaching; paternity/maternity leave; equality and diversity training; discrimination, harassment and use of inappropriate language.

The task force reported to the LHCb Collaboration Board in September 2014. In response to this report and the recommendations made therein, the LHCb management decided to appoint two Early-Career, Gender and Diversity (ECGD) officers, one male and one female, with the mandate to advise management on ECGD matters; be available to listen to and advise colleagues who feel that they are victims of harassment, discrimination, or other inappropriate behaviour; collate annual statistics on ECGD-related matters; and assist the management in scheduling regular open meetings where ECGD matters can be discussed. The ECGD officers are invited to attend all meetings of the LHCb Collaboration Board, the governing body of the collaboration.

3. ECGD Officers

Similar to most other coordination positions in LHCb, the two ECGD officers are appointed for a period of two years. They should be senior(-ish) members of the collaboration, ideally with long-term work contracts, to be less vulnerable to possible attempts at intimidation. During their term of office, they should continue their ongoing activities in detector operation or analysis and, if applicable, keep their coordinating roles in these activities. The first two ECGD officers, Barbara Sciascia and Jonas Rademacker, took office in October 2014 and served till the end of 2016. The second team, Silvia Borghi and Mat Charles, have been in office since October 2016. All four are people who were already visible in the collaboration: Barbara played a major role in the development of algorithms for the identification of charged particles in LHCb and was convener of the Particle Identification Working Group during her term of office; Silvia was Deputy Operations

Coordinator when she started on the ECGD and has in the meantime been promoted to Operations Coordinator; Jonas and Mat have made important contributions in the fields of beauty decays to charmed particles and in charm physics, respectively, and have been Physics (Sub-)Working Group Conveners.

4. ECGD Activities

The main activities of the ECGD office are in line with the recommendations made by the original task force. The ECGD officers maintain a web page [3] as public face of the ECGD and as a means for distributing ECGD-related information; they organize regular plenary meetings within the LHCb collaboration; they monitor the evolution of the gender and diversity balance in the collaboration, as a function of age, in leadership positions, and in the numbers of conference talks given on behalf of the collaboration; they advise the LHCb management on related issues; they are available to listen to and to support colleagues who experience specific problems; they provide support for newcomers to LHCb¹; and they are the LHCb point of contact for ECGD-related issues or initiatives outside the collaboration.

4.1 ECGD Webpage

The ECGD webpage [3] is linked directly to the LHCb homepage [4] and provides a mission statement and contact information as well as an extensive collection of useful links, for example to the web pages of ECGD meetings (Sec. 4.2) and the LHCb mentoring programme (Sec. 4.5), but also to external resources such as ECGD-related research and statistics. In a 2016 internal survey carried out by the ECGD, only three out of 138 respondents stated that they did not find the webpage useful, while 80 found it useful and 55 had not been aware of its existence. This last number demonstrates that there still is room for improvement in advertising the activities of the ECGD to the collaboration.

4.2 ECGD Meetings

A plenary meeting dedicated to ECGD matters has been a fixed agenda item in all LHCb collaboration weeks since December 2014. LHCb collaboration weeks take place four times a year and eleven such ECGD meetings have taken place so far. They have drawn of the order of 100 to 150 participants, which is a typical attendance for plenary sessions in LHCb weeks. A vast majority of respondents in the 2016 survey stated that they found the meetings useful.

Each meeting has been focused on a specific topic, often inspired by feedback received in surveys of the collaboration. Topics discussed in the meetings so far include mentoring, paternity/maternity leave, career options outside high-energy physics and academia, sexual harassment, gender imbalance, the representation of younger colleagues in the collaboration, and human-human interactions within the collaboration.

The meetings are organized and chaired by the two ECGD officers, but volunteers from the collaboration are enlisted to contribute, for example by suggesting topics for discussion, preparing introductory presentations, or participating in panel discussions. The emphasis during the meetings

¹The “LHCb Starter Kit initiative” is discussed in another contribution to these proceedings.

is on interactive discussions with the “audience”. The ECGD officers strive to follow up on these discussions with concrete, tangible actions.

4.3 Gender Biases

While we cannot eradicate gender biases and prejudices that are unfortunately deeply rooted in our society, we believe that we can and must make an effort to reduce obstacles and sources of inequality within our collaboration. Explicit discrimination, for example in the form of sexist comments or jokes, or unequal treatment of male and female students, is usually relatively easy to spot. The ECGD can help here by providing a point of contact for colleagues who feel they have been discriminated against and by raising awareness with people who could be a potential source of problems. It should be stressed that the ECGD never acts as a “gender police” but only in the form of friendly consultation. Often less obvious than explicit discrimination is implicit discrimination, for example through a male-dominated work environment that might provoke in female colleagues a feeling of not fitting in, or through structures that disfavour women from advancing in their career. Male colleagues may often not even be aware of the existence of such barriers. The ECGD can play an important role here in raising awareness and in proposing good practice towards alleviating the ill-effects of implicit discrimination. As an example of a concrete improvement, LHCb now guarantees that members holding a leadership position, for example as Physics Working Group Convener, can return to this position after paternity or maternity leave or a temporary leave of absence for similar reasons (for example to take care of a sick family member).

4.4 Harassment

Sadly, surveys show that sexual harassment occurs much too frequently also in academic environments [5]. The internal surveys performed in 2013 by the Equality and Diversity Task Force and in 2016 by the ECGD office, show that incidents of harassment also occur in our collaboration at a higher rate than we would like to believe. Sexual harassment can occur on many levels and in some cases the perpetrator may not even realize that his or her behaviour is perceived as harassment by the victim. Again, the ECGD office can help here by providing a point of contact for colleagues who feel they have been victims of harassment and by talking and raising awareness with perpetrators.

4.5 LHCb Mentoring

In the 2013 survey, one in four male and one in three female respondents indicated that they did not have a mentor but would like to have one. The vast majority of those respondents who did have a mentor indicated that they were glad to have one. The first of the ECGD meetings was dedicated to the topic of mentoring and the discussions at this meeting led to the introduction of a mentoring system within the LHCb collaboration. While a large number of colleagues, mostly senior physicists from Western European countries, volunteered as potential mentors, the uptake from potential mentees has so far been limited. We do not know the reason for this discrepancy between the apparently existing wish for having a mentor and this so far limited uptake, but one hypothesis is a reluctance of prospective mentees to approach a potential mentor whom they do

not know well enough. The ECGD are exploring ways to lower and overcome this activation barrier, for example by organizing informal meet-and-greets between mentees and mentors at LHCb collaboration meetings.

4.6 Beyond LHCb

The ECGD serves as LHCb's point of contact to related activities outside the collaboration. For example, the ECGD provided input for CERN's latest five-yearly review of employment conditions and is in contact with the CERN Ombudsperson [6].

Another goal of the ECGD is to help build contacts between LHCb physicists at early stages of their career and former members of the collaboration who made a career elsewhere, in particular outside of academia. For example, one of the ECGD meetings was dedicated to a discussion round with several LHCb alumni who had moved to jobs outside academia. The ECGD also participates in the organization of the LHC-wide career networking events, the most recent of which took place in December 2016 [7] and the next of which is scheduled for autumn 2017.

5. Conclusion

The LHCb collaboration is the first and, at the time of writing, the only large particle physics collaboration to form a dedicated office to address issues related to Early Career, Gender and Diversity (ECGD). Amongst other tasks, the ECGD officers monitor and advise the LHCb management on issues related to ECGD matters, they take action to raise awareness in the collaboration of ECGD-related issues and they provide a point of contact for members of the collaboration who feel that they have been victims of discrimination or harassment. The ECGD office has been in existence for about two and a half years, during which it launched a number of promising initiatives, raised the level of awareness in the collaboration for its objectives, and has had a very positive impact on the collaboration culture.

I would like to conclude by thanking the organizers of this conference for having dedicated a session to the very important questions of gender and diversity and to the concerns of our colleagues at an early stage in their career. Many of the gender- and diversity-related issues discussed here have their roots in society and we do not have the means to solve them on this larger scale. However, we should feel obliged to do our best to alleviate their impact on our daily lives as particle physicists. Talking about these issues and raising awareness about their existence is an important starting point. It would be nice to see a plenary presentation on these questions at the next edition of EPS.

References

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- [7] <https://indico.cern.ch/event/561880/>