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Update on Women in Physics in Argentina

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Abstract. Data collected 10 years ago in Argentina concluded that women in physics were underrepresented in many instances and that a "crystal ceiling" was firmly in place. We have collected updated data for several indicators and compared them with those obtained 10 years ago. Although there is not a clear conclusion to be drawn from this comparison, we try to explain the results within the framework of the changes in scientific policies in Argentina.

Keywords: women in physics, Argentina

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At the previous three IUPAP International Conferences on Women in Physics we reported on the opportunities and participation of women in physics in Argentina. We attempted to relate the patterns found in the representation of women at different positions and career stages to trends in the socioeconomic development of our country, as well as to more global trends in scientific careers.

In the past seven years Argentina has seen significant improvement in opportunities for all scientists, paralleling a general improvement in the economy and social welfare of the country. Since 2003 we have witnessed a significant increase in the overall science and technology budget, which translates into better salaries, more positions at universities and research institutions, more scholarships, better infrastructure, and more and larger research grants. At the same time, a great effort is under way to generate an innovation- and technology-based industry. All of this has contributed to science being perceived as a more attractive activity than it was 10 years ago.

We wondered how the changes in the overall scientific scenario in Argentina had affected women in science here, especially women in physics. We found one remarkable improvement is that key decision positions at governmental organizations such as the Ministry of Science, Technology and Productive Innovation are presently held by women. Also, CONICET (the Argentine national research council, similar to the French CNRS) is headed by a woman astronomer. However, it is difficult to tell whether these facts reflect reasonably established trends and are accompanied by deeper changes. In an attempt to clarify this issue we surveyed women in physics at different career stages from scientific institutions and universities and compared them with the data we collected in 2001–2002 [1, 2]. Our findings do not reflect clear trends and are not easy to interpret.

Our first concern was to study the number of women pursuing a degree in physics at the undergraduate level. We surveyed the University of Buenos Aires, which is the largest in the country. We found that the average female student enrollment in a physics major for the period 1990–1999 was 31%, and that it decreased to 27% for 2000–2010. However, the average number of female students graduating in physics is 34% for 2000–2010, which seems to indicate that more men than women drop off from physics during their undergraduate studies.

Another interesting parameter is the number of scholarships granted by CONICET to students enrolling in a PhD program in physics. The total number of scholarships almost doubled, from 31 in 1999 to 58 in 2010. The percentage of scholarships granted to women rose from 16% in 1999 to 33% in 2010, while the percentage of female applicants rose from 20% in 1999 to 35% in 2010. From this information one may conclude that when more people are given the opportunity to pursue graduate studies, the proportion of women increases. The same conclusion cannot be drawn at the research level, where we found that although research positions in physics funded by CONICET increased by 41% from 1999 to 2010, the proportion of women holding these positions remained essentially the same (22%). However, if these figures are split into the junior and the senior categories of research positions, we find that the percentage of women at the senior levels increased from 10% in 1999 to 19% in 2010, while the percentage of women at the junior levels decreased from 30% in 1999 to 26% in 2010.

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Increasing the money invested in research also seemed to increase the participation of women. The number of physics research projects funded by the ANPCYT (Agencia Nacional de Promoción Científica y Tecnológica, the main funding agency in Argentina) that are led by women increased from 7% (one of 15 funded projects) in 1999 to 21% (six of 29 funded projects) in 2008 [3].

In short, it appears that although there has been a strong support for science and technology at a governmental level for the past seven years, the participation of women in physics in Argentina has not changed significantly, nor equally, across the indicators we have studied. Although we believe that the scientific and physics community is more aware of gender issues than it was 10 years ago, and more sensitive to them, we feel that specific issues concerning the underrepresentation of women in physics still need to be addressed.

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