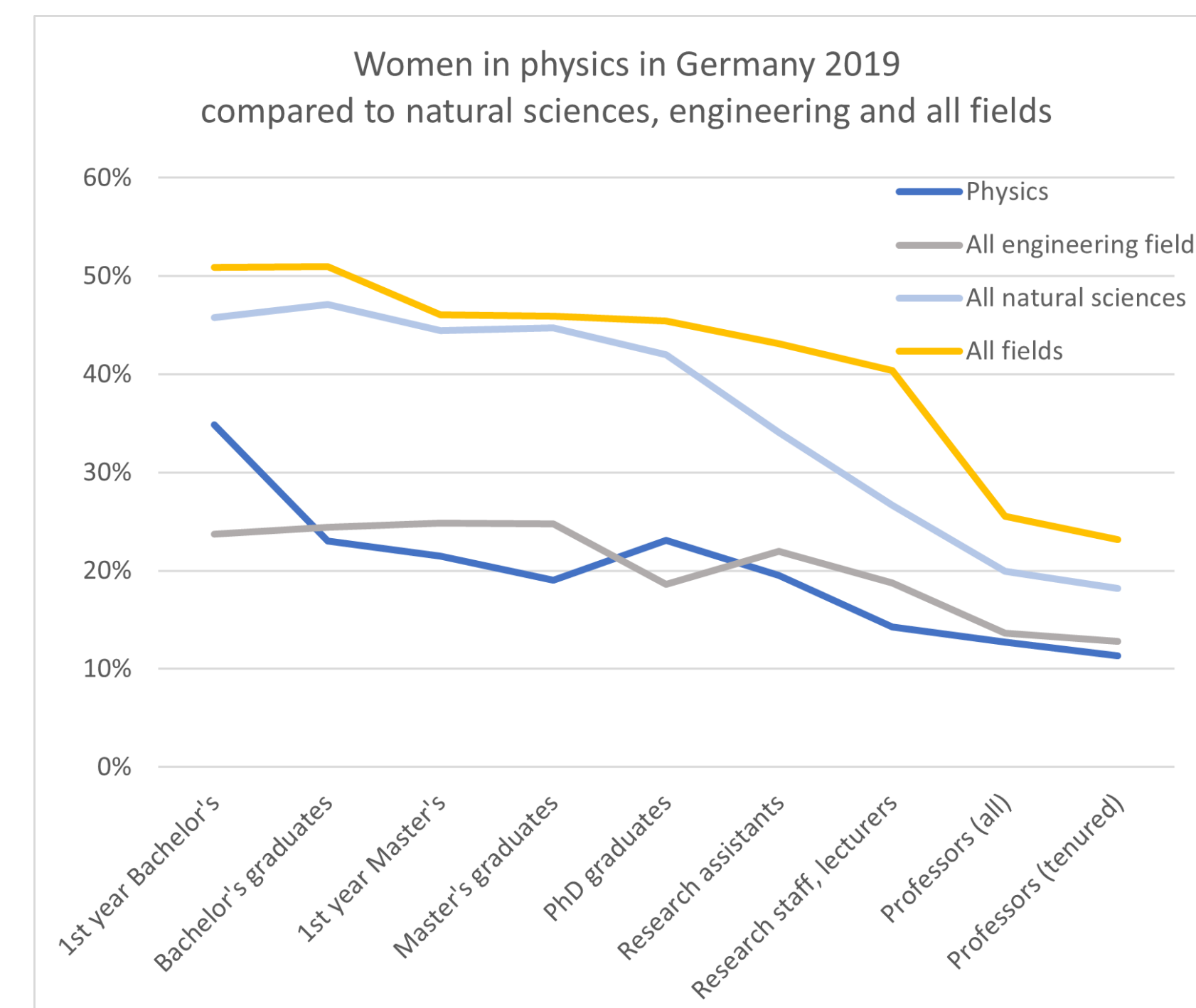
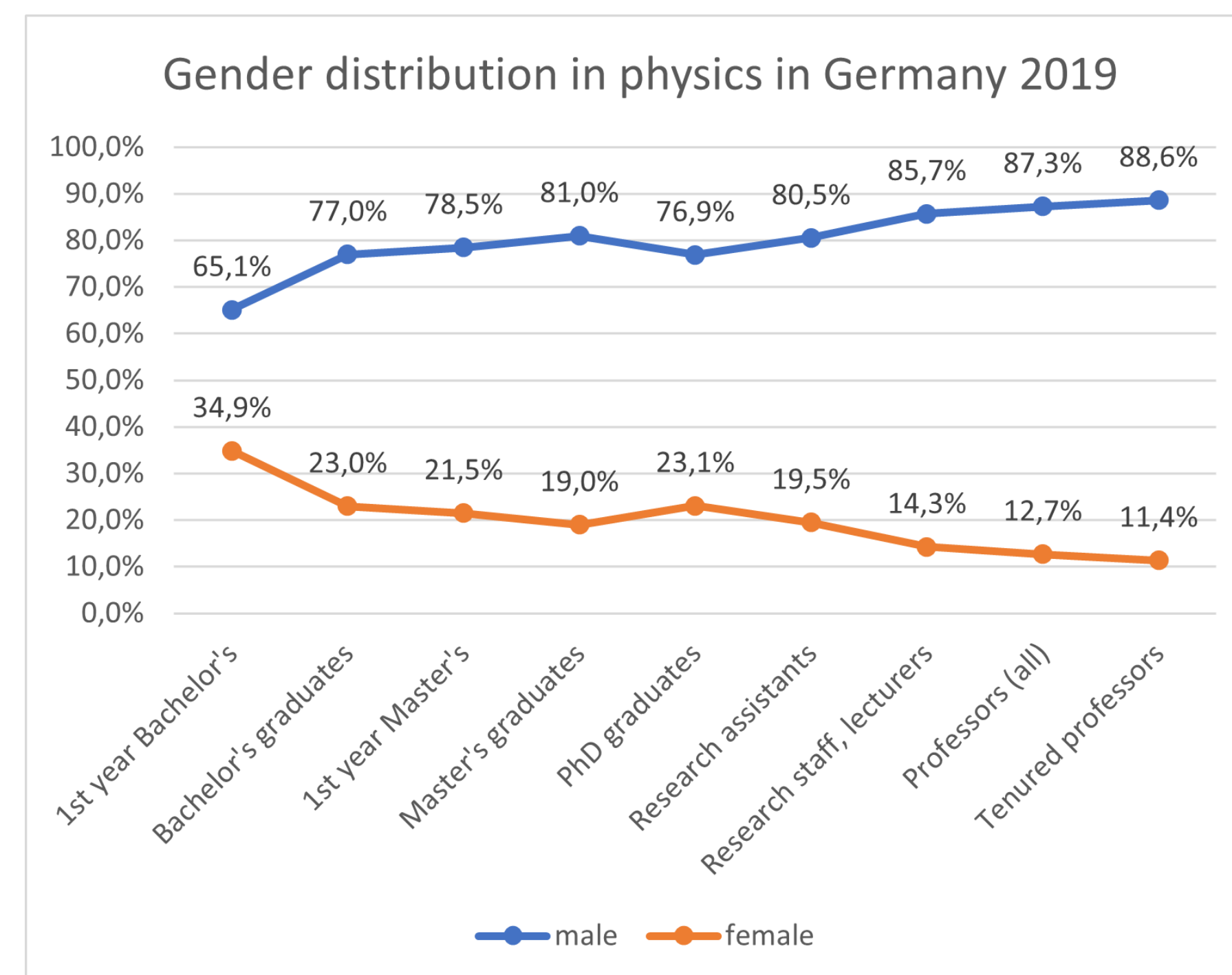
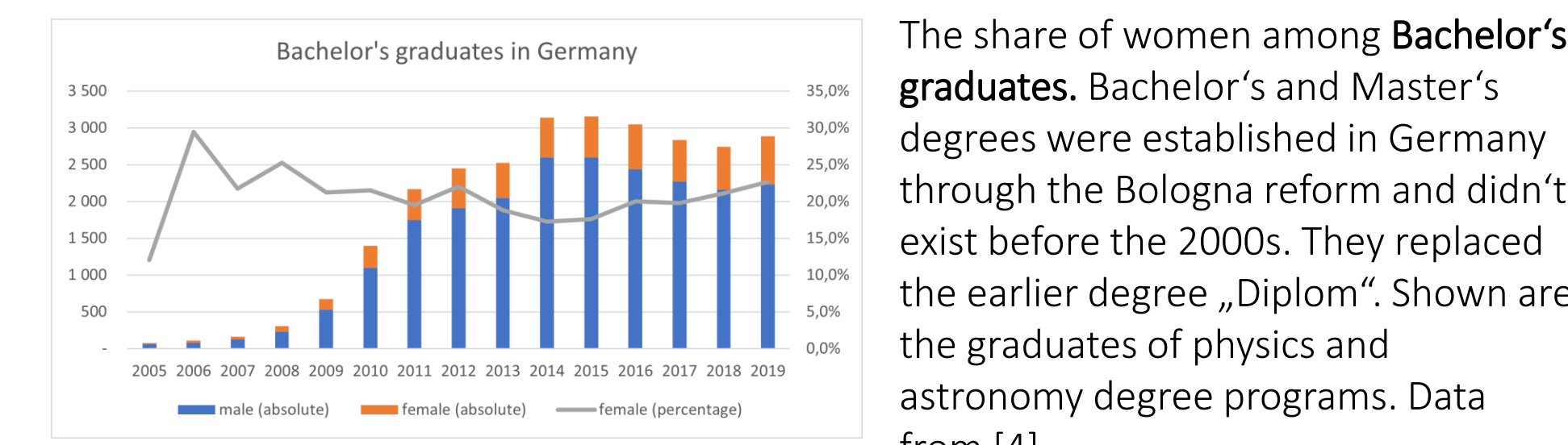


Women in physics in Germany: current developments and actions taken towards equal opportunities

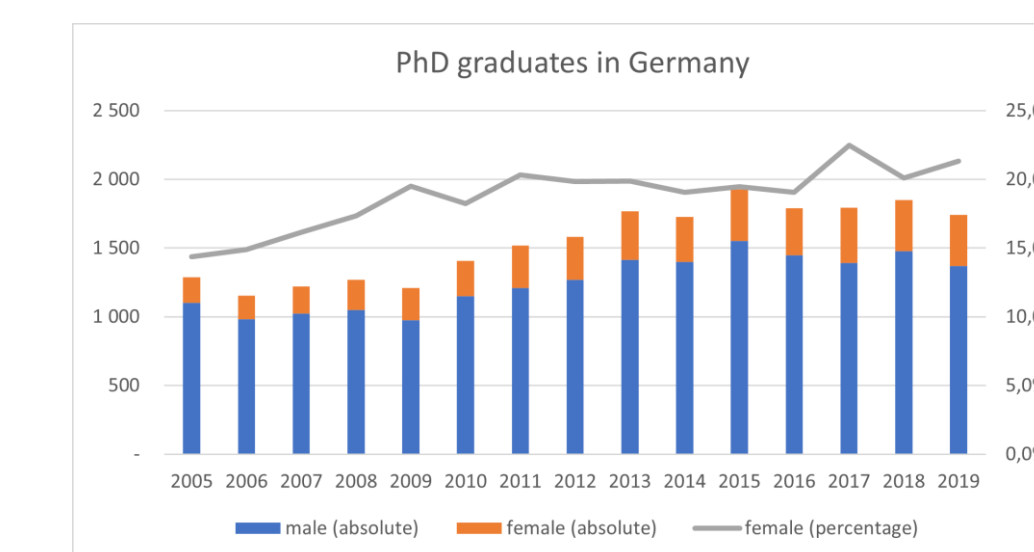
Statistics and recent developments



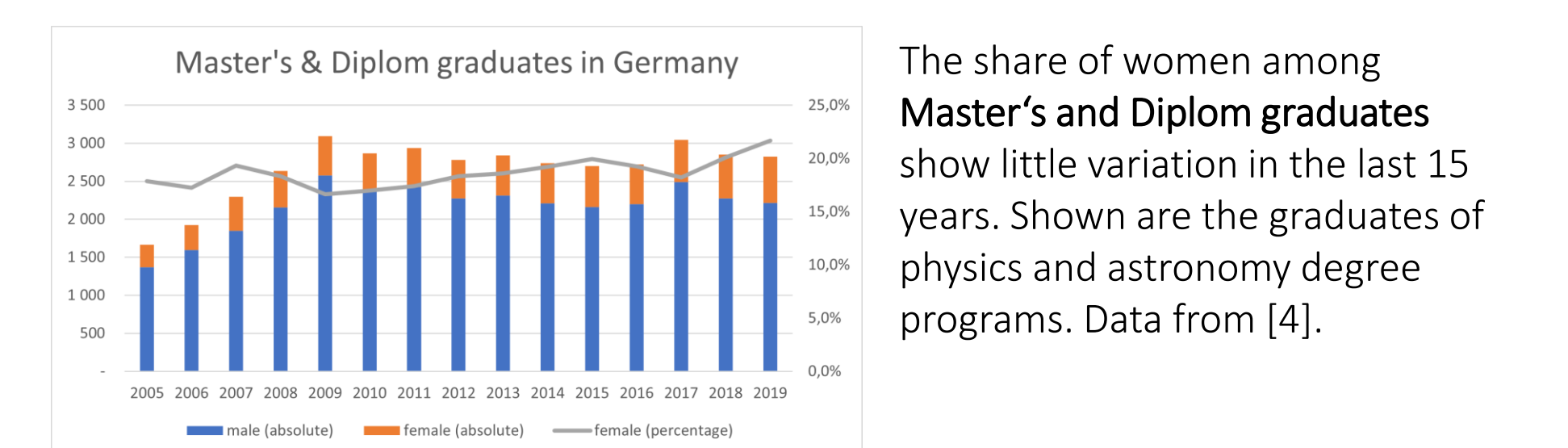
Development of the gender distribution at different career levels:



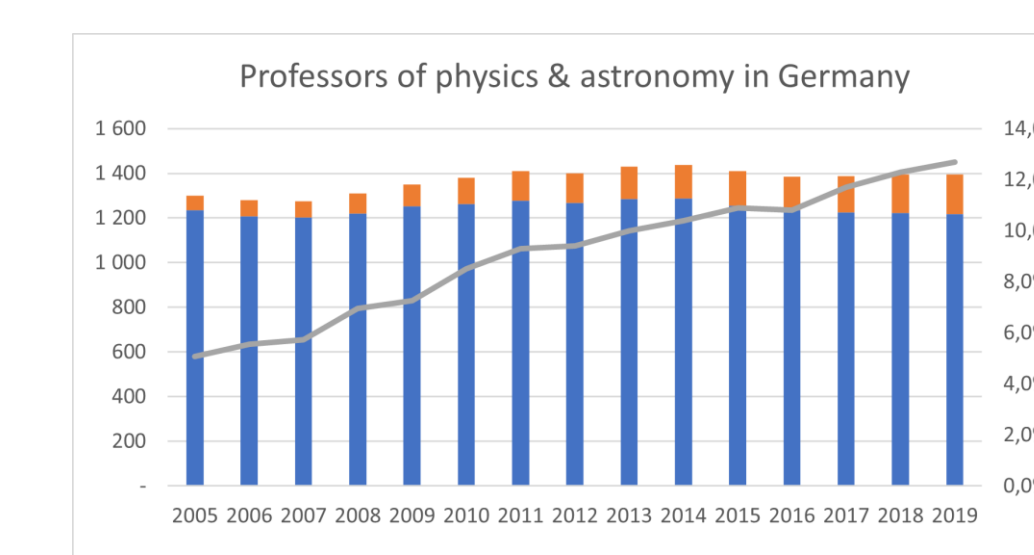
The share of women among **Bachelor's graduates**. Bachelor's and Master's degrees were established in Germany through the Bologna reform and didn't exist before the 2000s. They replaced the earlier degree „Diplom“. Shown are the graduates of physics and astronomy degree programs. Data from [4].



The share of women among **PhD graduates**. Shown are the graduates of physics and astronomy degree programs. Data from [4].



The share of women among **Master's and Diplom graduates** show little variation in the last 15 years. Shown are the graduates of physics and astronomy degree programs. Data from [4].



The share of women among **physics professors** does increase, however it increases by <1% per year. Shown is the data for all professors (tenured and non-tenured). The percentage of women among tenured professors is ~1,5% lower than these values and currently increases by ~0,5% per year. Data from [3].

The share of women in physics at different educational and career levels in Germany compared to the natural sciences and engineering. The data for physics students is from [2], all other data is from [3].

The large share of women among **first year Bachelor's students** is attributed to the large share of women among students who enroll in physics but never actually attend a class [2].

The share of women among **Bachelor's, Master's and PhD graduates** is stagnant at ca. 20% for more than ten years (see graphs on the right).

The relatively large share of women among **PhD graduates** is attributed to the large number of PhD students coming from abroad to pursue their PhD studies in Germany. While the share of women among German PhD students was 18% in 2020, the share of women among PhD students who came to Germany from abroad was 32%, and overall more than 43% of women pursuing a PhD in physics in Germany are coming from abroad [2]. Note: Many PhD students are employed as research assistants.

All these values are **significantly lower than the share of female students and staff across all fields in general** (in 2019: Bachelor's graduates: 50,9% female; Master's graduates: 45,9% female; PhD graduates: 45,4% female; professors: 25,6% female [3]).

Current projects and initiatives



Every year between 120-350 female physicists and students meet at the Physikerinnentagung (German Women in Physics Conference, since 1998) at varying universities for the exchange of experiences, discussing research and gender equality issues and networking. The photo shows participants at the 2018 conference.



The „physicist of the week“ campaign to increase the visibility of women in physics.



A physics project with female middle school students [5].



The annual Lise Meitner Lecture is accompanied by this poster exhibition portraying women in physics as role models.

Persisting problems addressed in recent initiatives:

- Lack of Childcare at conferences & workshops
- Relative underrepresentation of women receiving physics awards: still some of the most prestigious physics awards were never awarded to a woman
- Relative underrepresentation of women receiving Invitations to give plenary talks
- In general: the masculine culture

References:

[1] Ingold, G. and Düchs, G.-L., Frauenanteil bleibt stabil, 2018. Physik Journal 17, 8/9, p. 32-37.

[2] Düchs, G.-L. and Mecke, K., Konstanz trotz Corona, 2020. Physik Journal 19, 8/9, p. 70-75.

[3] German Federal Bureau of Statistics (Statistisches Bundesamt), Bildung und Kultur, 2020. Fachserie 11, Reihe 4.4.

[4] German Federal Bureau of Statistics (Statistisches Bundesamt), Bildung und Kultur, 2020. Fachserie 11, Reihe 4.2.

[5] Ađanođlu, R. and Sandner, A., Für den Nachwuchs in Physik, 2020. Physik Journal 19, 6, p. 2.