

Beyond Representation: Data to Improve Equity in Physics and Astronomy

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The American Institute of Physics (AIP) collects data on the representation of women and members of other underrepresented groups in physics and astronomy at all levels, from high school students to faculty members. Although indicative of some trends, these data do not tell the whole story. For physicists and astronomers who persist despite being underrepresented, data show that there are additional barriers to equitable participation. For example, women physicists who responded to a global survey reported that they have less access to career-advancing resources than men reported. In addition, AIP's TEAM UP report documents factors that contribute to the low numbers of Black undergraduate students in physics and astronomy. A recent AIP study of the effects of COVID on undergraduate physics and astronomy students showed more negative effects for those who are from marginalized groups than for those who are not marginalized. The effects of barriers such as these combine to create an accumulation of disadvantage that can set back individual scientists' careers and impede scientific progress. Data on inequity in physics and astronomy are essential so that we may design programs and practices that will allow full participation for all.