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The need for small scale experiments to answer big questions

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In the era of large collaborations in high-energy physics, early-career scientists might feel intimidated by the complex dynamics and politics of big modern experiments. Over-specialization of the scientific effort might cause one to lose touch with the big picture, especially at the beginning of the career. This, of course, is not the case for all new researchers. However, a subset of them might want to have a connection to every part of the experiment they contribute to and not specialize only in a sub-project. Furthermore, the long timescale of big experiments might cause part of the community to lose interest.
Small-scale experiments allow the training of new researchers that know how an experiment is sketched, built, and eventually run. Giving the opportunity to grow the next generation of leaders without a spotlight that is too bright. It also allows the development of technology in a reasonable time scale without the pressing requirements of big investments. The advantage to the community is then immediate: train the new generation and answer big physics questions in a reasonable timescale, all with a low-risk factor from the funding agencies.
One example of a small experiment that can have a big impact is PIONEER, which is a next-generation experiment to measure the charged-pion branching ratio to electrons vs. muons and the pion beta decay with an order of magnitude improvement in precision. However, many other experiments fit into this category.

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