

## P5 Town Hall Meeting



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### **Precision theory for energy and intensity frontiers**

Precision theoretical calculations have guided experimental discoveries, such as the Higgs boson, top quark, and neutrino masses. They are essential for distinguishing signals of New Physics from the Standard Model background, designing new experiments, and providing insight into the fundamental nature of the universe. Investing in theoretical support for experiments is critical for the future of high-energy physics. Experimental results can only be interpreted with sufficiently precise theoretical calculations, and we otherwise risk missing opportunities for discovery. Modern precision theory is highly challenging and needs focused effort. It requires developing new techniques and tools, significant computing resources, and large research collaborations.

As the United States continues to lead the way in high-energy physics, I will highlight how we must prioritize investment in precision theoretical predictions.

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