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## The ATLAS Forward Proton (AFP) detector

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The ATLAS Forward Proton (AFP) is a project to upgrade the ATLAS experiment with additional 3-D silicon detectors, placed at  $\pm 206$  and  $\pm 214$  meters on both sides of the ATLAS experiment, allowing measurements of the forward protons scattered diffractively or electromagnetically and with the remarkable capability to tag and measure both protons in exclusive central diffractive/elmg processes. The use of precision timing detectors allows this type of physics to be pursued to high luminosity for the first time.

The AFP project opens up an important new window on LHC physics not available with the existing ATLAS detector. The AFP physics programme will be discussed, including soft diffraction, hard inclusive diffraction, exclusive diffraction and exotics studies in two-photon exchange processes. The experimental challenges in constructing this detector as well as the status of the project will be discussed

### Summary

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