Explain your request. This explanation should be able to guide the scheduling committee. Outline if only a fraction of the PAC-approved runtime is requested. Identify any constraints on the scheduling of your experiments (e.g. periods when members of the collaboration have prior commitments that would exclude their participation, or times when critical apparatus will not be available): Type your answer in the space provided below or attach a document in the attachments section at the bottom of this form.

The HPS experiment is approved to run for 180 PAC days, of which 78 were used for Engineering Runs in 2015 and 2016 and physics runs in 2019 and 2021. The experiment collects data at energies between 1.1 and 6.6 GeV in order to search for a heavy photon (aka hidden sector or dark photon) over a wide range of mass/coupling parameter in two signatures; resonances and displaced vertices in the e+e- final state. Results from the resonance search on 2015 data were published in 2018, and the full 2015 and 2016 results for both the resonance and displaced vertex searches were published as a PRD in 2023. Analysis of the 2019 and 2021 datasets for both resonance and displaced vertex searches are ongoing, as well as searches for non-minimal models where the heavy photon couples to a strongly interacting dark sector. HPS has re-evaluated its reach using the actual performance achieved during these runs, and our request is based on an optimized run plan using these new estimates. For the 2025-2026 run period, we request a total of 60 PAC days including 50 days of production data taking at ~4.4 GeV (2-pass beam), 6 PAC days of running at 2.2 GeV (1-pass beam) for SVT calibration, and 4 PAC days for beam tune and commissioning. The data from this run will contribute to the ongoing search for heavy photons in well-motivated and unexplored territory where dark matter coupling to regular matter through the heavy photon produces the observed dark matter abundance via thermal freeze-out.