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LHCb Charm Pentaquark Search with SoLID Detector in Hall A at Jefferson Lab[1] BURCU DURAN, Temple University, E12-12-006 / SOLID COLLABORATION COLLABORATION — Four years after the initial discovery of the hidden-charm pentaquarks by LHCb, the collaboration released new results in 2019 indicating the discovery of a new pentaquark, while the $P_c(4450)$ state resolved into a double peak structure. Although the theory community produced numerous publications interpreting the results, the LHCb experiment remains the only experiment that observed these states. Jefferson Lab has an extensive experimental program in all four experimental halls to study the LHCb hidden-charm pentaquarks' nature. The recent Hall C J/ψ experiment (E12-16-007) used a high-intensity real photon beam to search for these states at high values of the proton momentum transfer $|t|$, maximizing the sensitivity to these s-channel resonances. The SoLID-J/ψ experiment will combine high luminosity and large acceptance to measure J/ψ electro- and photo-production in the threshold region with unprecedented statistical precision. In this talk, I will discuss the impact of the SoLID-J/ψ experiment on the LHCb hidden-charm pentaquark search.

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