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The lifetime of the 6.793 MeV subthreshold state in ^{15}O plays a central role in constraining the astrophysical S-factor of the $^{14}\text{N}(p,\gamma)^{15}\text{O}$ reaction, the slowest process in the CNO cycle. This state has long been the source of large uncertainties in extrapolations to stellar energies, and previous lifetime measurements were unable to resolve the problem due to limited sensitivity. The measurement was conducted at the AGATA setup at LNL coupled with the SAURON array in November 2023. The measurement pushed the AGATA γ -ray tracking array to the very limit of its sensitivity and demanded an exceptionally precise energy calibration over a wide dynamic range. In this talk we will present the current status of our advanced analysis of the Doppler Shift Attenuation Method (DSAM) and the development of an innovative analysis technique to extract the half-life in the femtosecond range.

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