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$p-p$, $p-\bar{p}$, and $\bar{p}-\bar{p}$ Femtoscopic Correlations in the RHIC Beam Energy Scan in STAR ANDREW PETERSON, Ohio State Univ - Columbus, STAR COLLABORATION — In heavy-ion collisions, observables are known to differ significantly for p and $\bar{p}$. This may purely be an effect of differing emission region geometry for p's and $\bar{p}$'s within the hot, dense matter produced in heavy-ion collisions with flow. Femtoscopic analysis is sensitive to the size of the emission region of pairs of particles and, for non-identical species pairs, the separation between their emission regions. Qualitative predictions for the separation between p and $\bar{p}$ emission regions in the transverse plane have been made that contradict in regards to which species comes from deeper within the source. We present femtoscopic correlation functions, decomposed in Spherical Harmonics, from identified pairs of protons and anti-protons measured in the STAR detector during the RHIC Beam Energy Scan.

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