Measurements of femtoscopic correlations in high-energy heavy-ion collisions aim to unravel the space-time structure of the particle-emitting source (the quark-gluon-plasma). Recent results indicate, that the pion pair-source exhibits a power-law behavior, and can be described well by a Lévy distribution. In this study, Lévy fits were performed to the measured one-dimensional two-pion correlation functions in Au+Au collisions at $\sqrt{s_{NN}}=200$ GeV. The three extracted source parameters are the Lévy scale parameter, $R$, which relates to the size of the source, the correlation strength parameter, $\lambda$, and the Lévy exponent, $\alpha$, which characterizes the power-law tail of the source. In this poster, we report the current status of the analysis of the extracted Lévy source parameters, and present their dependence on average transverse mass, $m_T$, and on centrality.