Figure 4.40: Experimental and theoretical data for the derivatives of $\sigma_1 + \sigma_2$ and the experimental integrated $\sigma_1 + \sigma_2$ for specimen HomC1 for $K_I = 0.259 \text{ MPa}\sqrt{\text{m}}$ and $K_{II} = 5.0 \text{ kPa}\sqrt{\text{m}}$ with crack region masked in blue.
Figure 4.41: Theoretical error for CGS approximating the derivatives of $\sigma_1 + \sigma_2$, assuming $K_I = 0.259$ MPa$\sqrt{m}$ and $K_{II} = 5.0$ kPa$\sqrt{m}$ for the 4.6 mm $\times$ 4.6 mm field of view and lateral shearing distance of $d_{shear} = 225$ $\mu$m [Crack indicated in black]
Figure 4.42: Experimental and theoretical data for the principal stresses for specimen HomC1 for $K_I = 0.259 \text{ MPa}\sqrt{\text{m}}$ and $K_{II} = 5.0 \text{ kPa}\sqrt{\text{m}}$ with crack region masked in blue.
Figure 4.43: Experimental and theoretical data for the Cartesian stresses for specimen HomC1 for $K_I = 0.259 \text{ MPa} \sqrt{\text{m}}$ and $K_{II} = 5.0 \text{ kPa} \sqrt{\text{m}}$ with crack region masked in blue.
Figure 4.44: Experimental and theoretical data for the polar stresses for specimen HomC1 for $K_I = 0.259$ MPa$\sqrt{m}$ and $K_{II} = 5.0$ kPa$\sqrt{m}$ with crack region masked in blue.
Figure 4.45: Experimental and theoretical data for \( \sigma_{yy} \) along \( \theta = 0 \) for specimen HomC1 for \( K_I = 0.259 \text{ MPa}\sqrt{\text{m}} \) and \( K_{II} = 5.0 \text{ kPa}\sqrt{\text{m}} \): The experimental data is slightly lower than the theoretical data, but with similar \( r^{-1/2} \) dependence seen by the near \(-1/2\) slope on the log-log plot of \( \sigma_{yy} \) versus \( r \).