Normalized energy release rate $\frac{G_{(\cdot\cdot)}}{G_0}$ as function of crack angular semi-aperture $\Delta\theta$, calculated with in-house VCCT and Abaqus built-in J-Integral (*CONTOUR INTEGRAL) post-processing routines 0.7 $\frac{G_I}{G_0}$, FEM-VCCT $\frac{G_{II}}{G_0}$, FEM-VCCT $\frac{G_I + G_{II}}{G_0}$, FEM-VCCT $\frac{G_{TOT}}{G_0}$, FEM-JINT, Contour 1 0.65 $\frac{G_{TOT}}{G_0}$, FEM-JINT, Contour 2 $\frac{G_{TOT}}{G_0}$, FEM-JINT, Contour 3 $\xrightarrow{G_{TOT}}$, FEM-JINT, Contour 4 $\frac{G_{TOT}}{G_0}$, FEM-JINT, Contour 5 0.6 $\frac{G_{TOT}}{G_0}$, FEM-JINT, Contour 6 $\xrightarrow{G_{TOT}}$, FEM-JINT, Contour 7

