Metal Spheres Phantom Images
Without and With MAR
Control – No metal spheres without MAR

\[ \sigma_{\text{artifact}} = 35.9 \pm 1.1 \]
Control – No metal spheres with MAR

\[ \sigma_{\text{artifact}} = 33.6 \pm 1.0 \]
3.2mm Steel Without MAR

$\sigma_{\text{artifact}} = 1278.6 \pm 262.0$
3.2mm Steel With MAR

\[ \sigma_{\text{artifact}} = 31.7 \pm 2.7 \]
3.2mm Tungsten Without MAR

\[ \sigma_{\text{artifact}} = 1580.0 \pm 268.0 \]
3.2mm Tungsten With MAR

\[ \sigma_{\text{artifact}} = 34.4 \pm 1.2 \]
$\sigma_{\text{artifact}} = 360.8 \pm 65.6$
3.2mm Titanium With MAR

\[ \sigma_{\text{artifact}} = 39.1 \pm 1.6 \]
6.4mm Steel Without MAR

\[ \sigma_{\text{artifact}} = 1179.1 \pm 106.9 \]
$\sigma_{\text{artifact}} = 33.4 \pm 1.8$
6.4mm Tungsten Without MAR

\[ \sigma_{\text{artifact}} = 1039.1 \pm 60.5 \]
6.4mm Tungsten With MAR

\[ \sigma_{\text{artifact}} = 37.8 \pm 2.1 \]
6.4mm Titanium Without MAR

\[ \sigma_{\text{artifact}} = 683.5 \pm 97.7 \]
6.4mm Titanium With MAR

\[ \sigma_{\text{artifact}} = 54.2 \pm 9.3 \]
12.8mm Steel Without MAR

$\sigma_{\text{artifact}} = 405.1 \pm 24.0$
12.8mm Steel With MAR

\[ \sigma_{\text{artifact}} = 53.2 \pm 7.1 \]
$\sigma_{\text{artifact}} = 60.5 \pm 12.4$

Different position than others (frontal lobe)
12.8mm Tungsten With MAR**

\[ \sigma_{\text{artifact}} = 26.0 \pm 1.7 \]

Different position than others (frontal lobe)
$\sigma_{\text{artifact}} = 298.0 \pm 39.8$
12.8mm Titanium With MAR

\[ \sigma_{\text{artifact}} = 48.7 \pm 8.0 \]
Coil+stent Phantom Images
Control With Noncontrast

\[ \sigma_{\text{artifact}} = \pm \]
Control With Contrast

$\sigma_{\text{artifact}} = \pm$
Stent With Contrast

$\sigma_{\text{artifact}} = \pm$
Stent with Noncontrast

\[ \sigma_{\text{artifact}} = \pm \]
3 Coils and Stent With Contrast

\[ \sigma_{\text{artifact}} = 483.9 \pm 41.9 \]
3 Coils and Stent With Contrast after MAR

$\sigma_{\text{artifact}} = 51.6 \pm 2.6$
3 Coils and Stent With Noncontrast

\[ \sigma_{\text{artifact}} = 489.3 \pm 53.3 \]
3 Coils and Stent With Noncontrast after MAR

\[ \sigma_{\text{artifact}} = 40.7 \pm 2.2 \]
$\sigma_{\text{artifact}} = 479.9 \pm 39.2$
3 Coils Alone With Noncontrast after MAR

$\sigma_{\text{artifact}} = 34.5 \pm 3.3$
$\sigma_{\text{artifact}} = 443.3 \pm 46.7$
3 Coils Alone With Contrast after MAR

$\sigma_{\text{artifact}} = 43.9 \pm 11.7$