

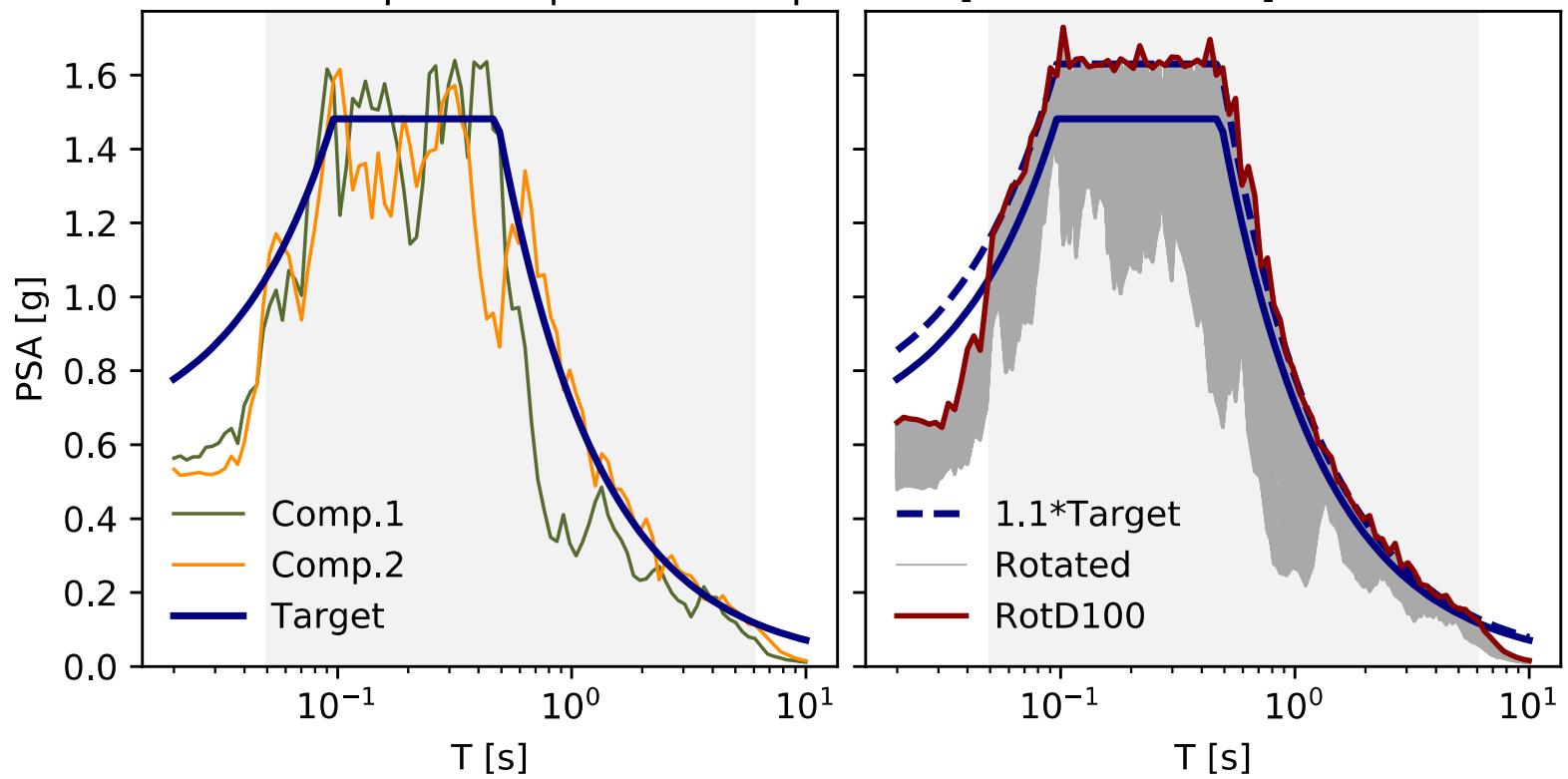
Digital Appendix for:

Response spectral matching of horizontal ground motion components to an orientation-independent spectrum (RotDnn)

Luis A. Montejo

A3. Results obtained using the proposed methodology and the ASCE-7 MCE_R spectrum as target

Response Spectra Comparison [NGA.RSN.164]

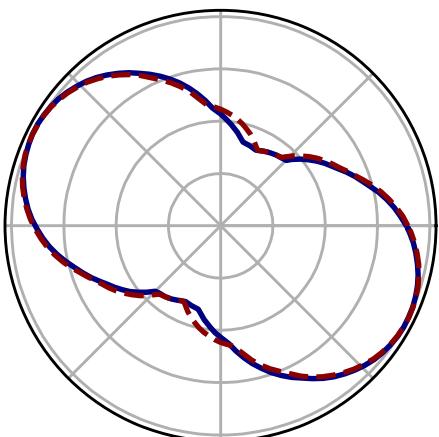
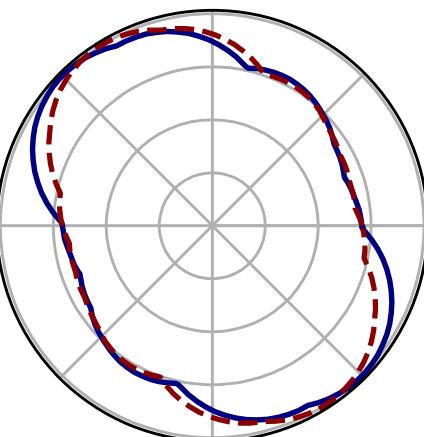
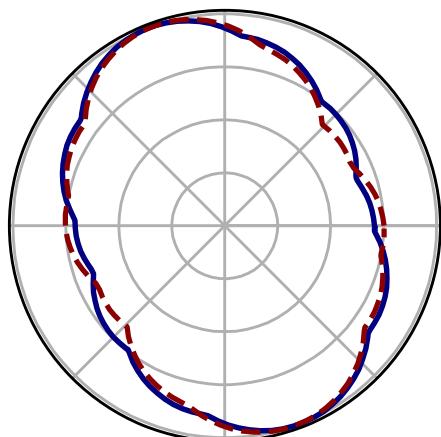


Normalized Spectral Accelerations @ θ [NGA.RSN.164]

T = 0.1 s

T = 0.2 s

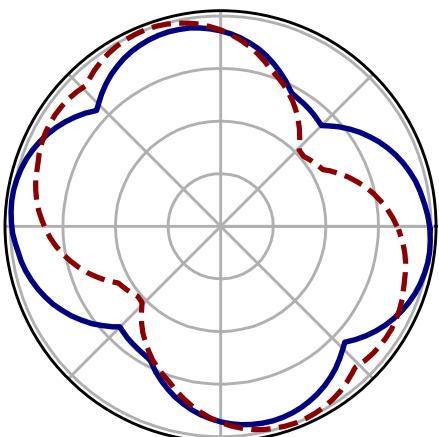
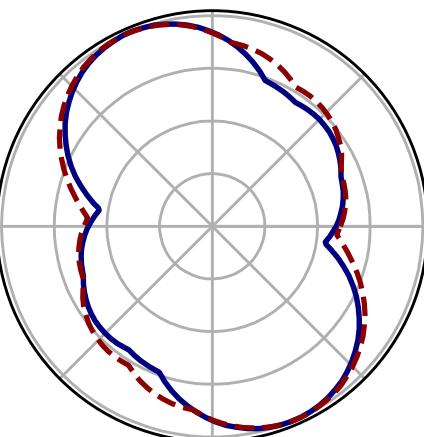
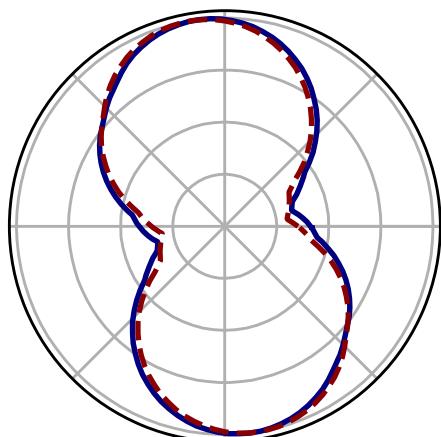
T = 0.5 s



T = 1.0 s

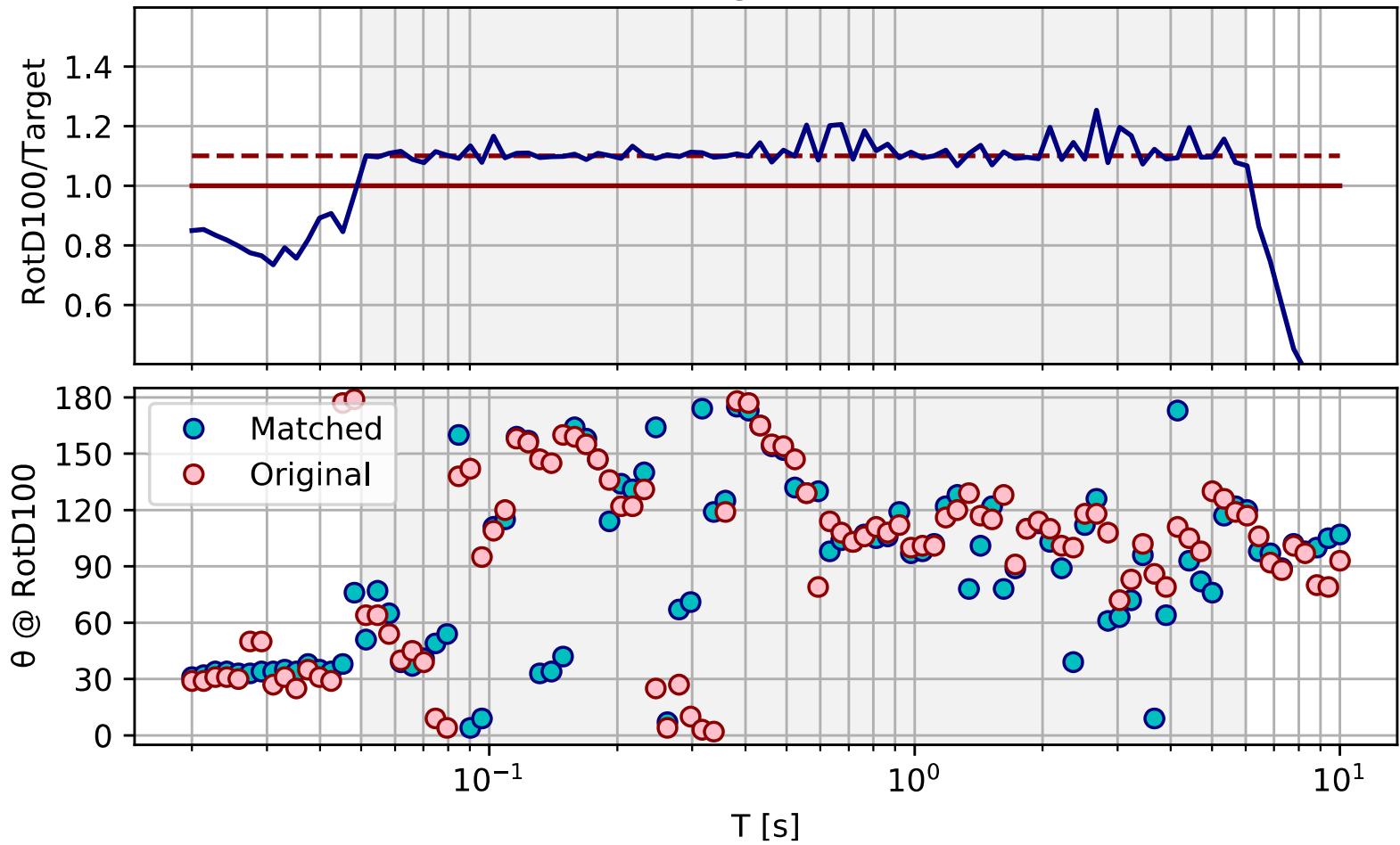
T = 2.0 s

T = 4.2 s

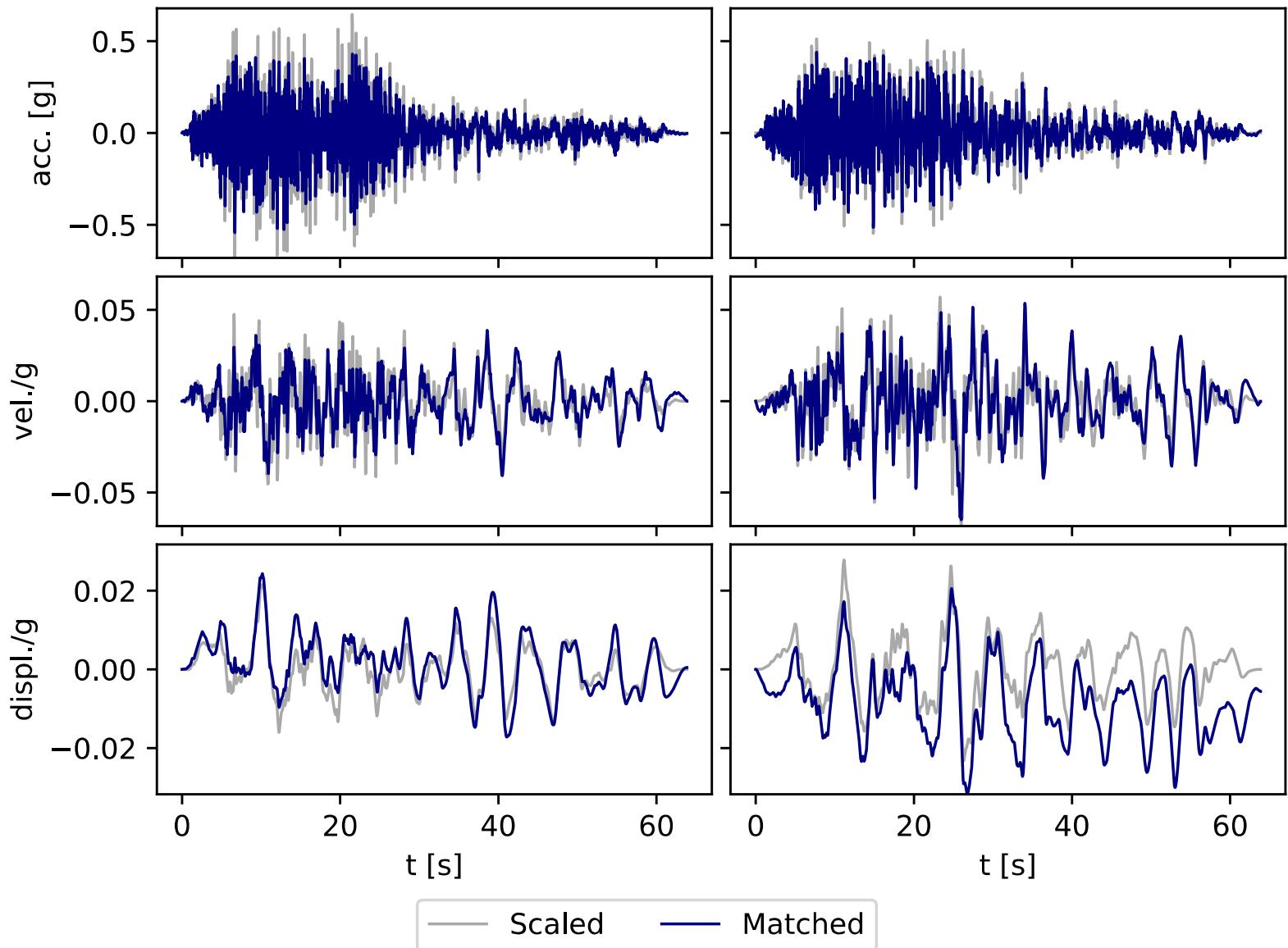


— Matched - - Original

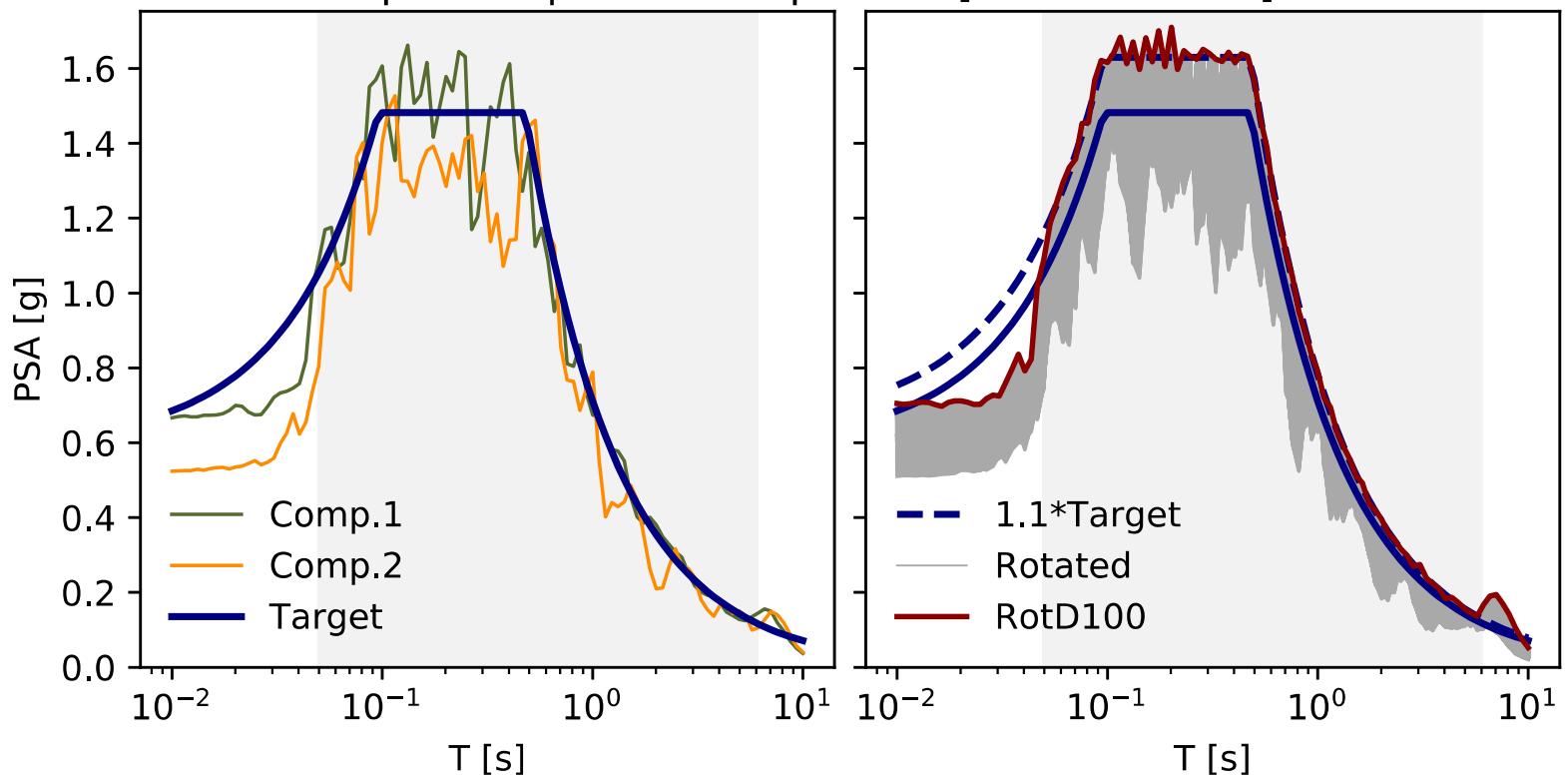
RotD100 ratios and angles [NGA.RSN.164]



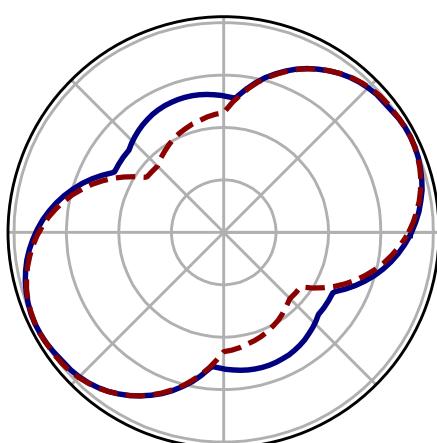
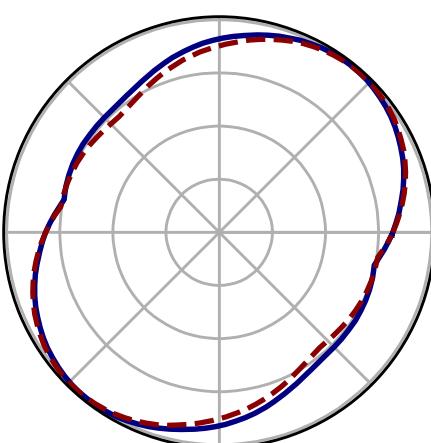
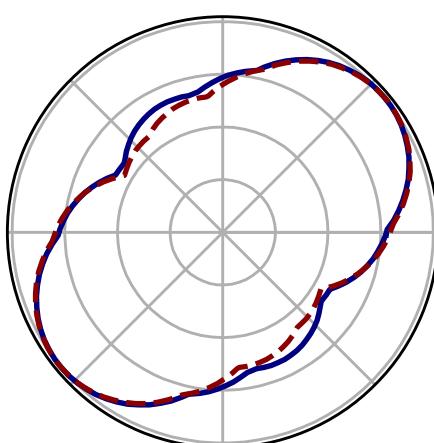
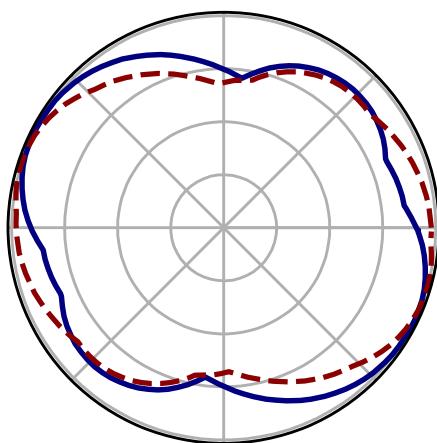
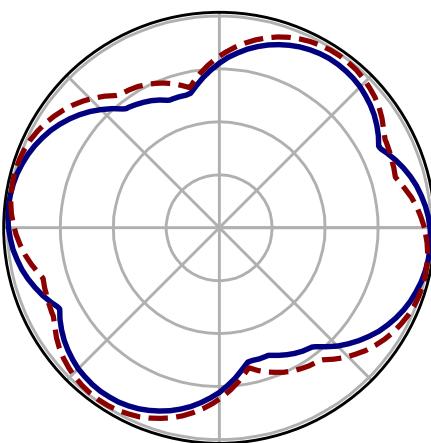
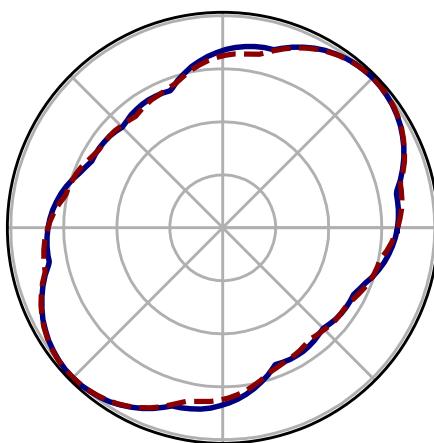
Time Histories Comparison [NGA.RSN.164]



Response Spectra Comparison [NGA.RSN.175]

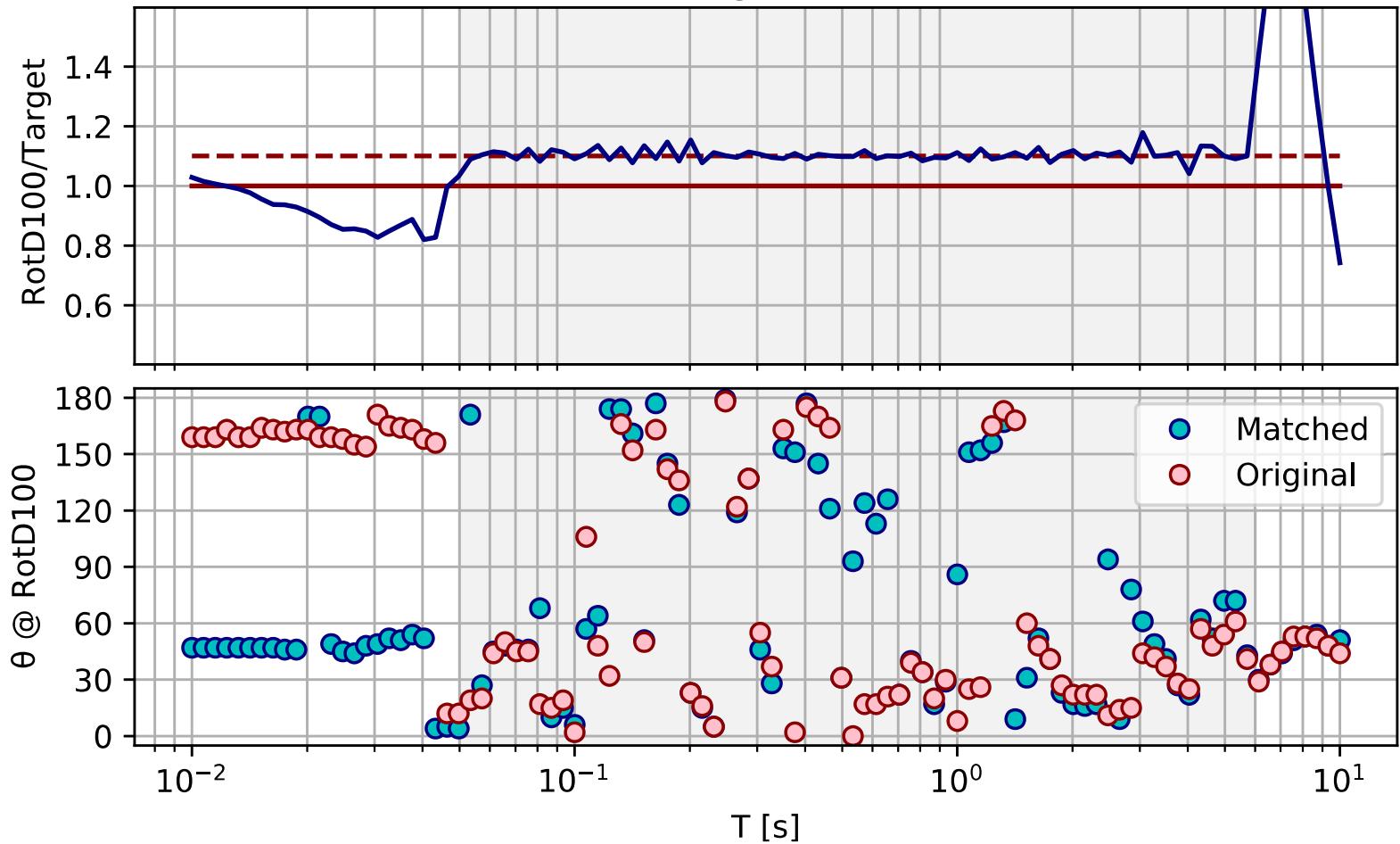


Normalized Spectral Accelerations @ θ [NGA.RSN.175]
 $T = 0.1$ s $T = 0.1$ s $T = 0.4$ s

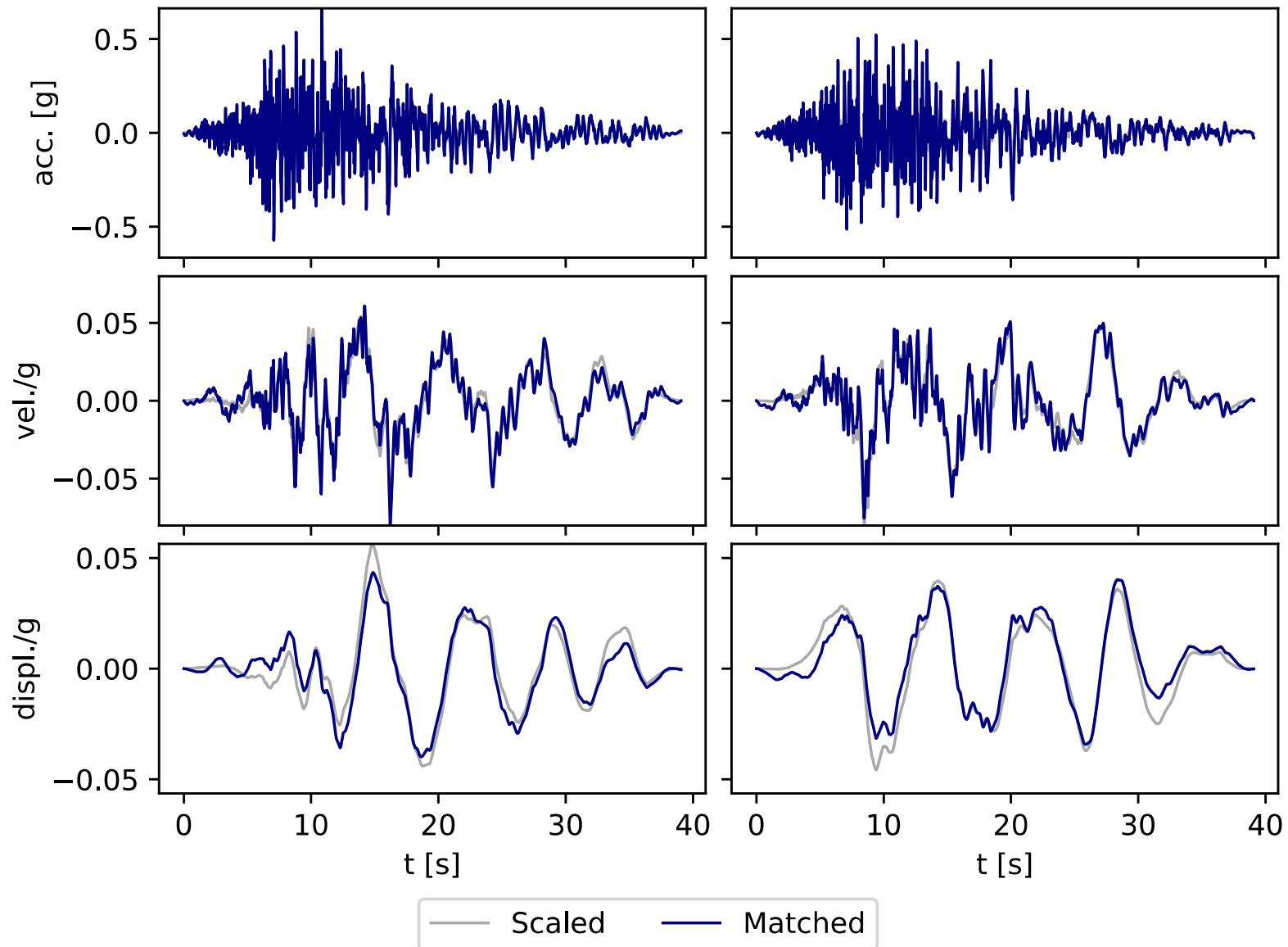


— Matched - - - Original

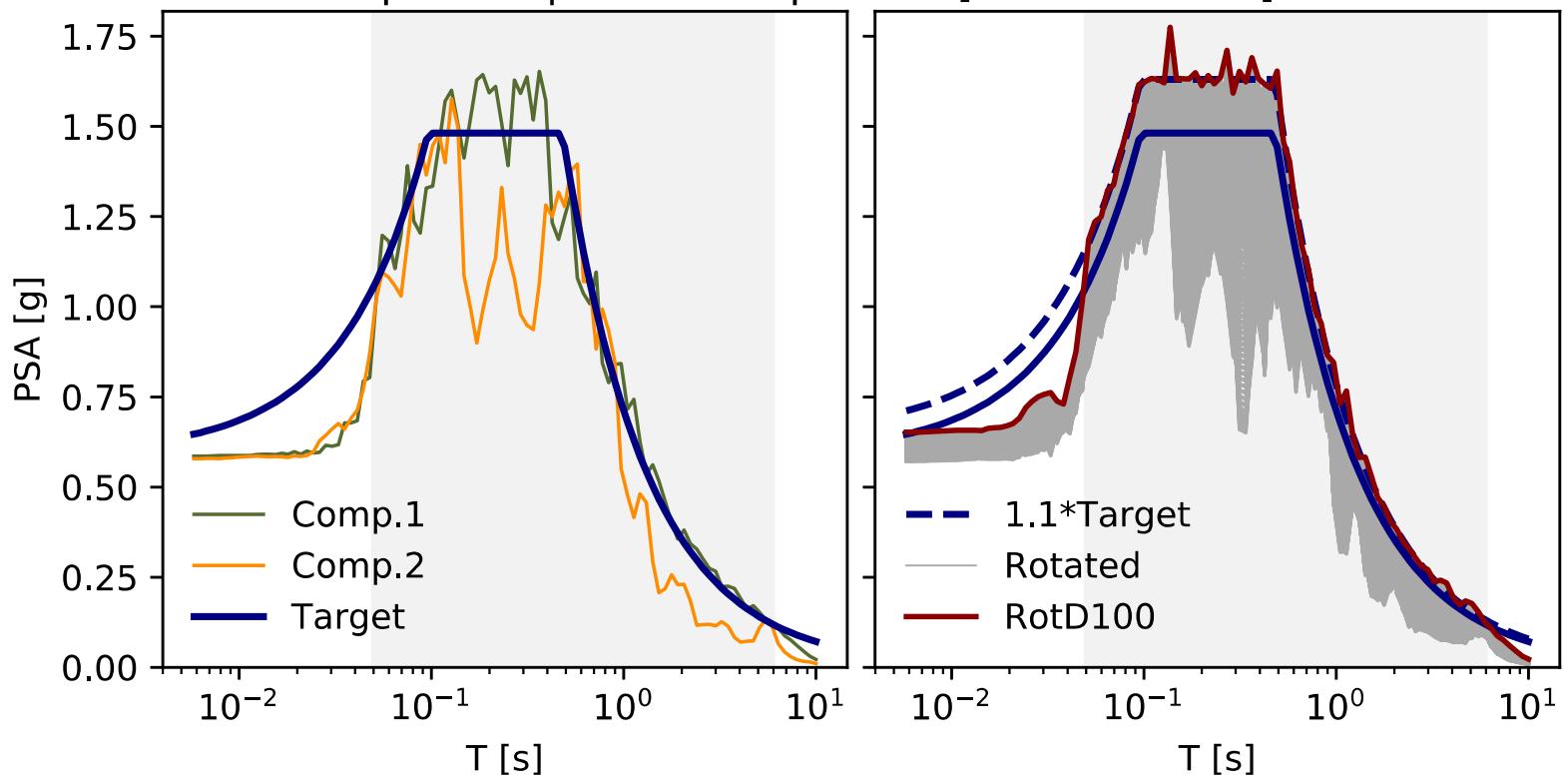
RotD100 ratios and angles [NGA.RSN.175]



Time Histories Comparison [NGA.RSN.175]



Response Spectra Comparison [NGA.RSN.302]

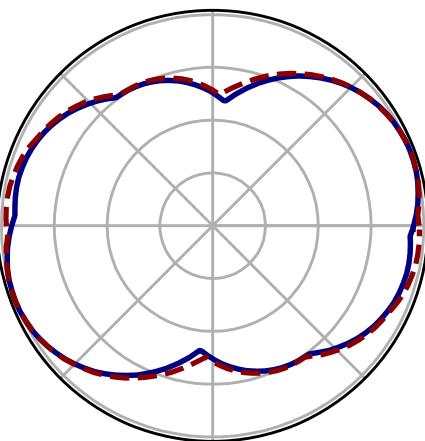
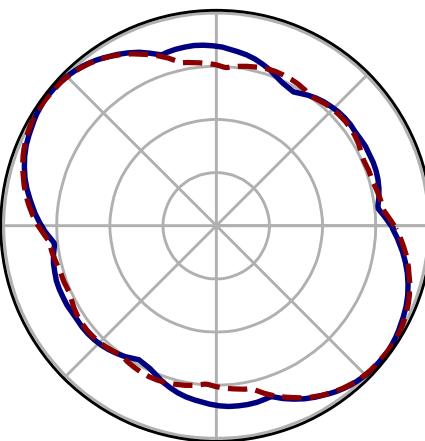
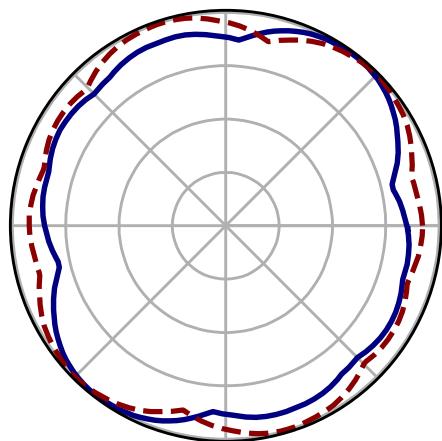


Normalized Spectral Accelerations @ θ [NGA.RSN.302]

T = 0.0 s

T = 0.1 s

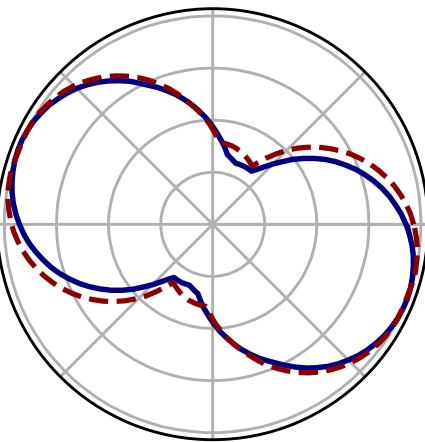
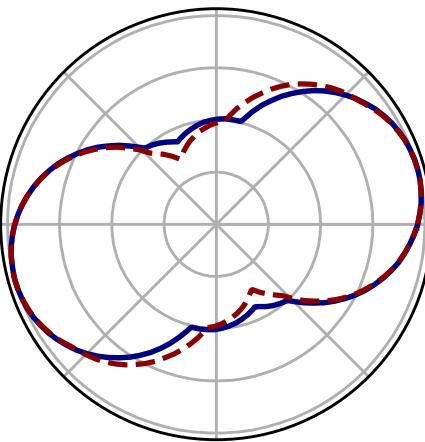
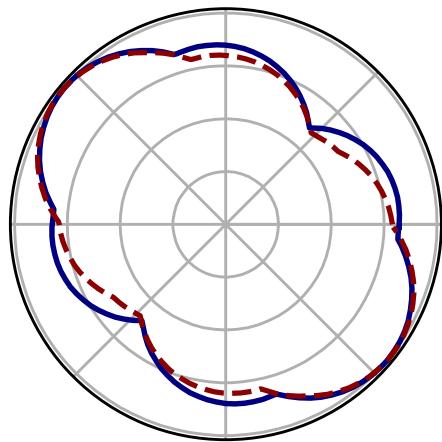
T = 0.3 s



T = 0.6 s

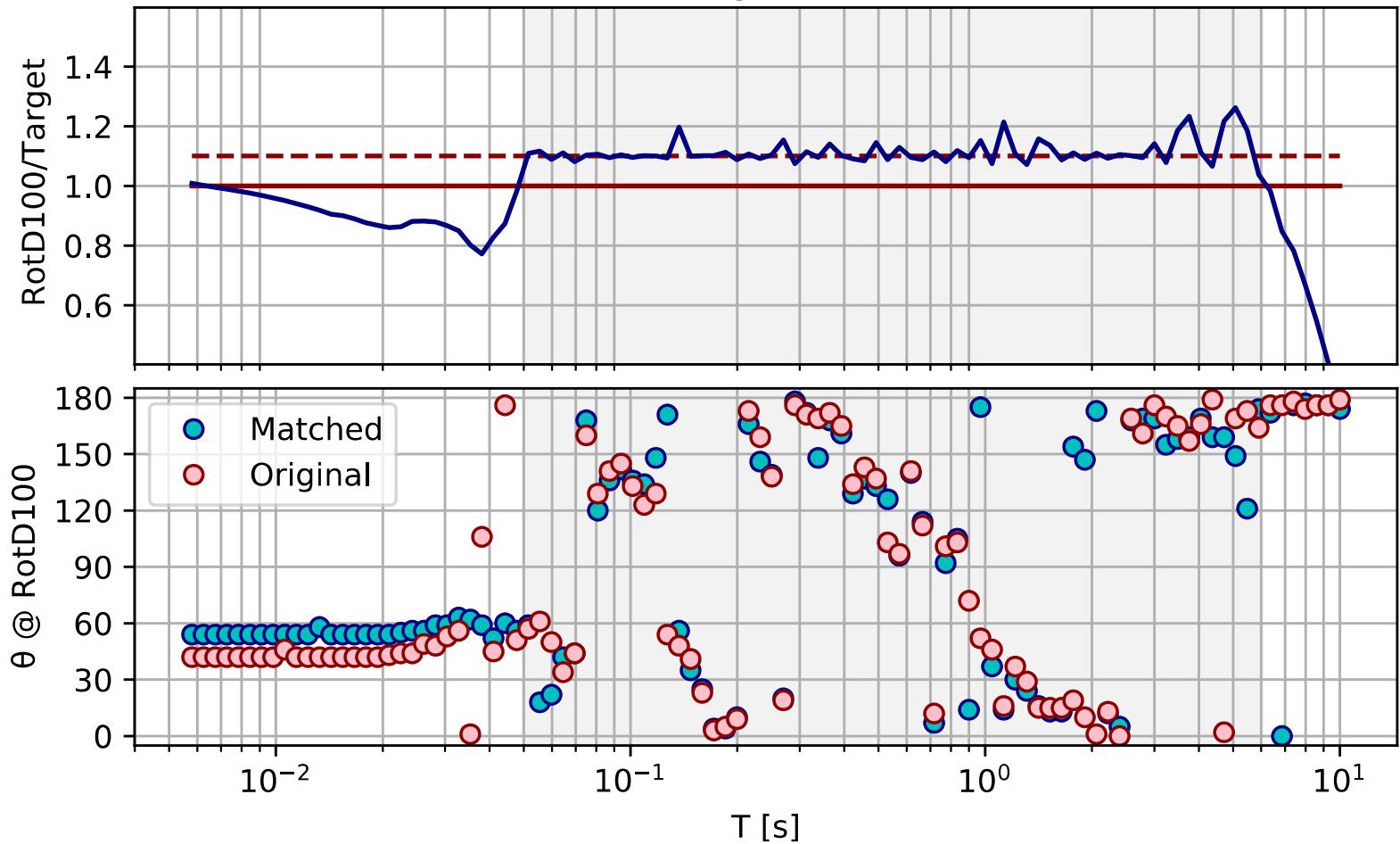
T = 1.4 s

T = 3.5 s

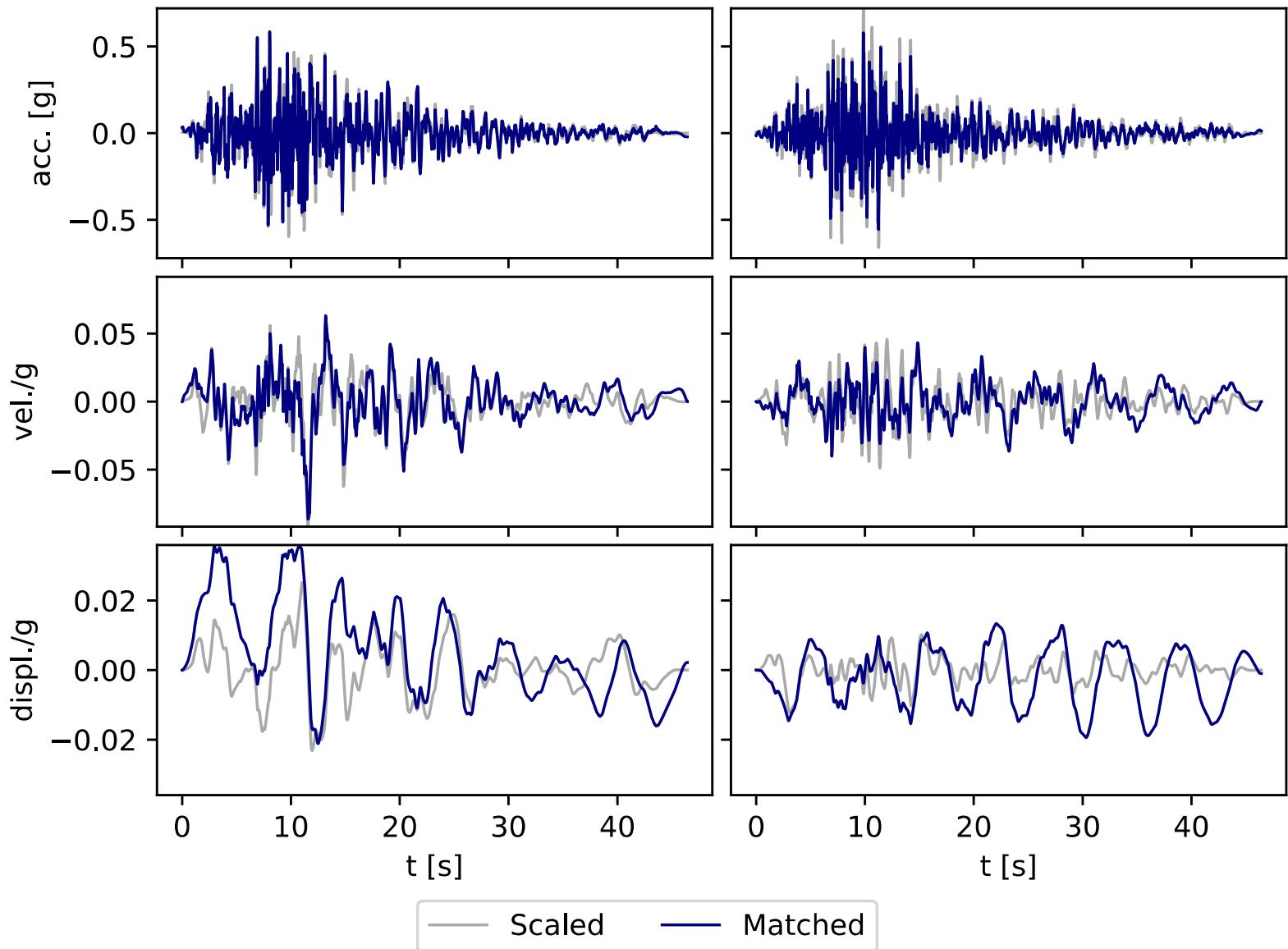


— Matched - - Original

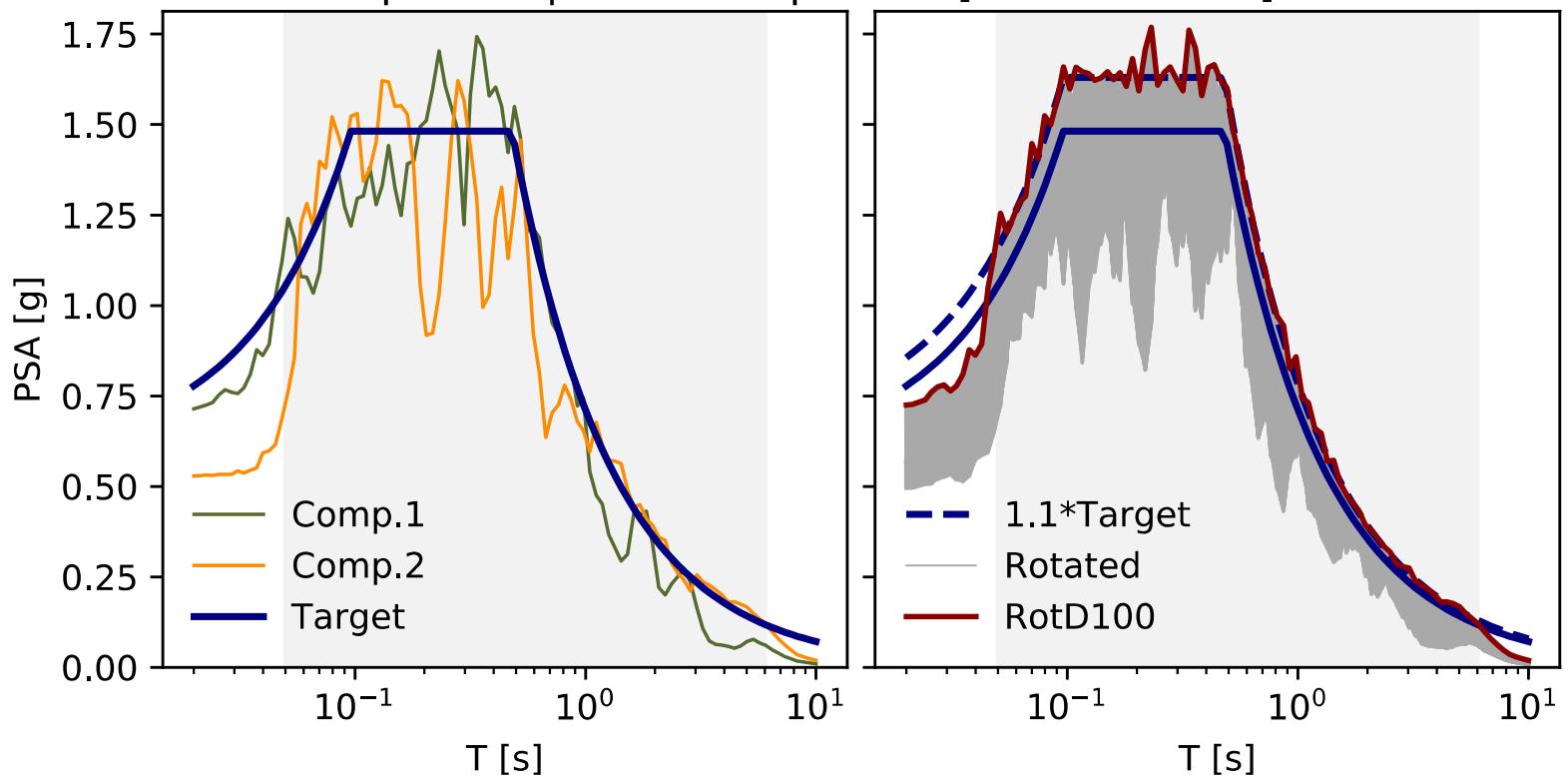
RotD100 ratios and angles [NGA.RSN.302]



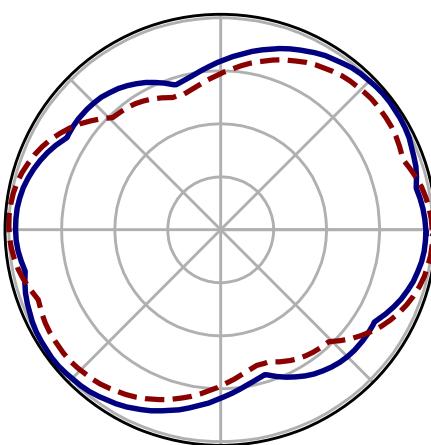
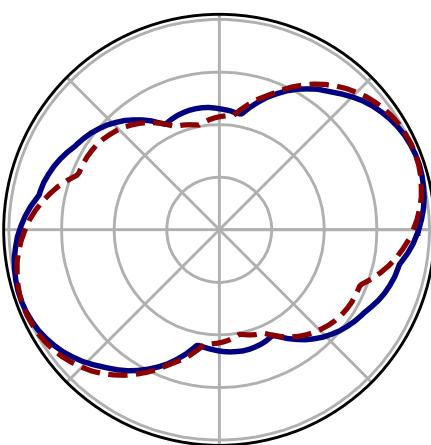
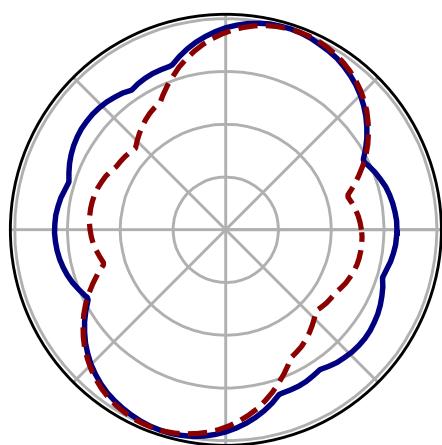
Time Histories Comparison [NGA.RSN.302]



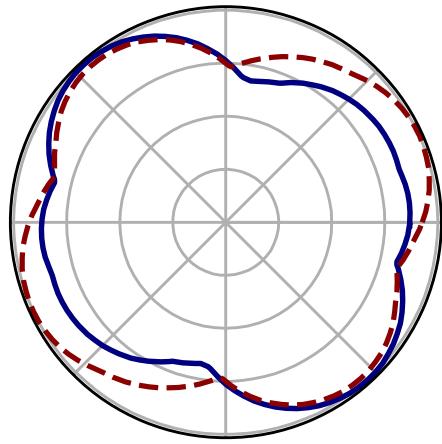
Response Spectra Comparison [NGA.RSN.719]



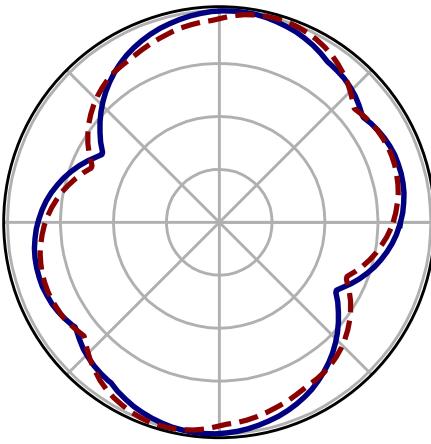
Normalized Spectral Accelerations @ θ [NGA.RSN.719]
 $T = 0.1 \text{ s}$ $T = 0.2 \text{ s}$ $T = 0.5 \text{ s}$



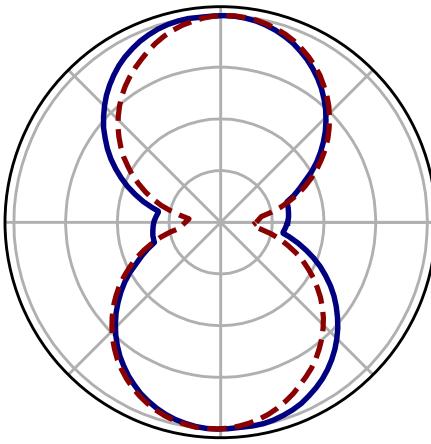
$T = 1.0 \text{ s}$



$T = 2.0 \text{ s}$

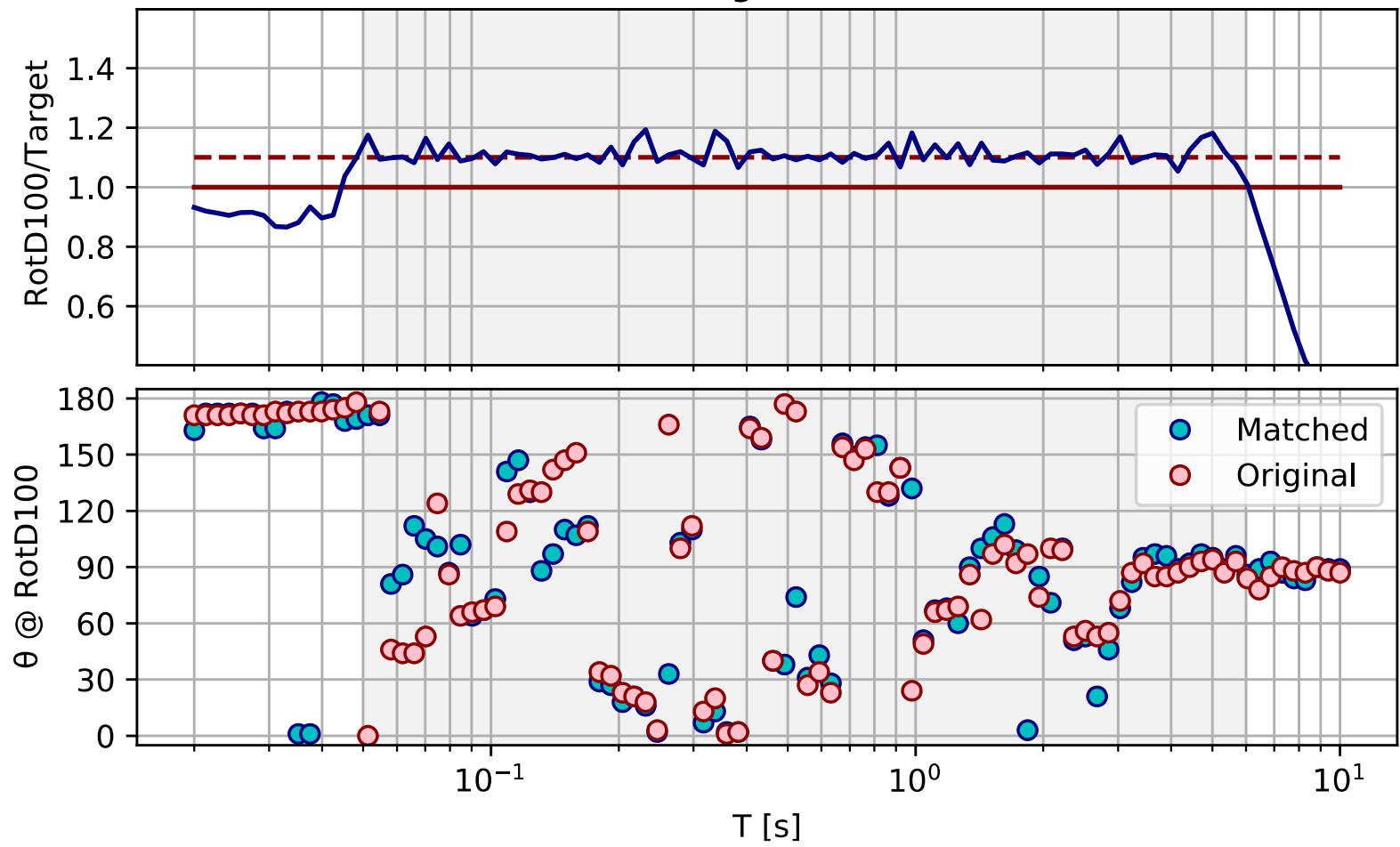


$T = 4.2 \text{ s}$

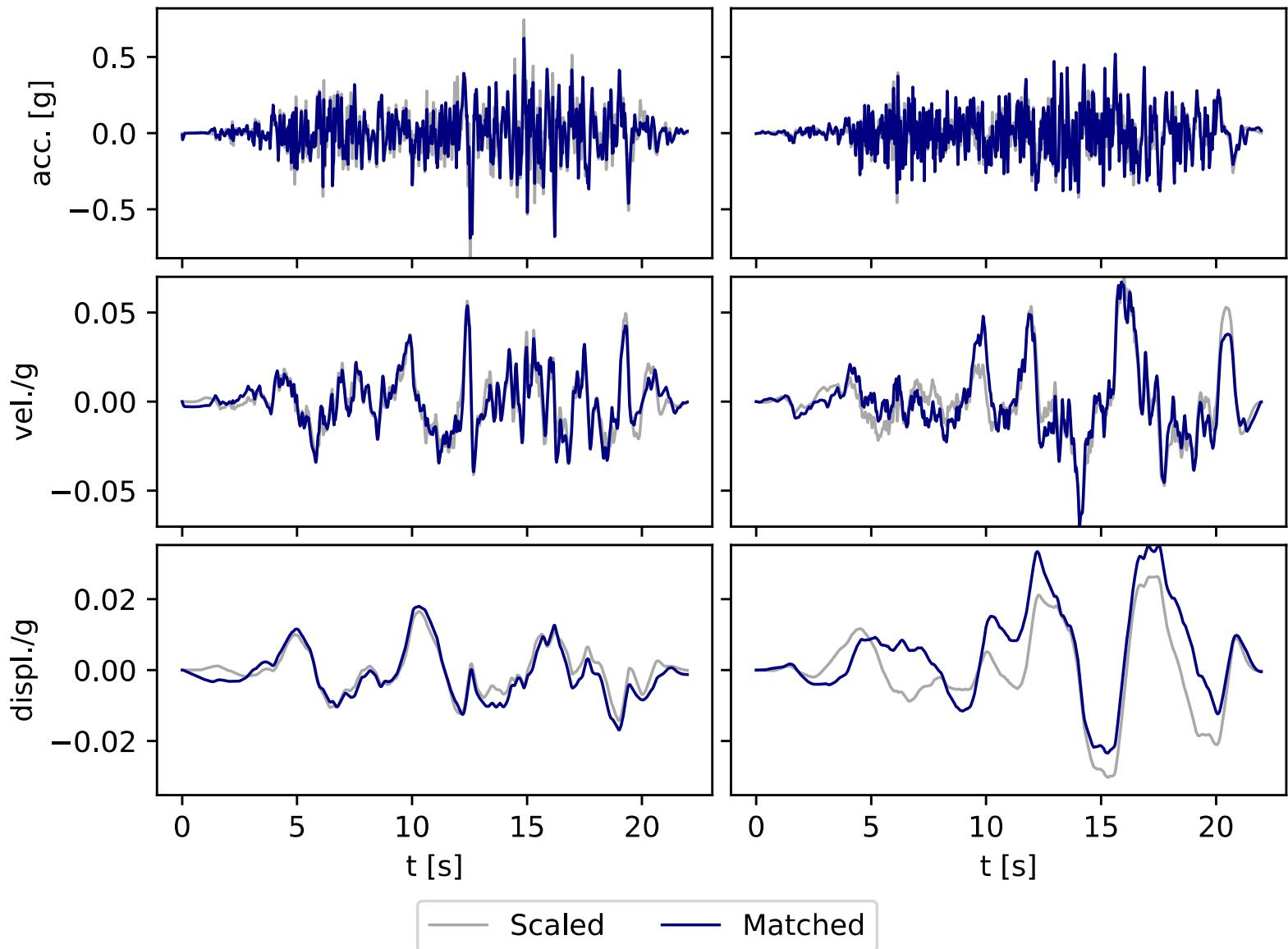


— Matched - - - Original

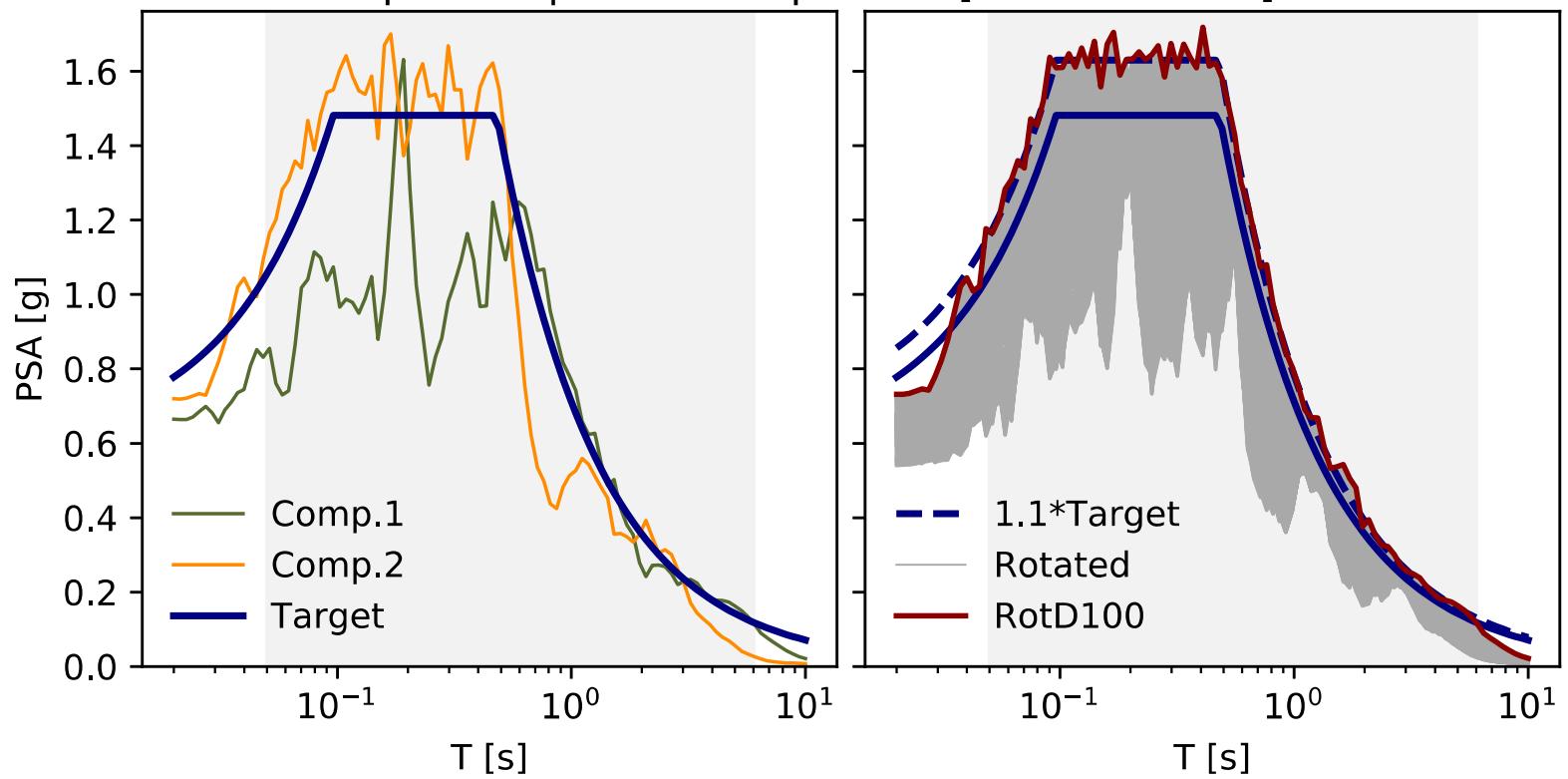
RotD100 ratios and angles [NGA.RSN.719]



Time Histories Comparison [NGA.RSN.719]



Response Spectra Comparison [NGA.RSN.730]

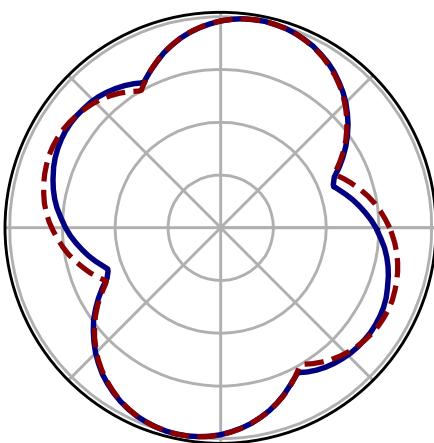
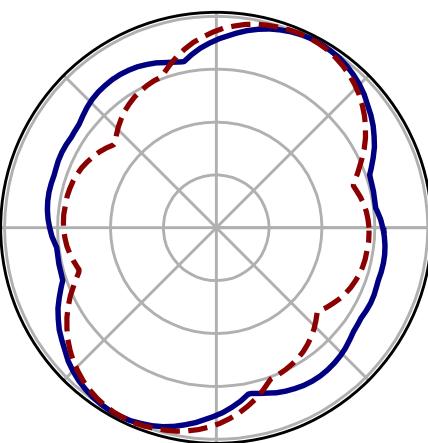
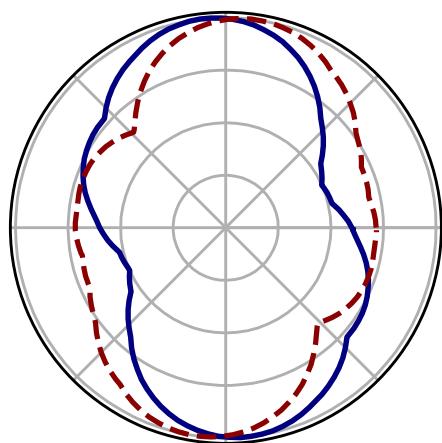


Normalized Spectral Accelerations @ θ [NGA.RSN.730]

T = 0.1 s

T = 0.2 s

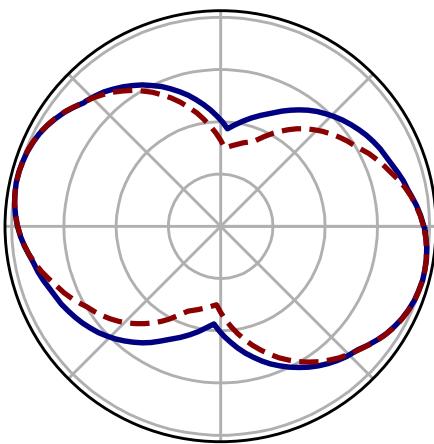
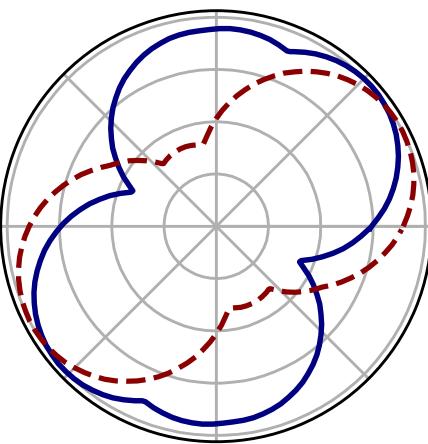
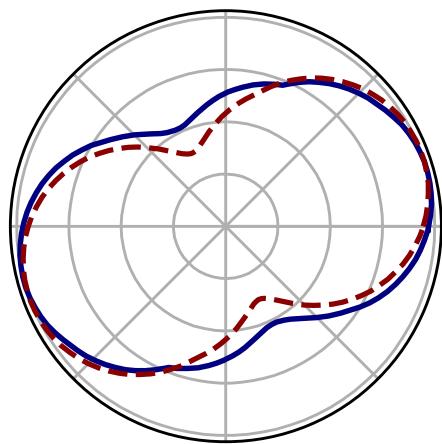
T = 0.5 s



T = 1.0 s

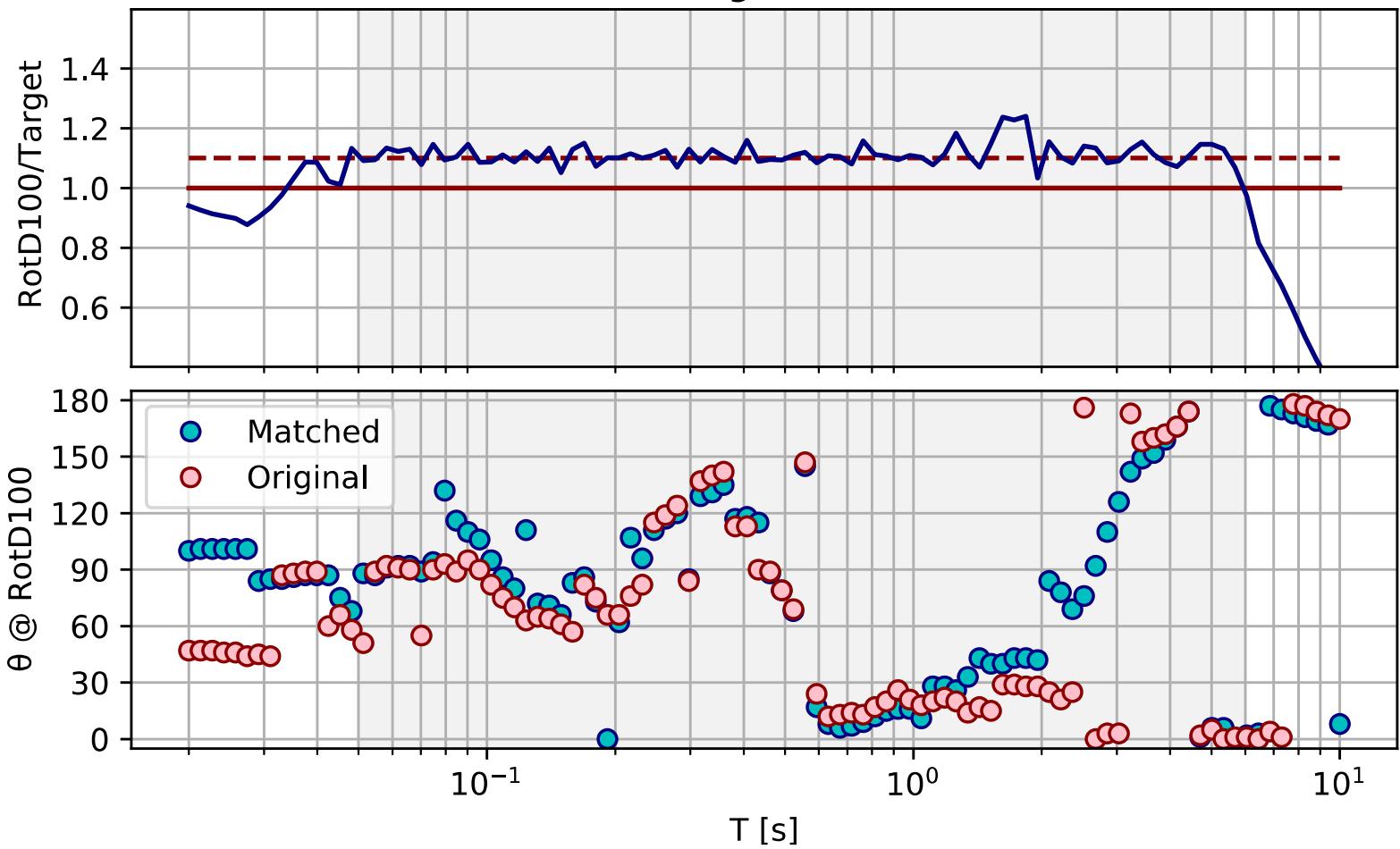
T = 2.0 s

T = 4.2 s

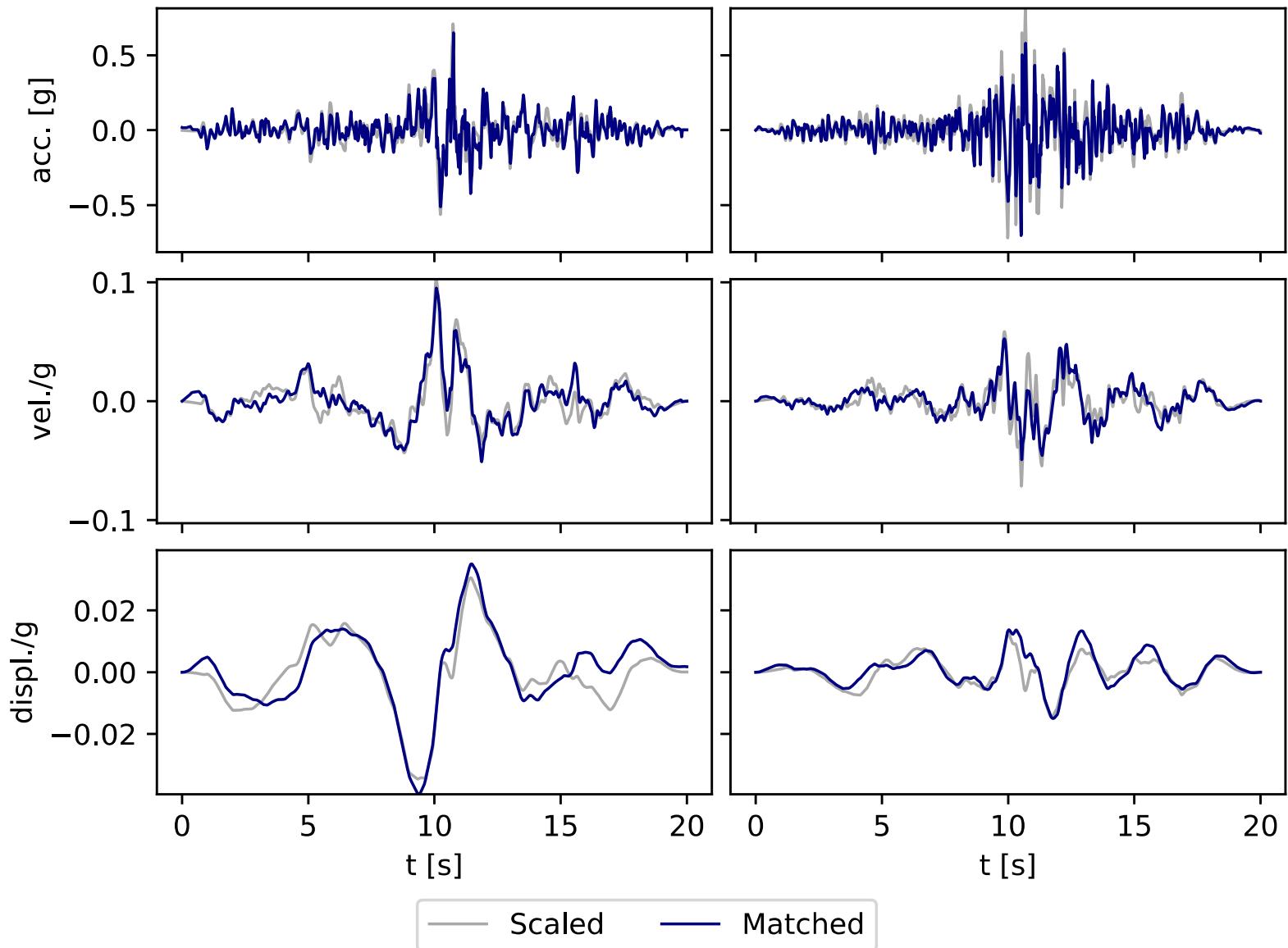


— Matched - - Original

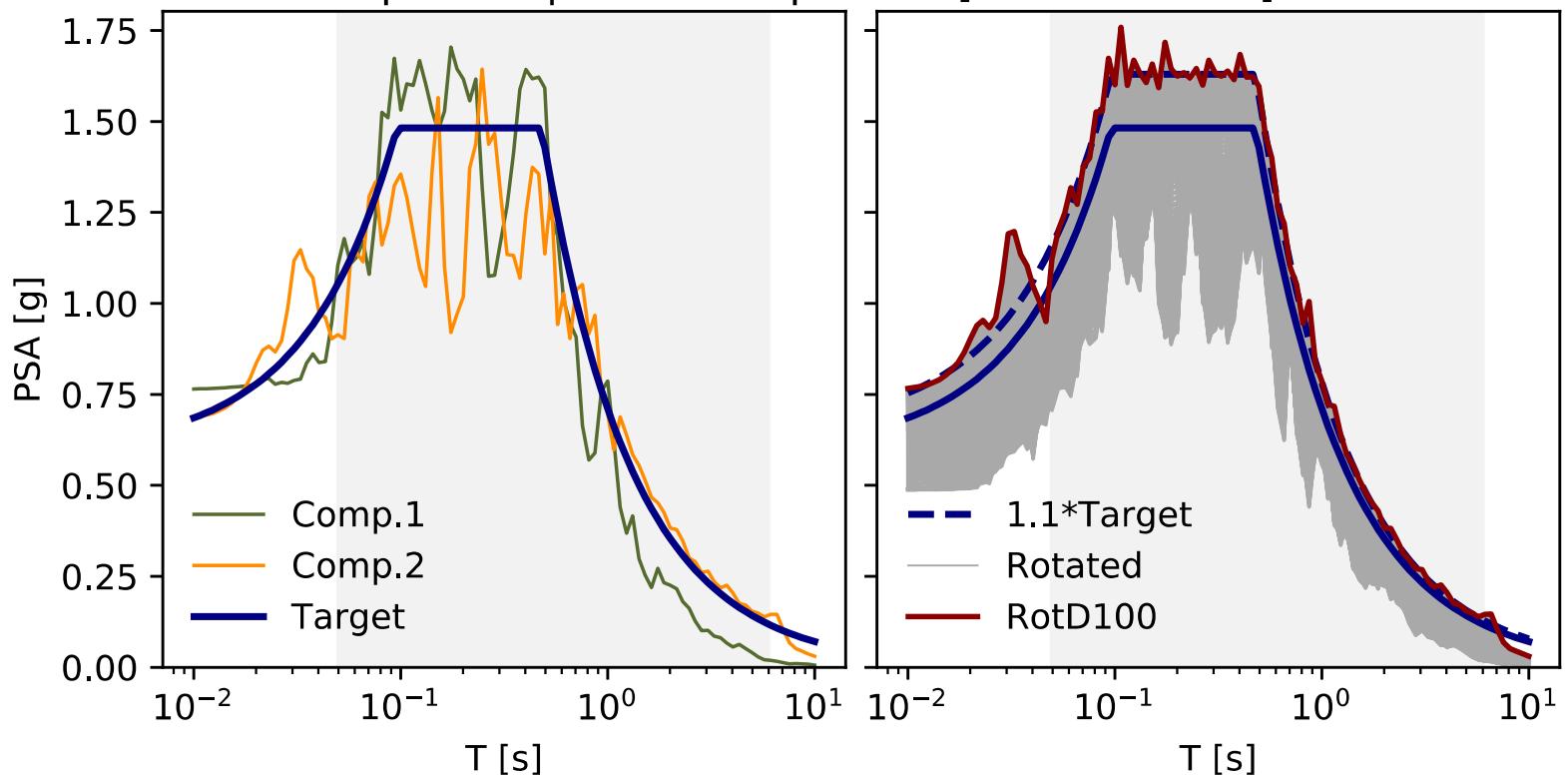
RotD100 ratios and angles [NGA.RSN.730]



Time Histories Comparison [NGA.RSN.730]



Response Spectra Comparison [NGA.RSN.880]

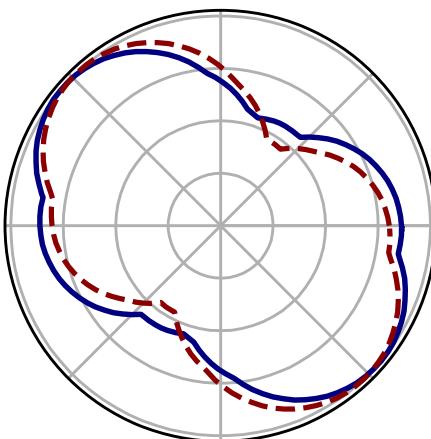
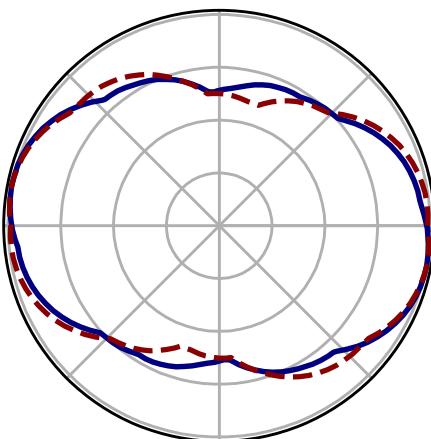
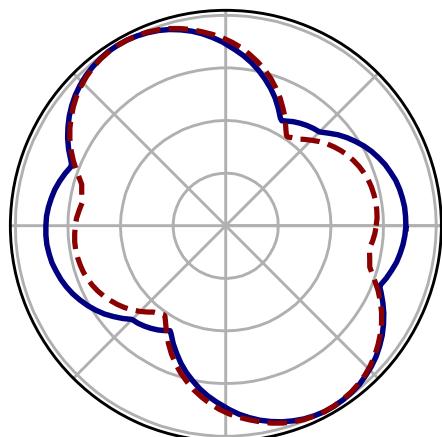


Normalized Spectral Accelerations @ θ [NGA.RSN.880]

T = 0.1 s

T = 0.1 s

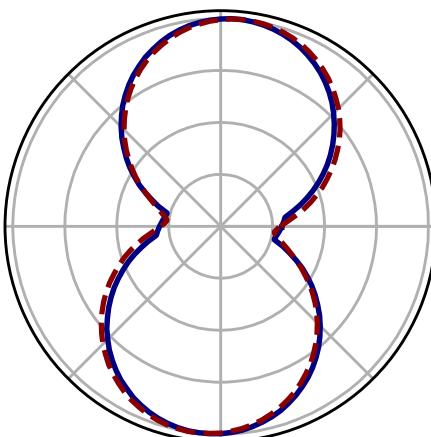
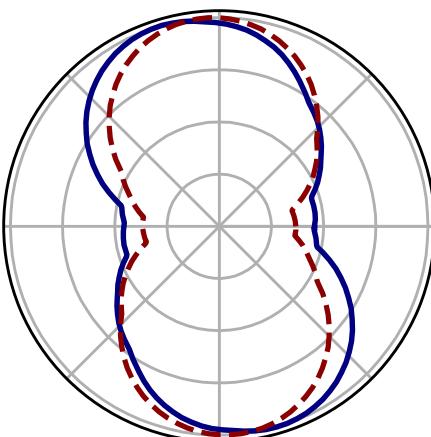
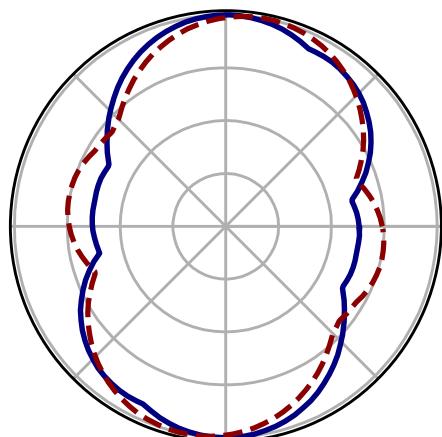
T = 0.4 s



T = 0.8 s

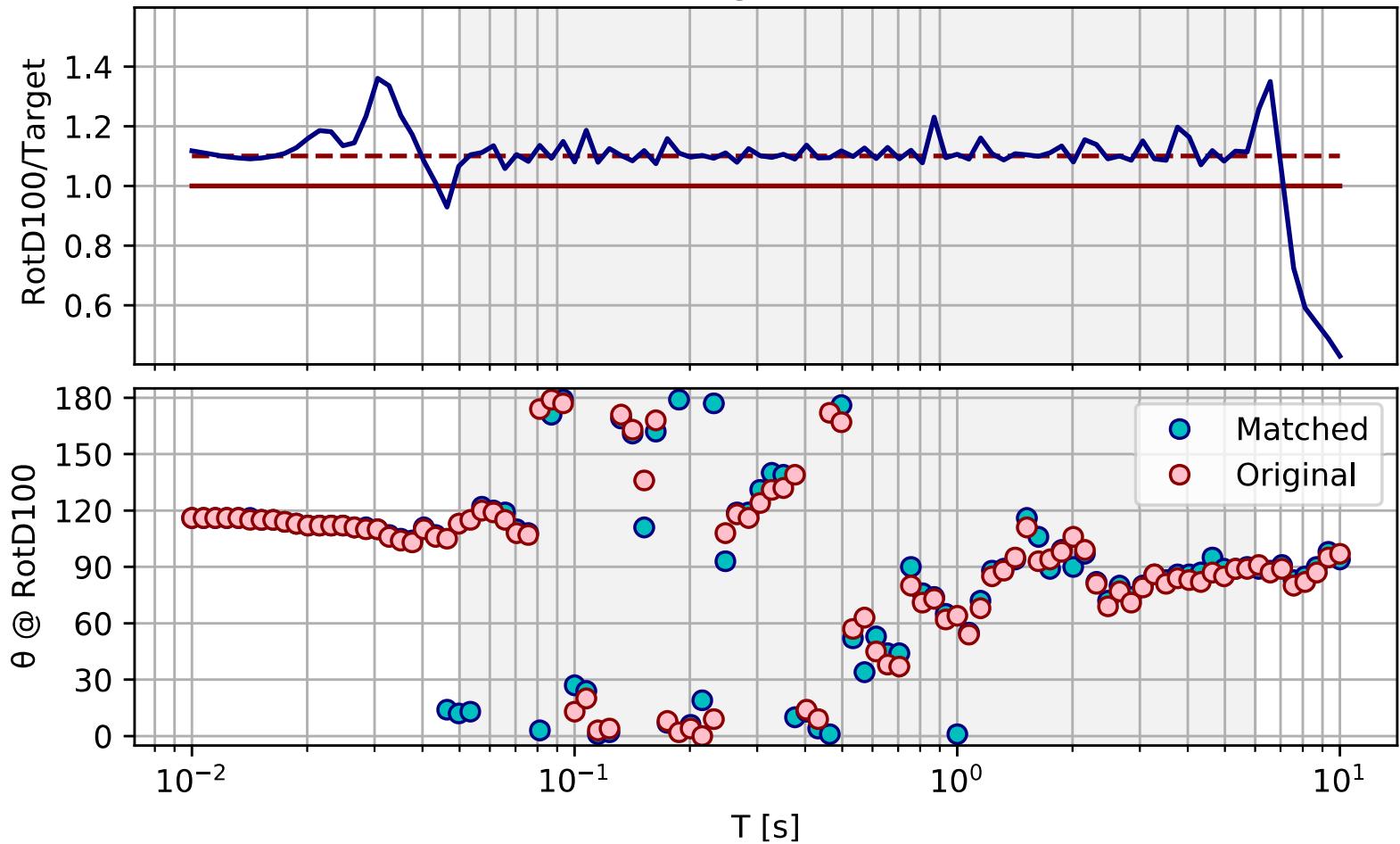
T = 1.6 s

T = 3.8 s

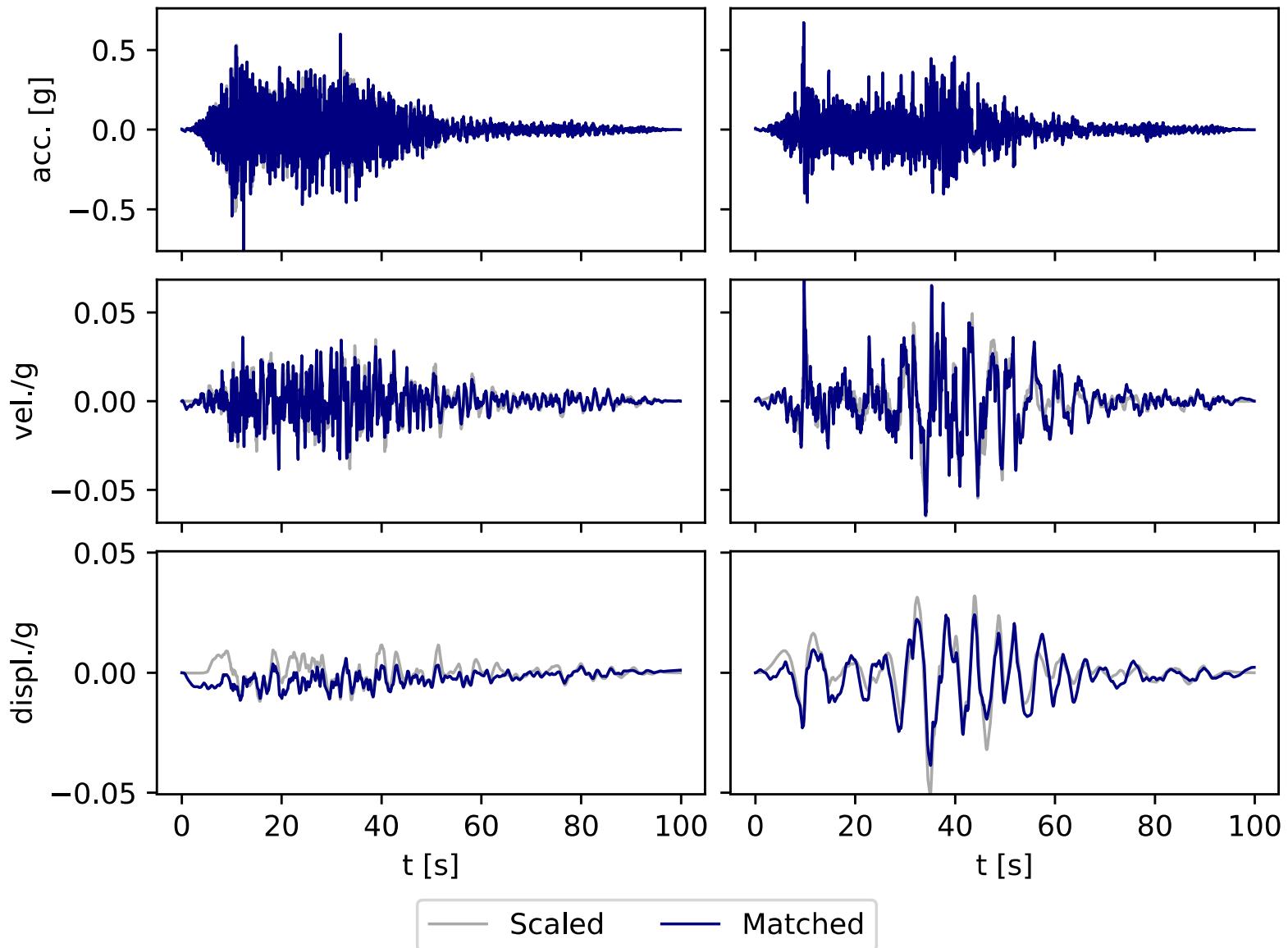


— Matched - - - Original

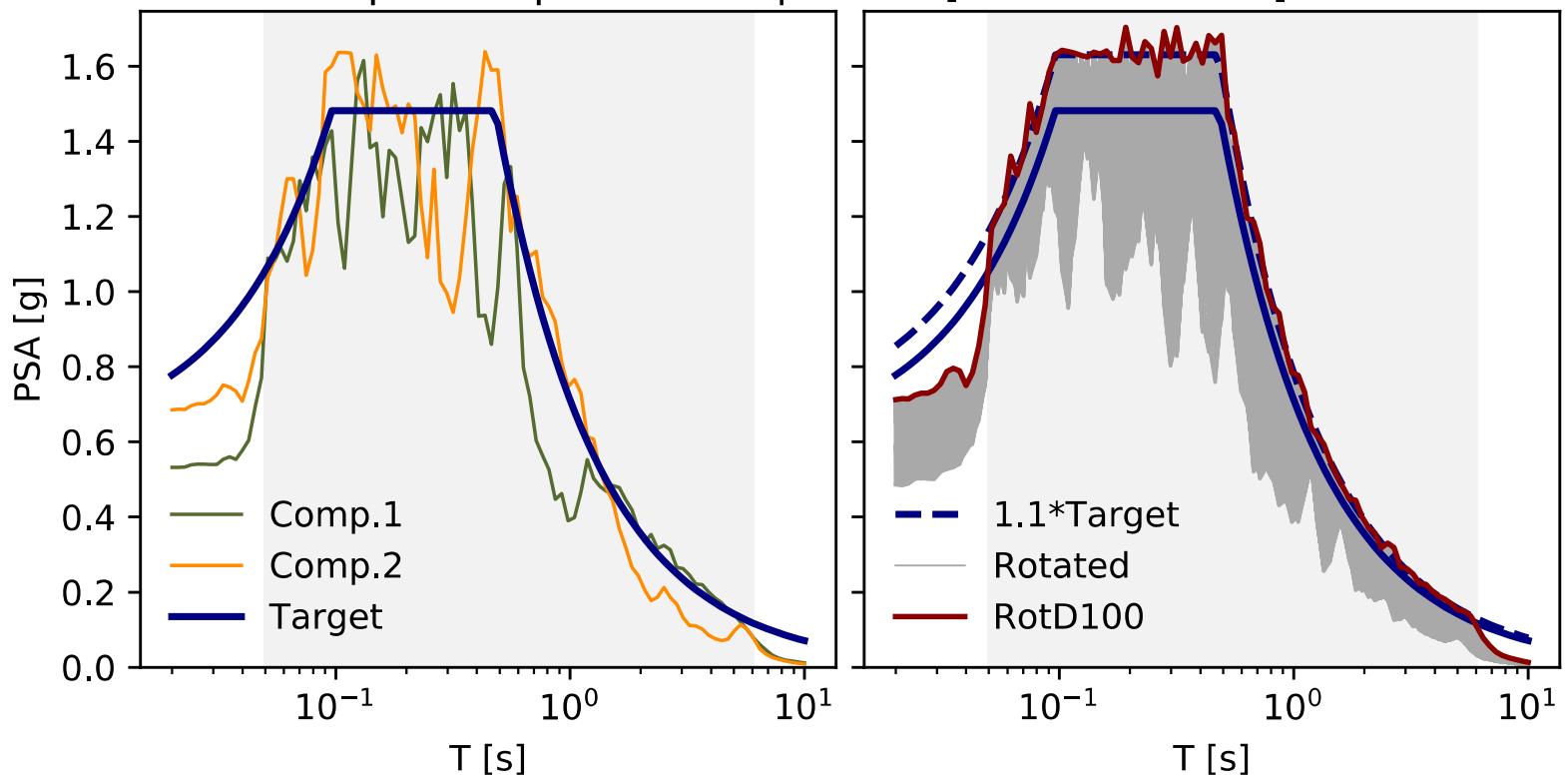
RotD100 ratios and angles [NGA.RSN.880]



Time Histories Comparison [NGA.RSN.880]

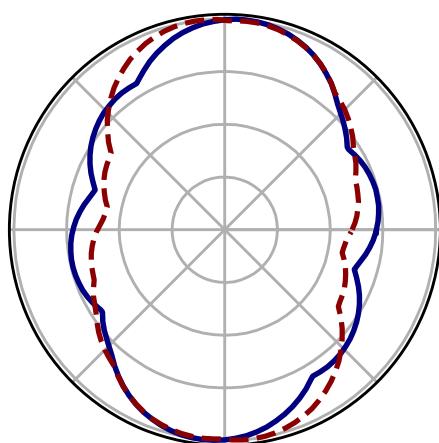


Response Spectra Comparison [NGA.RSN.1005]

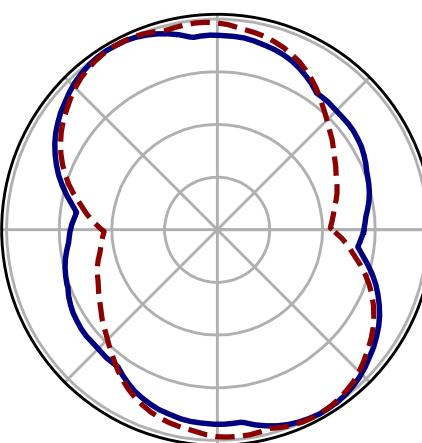


Normalized Spectral Accelerations @ θ [NGA.RSN.1005]

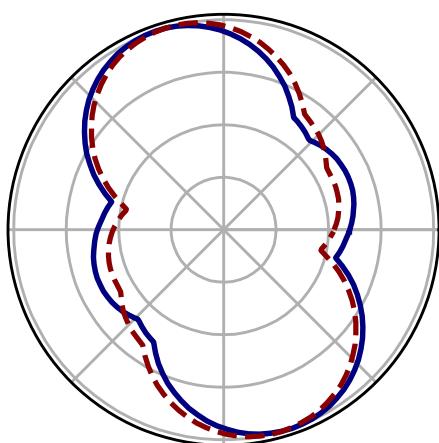
T = 0.1 s



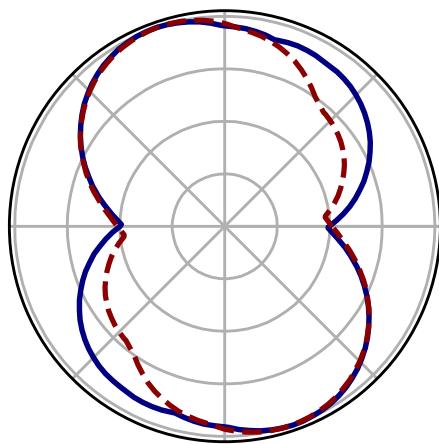
T = 0.2 s



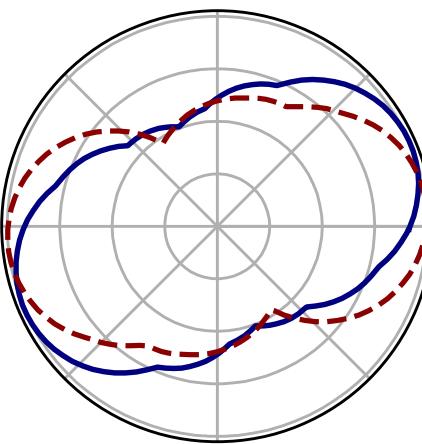
T = 0.5 s



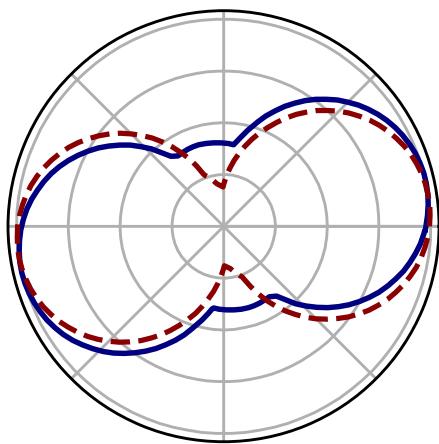
T = 1.0 s



T = 2.0 s

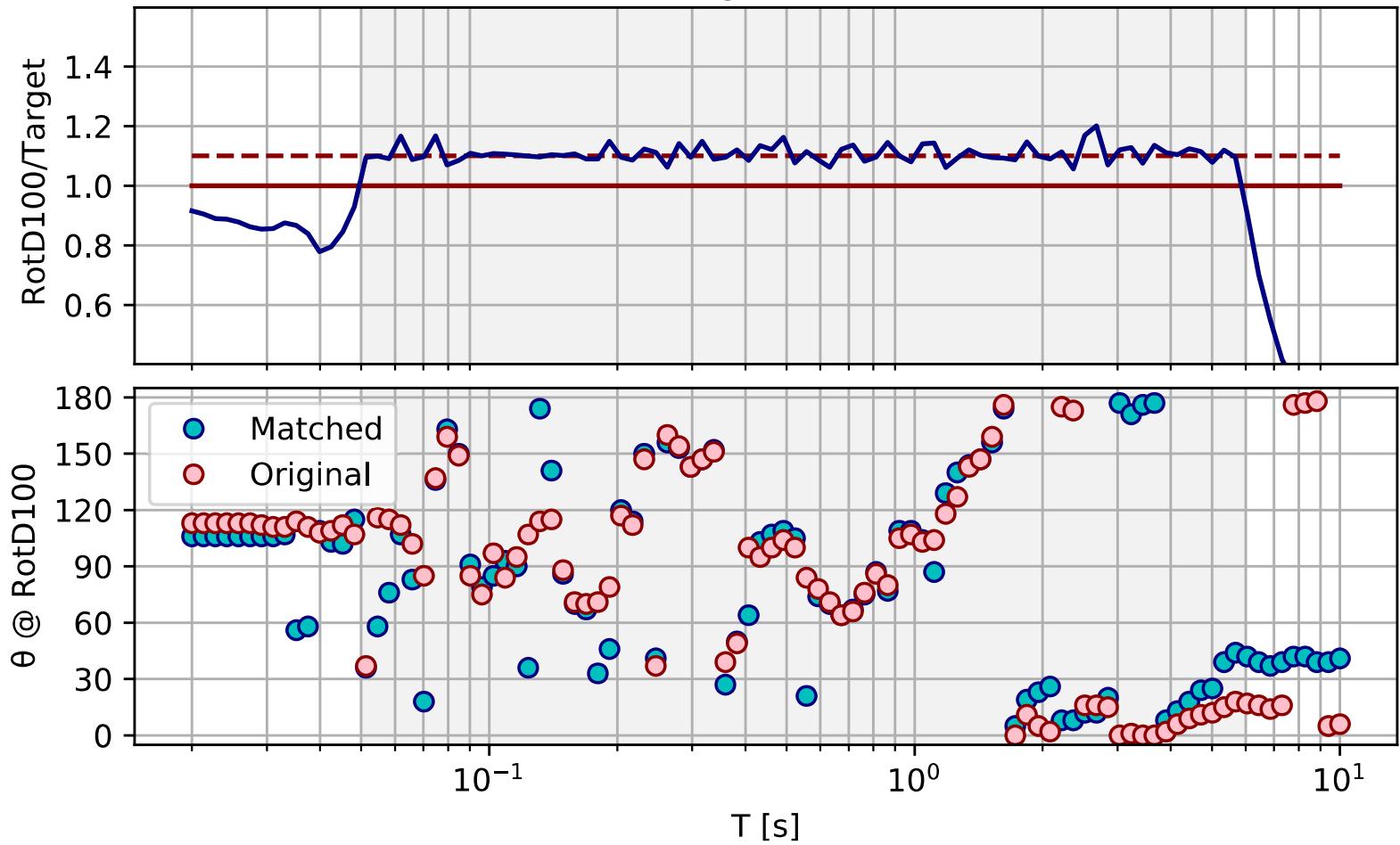


T = 4.2 s

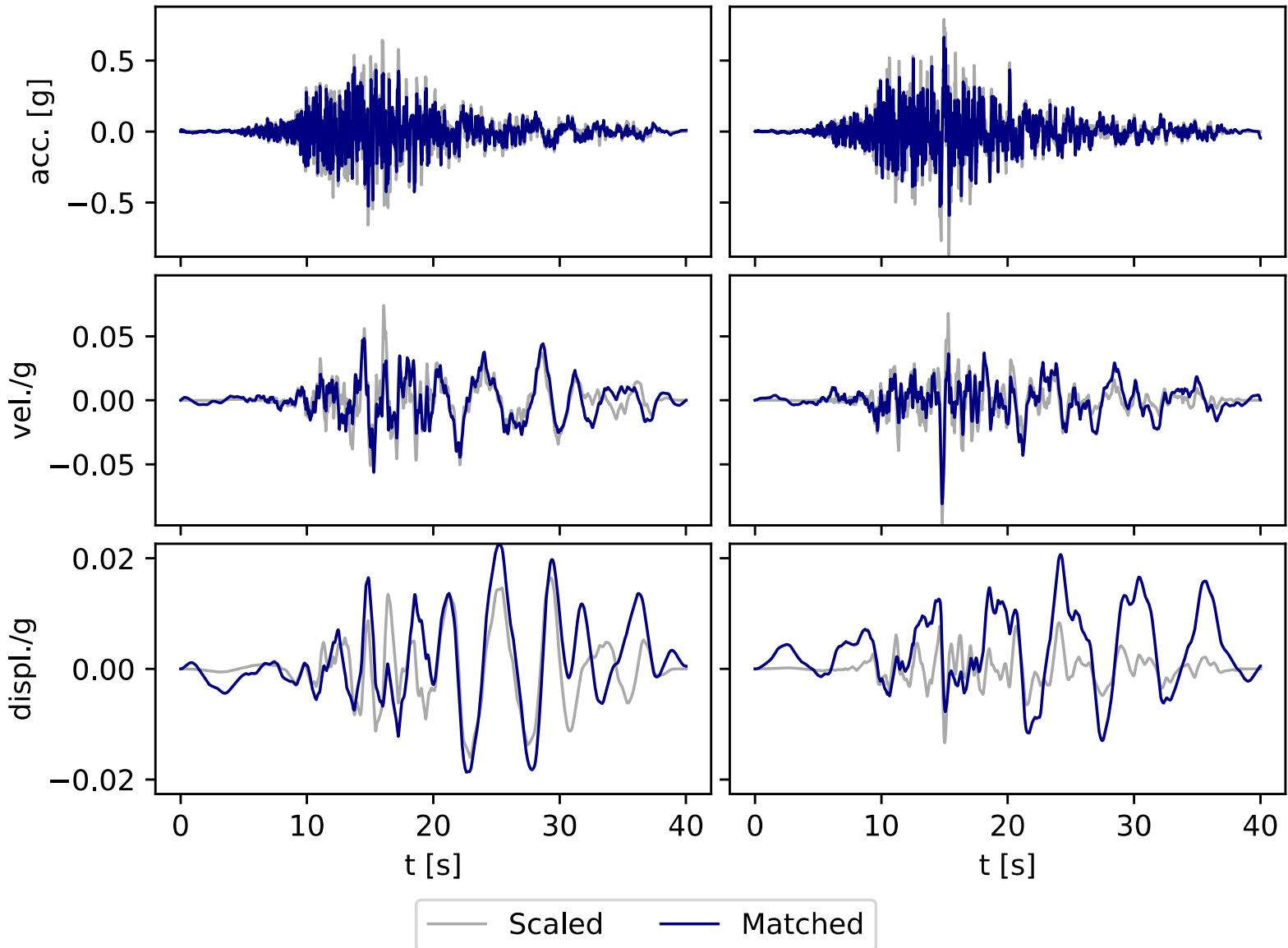


— Matched - - Original

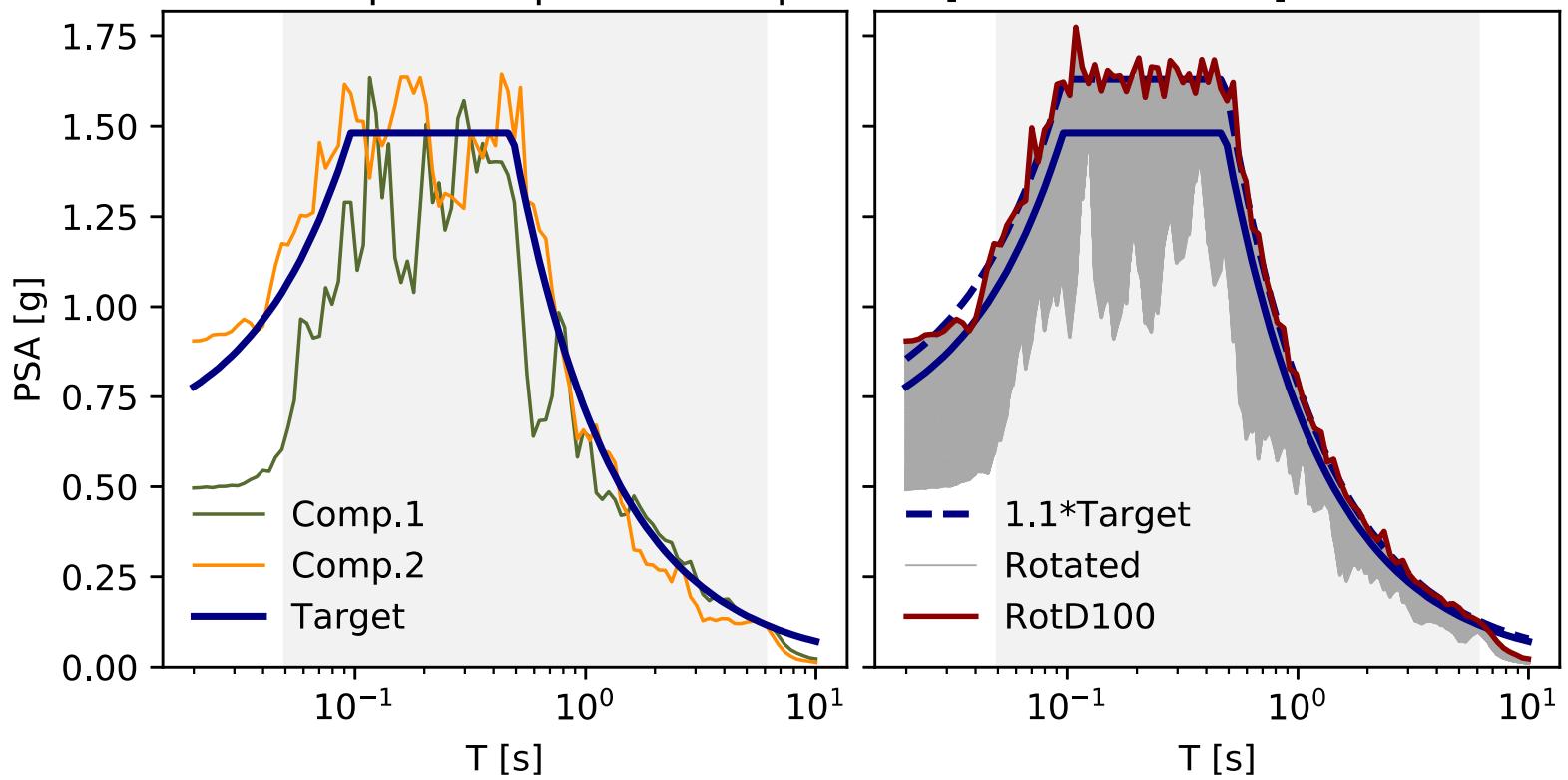
RotD100 ratios and angles [NGA.RSN.1005]



Time Histories Comparison [NGA.RSN.1005]

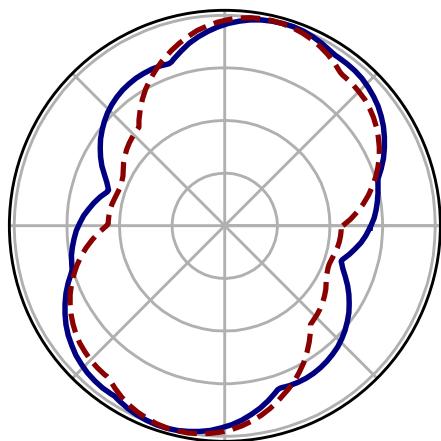


Response Spectra Comparison [NGA.RSN.1008]

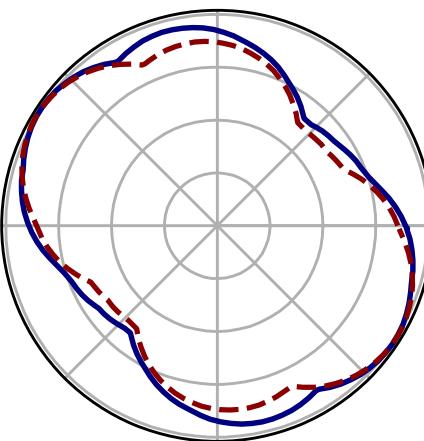


Normalized Spectral Accelerations @ θ [NGA.RSN.1008]

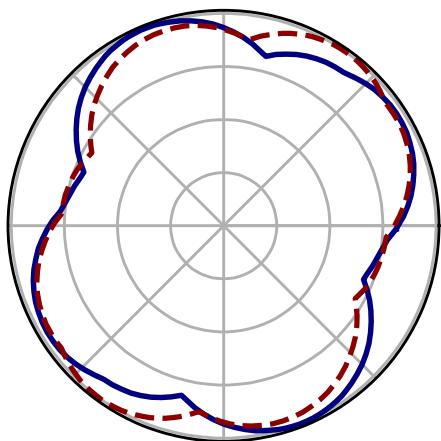
T = 0.1 s



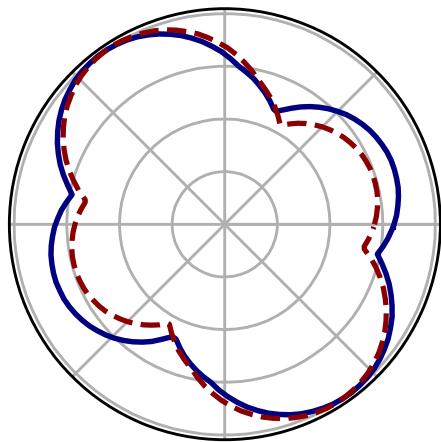
T = 0.2 s



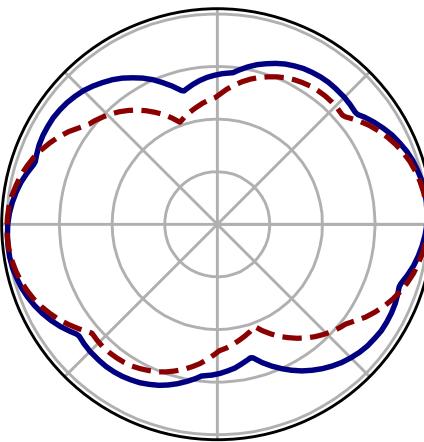
T = 0.5 s



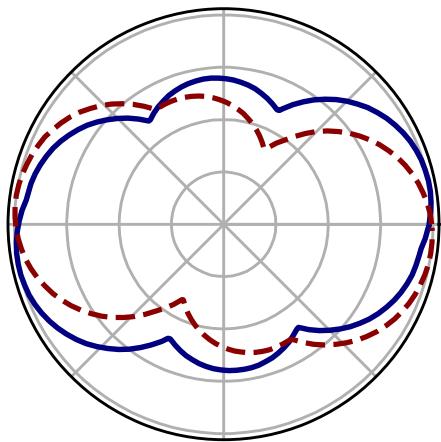
T = 1.0 s



T = 2.0 s

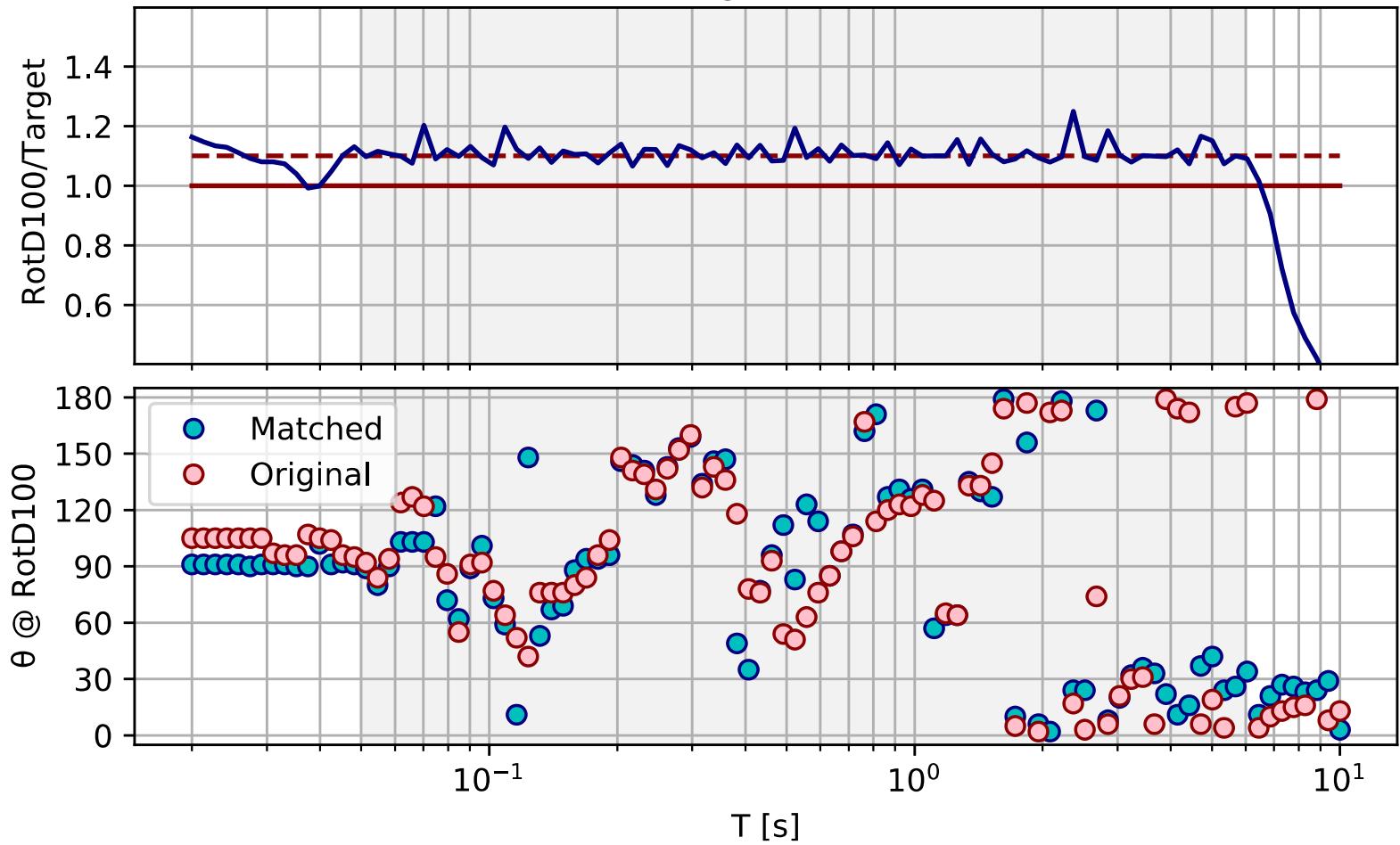


T = 4.2 s

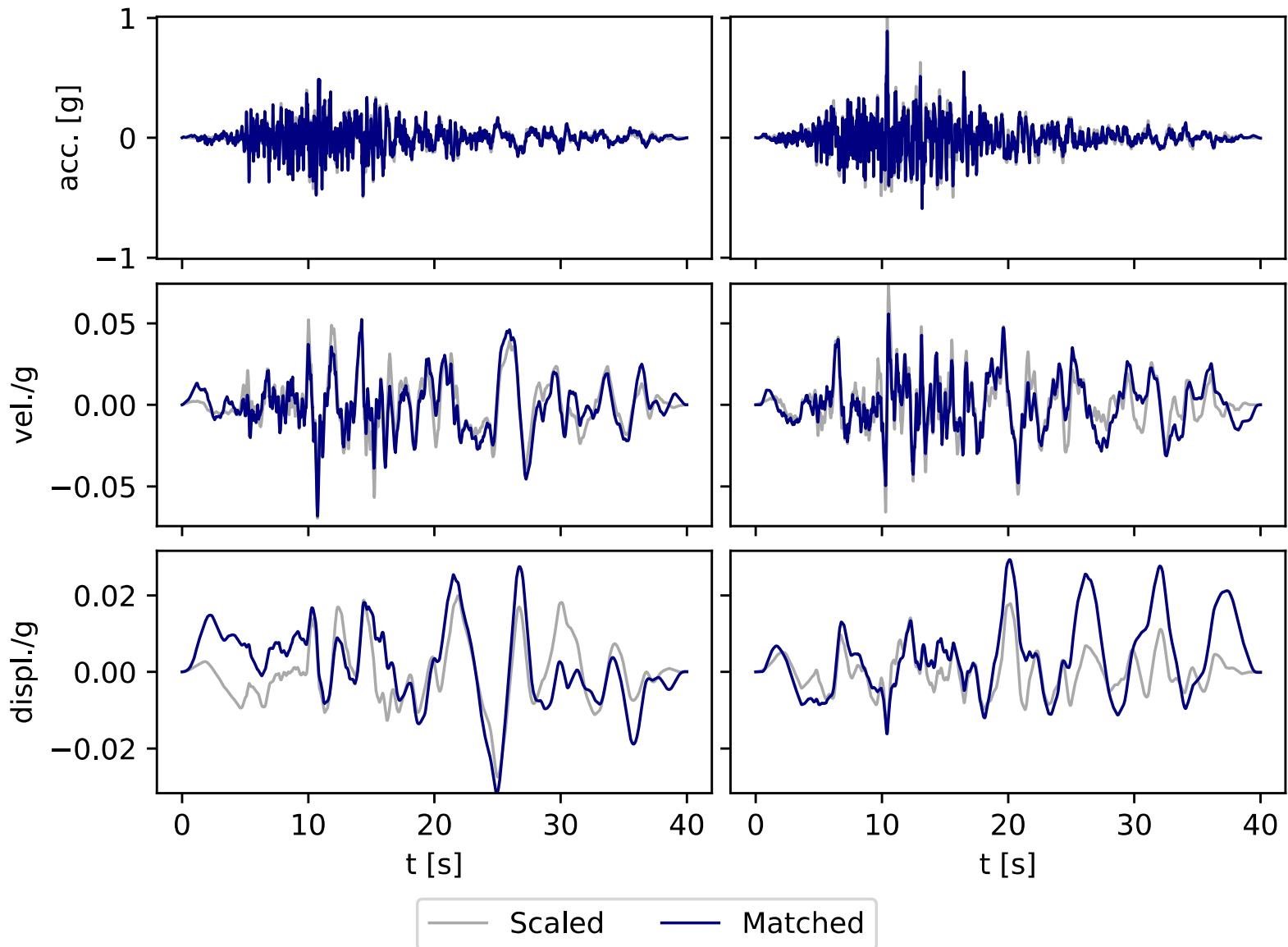


— Matched - - Original

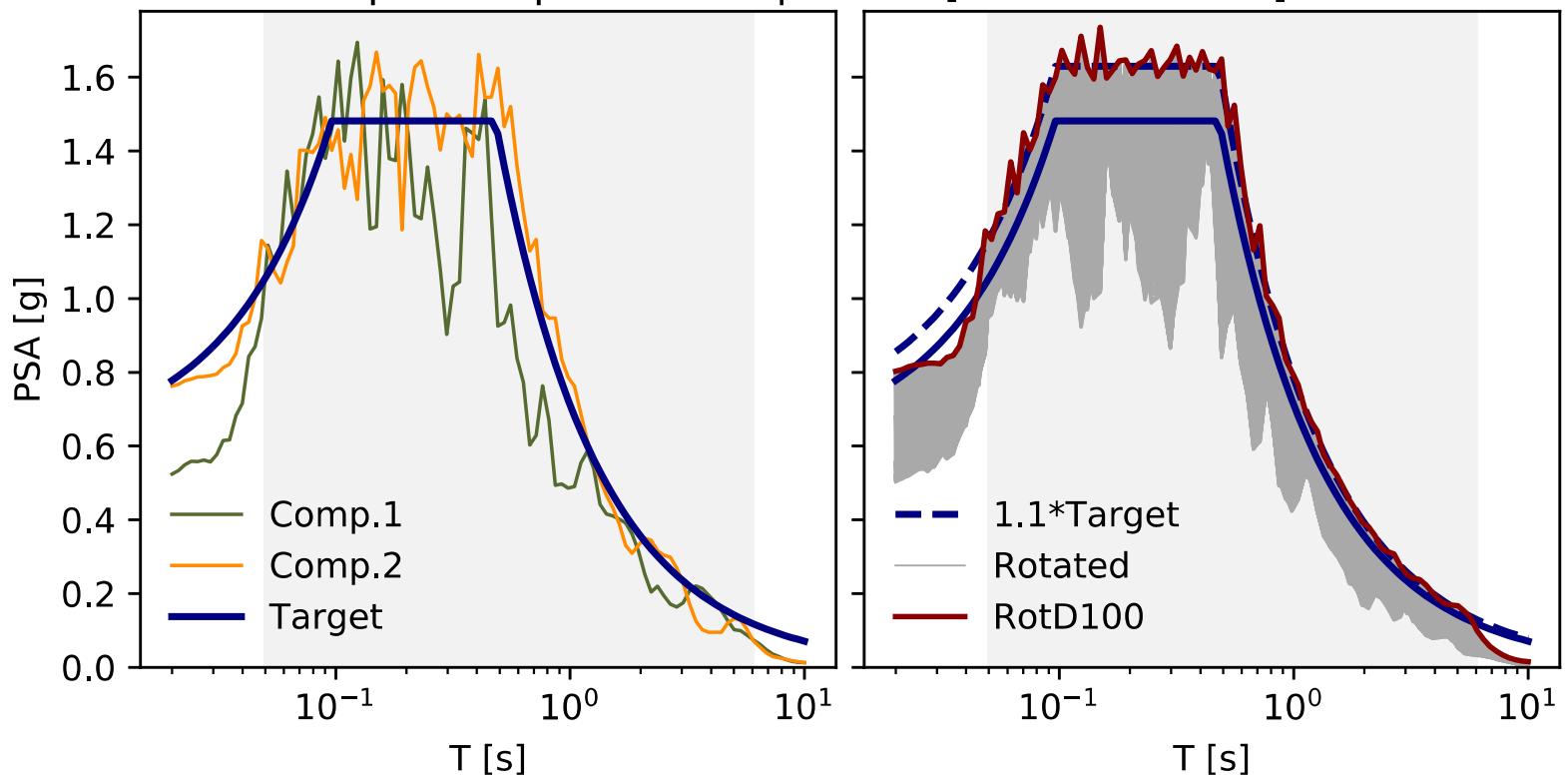
RotD100 ratios and angles [NGA.RSN.1008]



Time Histories Comparison [NGA.RSN.1008]

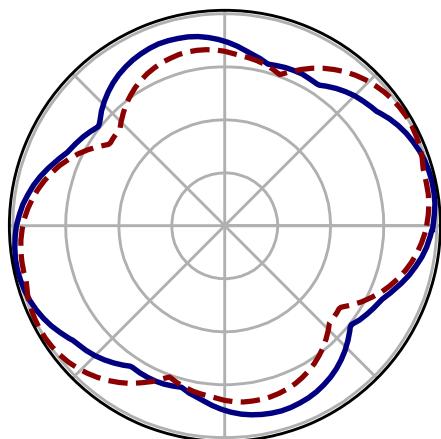


Response Spectra Comparison [NGA.RSN.1011]

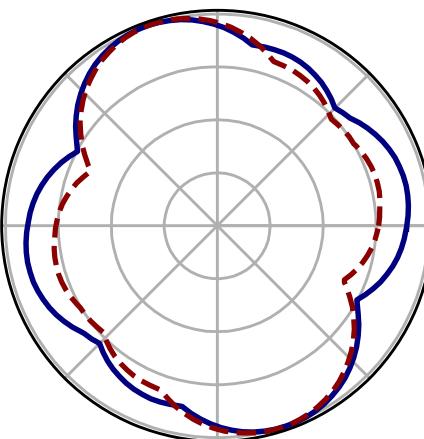


Normalized Spectral Accelerations @ θ [NGA.RSN.1011]

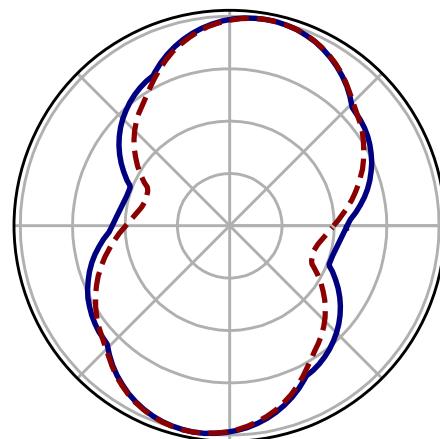
T = 0.1 s



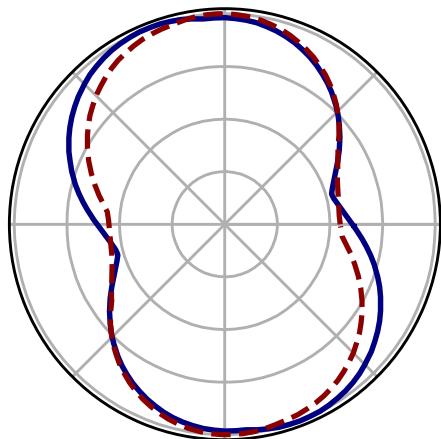
T = 0.2 s



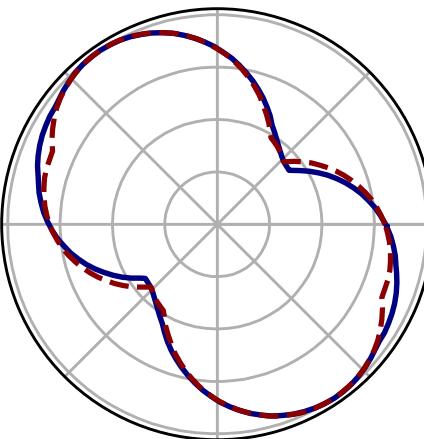
T = 0.5 s



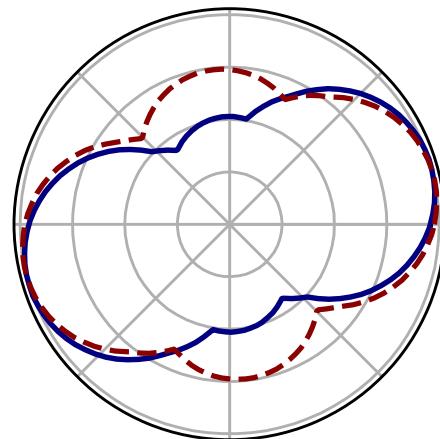
T = 1.0 s



T = 2.0 s

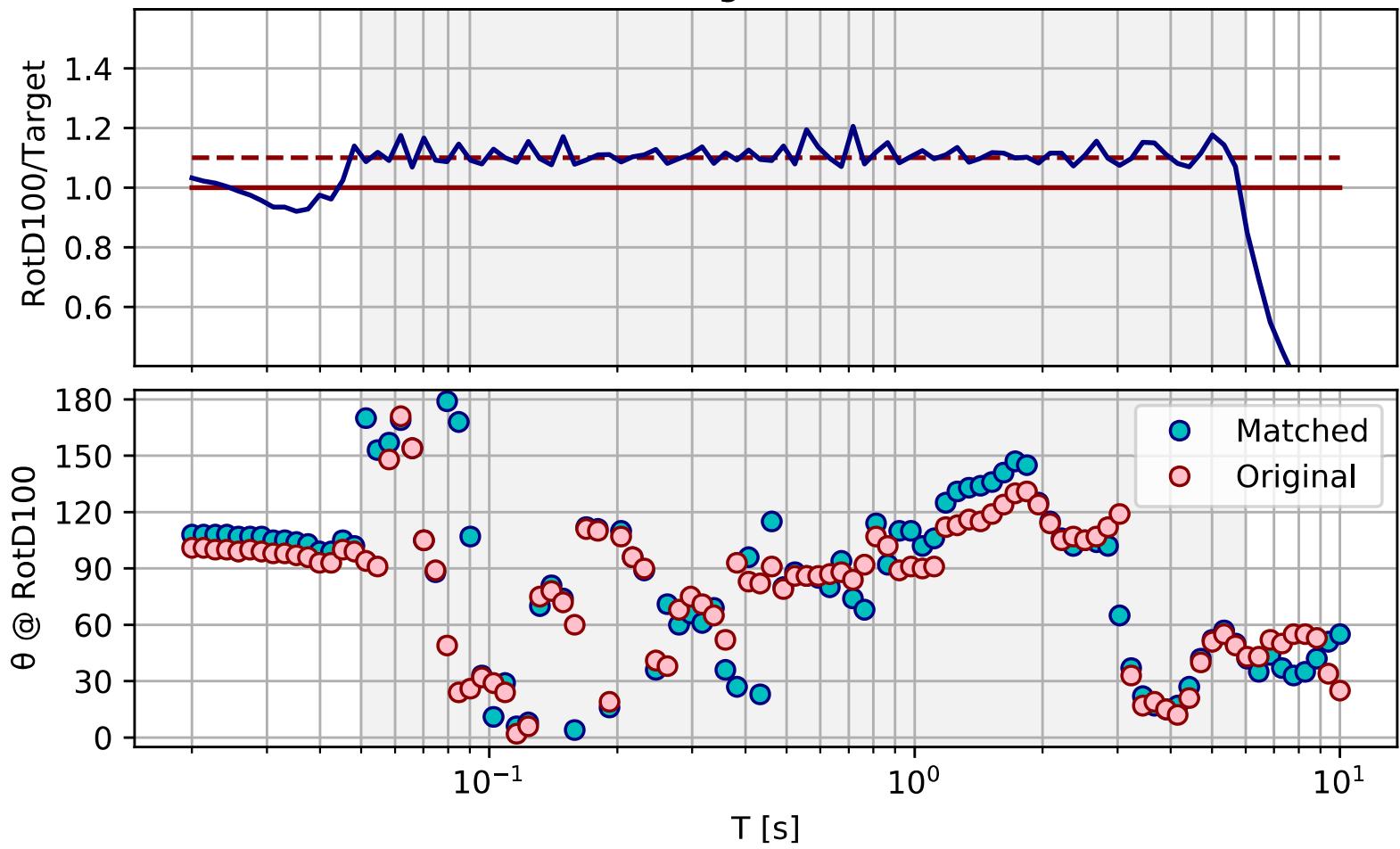


T = 4.2 s

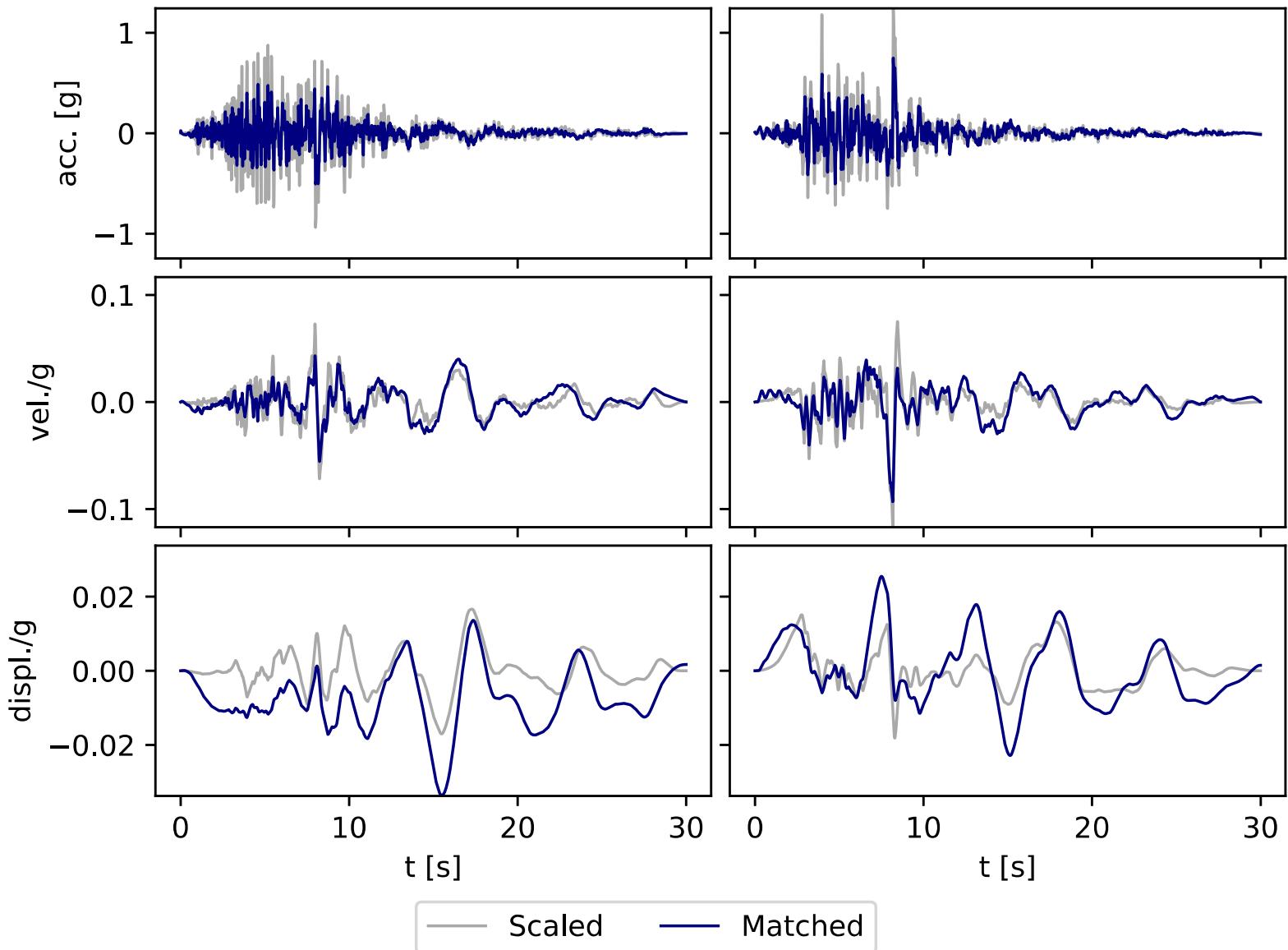


— Matched - - Original

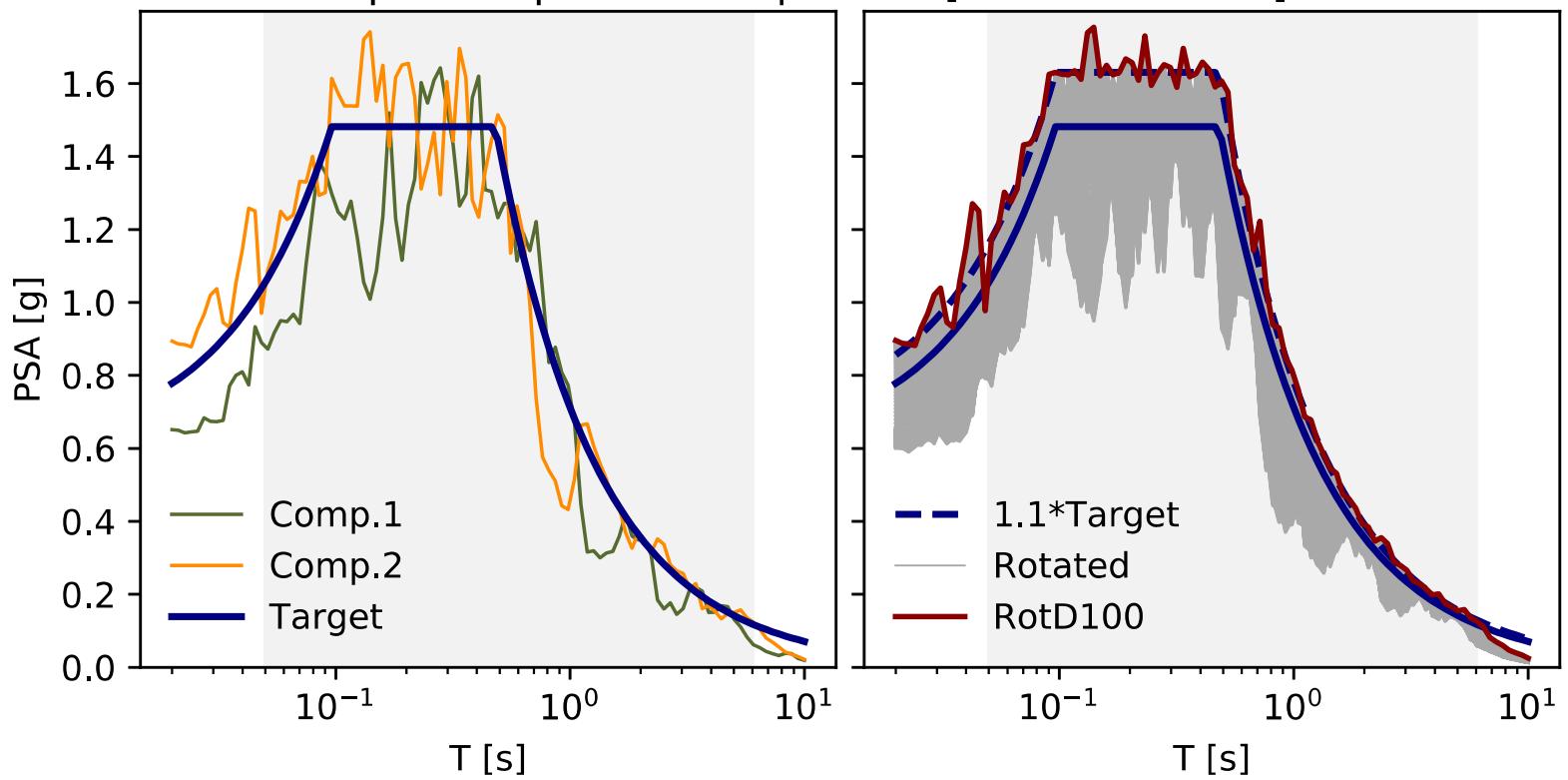
RotD100 ratios and angles [NGA.RSN.1011]



Time Histories Comparison [NGA.RSN.1011]



Response Spectra Comparison [NGA.RSN.1100]

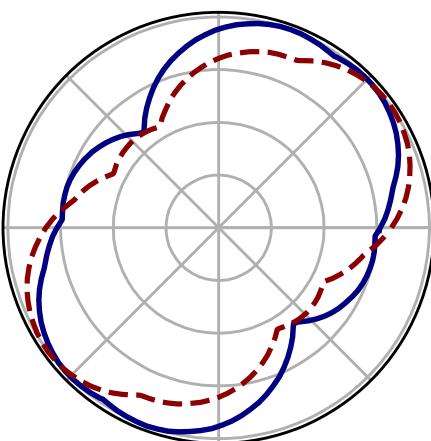
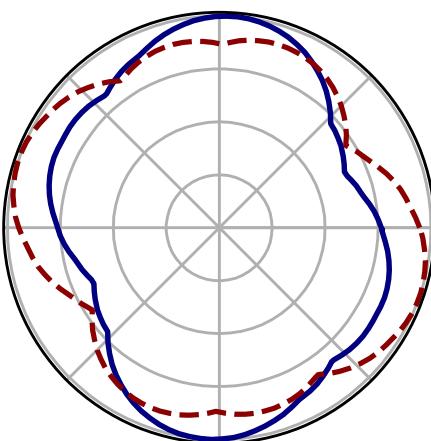
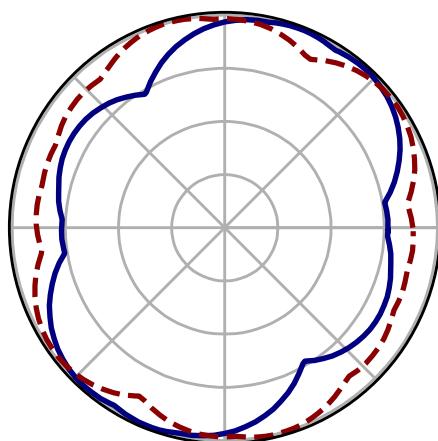


Normalized Spectral Accelerations @ θ [NGA.RSN.1100]

T = 0.1 s

T = 0.2 s

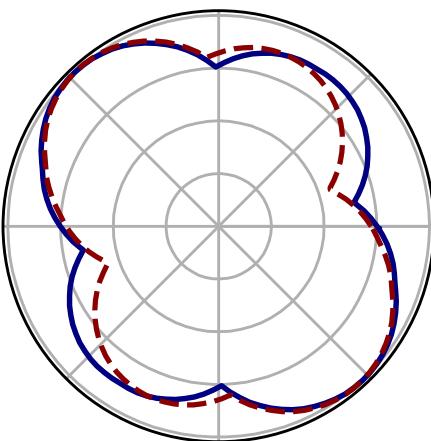
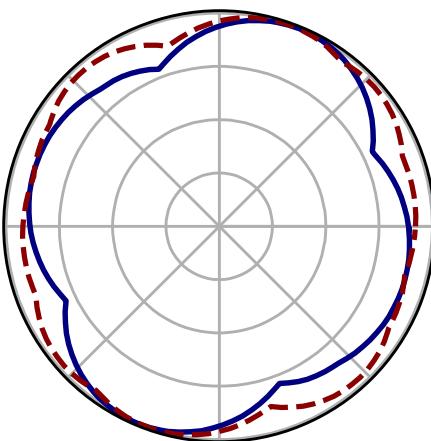
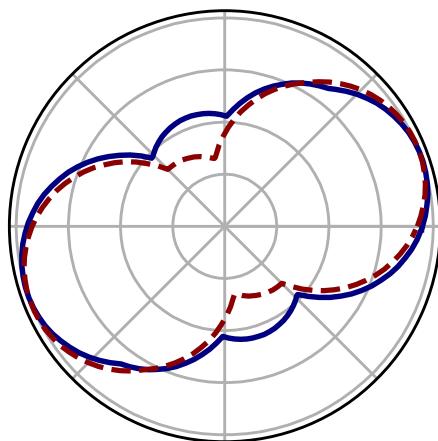
T = 0.5 s



T = 1.0 s

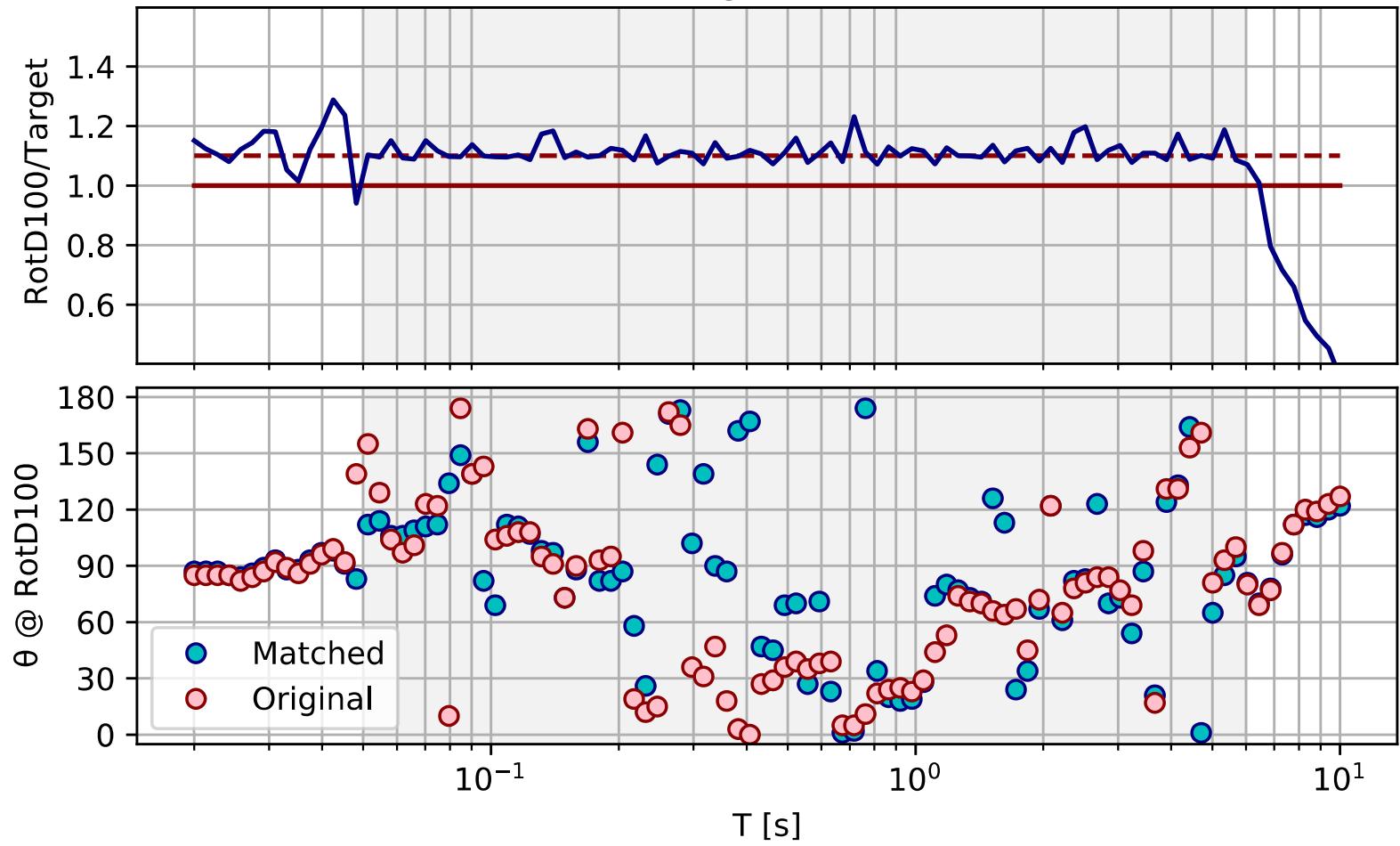
T = 2.0 s

T = 4.2 s

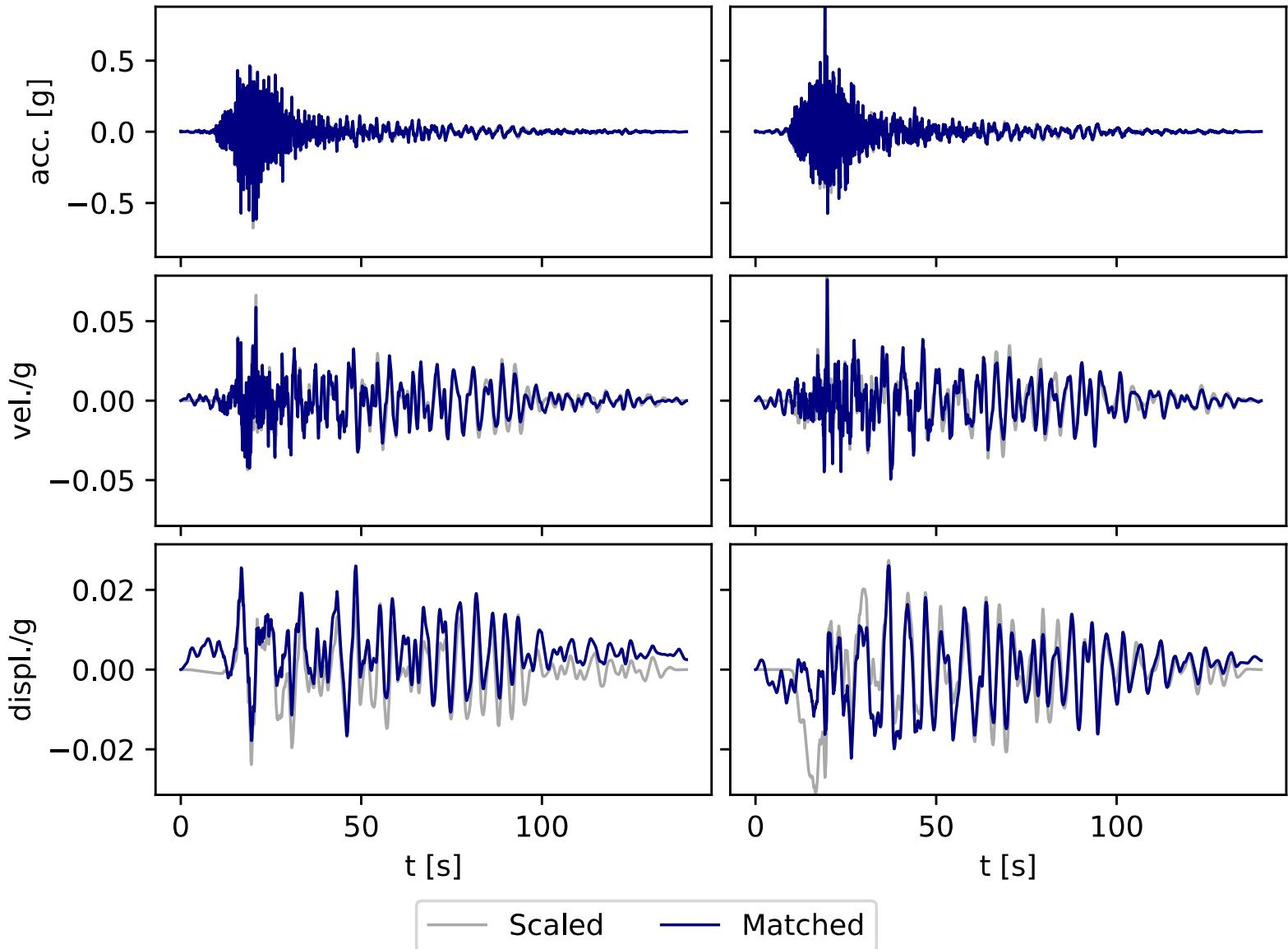


— Matched - - Original

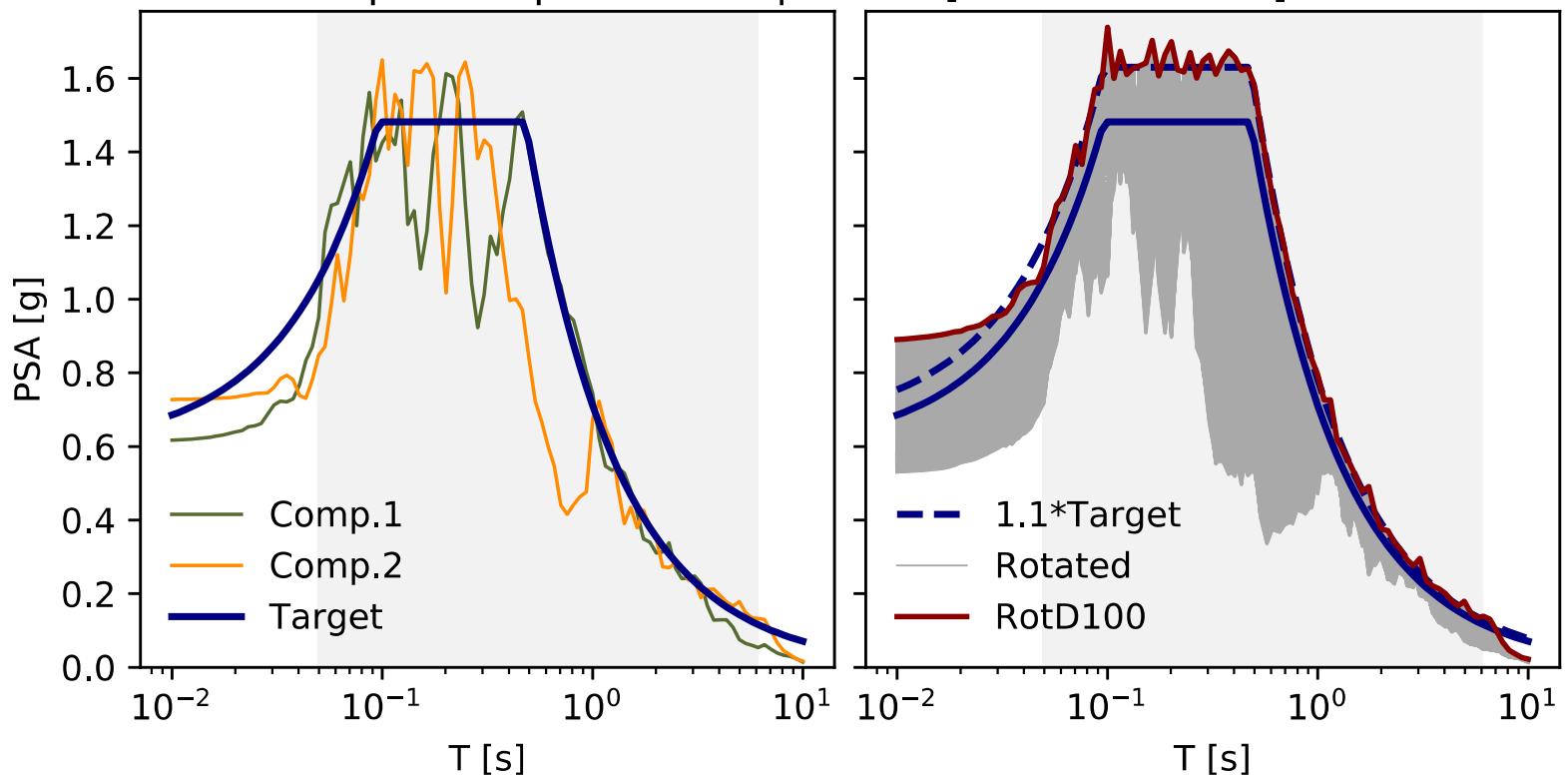
RotD100 ratios and angles [NGA.RSN.1100]



Time Histories Comparison [NGA.RSN.1100]

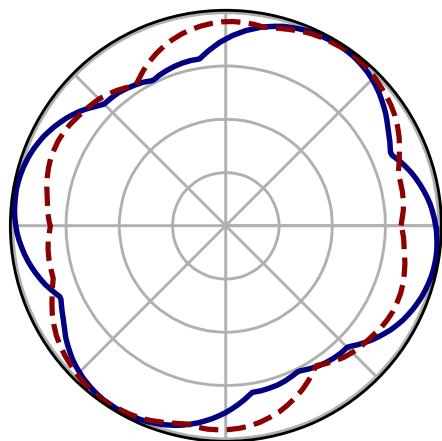


Response Spectra Comparison [NGA.RSN.3302]

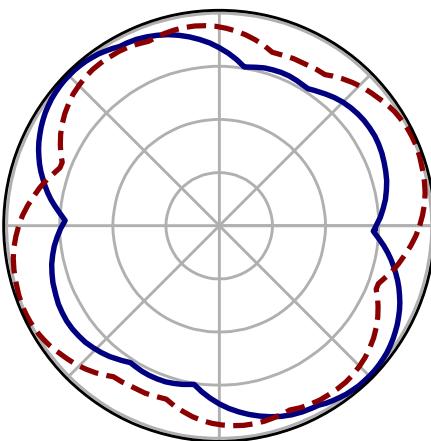


Normalized Spectral Accelerations @ θ [NGA.RSN.3302]

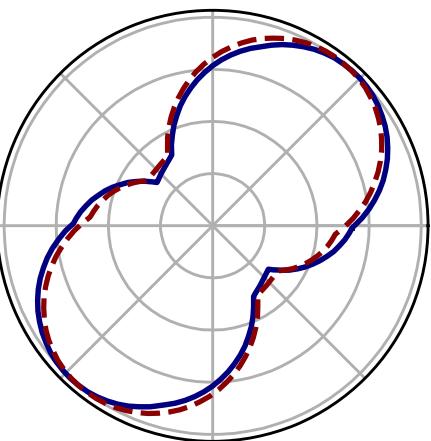
T = 0.1 s



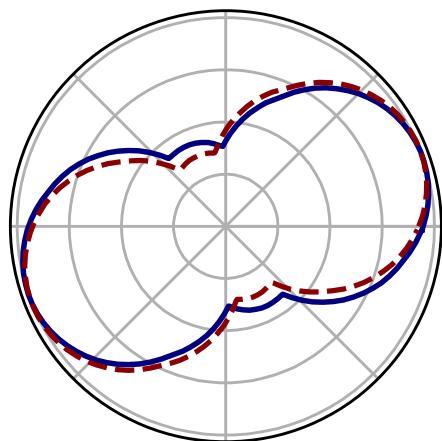
T = 0.1 s



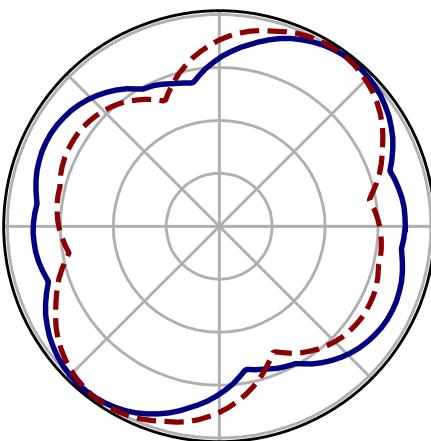
T = 0.4 s



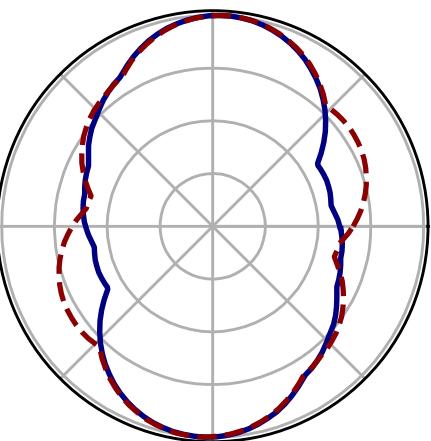
T = 0.8 s



T = 1.6 s

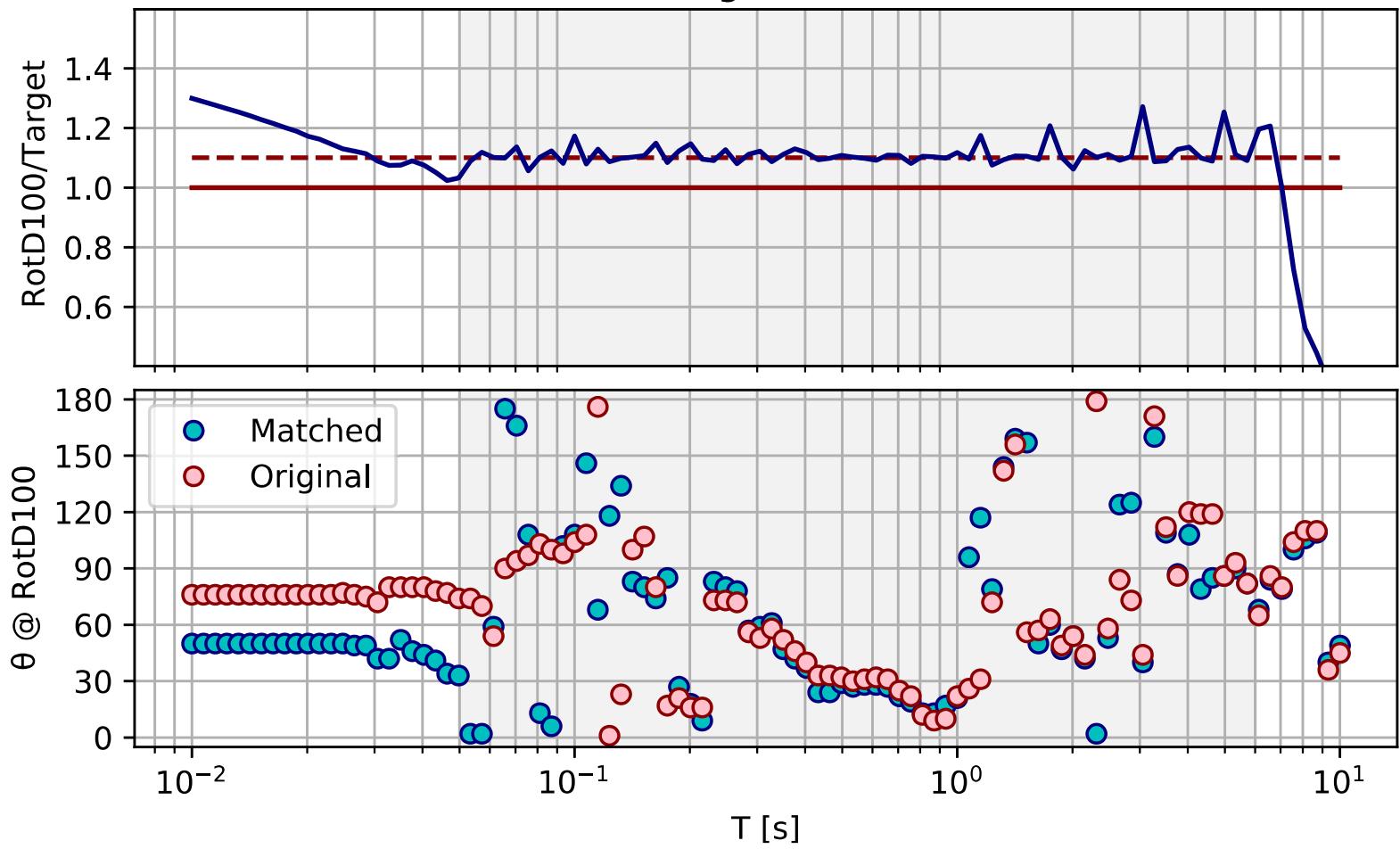


T = 3.8 s

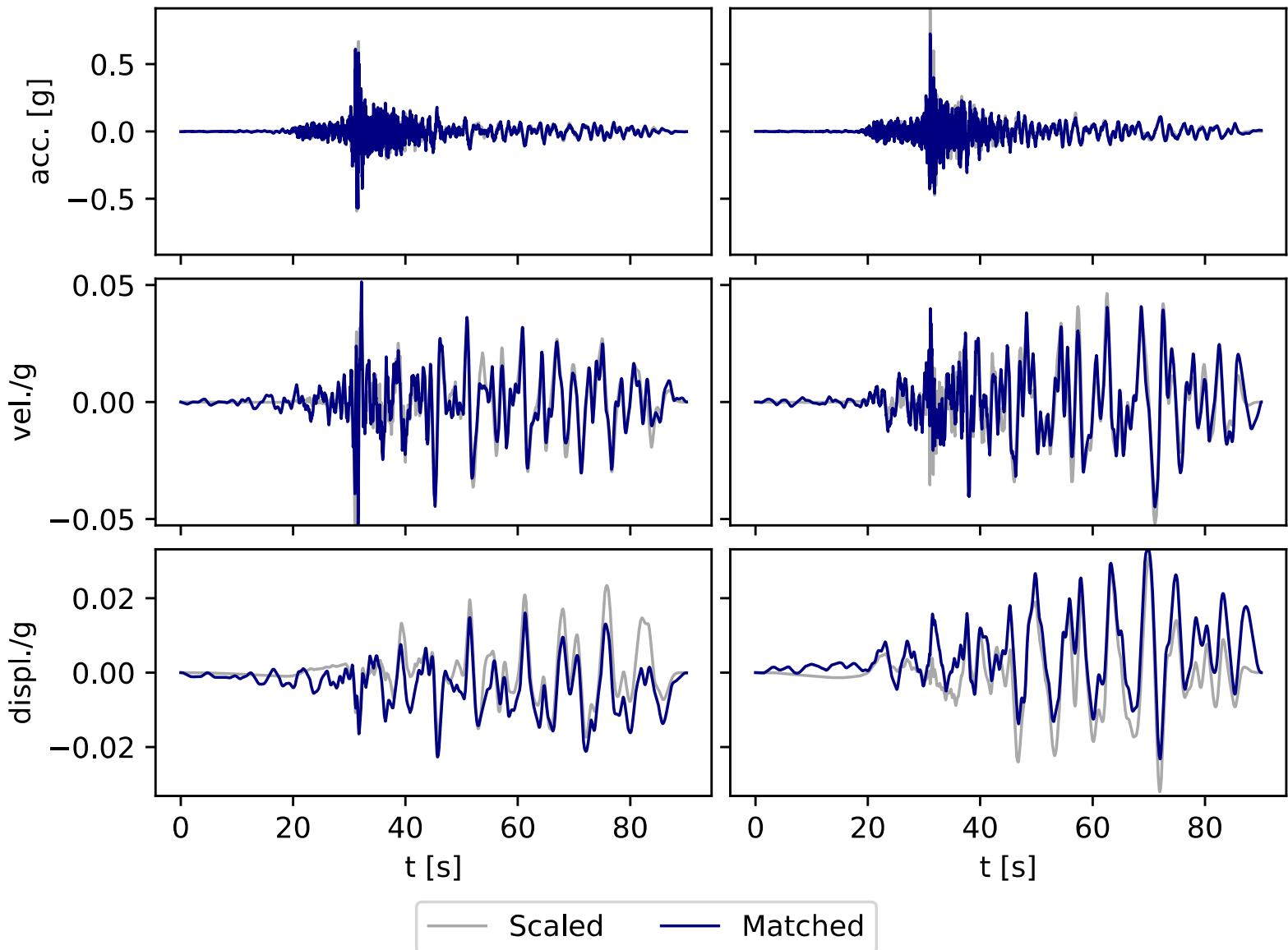


— Matched - - - Original

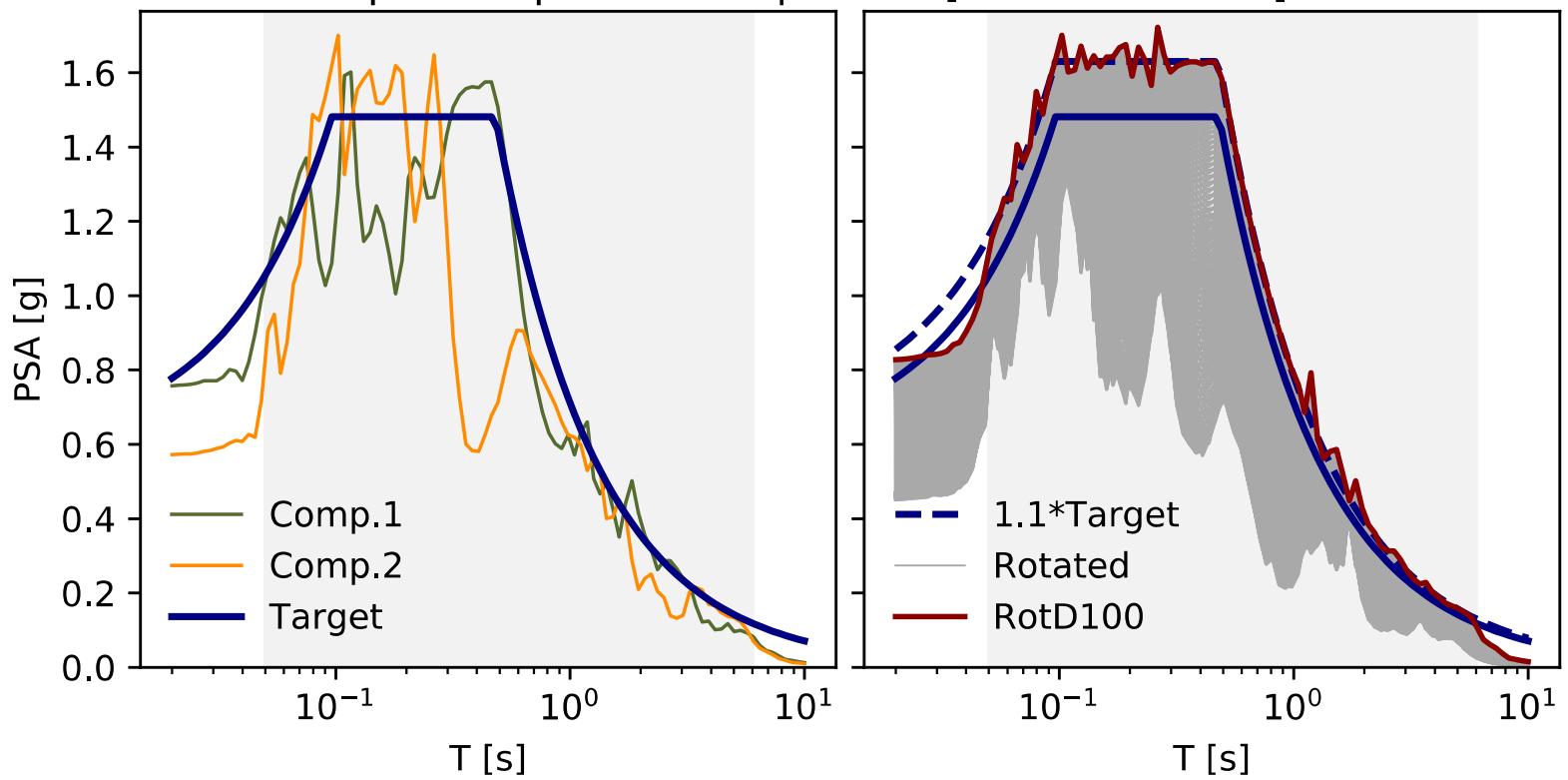
RotD100 ratios and angles [NGA.RSN.3302]



Time Histories Comparison [NGA.RSN.3302]

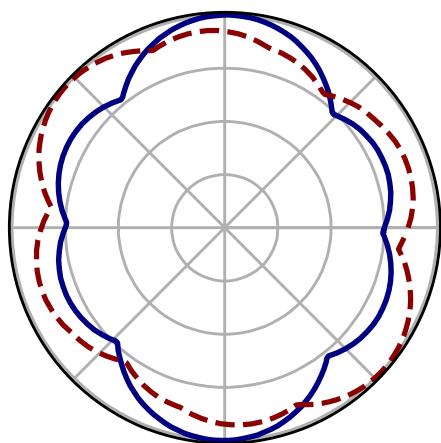


Response Spectra Comparison [NGA.RSN.4213]

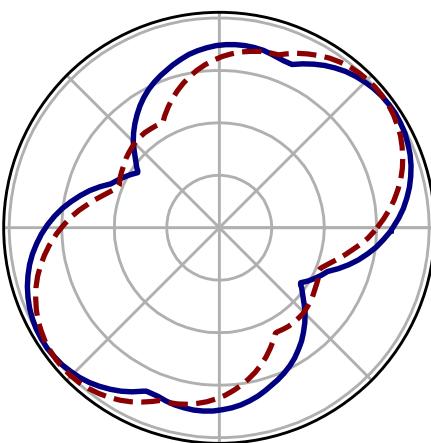


Normalized Spectral Accelerations @ θ [NGA.RSN.4213]

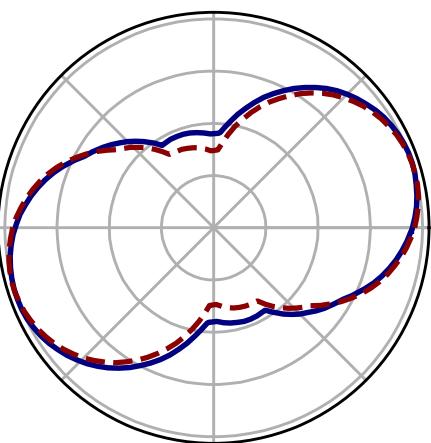
T = 0.1 s



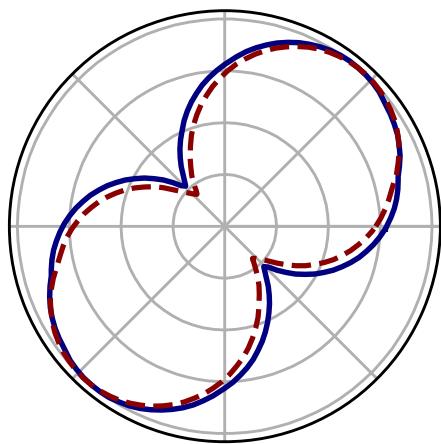
T = 0.2 s



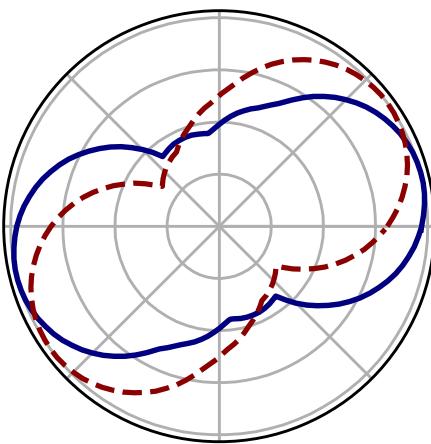
T = 0.5 s



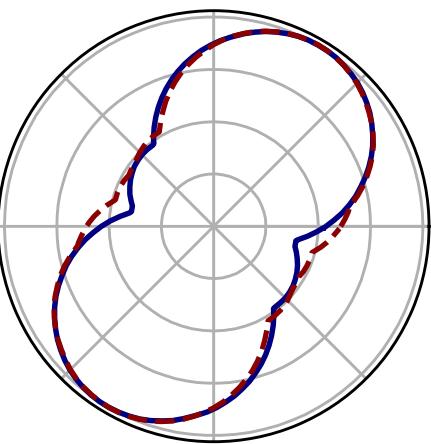
T = 1.0 s



T = 2.0 s

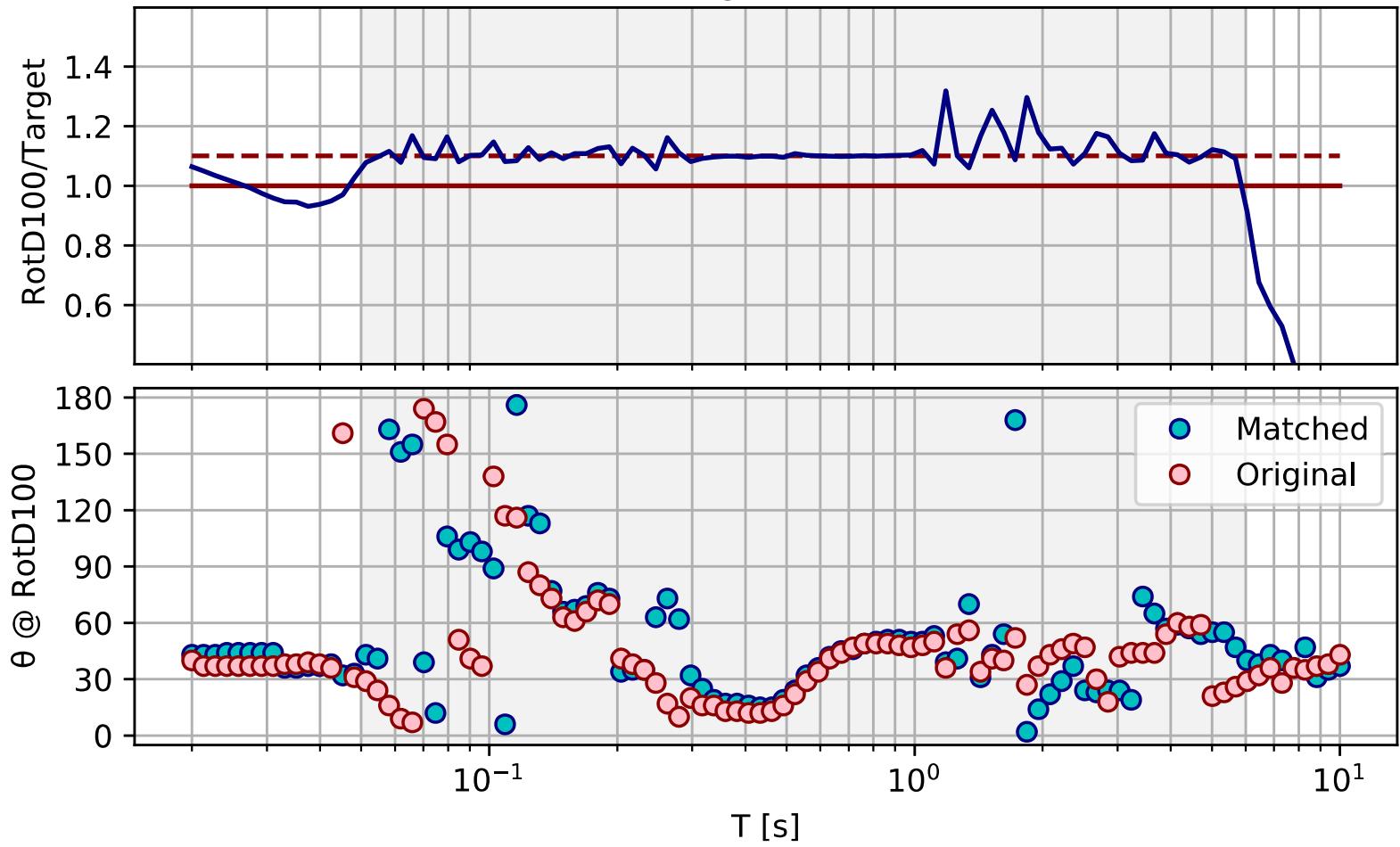


T = 4.2 s

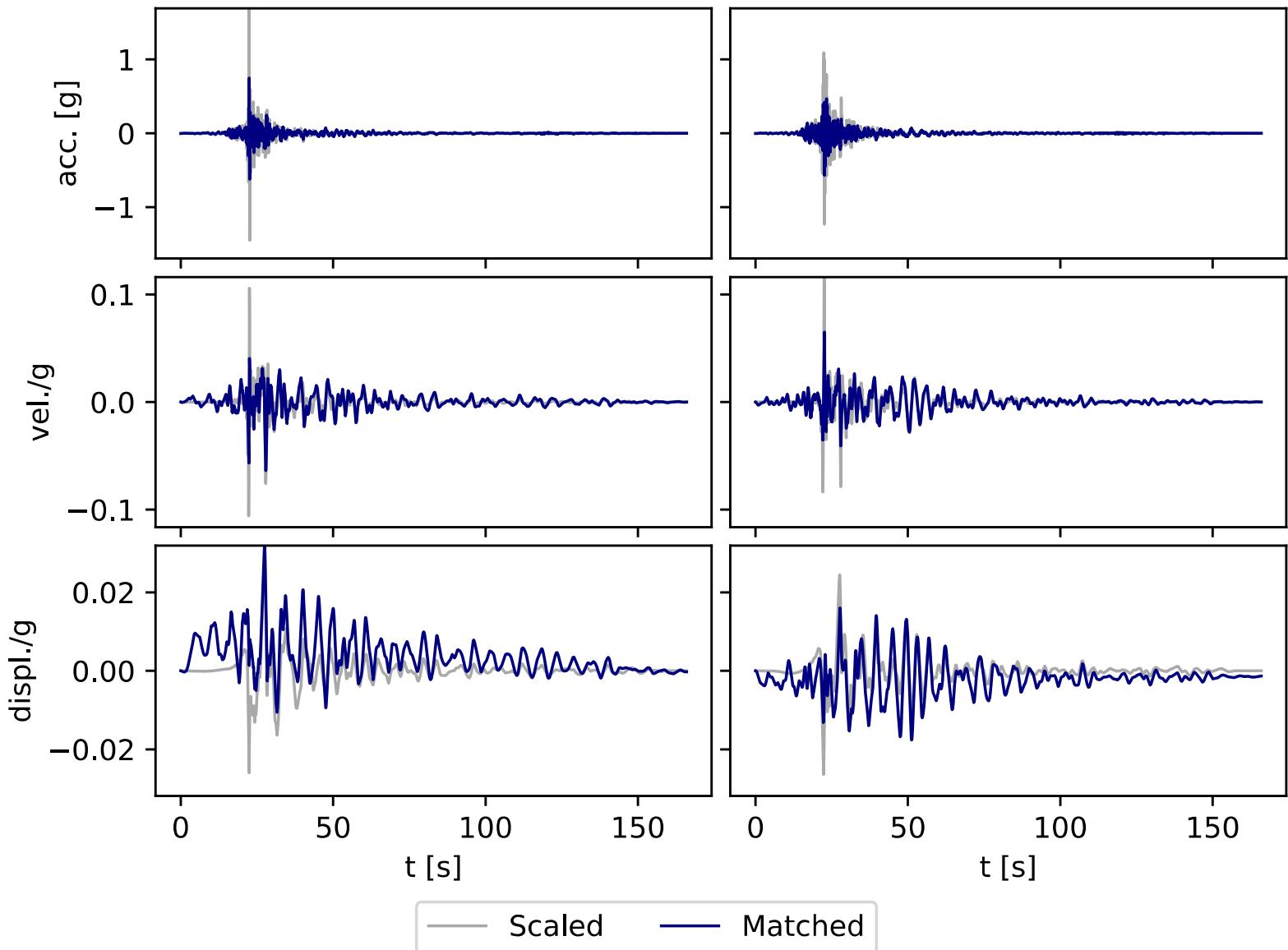


— Matched - - - Original

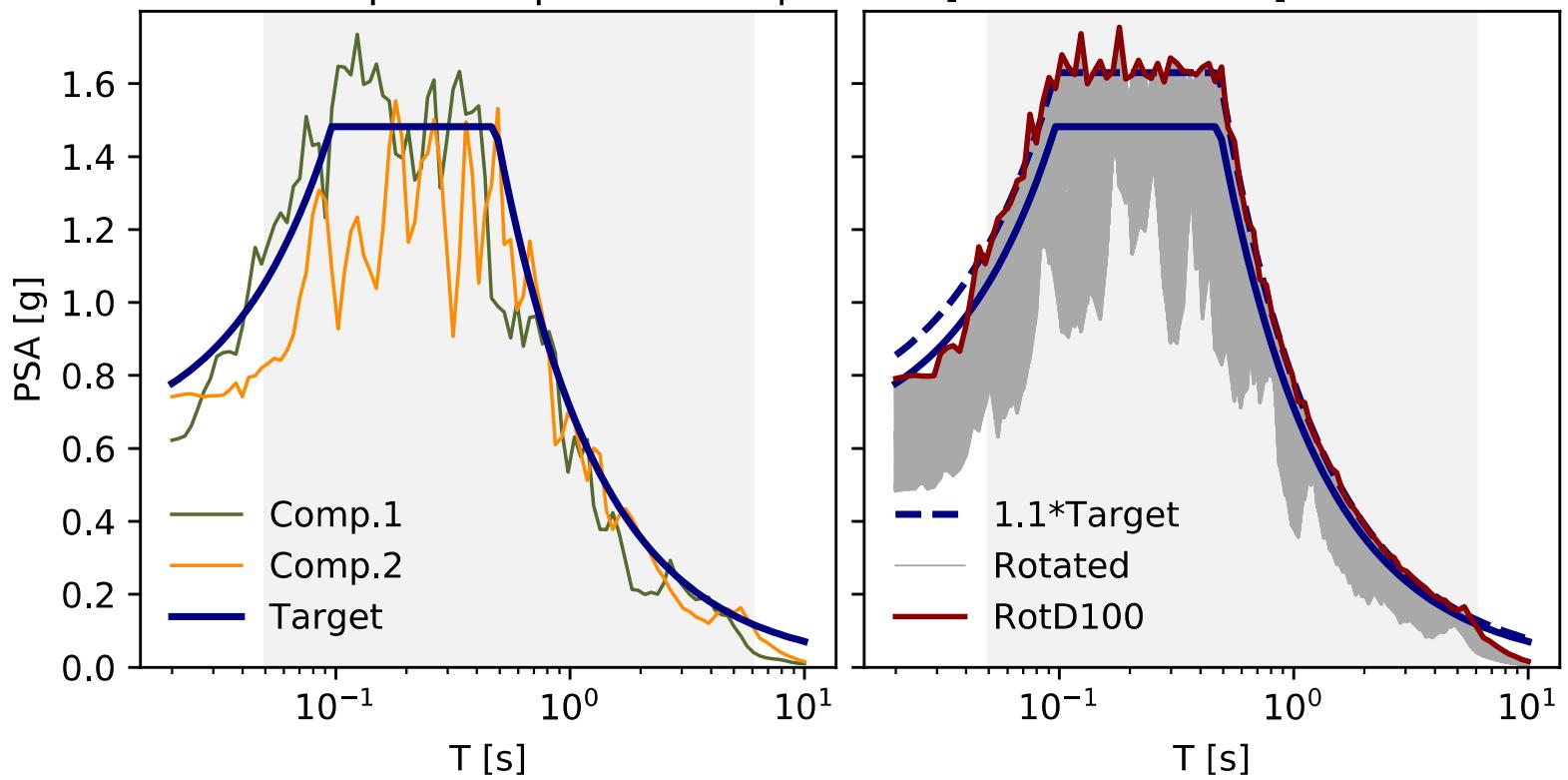
RotD100 ratios and angles [NGA.RSN.4213]



Time Histories Comparison [NGA.RSN.4213]

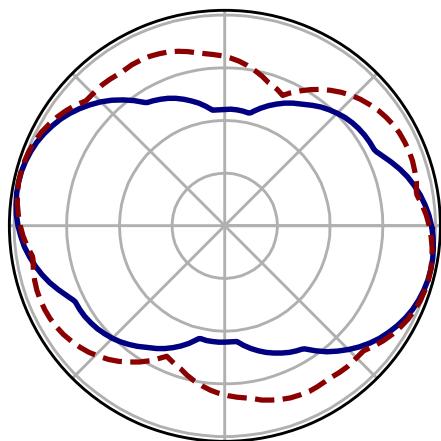


Response Spectra Comparison [NGA.RSN.4858]

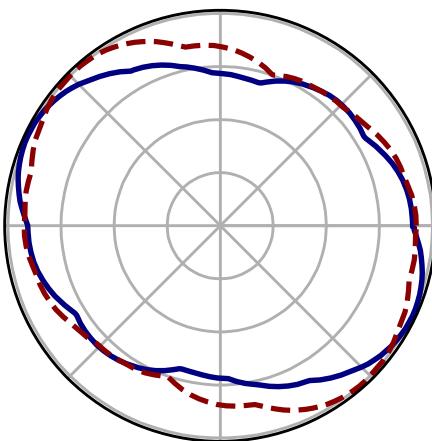


Normalized Spectral Accelerations @ θ [NGA.RSN.4858]

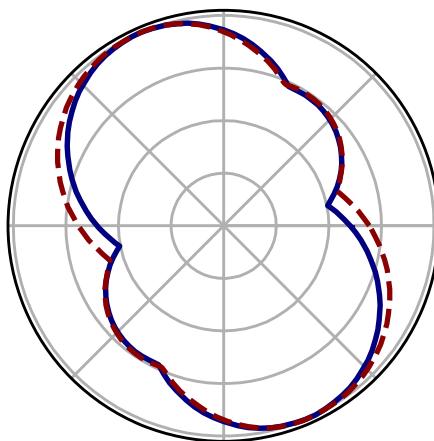
T = 0.1 s



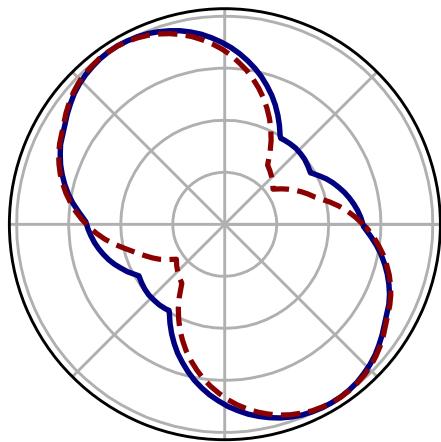
T = 0.2 s



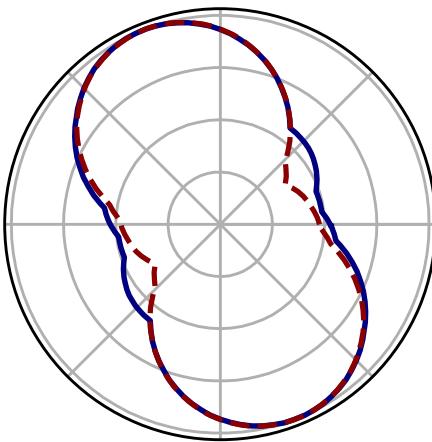
T = 0.5 s



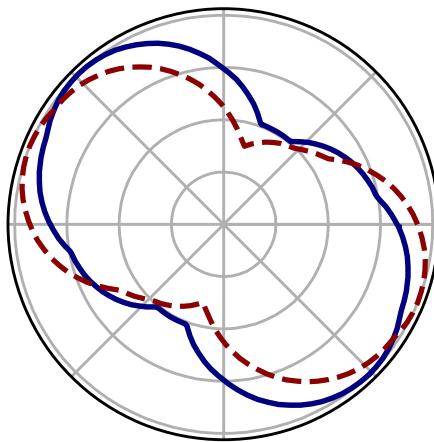
T = 1.0 s



T = 2.0 s

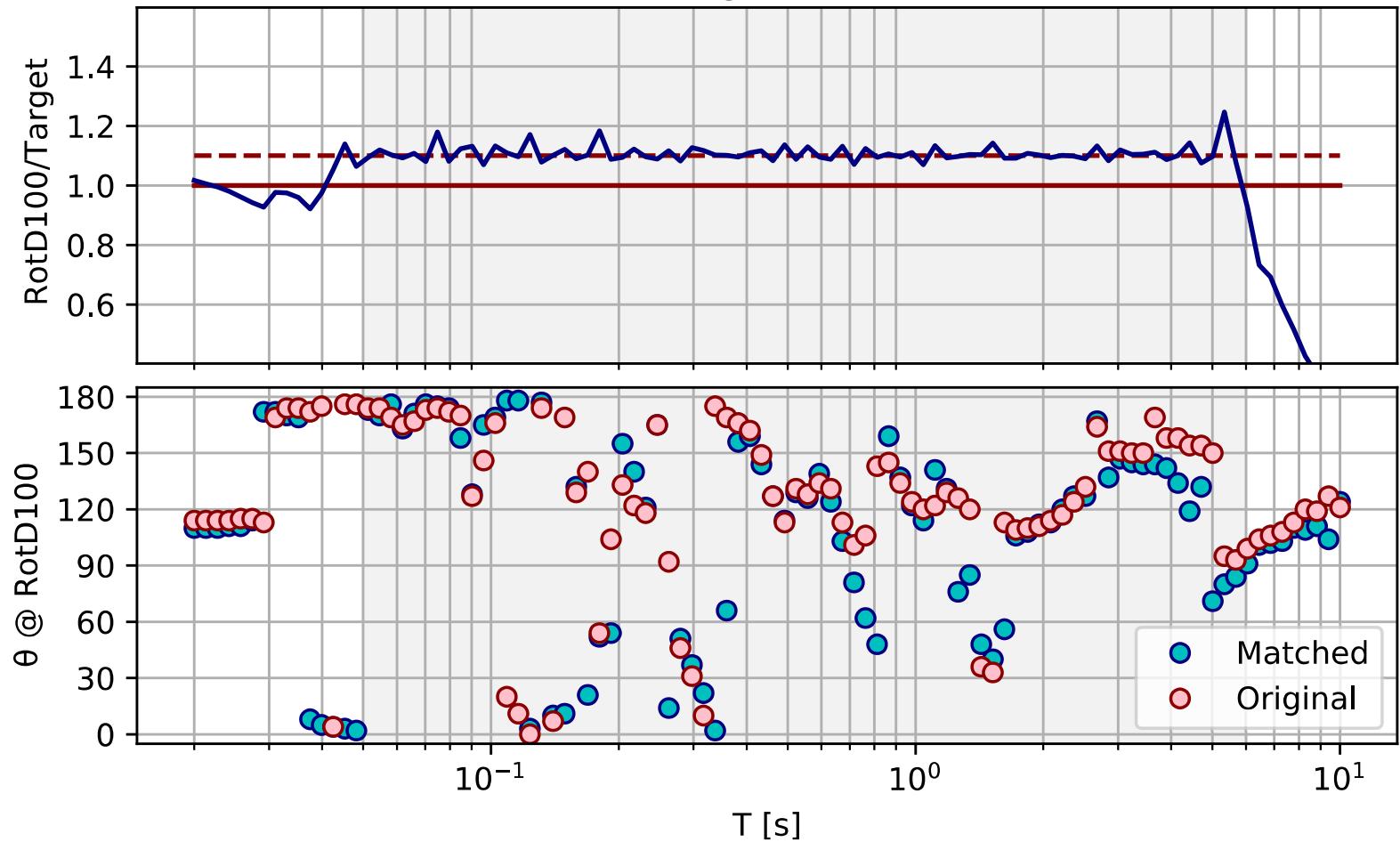


T = 4.2 s

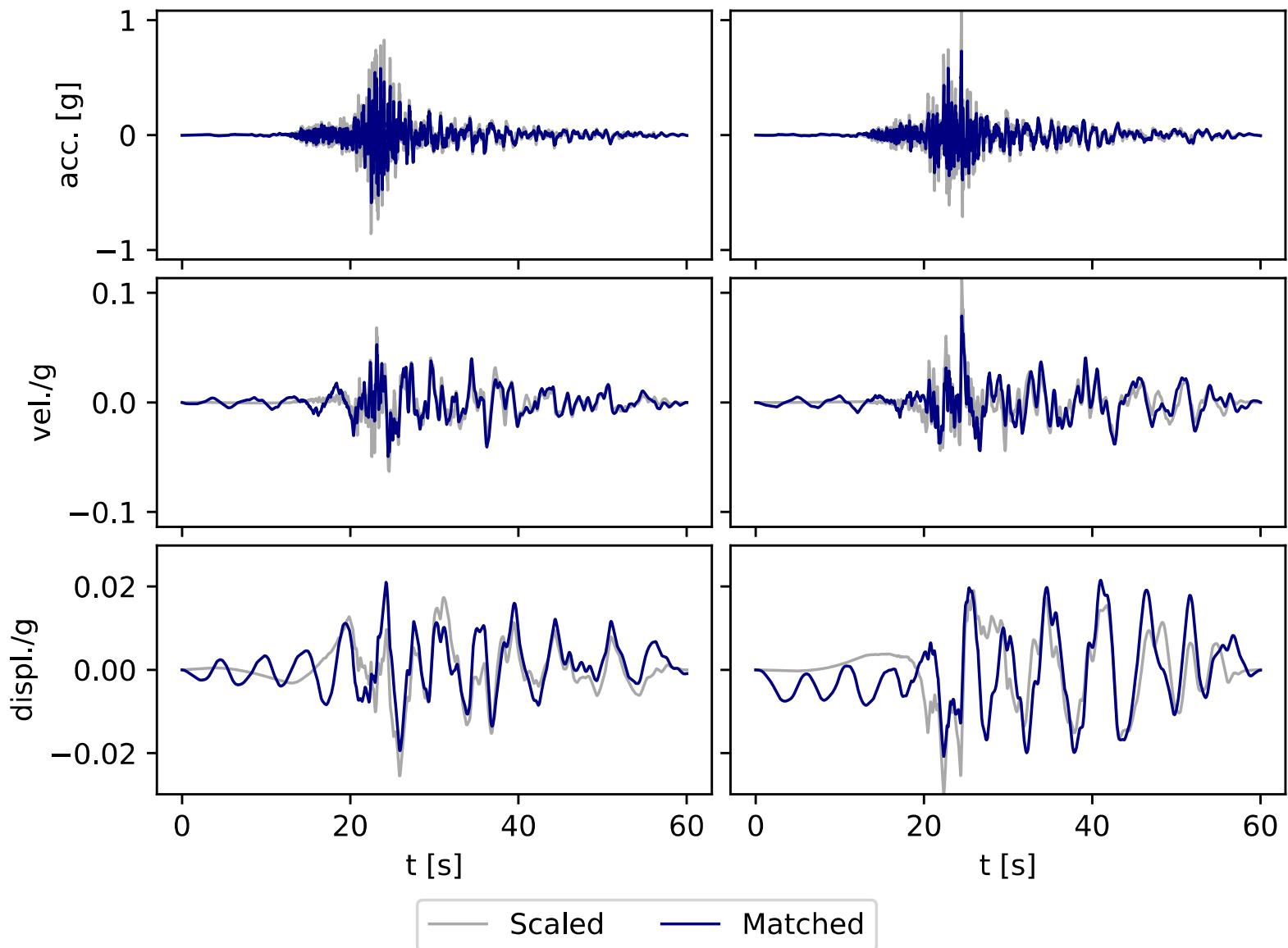


— Matched - - Original

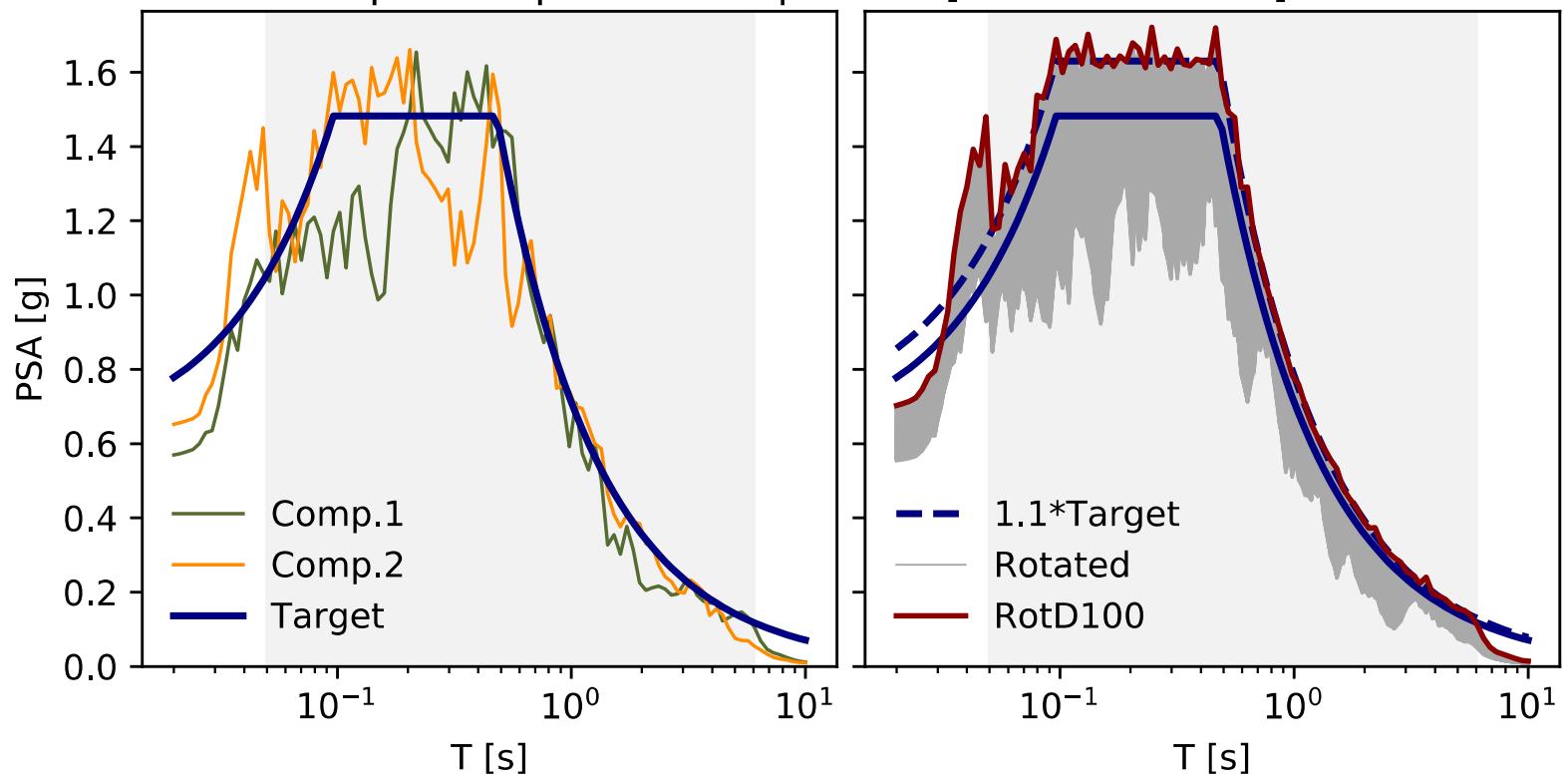
RotD100 ratios and angles [NGA.RSN.4858]



Time Histories Comparison [NGA.RSN.4858]

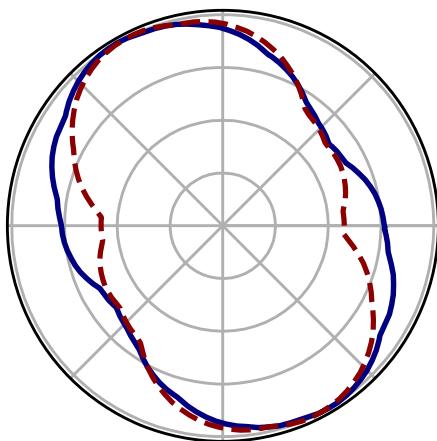


Response Spectra Comparison [NGA.RSN.5618]

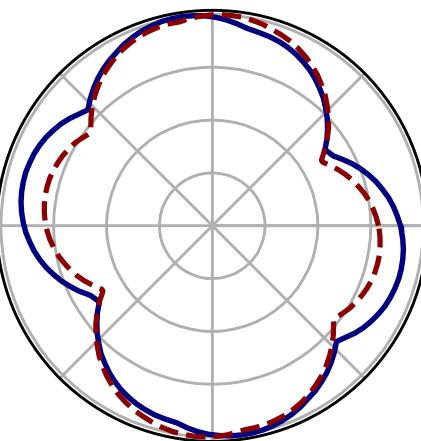


Normalized Spectral Accelerations @ θ [NGA.RSN.5618]

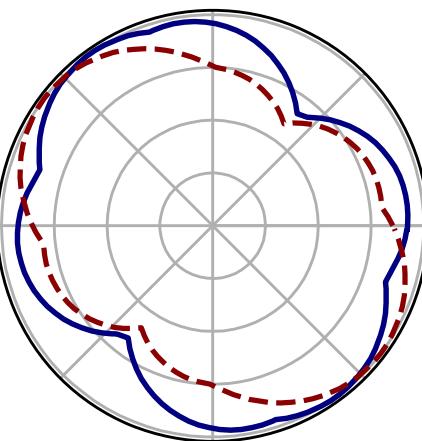
T = 0.1 s



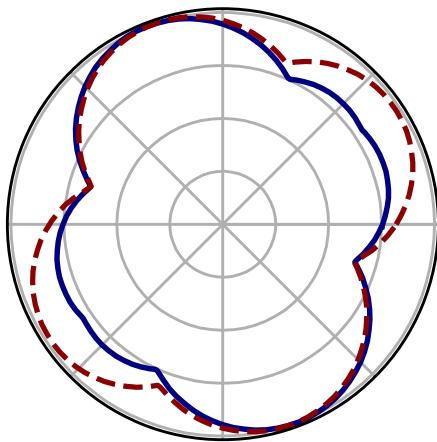
T = 0.2 s



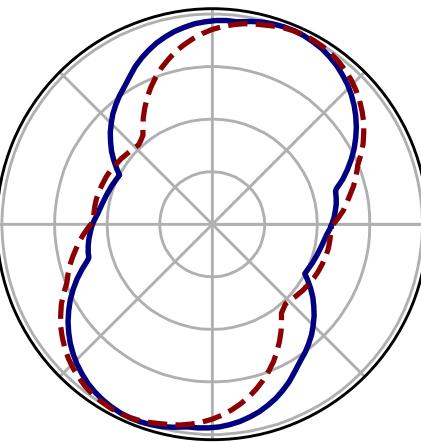
T = 0.5 s



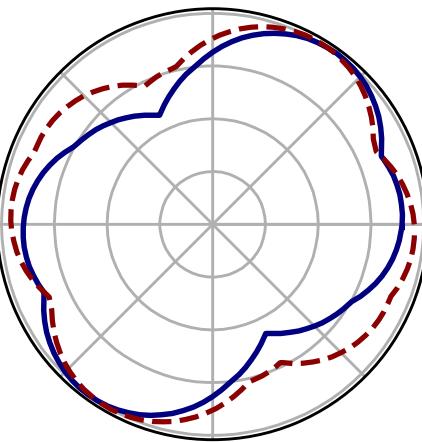
T = 1.0 s



T = 2.0 s

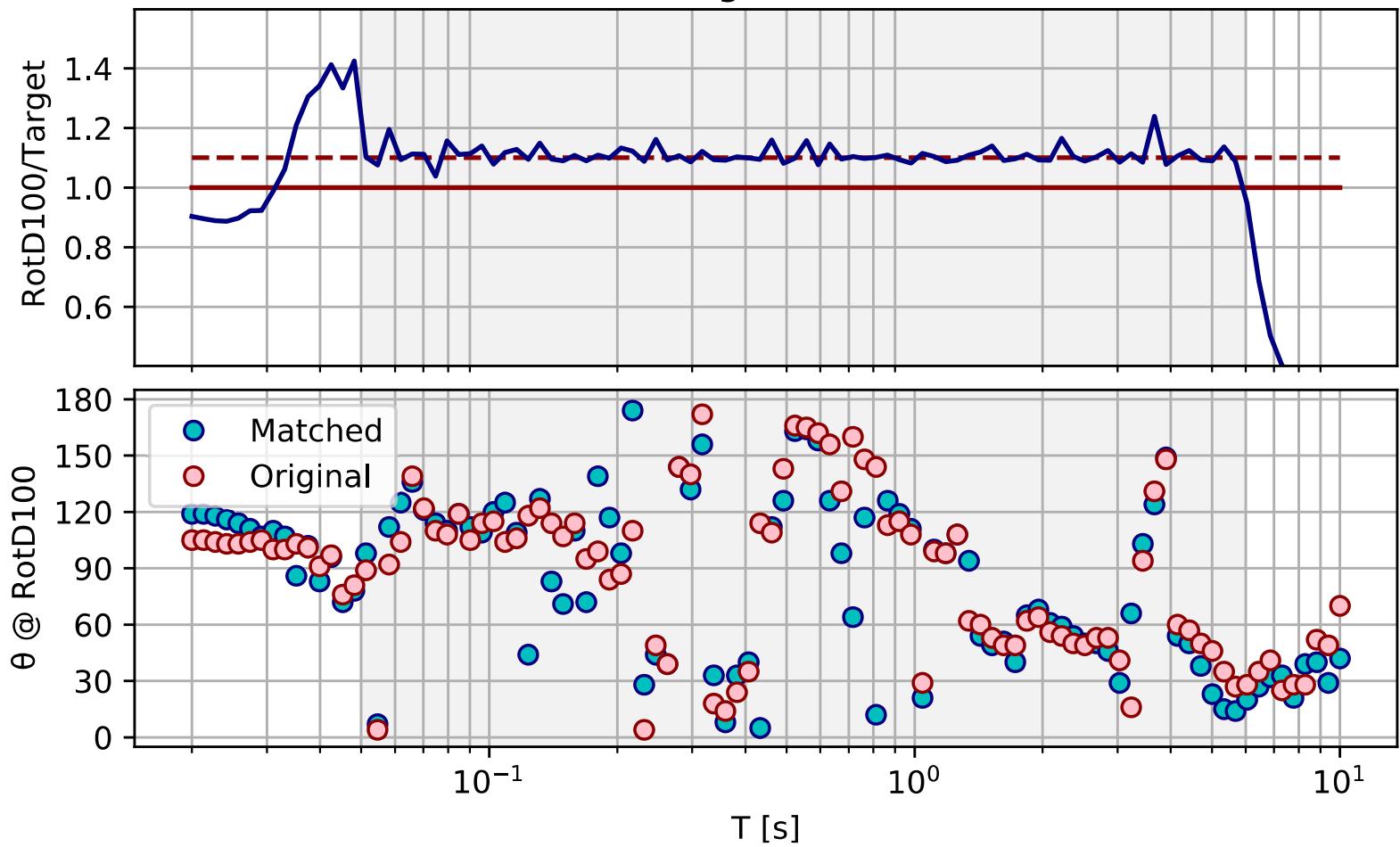


T = 4.2 s

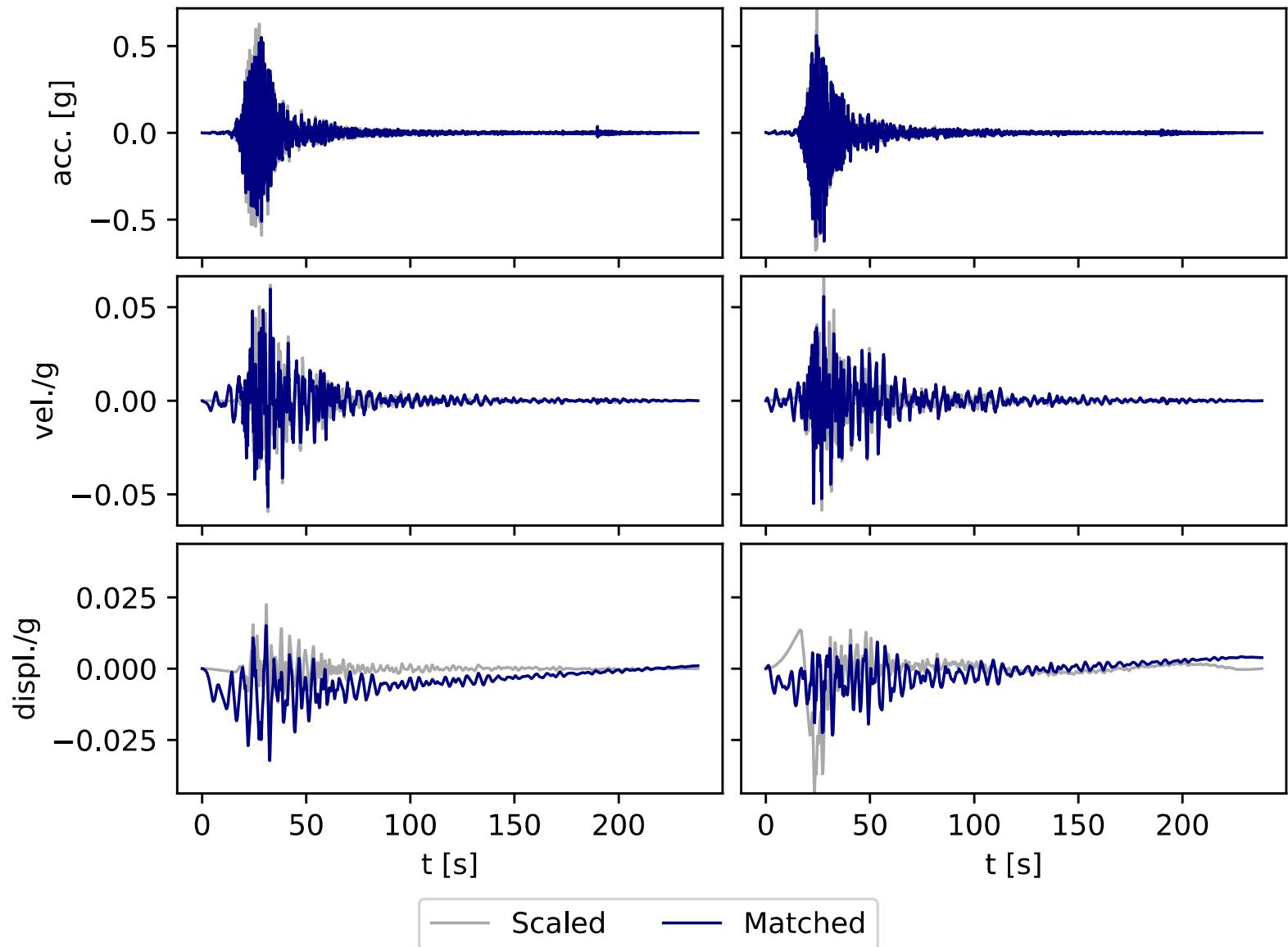


— Matched - - Original

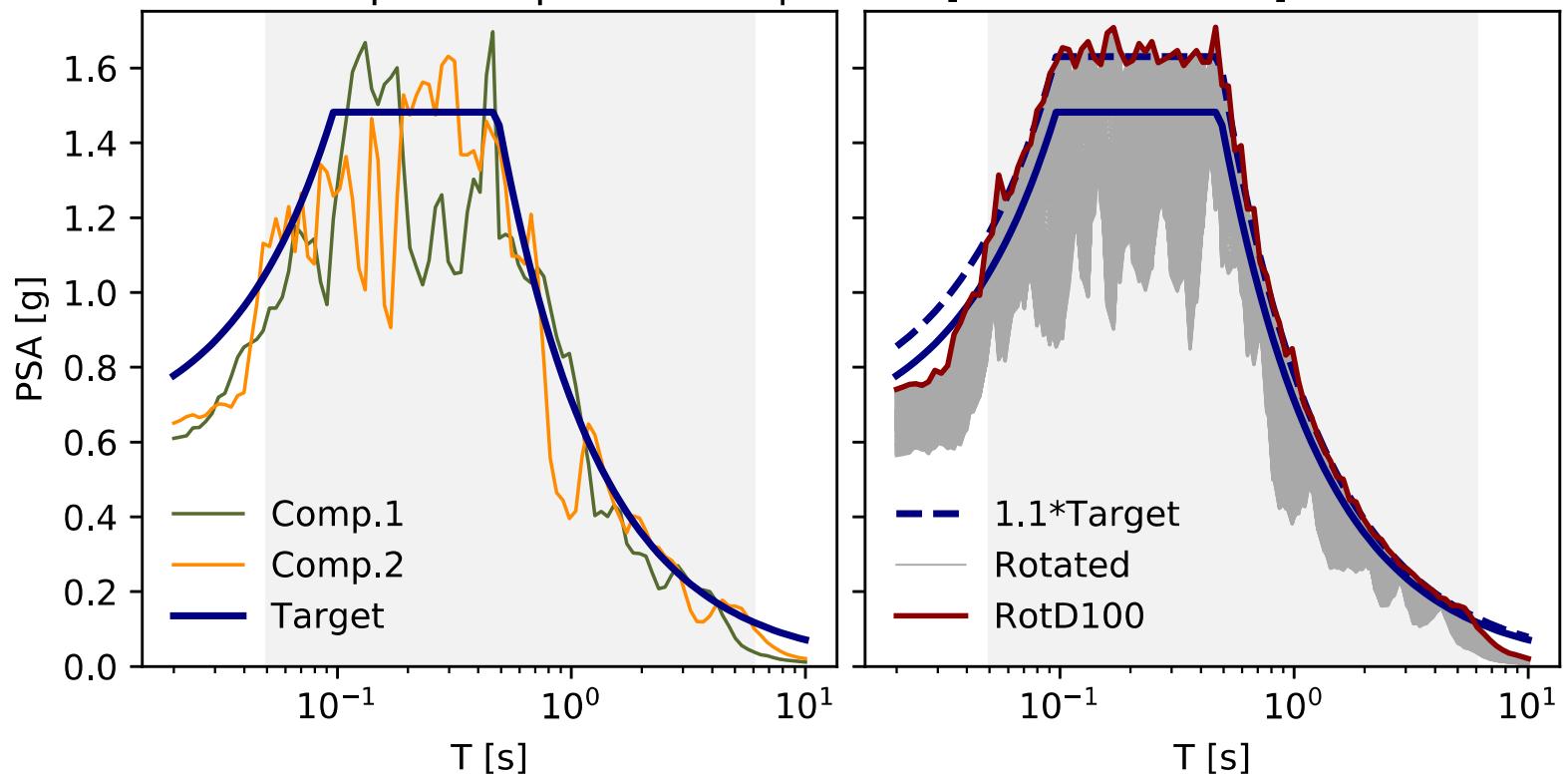
RotD100 ratios and angles [NGA.RSN.5618]



Time Histories Comparison [NGA.RSN.5618]



Response Spectra Comparison [NGA.RSN.5776]

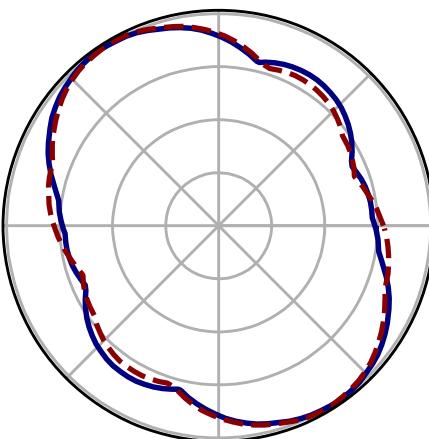
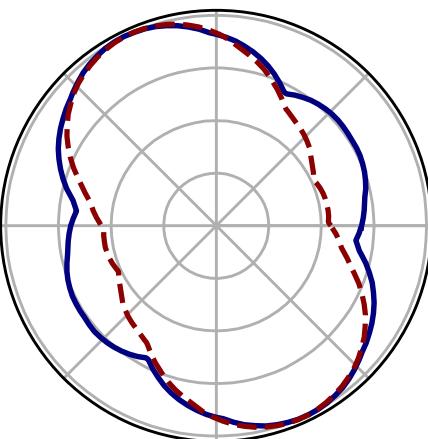
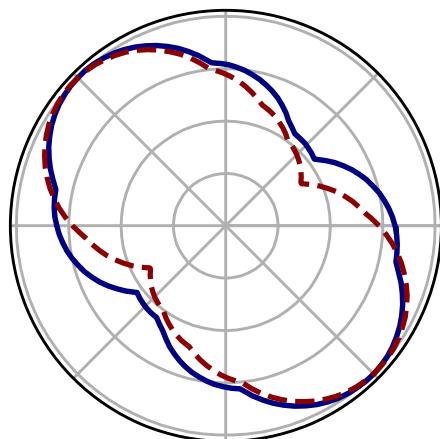


Normalized Spectral Accelerations @ θ [NGA.RSN.5776]

T = 0.1 s

T = 0.2 s

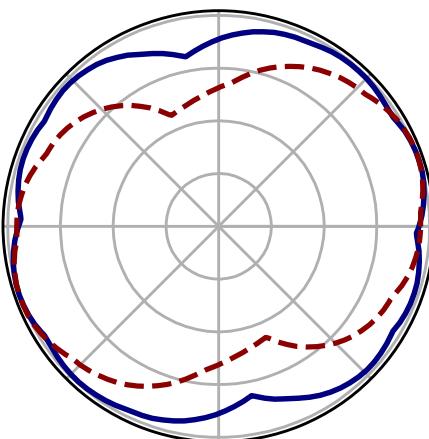
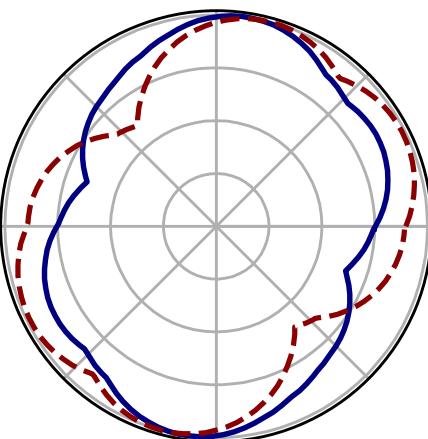
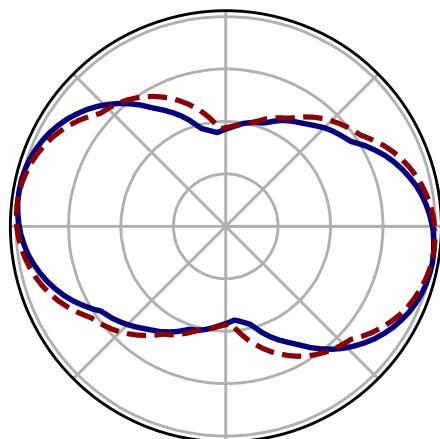
T = 0.5 s



T = 1.0 s

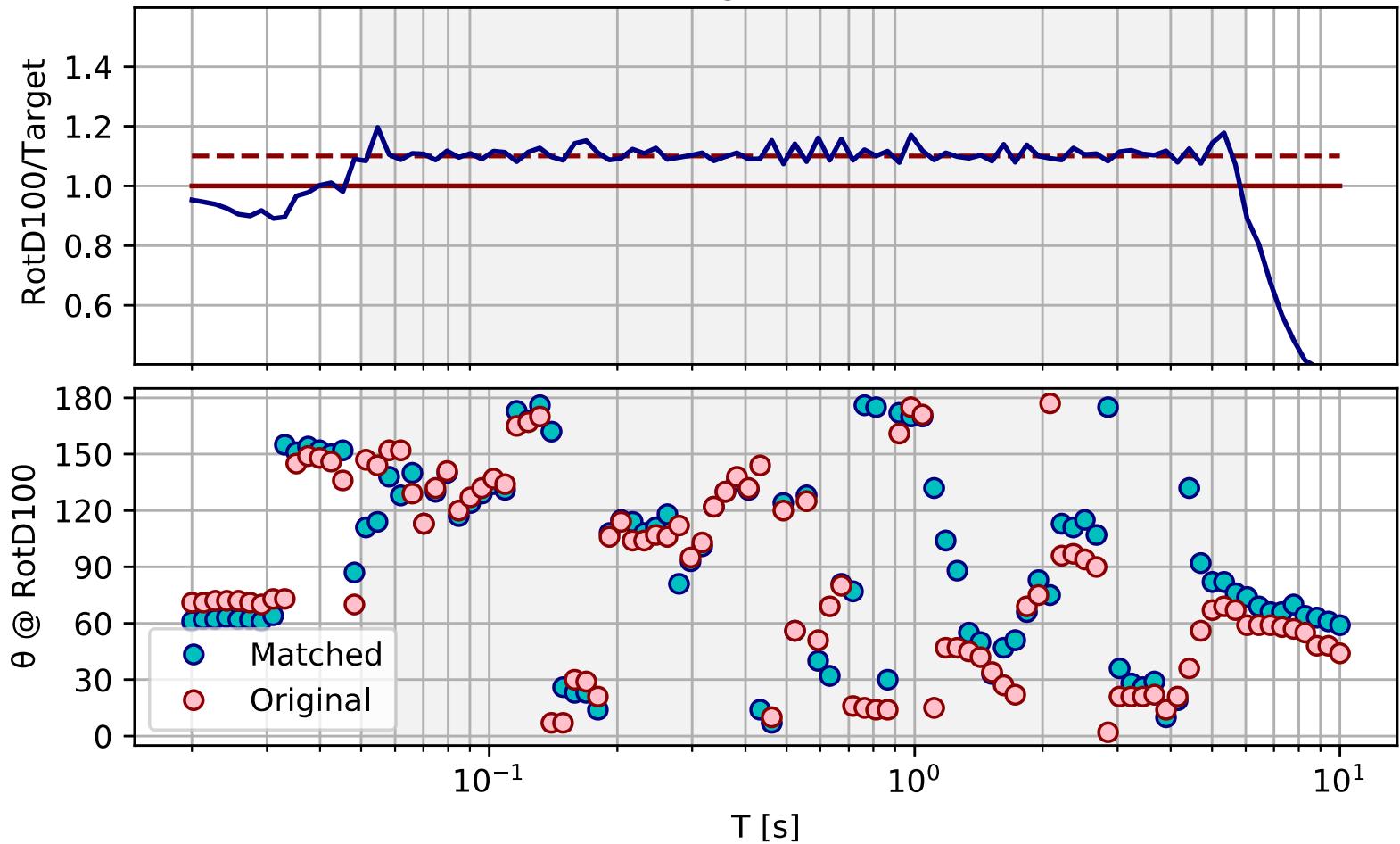
T = 2.0 s

T = 4.2 s

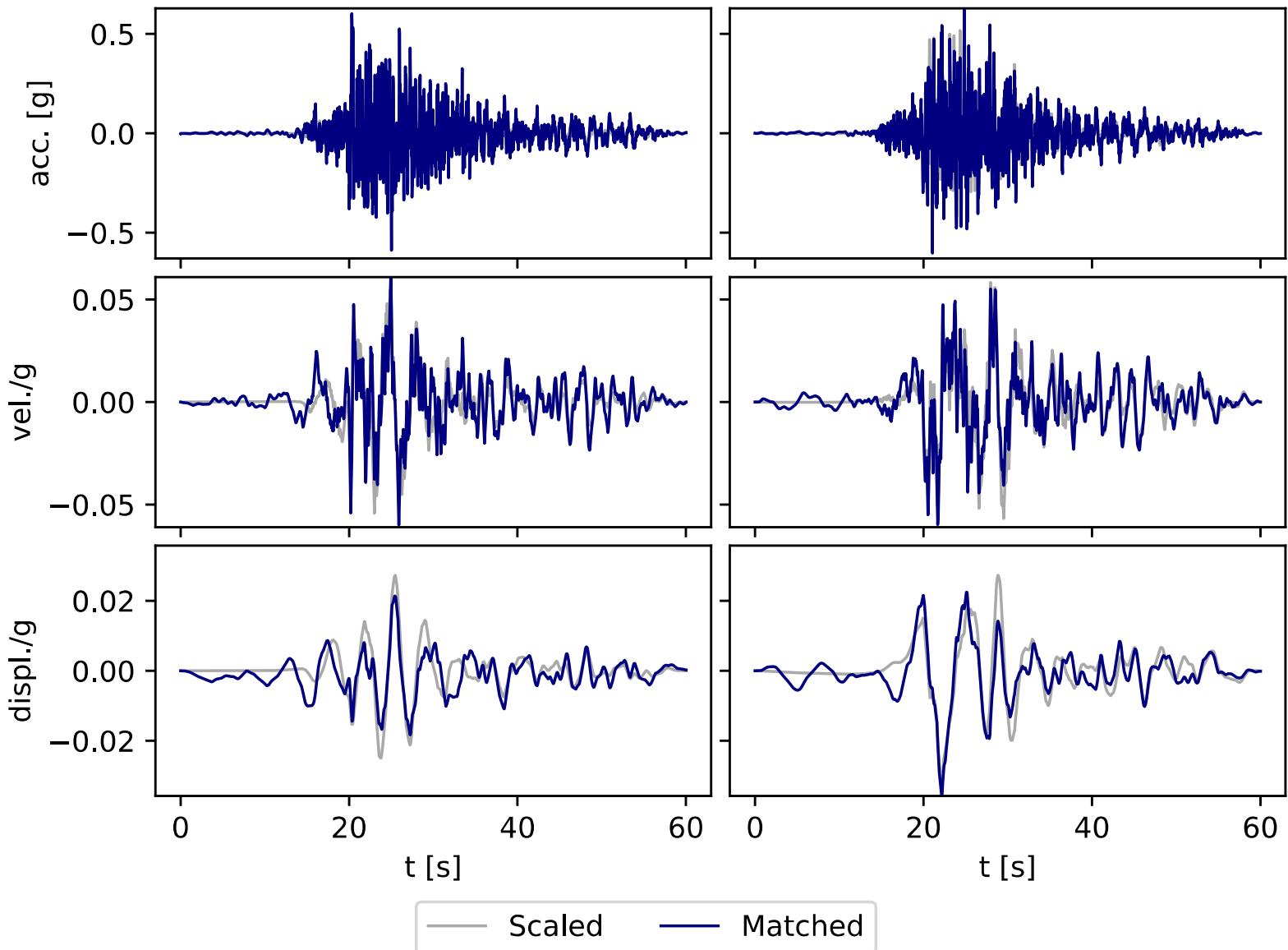


— Matched - - Original

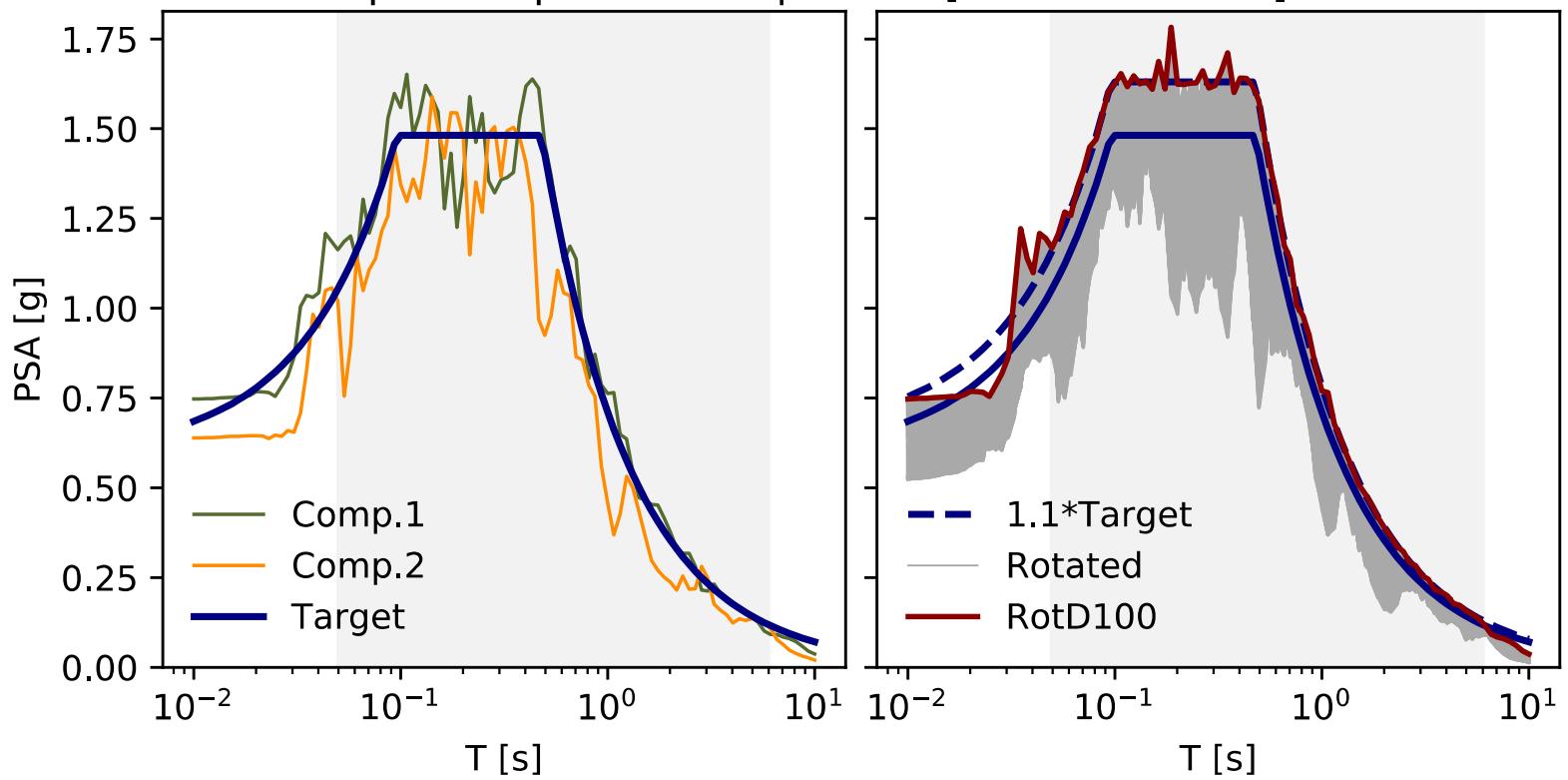
RotD100 ratios and angles [NGA.RSN.5776]



Time Histories Comparison [NGA.RSN.5776]



Response Spectra Comparison [NGA.RSN.5827]

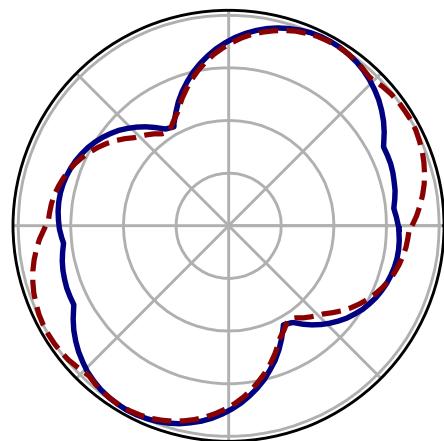
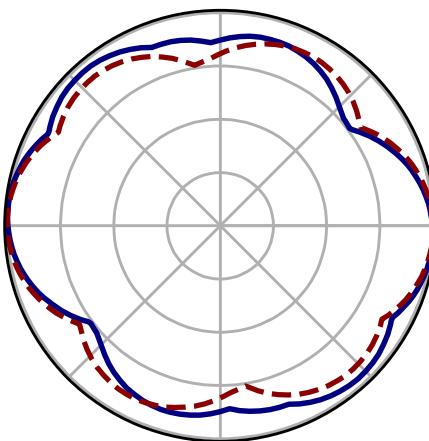
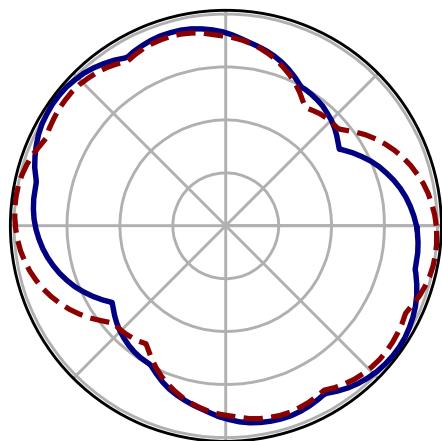


Normalized Spectral Accelerations @ θ [NGA.RSN.5827]

T = 0.1 s

T = 0.1 s

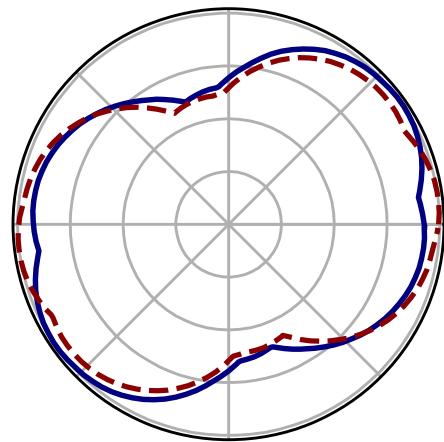
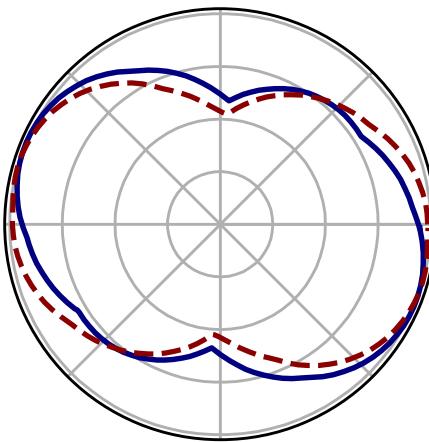
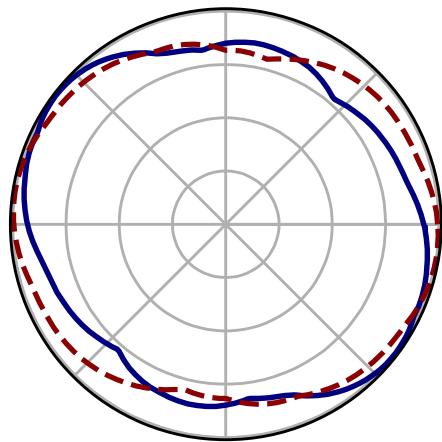
T = 0.4 s



T = 0.8 s

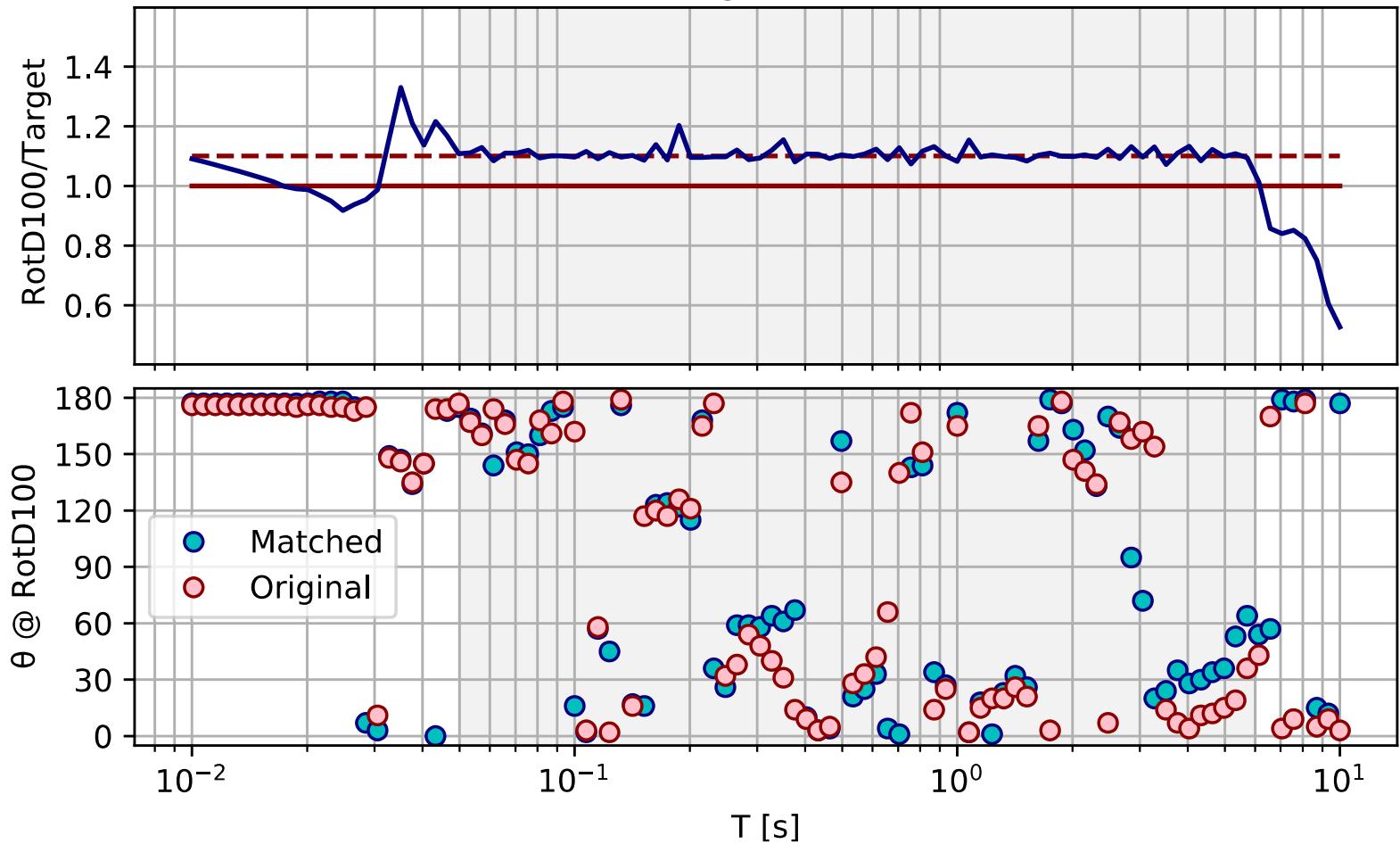
T = 1.6 s

T = 3.8 s

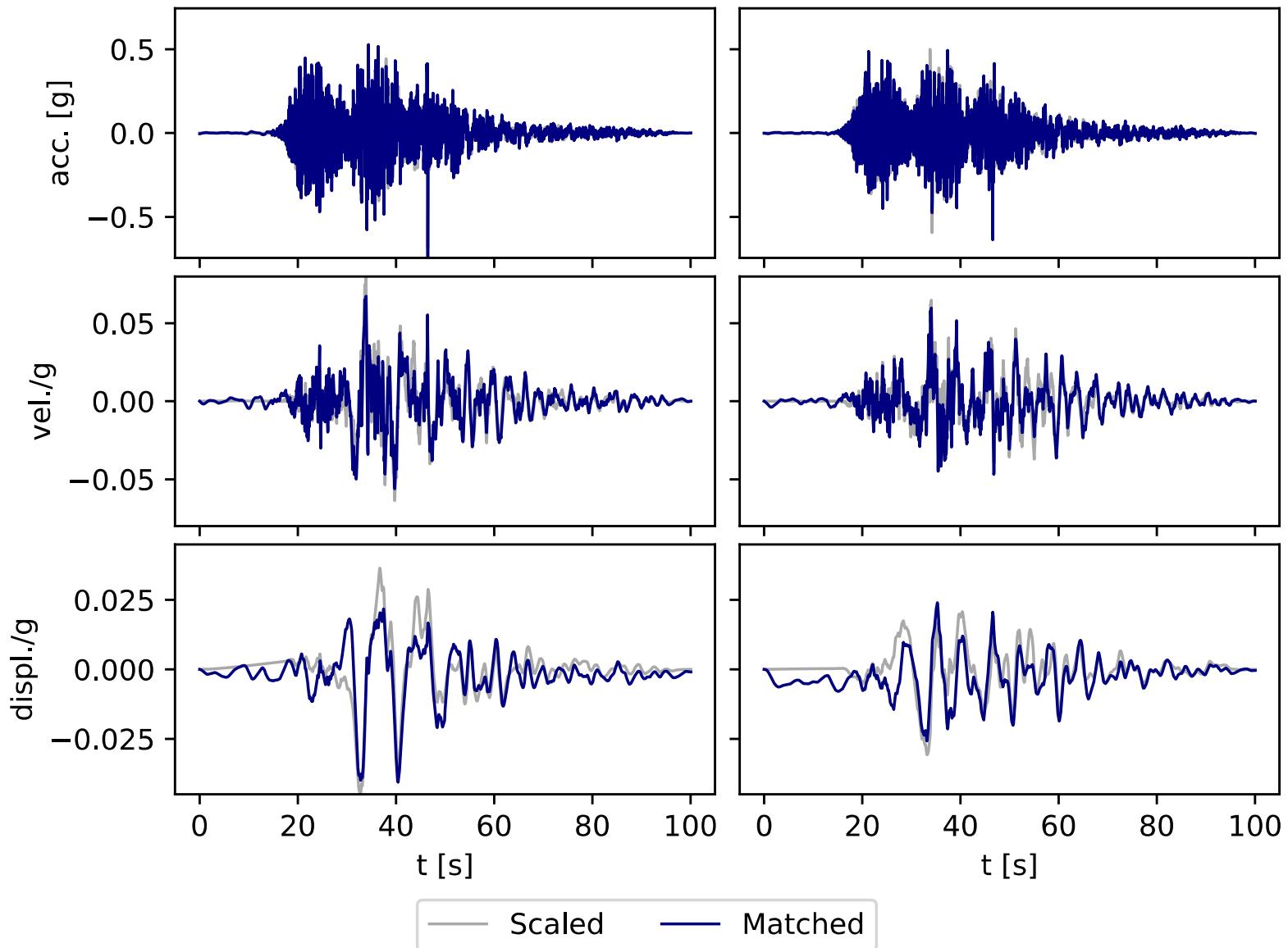


— Matched - - Original

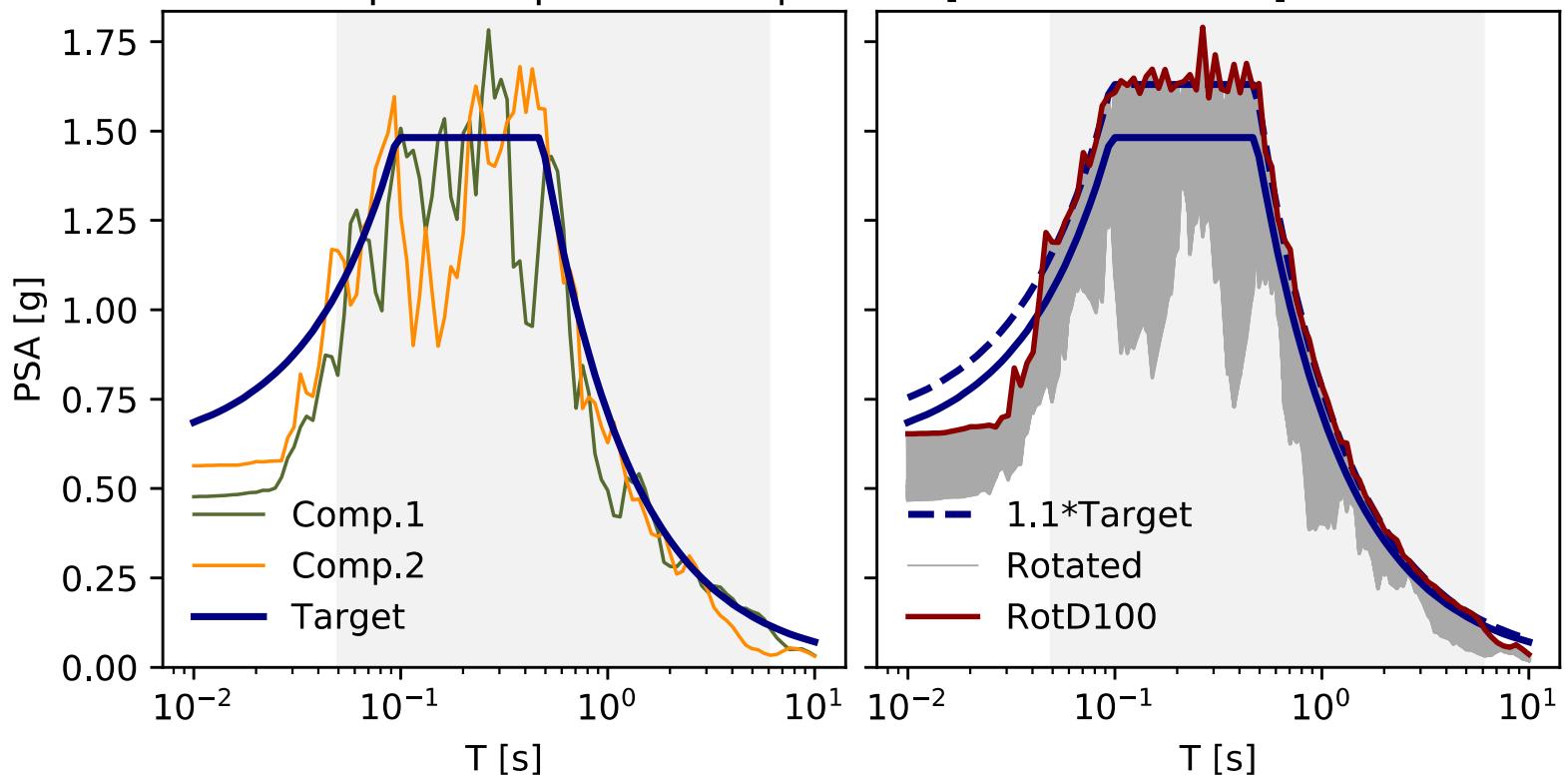
RotD100 ratios and angles [NGA.RSN.5827]



Time Histories Comparison [NGA.RSN.5827]

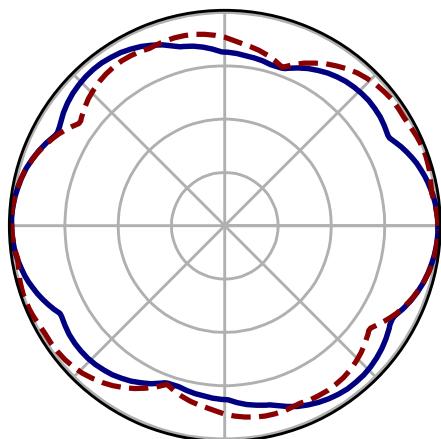


Response Spectra Comparison [NGA.RSN.5829]

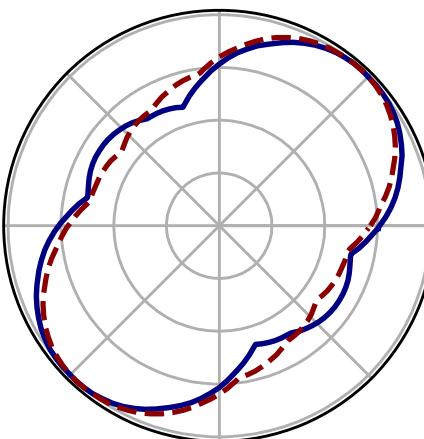


Normalized Spectral Accelerations @ θ [NGA.RSN.5829]

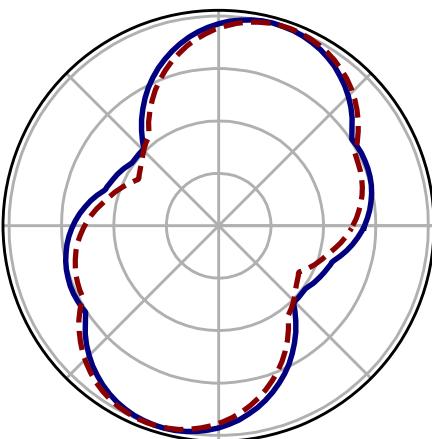
T = 0.1 s



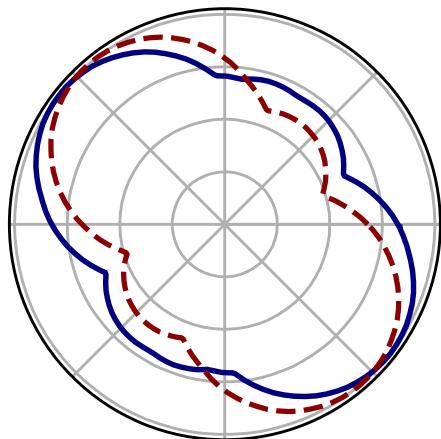
T = 0.1 s



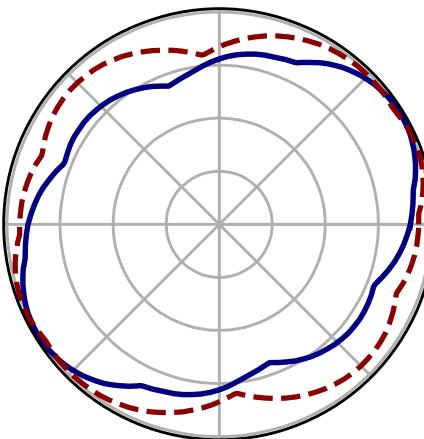
T = 0.4 s



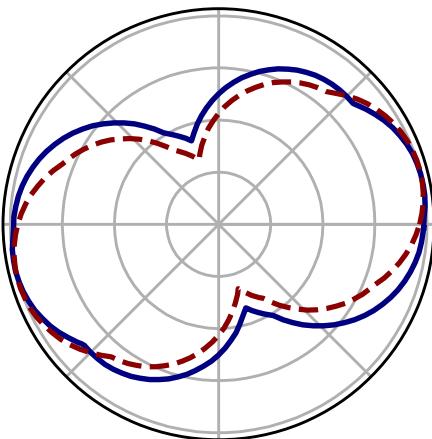
T = 0.8 s



T = 1.6 s

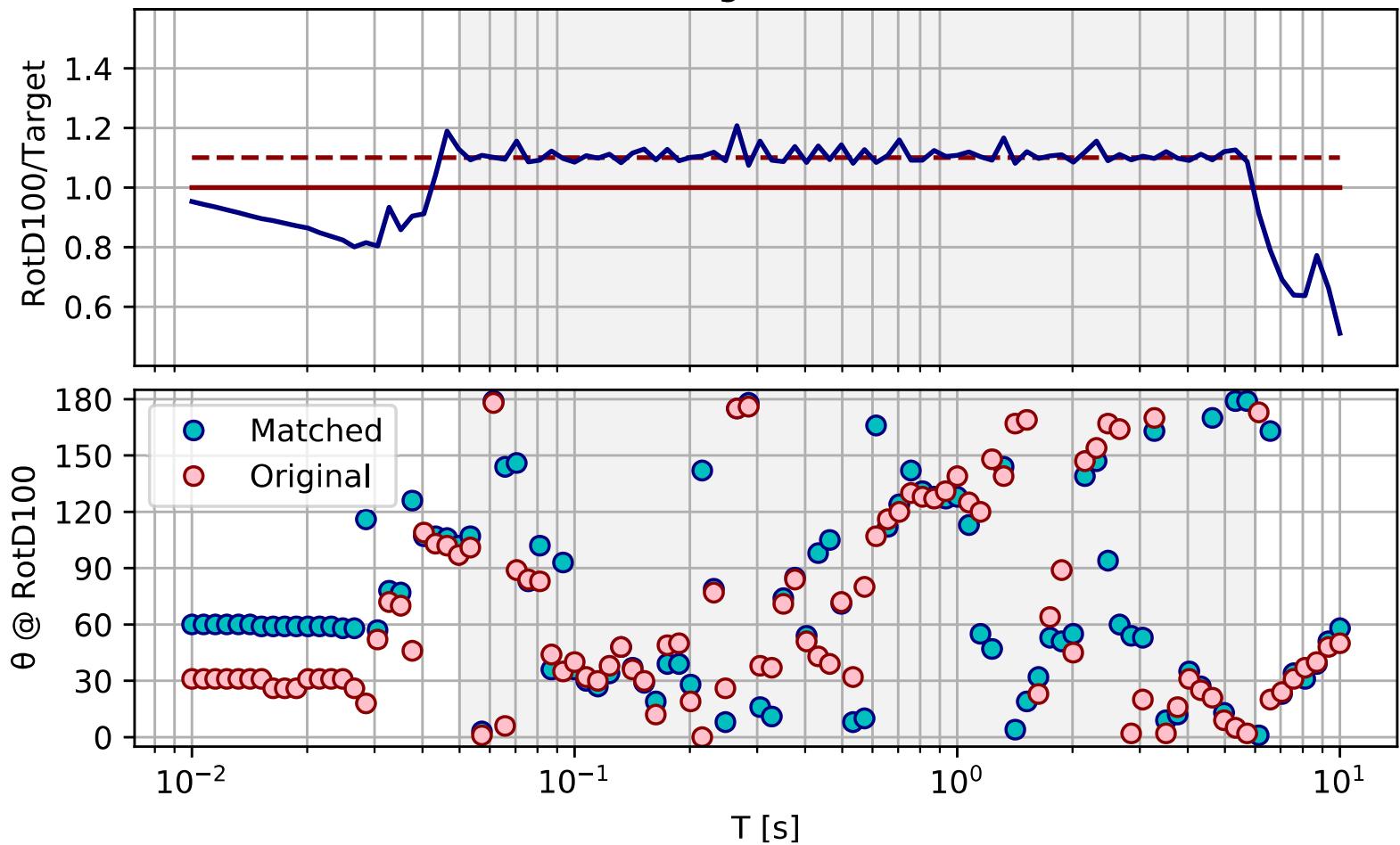


T = 3.8 s

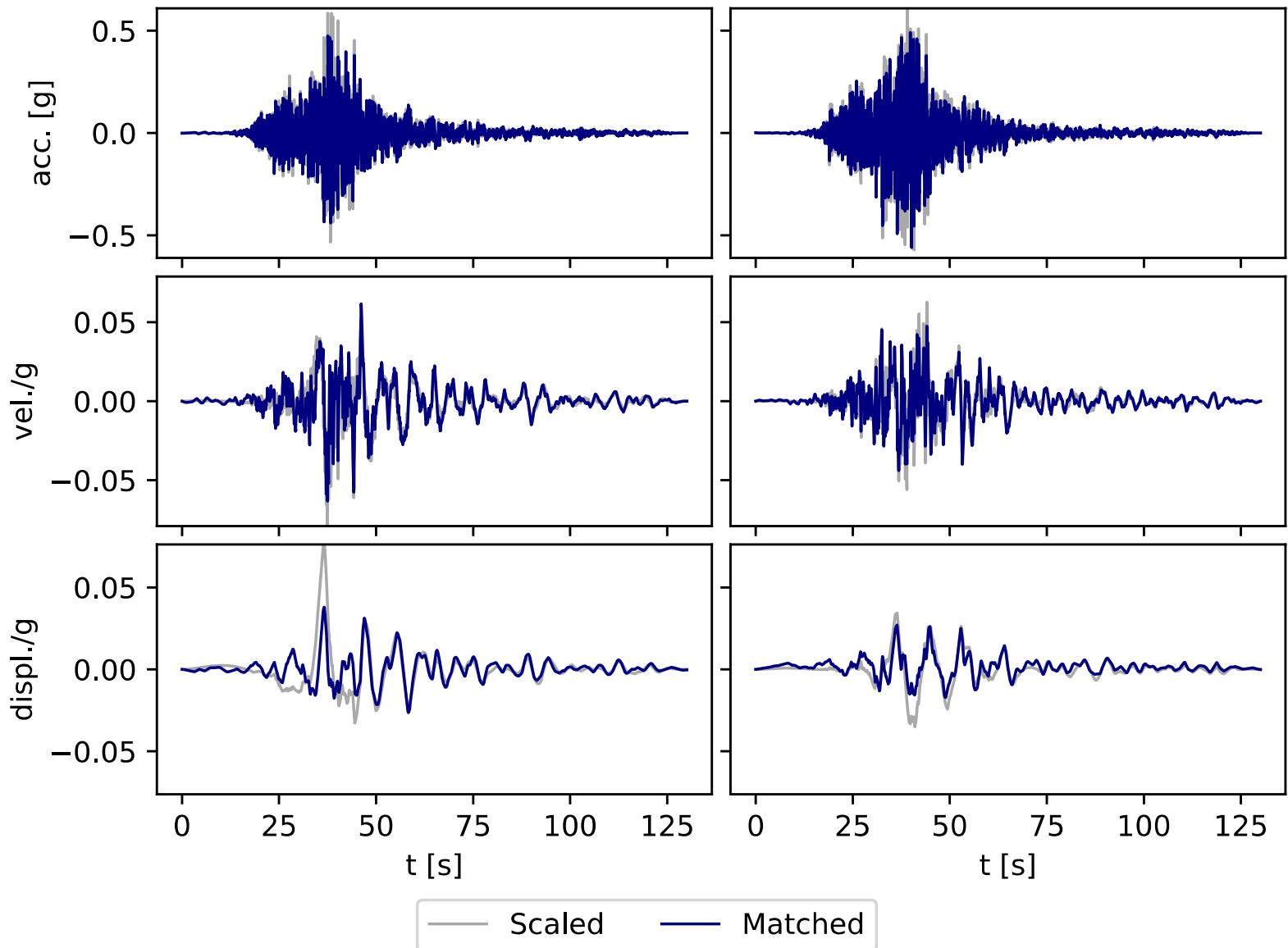


— Matched - - - Original

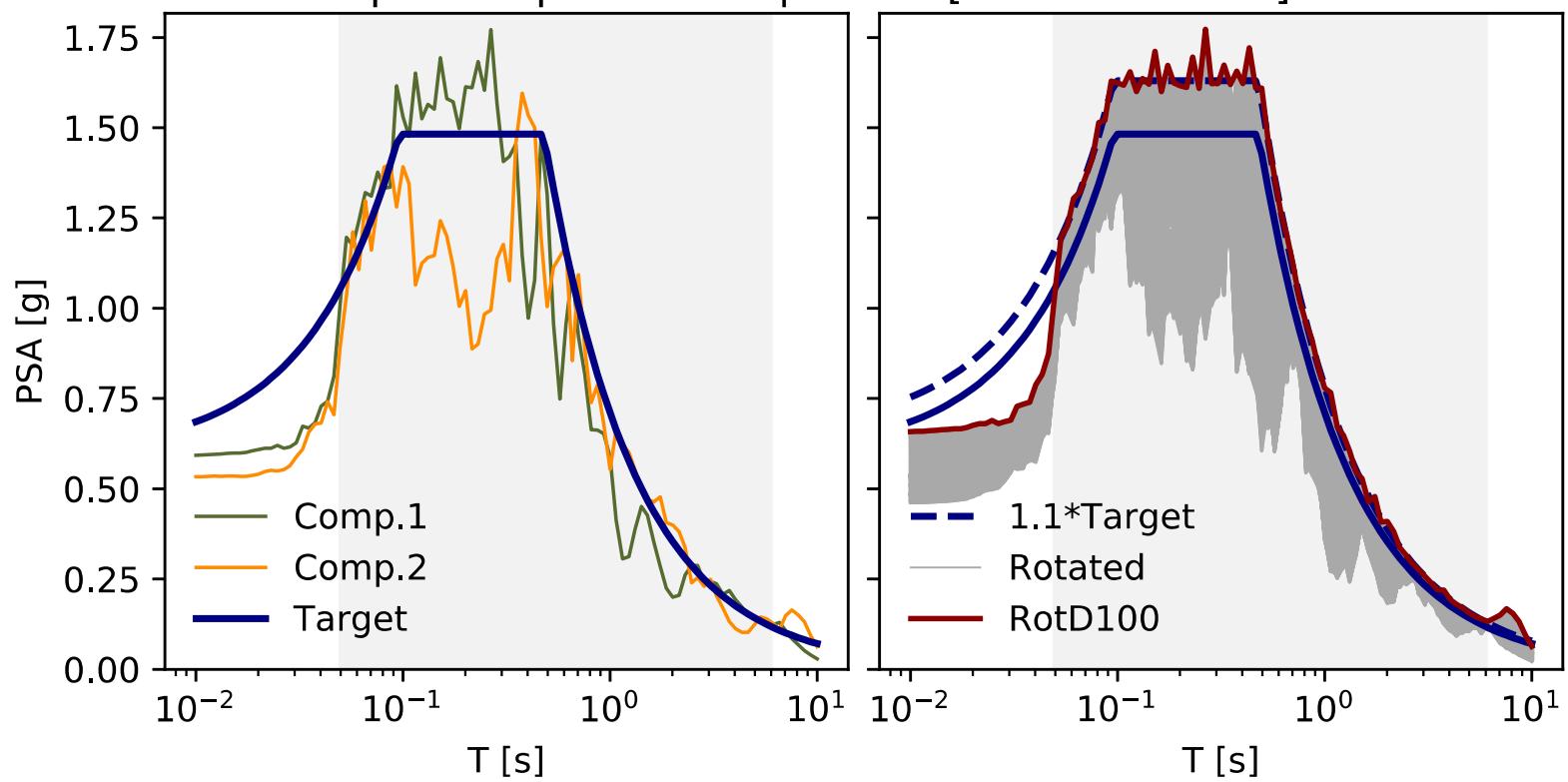
RotD100 ratios and angles [NGA.RSN.5829]



Time Histories Comparison [NGA.RSN.5829]

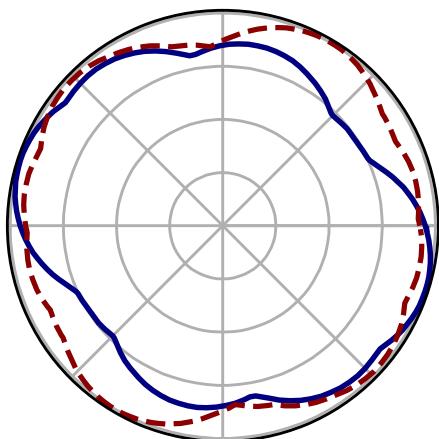


Response Spectra Comparison [NGA.RSN.6013]

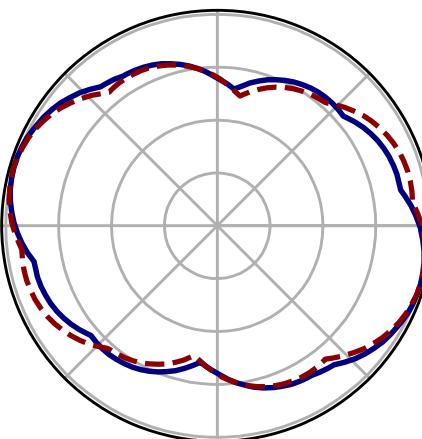


Normalized Spectral Accelerations @ θ [NGA.RSN.6013]

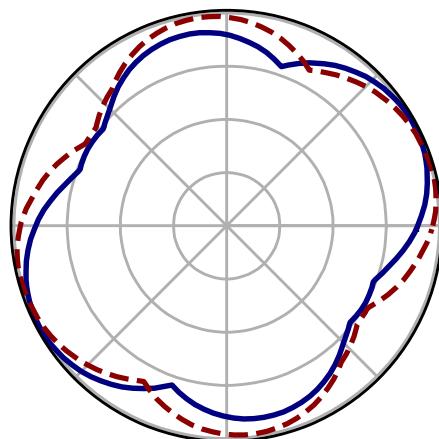
T = 0.1 s



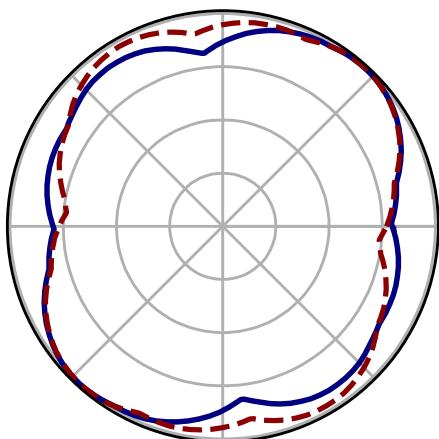
T = 0.1 s



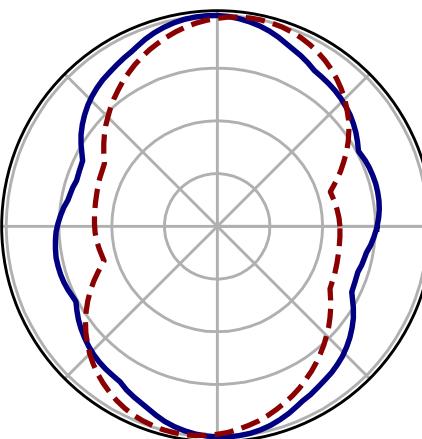
T = 0.4 s



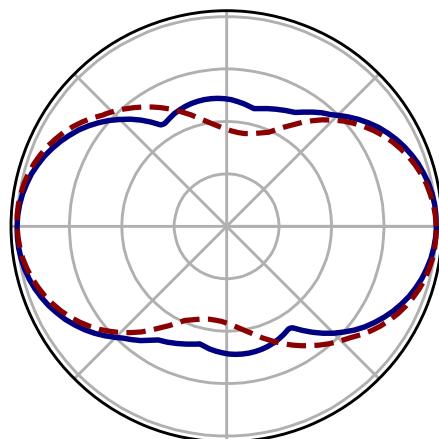
T = 0.8 s



T = 1.6 s

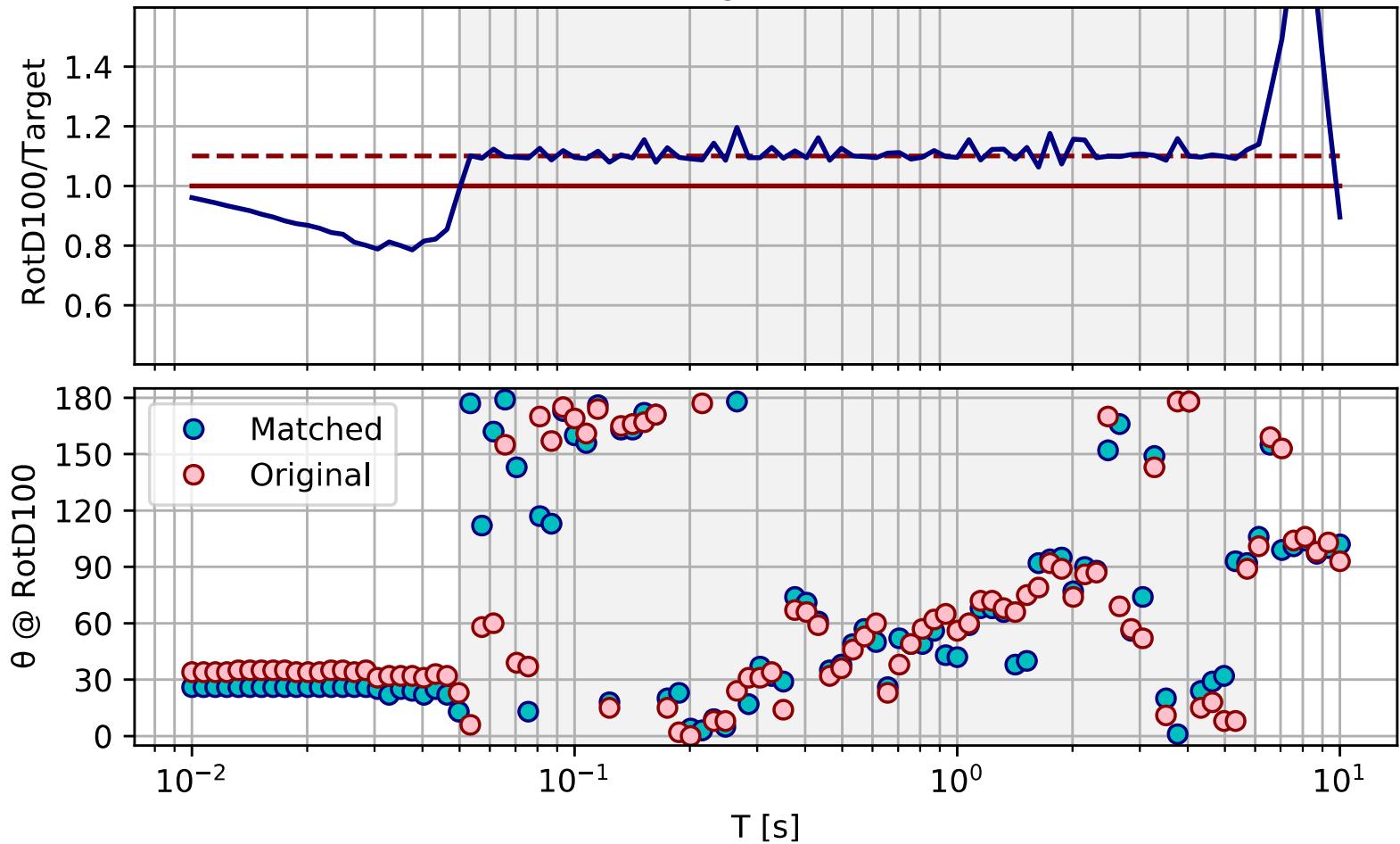


T = 3.8 s

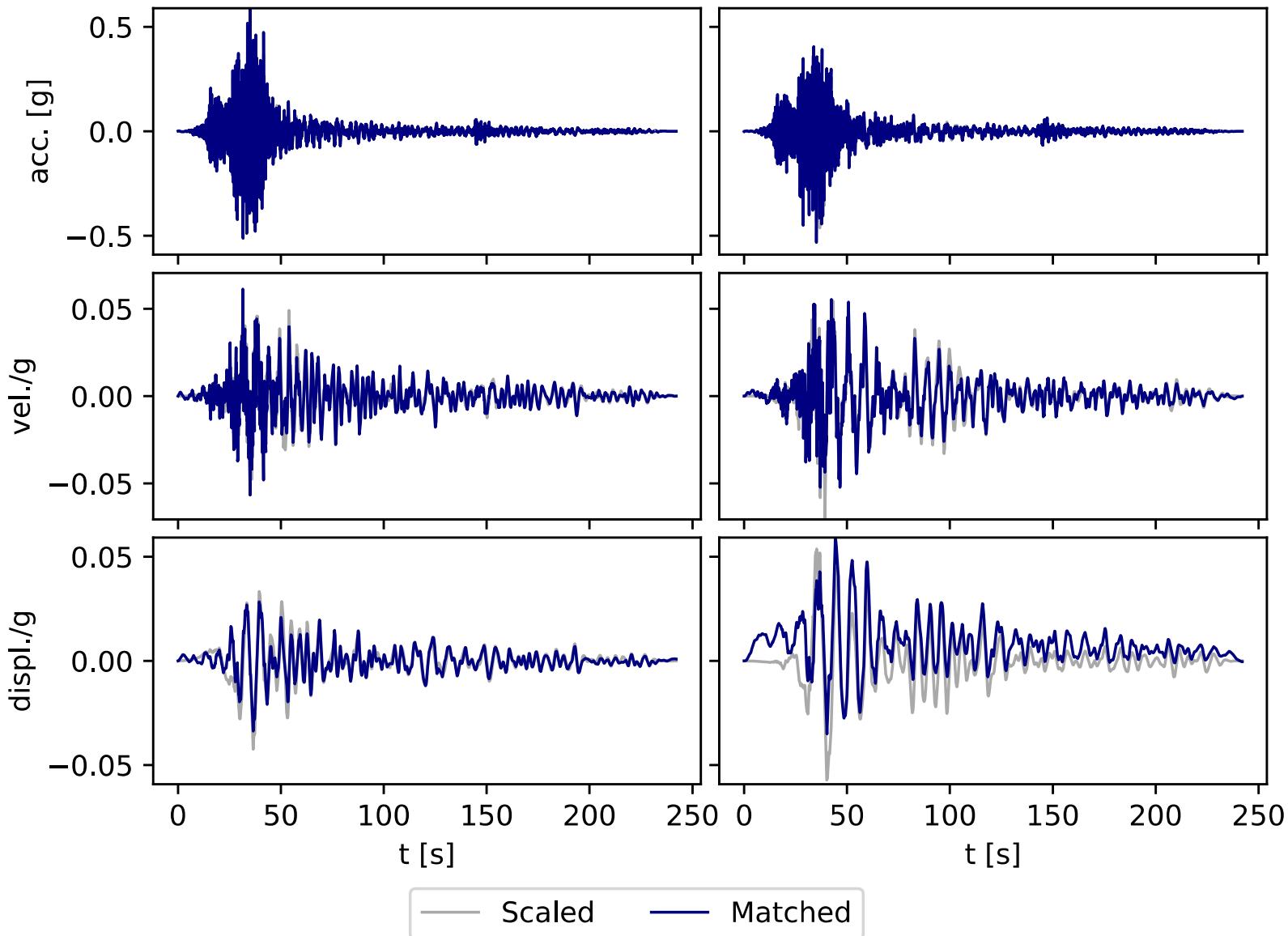


— Matched - - Original

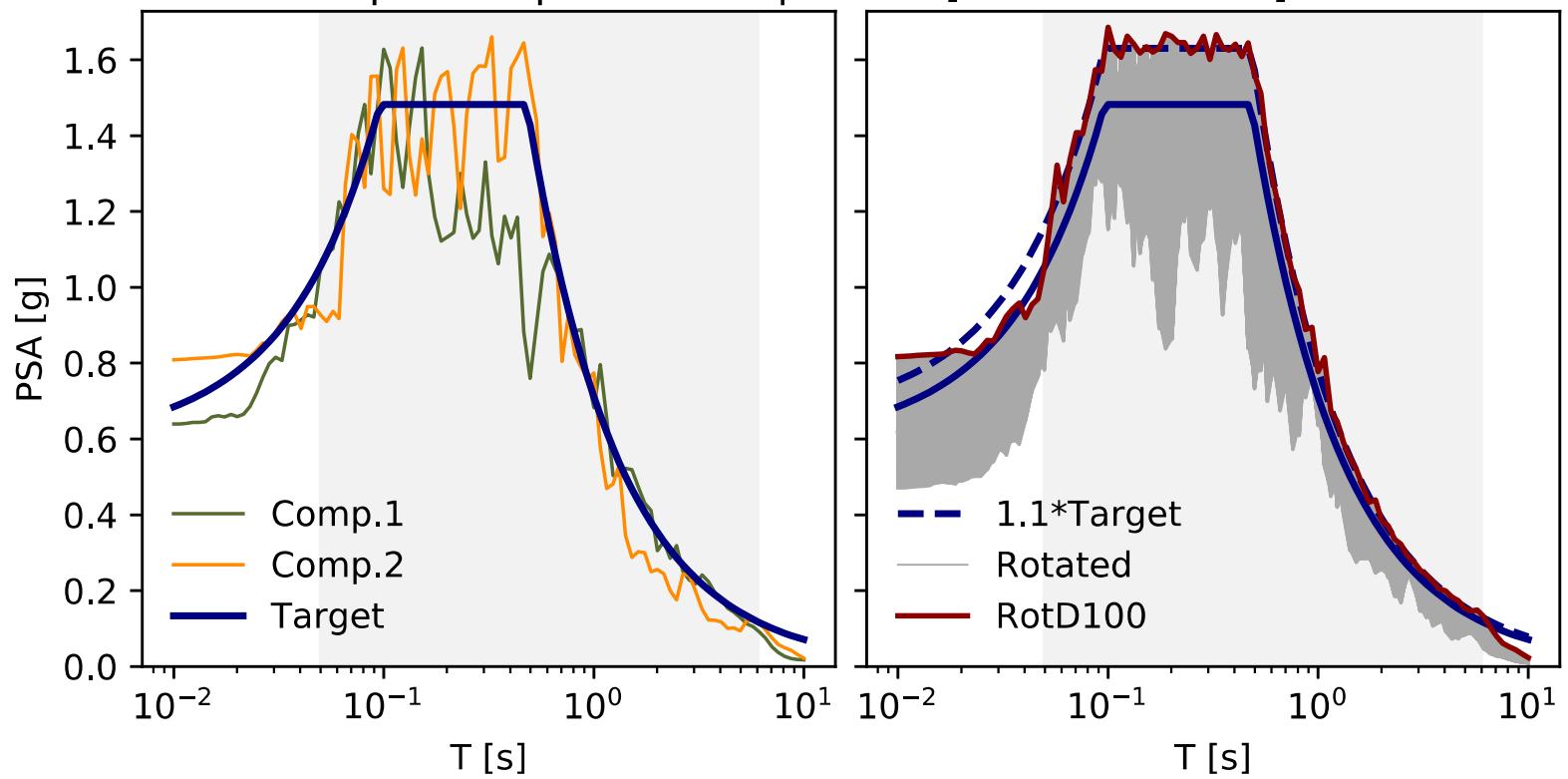
RotD100 ratios and angles [NGA.RSN.6013]



Time Histories Comparison [NGA.RSN.6013]

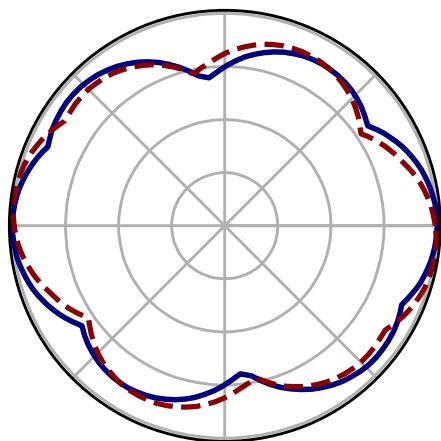


Response Spectra Comparison [NGA.RSN.6893]

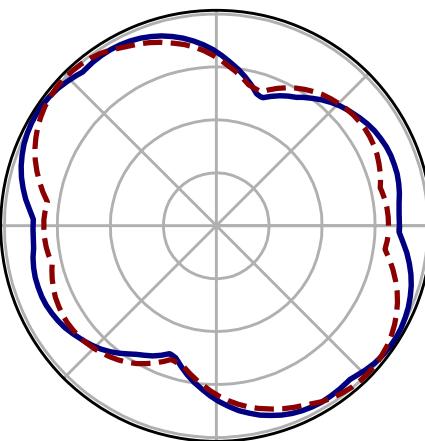


Normalized Spectral Accelerations @ θ [NGA.RSN.6893]

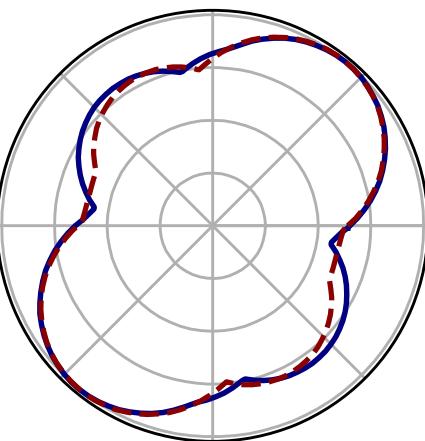
T = 0.1 s



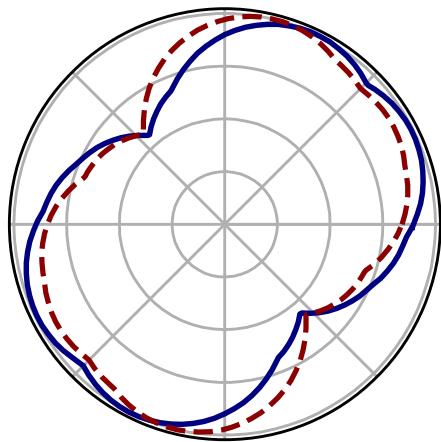
T = 0.1 s



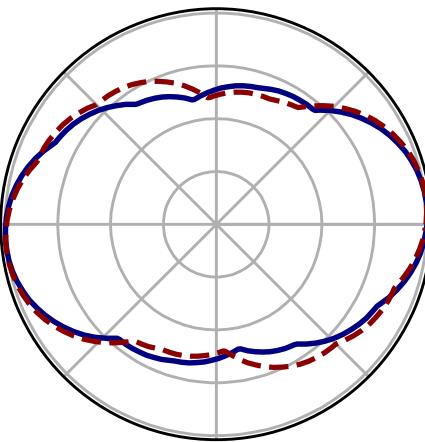
T = 0.4 s



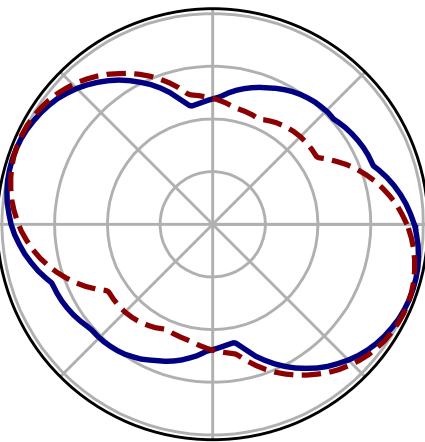
T = 0.8 s



T = 1.6 s

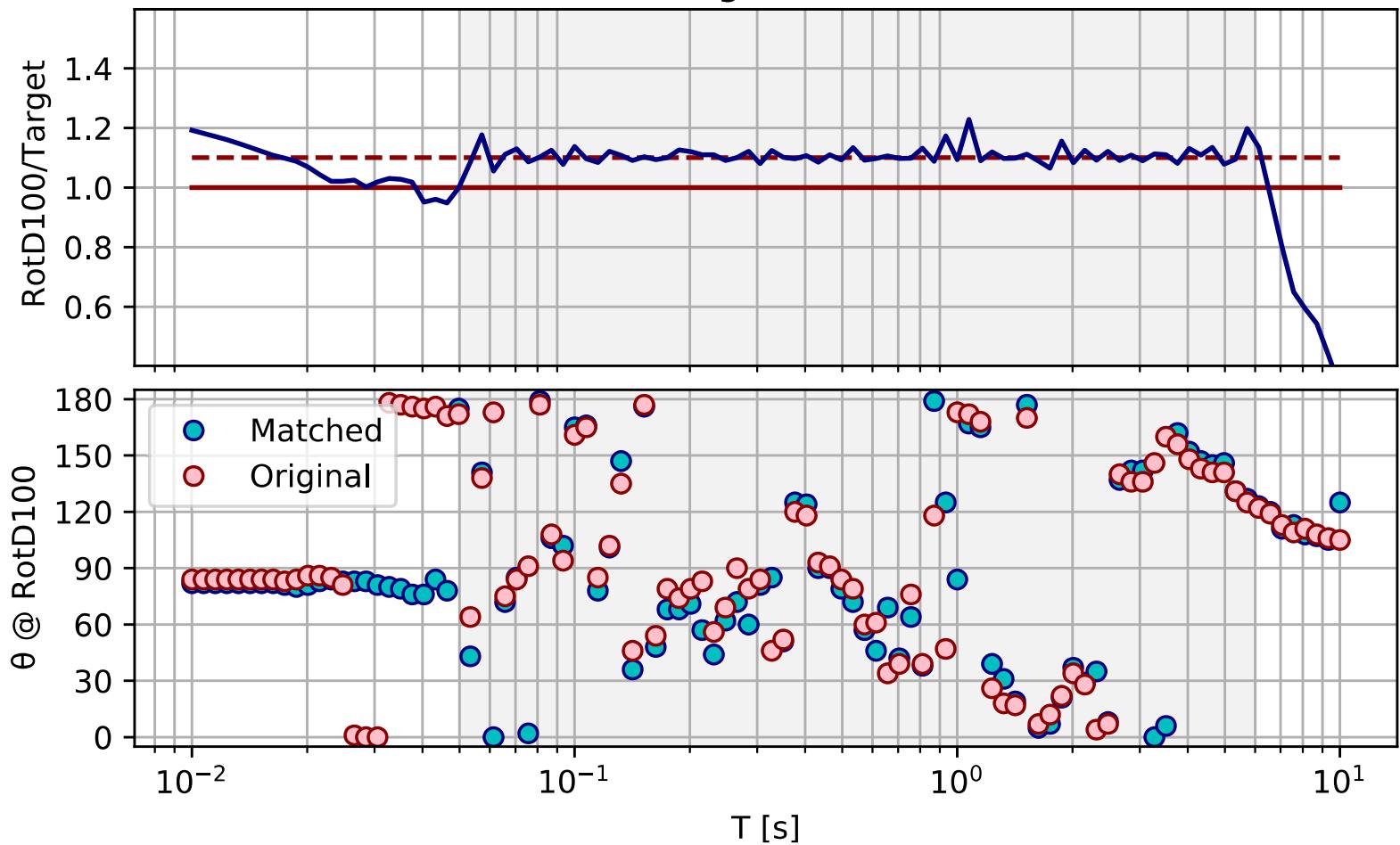


T = 3.8 s

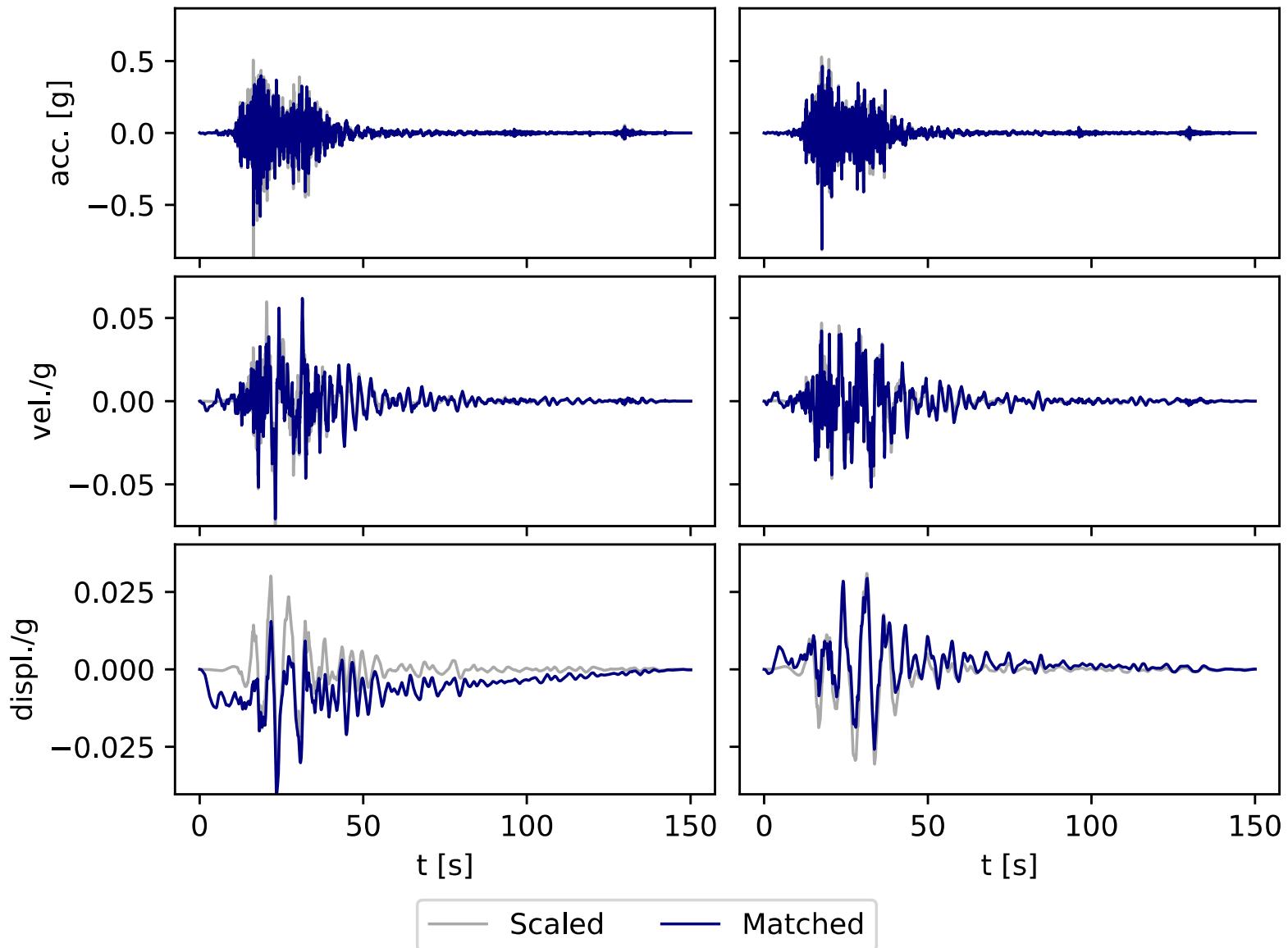


— Matched - - - Original

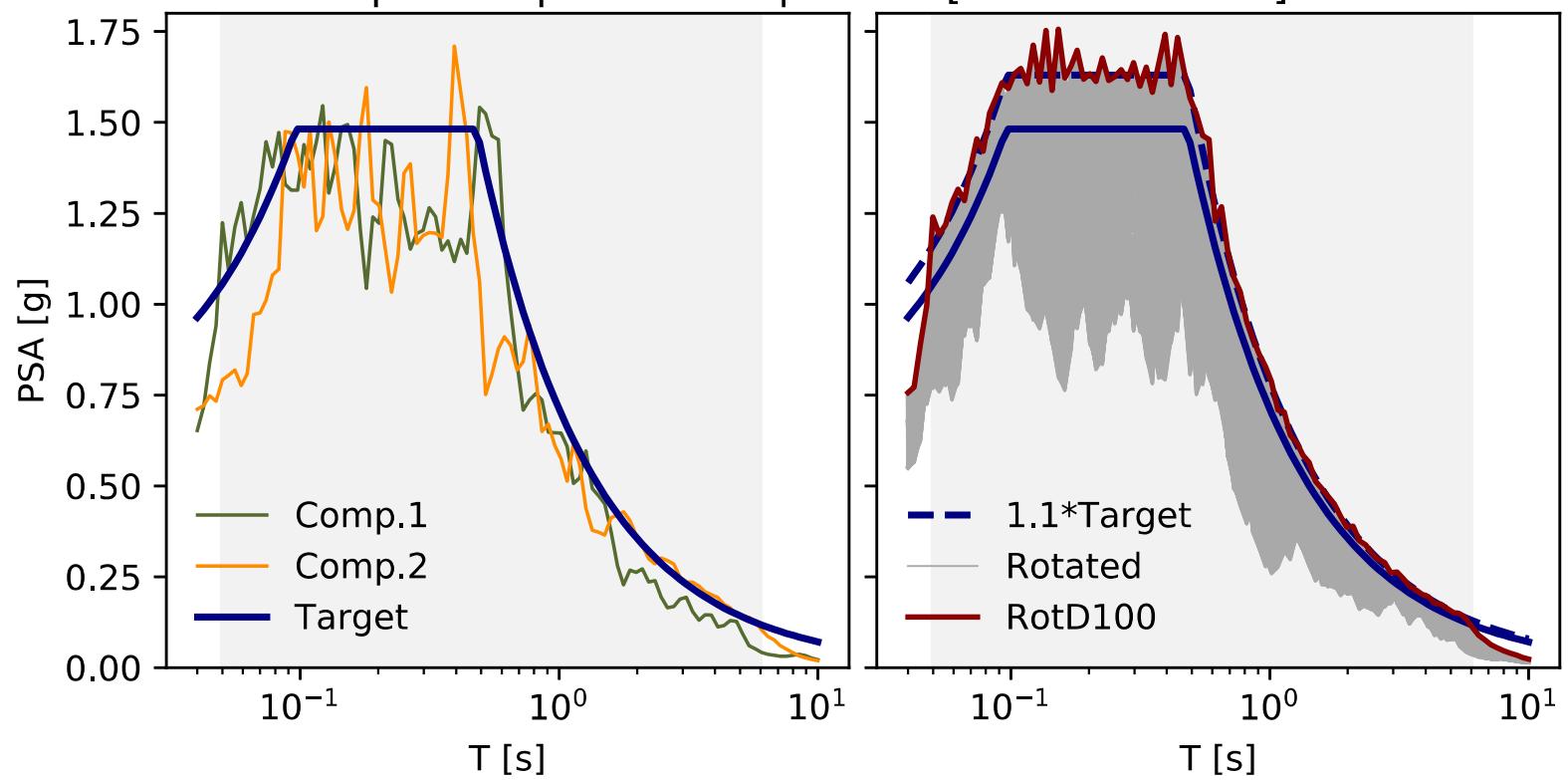
RotD100 ratios and angles [NGA.RSN.6893]



Time Histories Comparison [NGA.RSN.6893]



Response Spectra Comparison [NGA.RSN.6948]

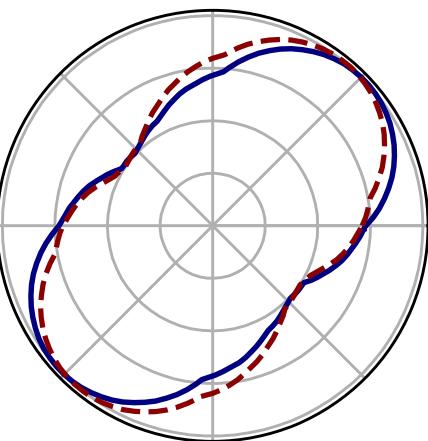
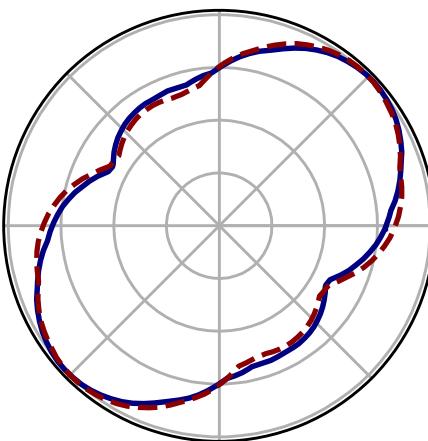
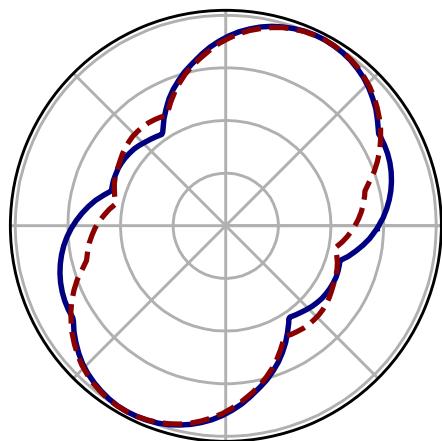


Normalized Spectral Accelerations @ θ [NGA.RSN.6948]

T = 0.2 s

T = 0.3 s

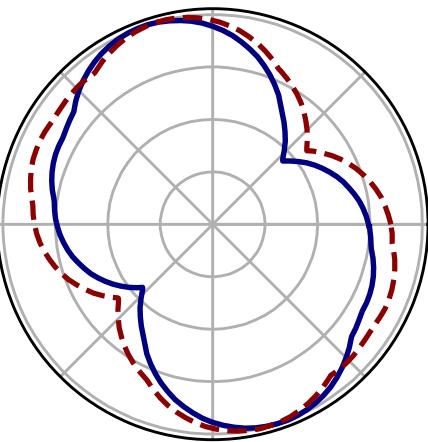
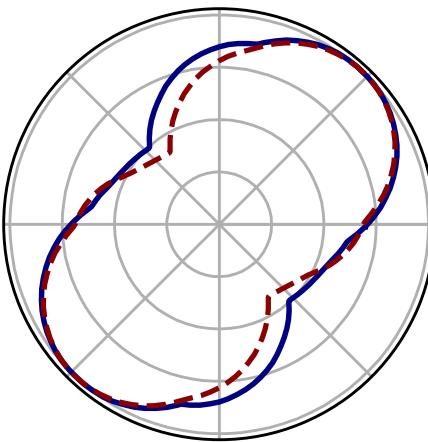
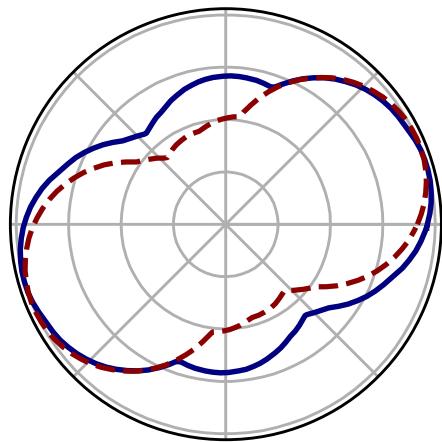
T = 0.7 s



T = 1.3 s

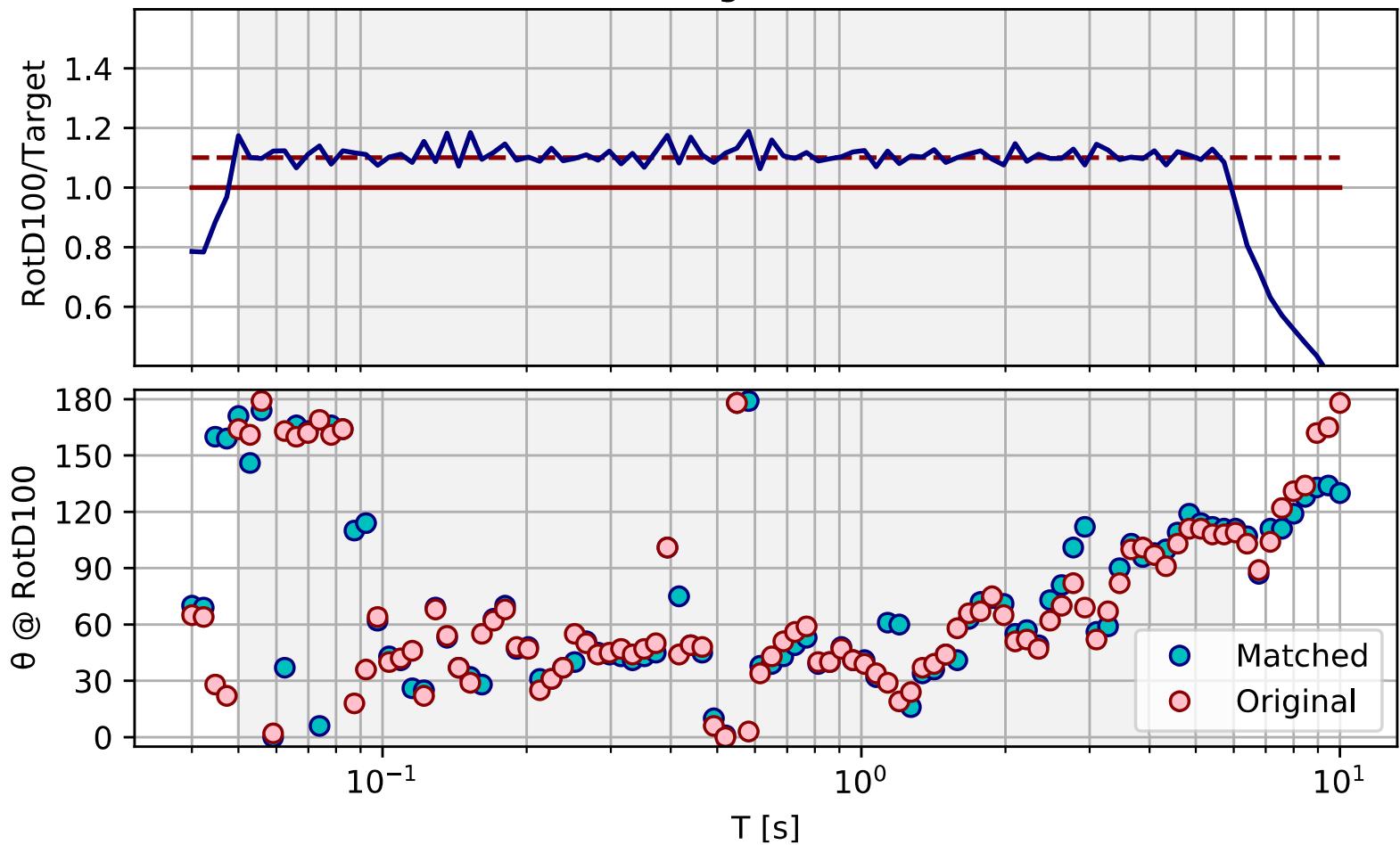
T = 2.3 s

T = 4.6 s



— Matched - - - Original

RotD100 ratios and angles [NGA.RSN.6948]



Time Histories Comparison [NGA.RSN.6948]

