Global optimizer comparisons Mug rotation $(s_{target} = 0.00)$ 0.020 SSO U.015 O.010 O.010 dual_annealing (81 function evals) 0.005 basinhopping (52 function evals) differential_evolution (392 function evals) 0.000 <u>-</u>2 -12 s (rotation) Mug scale $(s_{target} = 0.00)$ 0.20 SSO 0.15 SSO 0.10 dual_annealing (57 function evals) 0.05 basinhopping (52 function evals) differential_evolution (392 function evals) 0.00 **-**2 -12 1 s (scale) Mug x-translation $(s_{target} = 0.00)$ 0.020 0.015 MSE loss 0.010 dual annealing (63 function evals) 0.005 basinhopping (52 function evals) differential_evolution (392 function evals) 0.000 **-**3 **-**2 -12 3

s (x-translation)