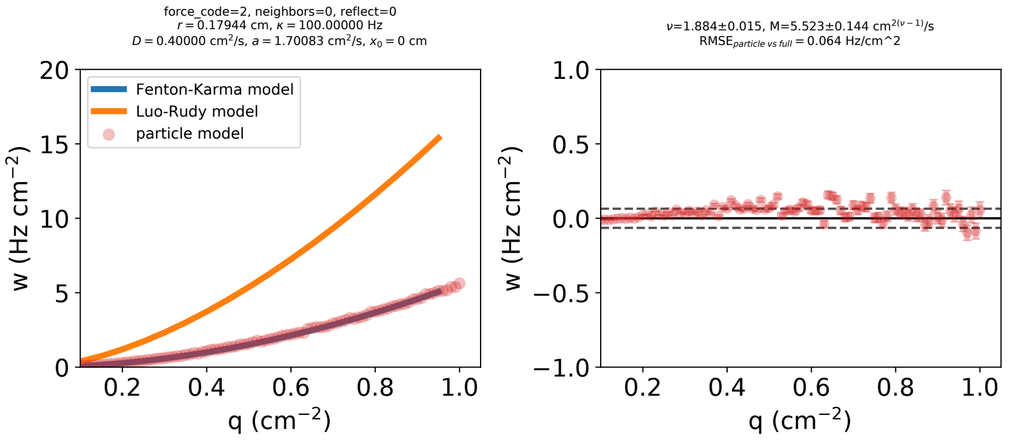
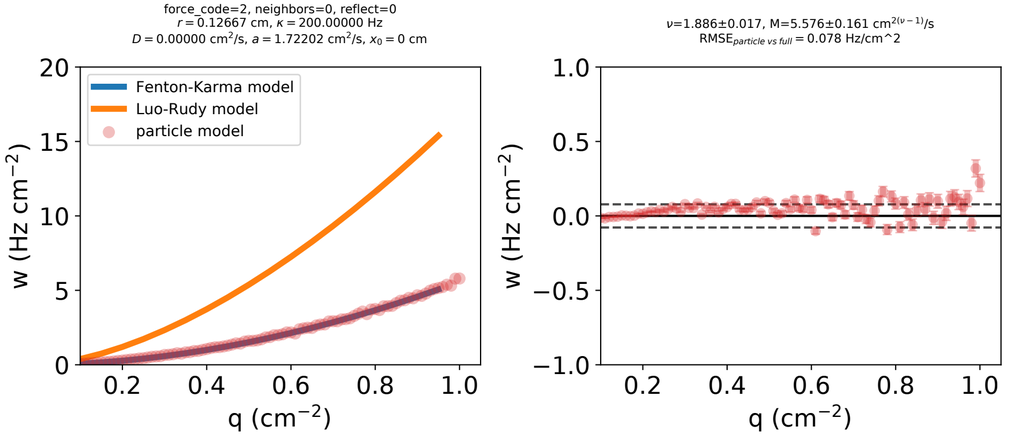
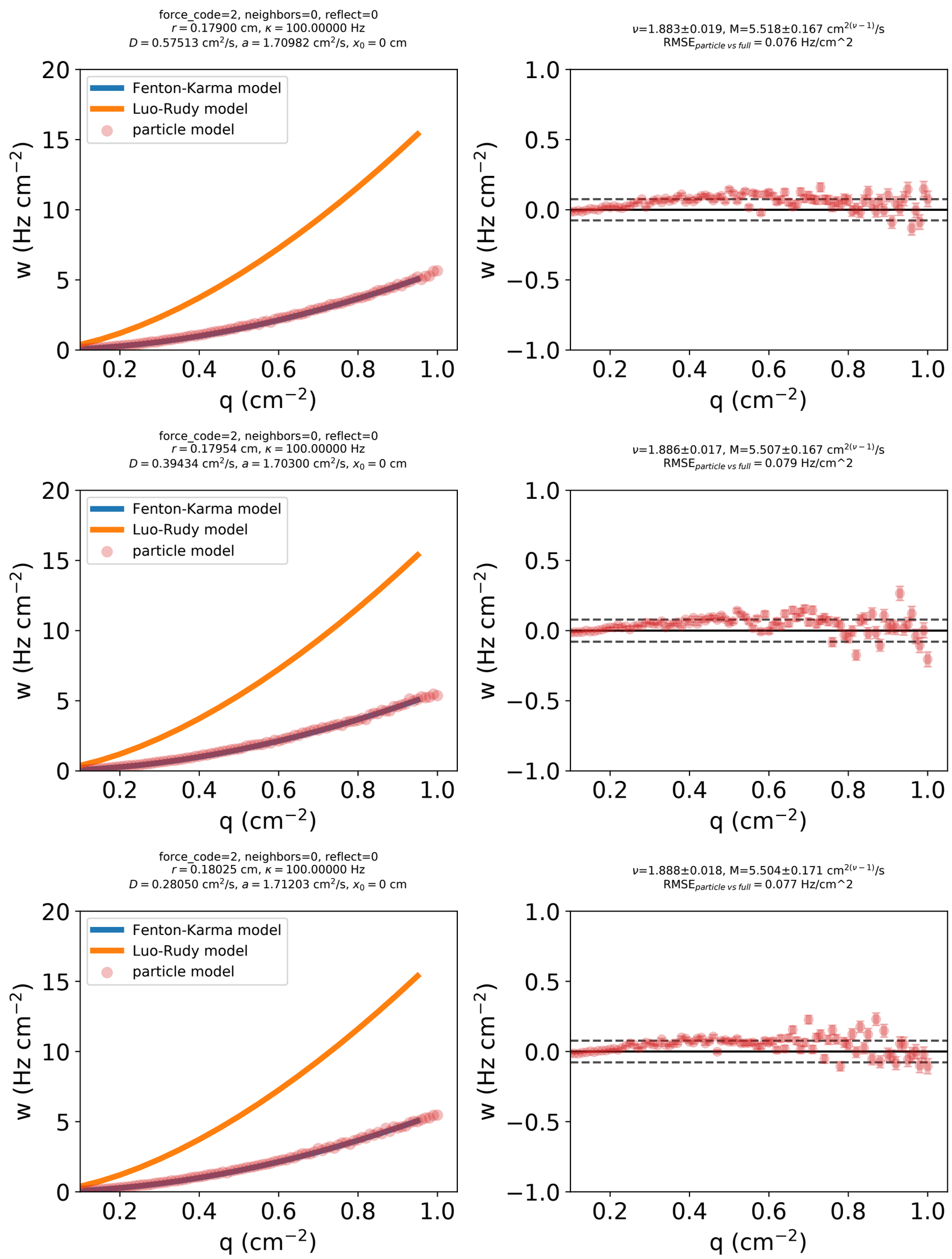
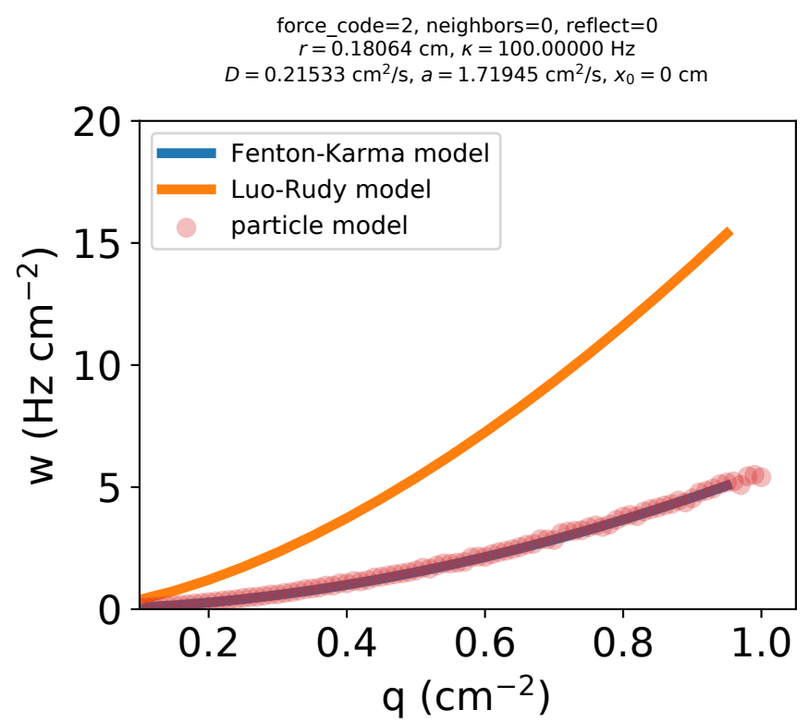
(left column) the mean annihilation rate, w, versus the particle number density, q, for (blue) the Fenton-Karma model, (orange) the Luo-Rudy model, and (red) the particle model. The parameters of the particle models were selected as the critical points found in the (r, a) plane with D and κ fixed.

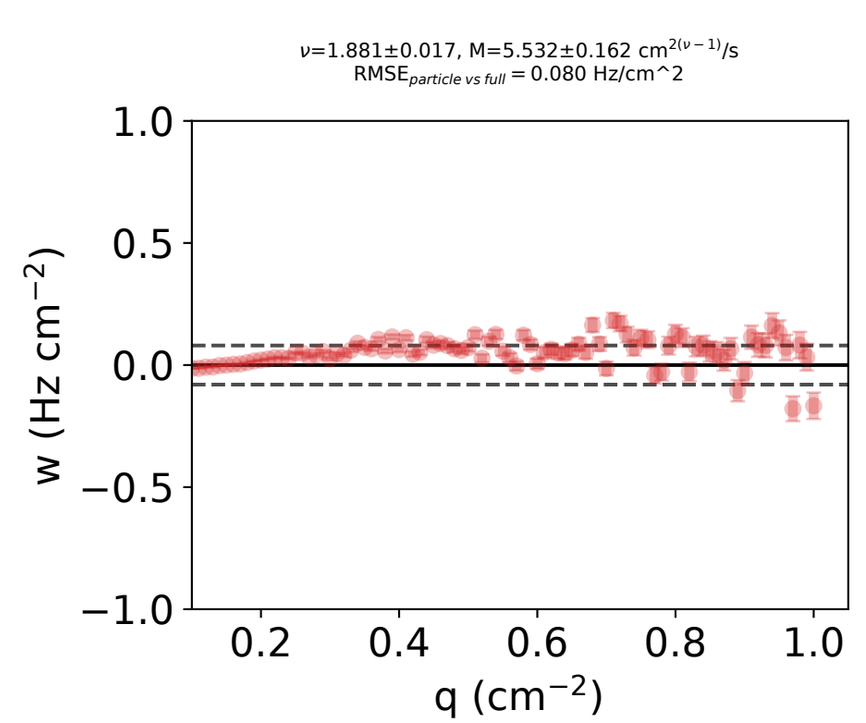
(right column) the disagreement of the mean annihilation rate of the particle model with that of the full model. Error bars represent the 95% confidence intervals for the particle model, supposing there is zero uncertainty from the full model.

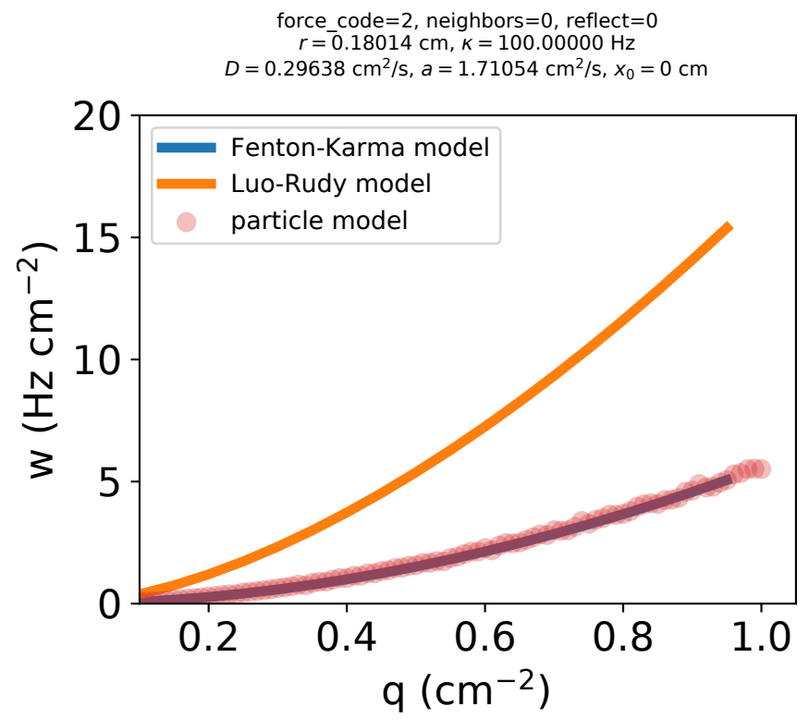


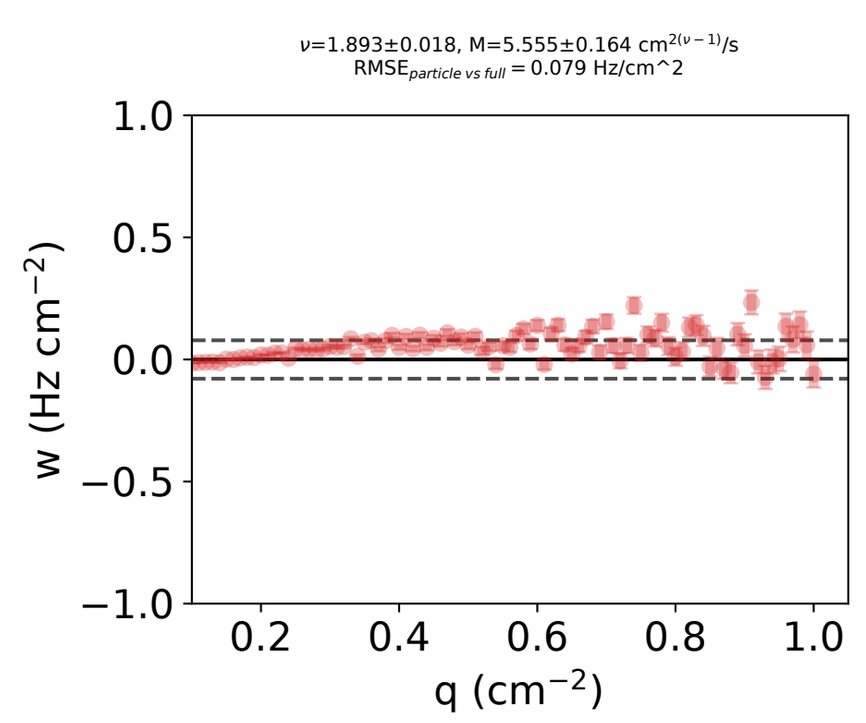


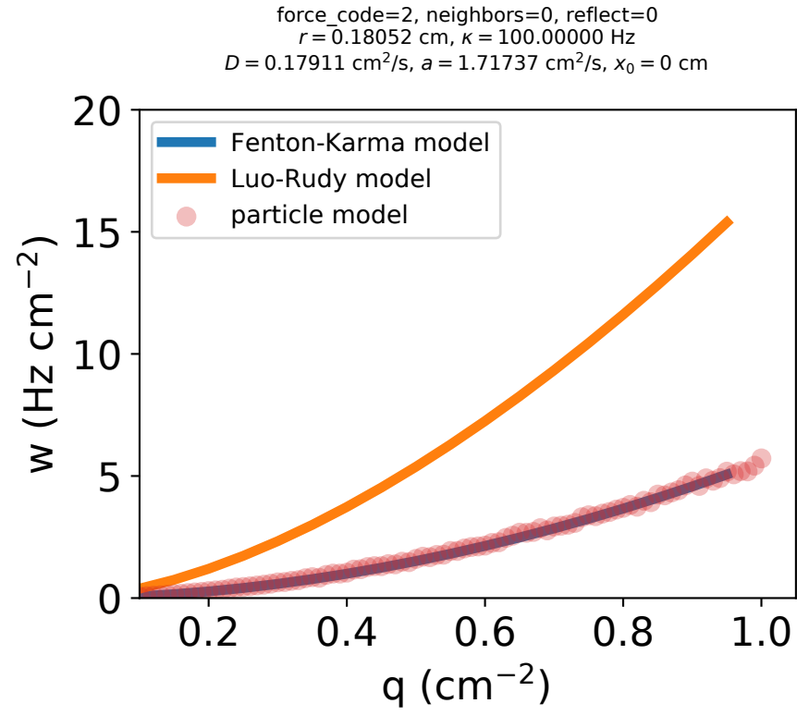

force_code=2, neighbors=0, reflect=0
$r = 0.17900$ cm, $\kappa = 100.00000$ Hz
$D = 0.57513$ cm^2/s, $a = 1.70982$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})
ν=1.883±0.019, M=5.518±0.167 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.076 Hz/cm^2
force_code=2, neighbors=0, reflect=0
$r = 0.17954$ cm, $\kappa = 100.00000$ Hz
$D = 0.39434$ cm^2/s, $a = 1.70300$ cm^2/s, $x_0 = 0$ cm
ν=1.886±0.017, M=5.507±0.167 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.079 Hz/cm^2
force_code=2, neighbors=0, reflect=0
$r = 0.18025$ cm, $\kappa = 100.00000$ Hz
$D = 0.28050$ cm^2/s, $a = 1.71203$ cm^2/s, $x_0 = 0$ cm
ν=1.888±0.018, M=5.504±0.171 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.077 Hz/cm^2

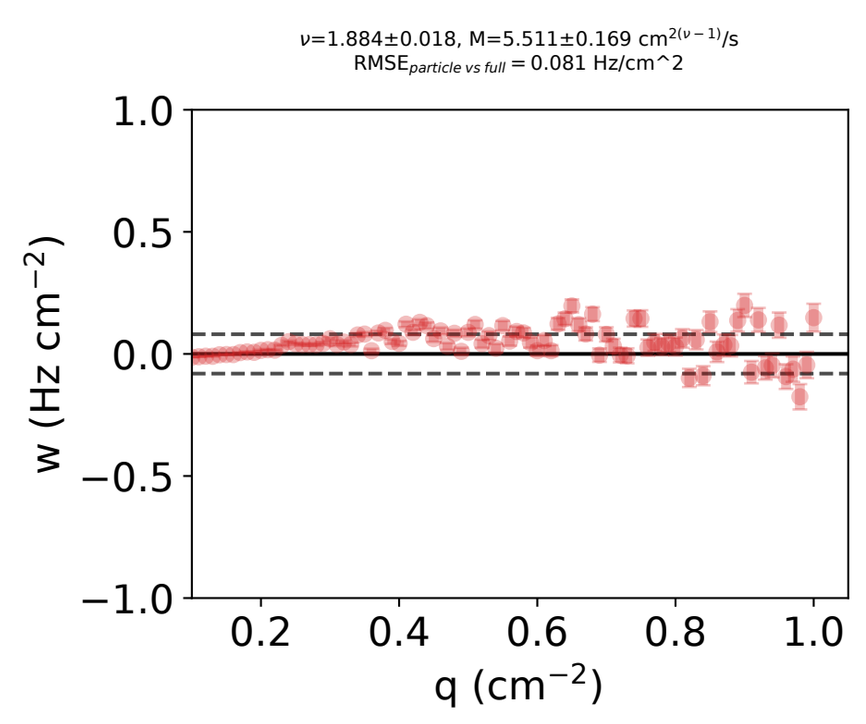

force_code=2, neighbors=0, reflect=0
$r = 0.18064$ cm, $\kappa = 100.00000$ Hz
$D = 0.21533$ cm^2/s, $a = 1.71945$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})

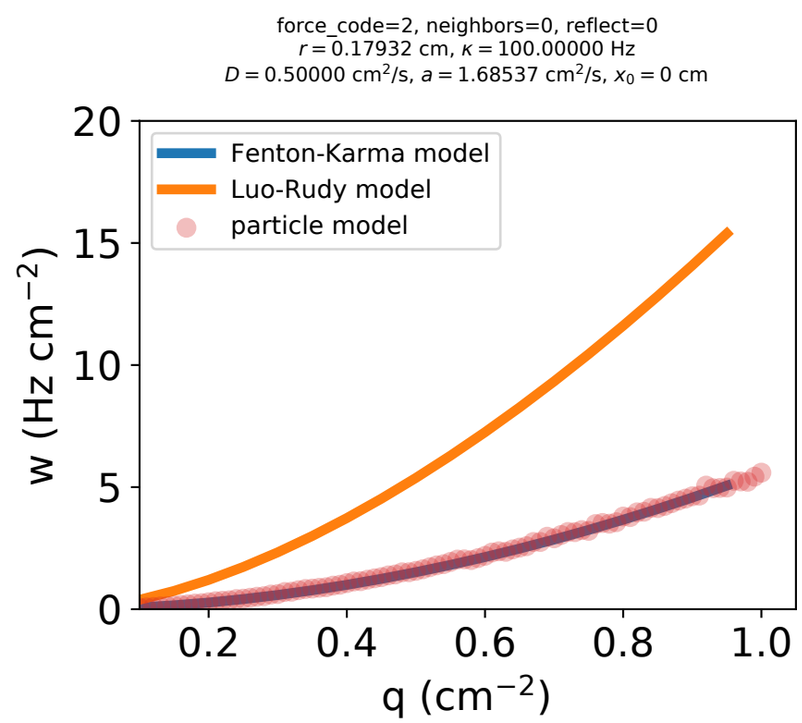

ν=1.881±0.017, M=5.532±0.162 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.080 Hz/cm^2
w (Hz cm^{-2})
q (cm^{-2})

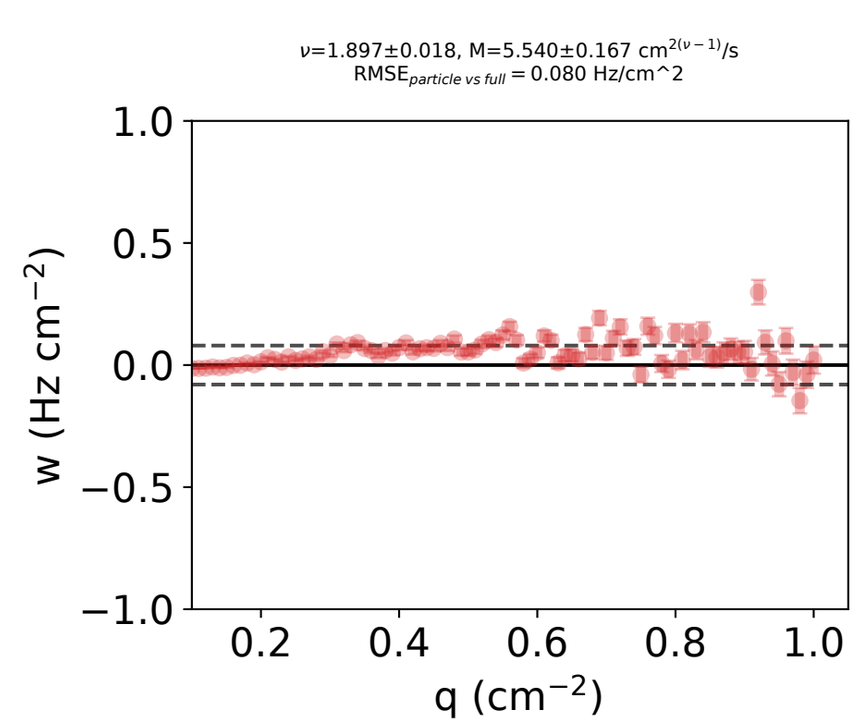

force_code=2, neighbors=0, reflect=0
$r = 0.18014$ cm, $\kappa = 100.00000$ Hz
$D = 0.29638$ cm^2/s, $a = 1.71054$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})

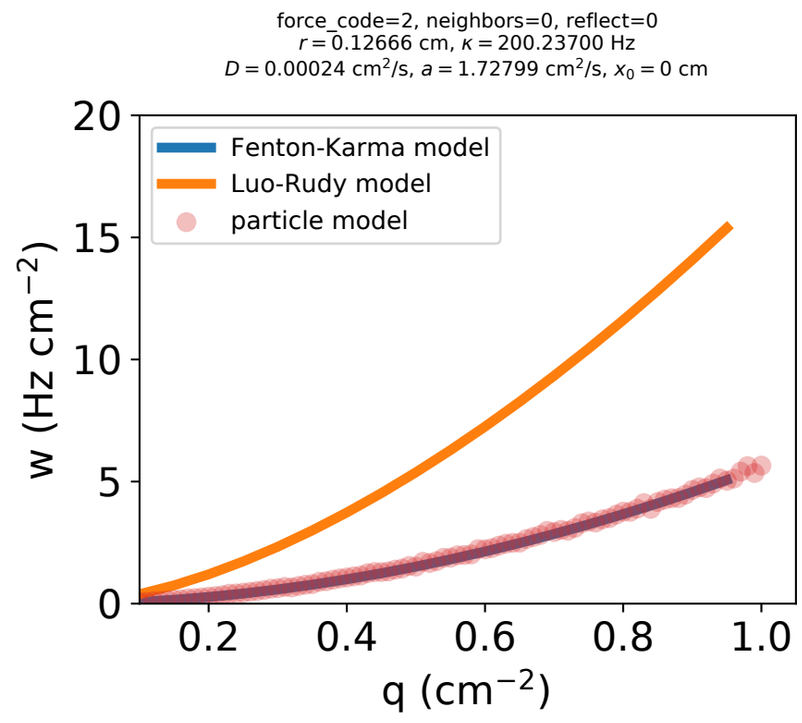

ν=1.893±0.018, M=5.555±0.164 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.079 Hz/cm^2
w (Hz cm^{-2})
q (cm^{-2})

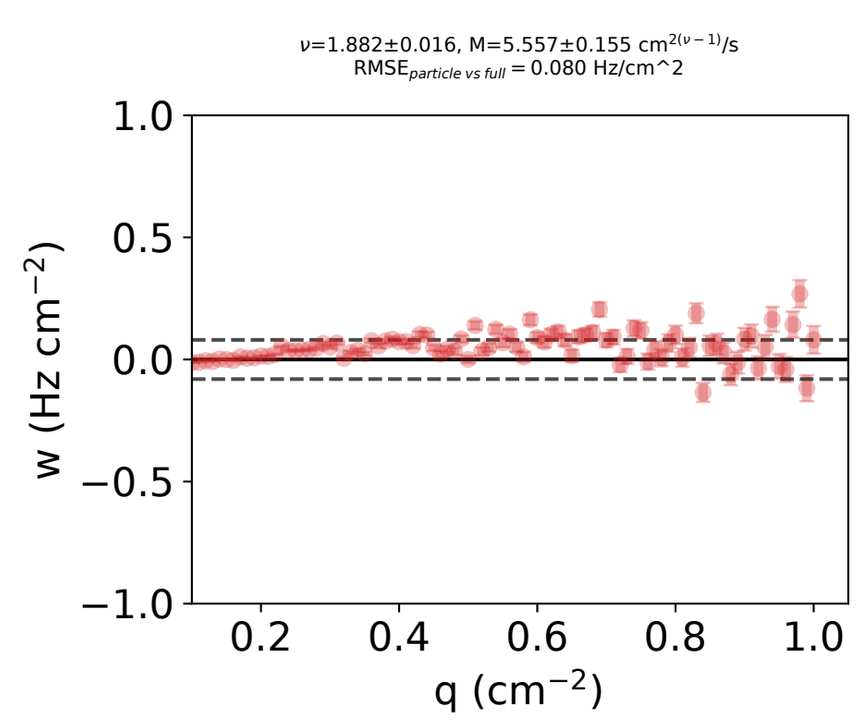

force_code=2, neighbors=0, reflect=0
$r = 0.18052$ cm, $\kappa = 100.00000$ Hz
$D = 0.17911$ cm^2/s, $a = 1.71737$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})

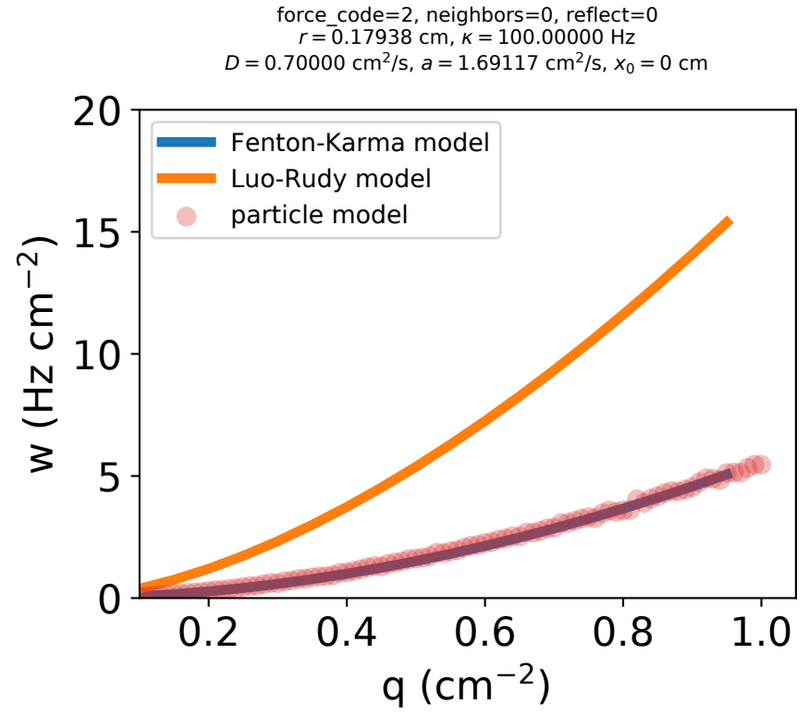

ν=1.884±0.018, M=5.511±0.169 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.081 Hz/cm^2
w (Hz cm^{-2})
q (cm^{-2})

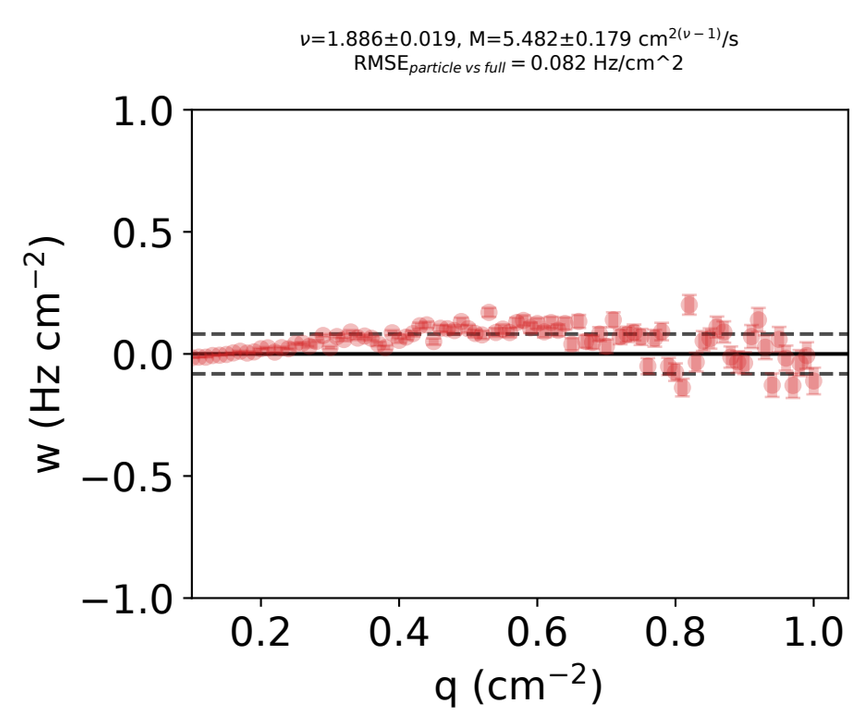

force_code=2, neighbors=0, reflect=0
$r = 0.17932$ cm, $\kappa = 100.00000$ Hz
$D = 0.50000$ cm^2/s, $a = 1.68537$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})

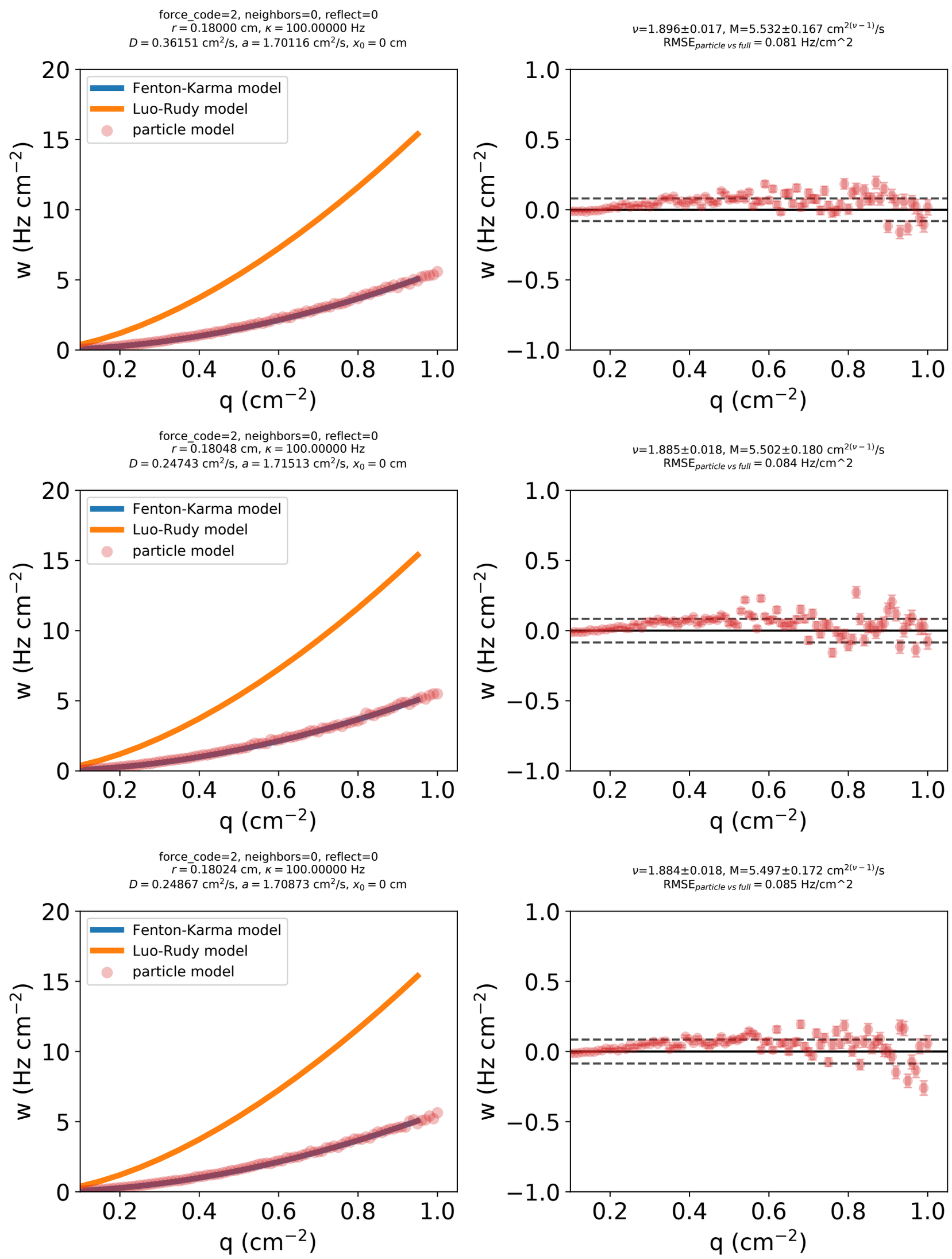

ν=1.897±0.018, M=5.540±0.167 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.080 Hz/cm^2
w (Hz cm^{-2})
q (cm^{-2})

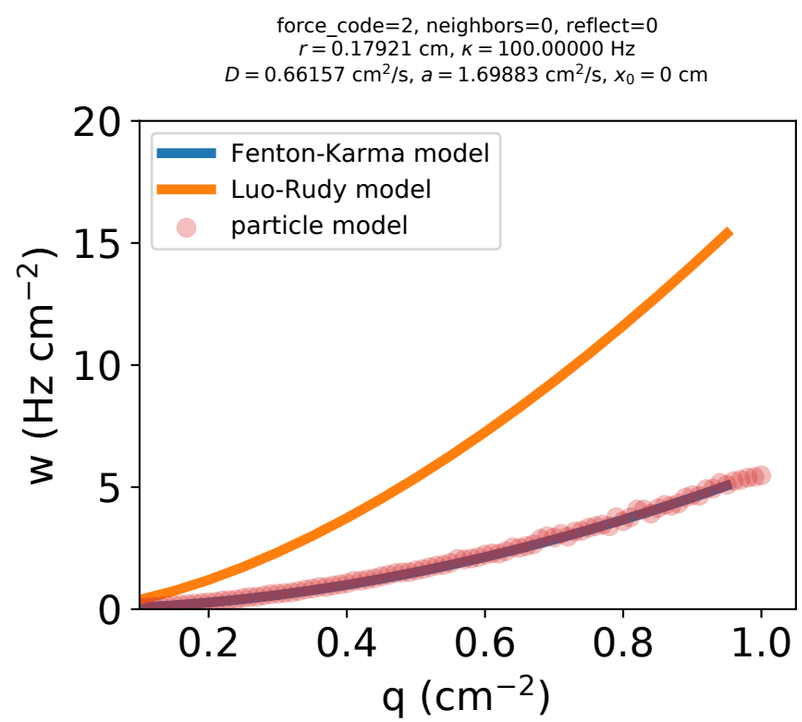

force_code=2, neighbors=0, reflect=0
$r = 0.12666$ cm, $\kappa = 200.23700$ Hz
$D = 0.00024$ cm^2/s, $a = 1.72799$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})

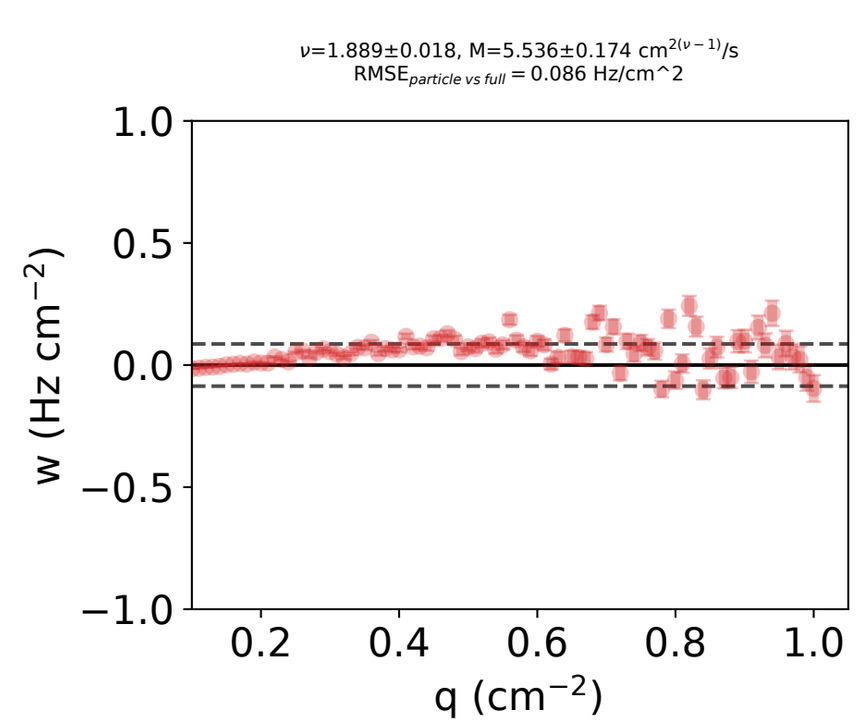

ν=1.882±0.016, M=5.557±0.155 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.080 Hz/cm^2
w (Hz cm^{-2})
q (cm^{-2})

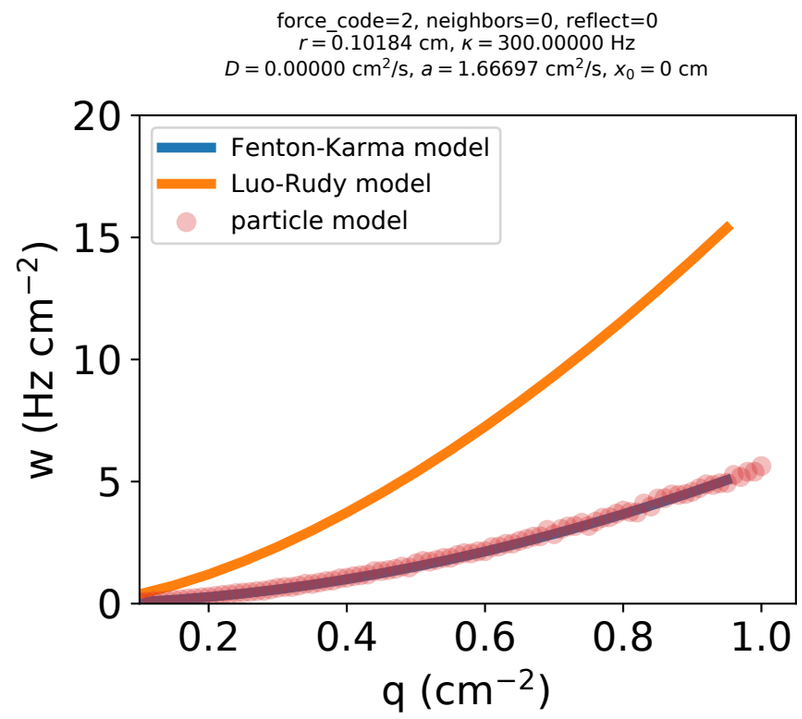

force_code=2, neighbors=0, reflect=0
$r = 0.17938$ cm, $\kappa = 100.00000$ Hz
$D = 0.70000$ cm^2/s, $a = 1.69117$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})

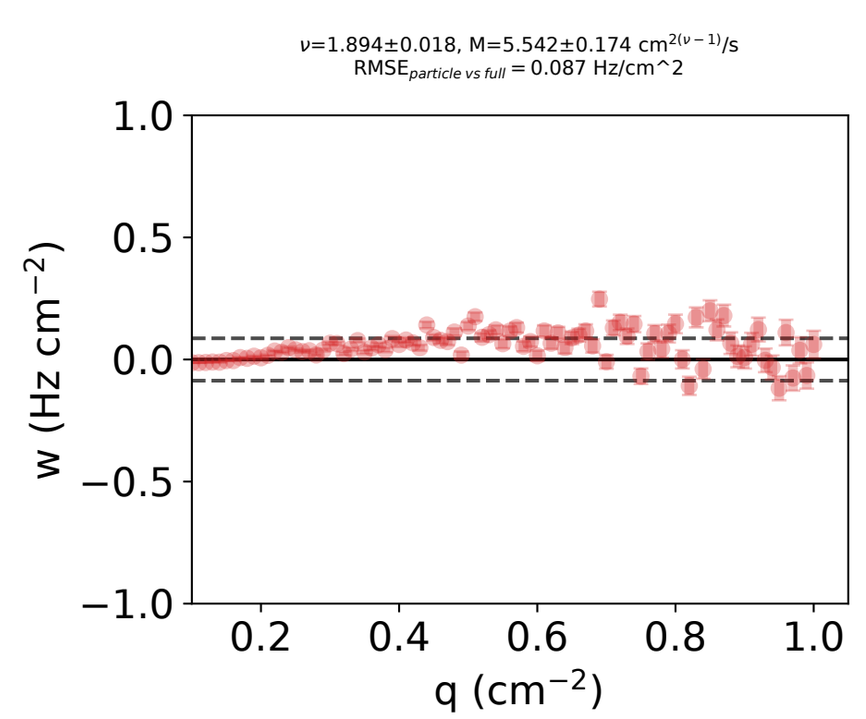

ν=1.886±0.019, M=5.482±0.179 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.082 Hz/cm^2
w (Hz cm^{-2})
q (cm^{-2})

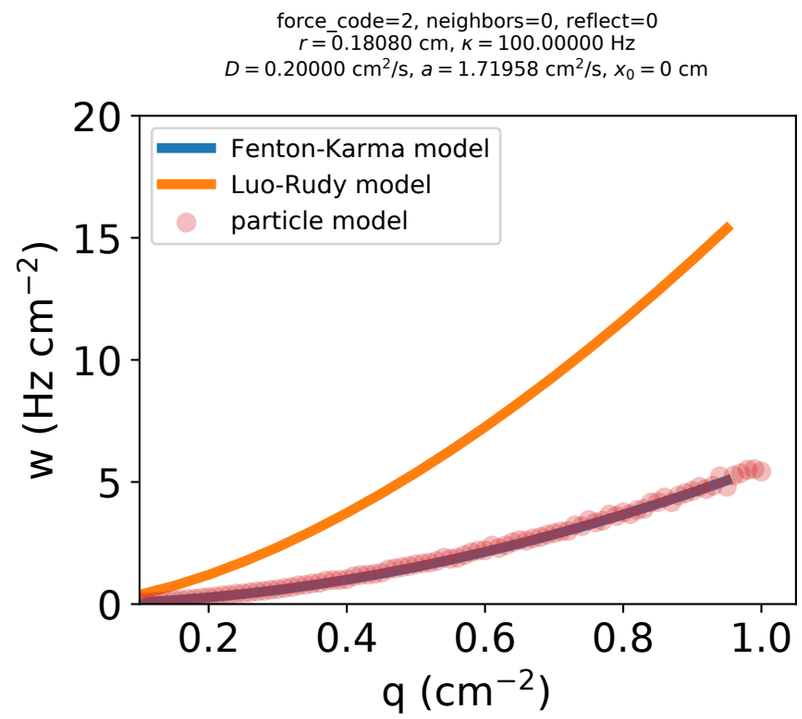

force_code=2, neighbors=0, reflect=0
$r = 0.18000$ cm, $\kappa = 100.00000$ Hz
$D = 0.36151$ cm^2/s, $a = 1.70116$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})
ν=1.896±0.017, M=5.532±0.167 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.081 Hz/cm^2
force_code=2, neighbors=0, reflect=0
$r = 0.18048$ cm, $\kappa = 100.00000$ Hz
$D = 0.24743$ cm^2/s, $a = 1.71513$ cm^2/s, $x_0 = 0$ cm
ν=1.885±0.018, M=5.502±0.180 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.084 Hz/cm^2
force_code=2, neighbors=0, reflect=0
$r = 0.18024$ cm, $\kappa = 100.00000$ Hz
$D = 0.24867$ cm^2/s, $a = 1.70873$ cm^2/s, $x_0 = 0$ cm
ν=1.884±0.018, M=5.497±0.172 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.085 Hz/cm^2

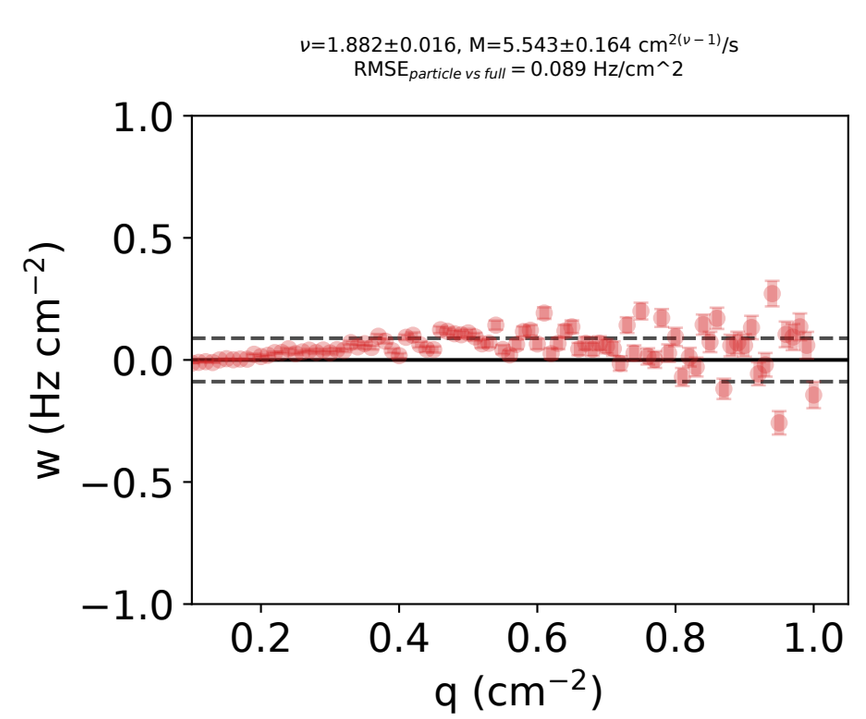

force_code=2, neighbors=0, reflect=0
$r = 0.17921$ cm, $\kappa = 100.00000$ Hz
$D = 0.66157$ cm^2/s, $a = 1.69883$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})

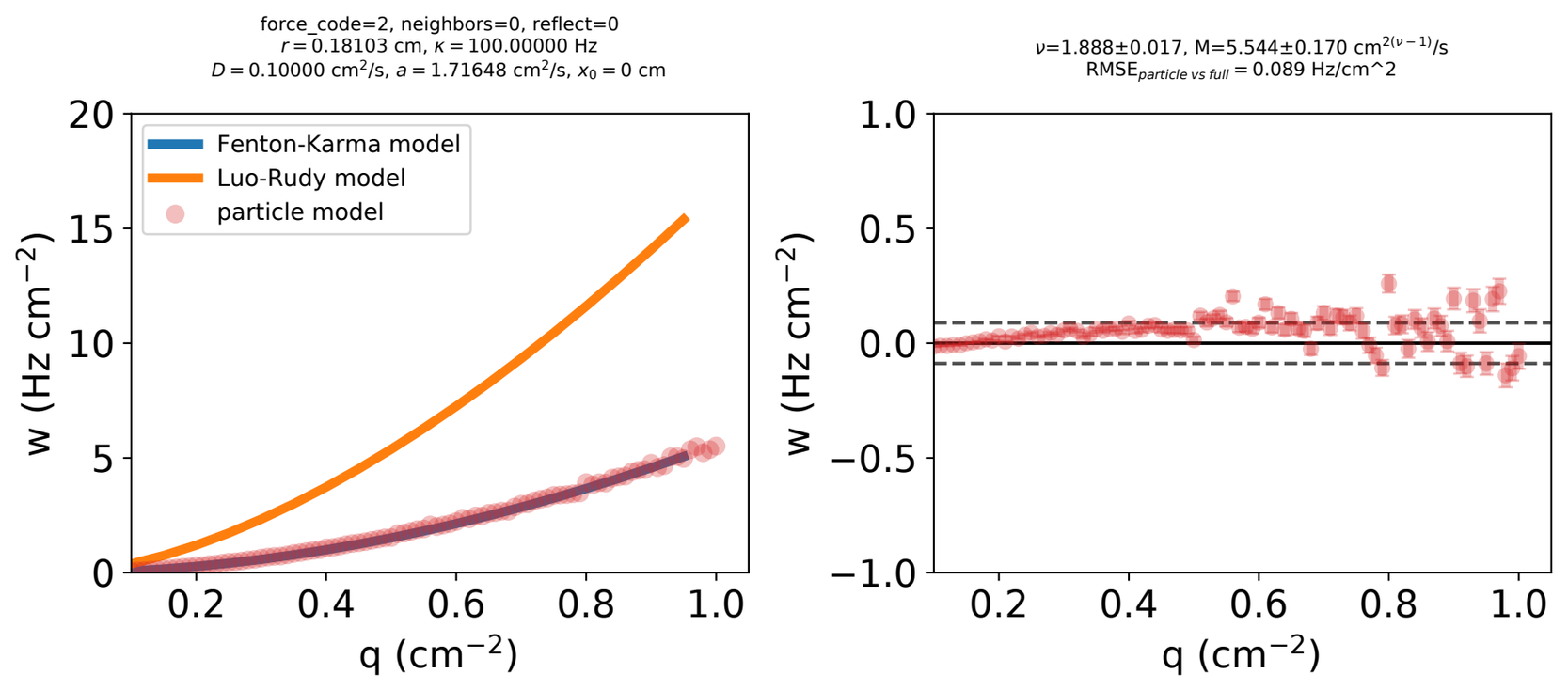

ν=1.889±0.018, M=5.536±0.174 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.086 Hz/cm^2
w (Hz cm^{-2})
q (cm^{-2})

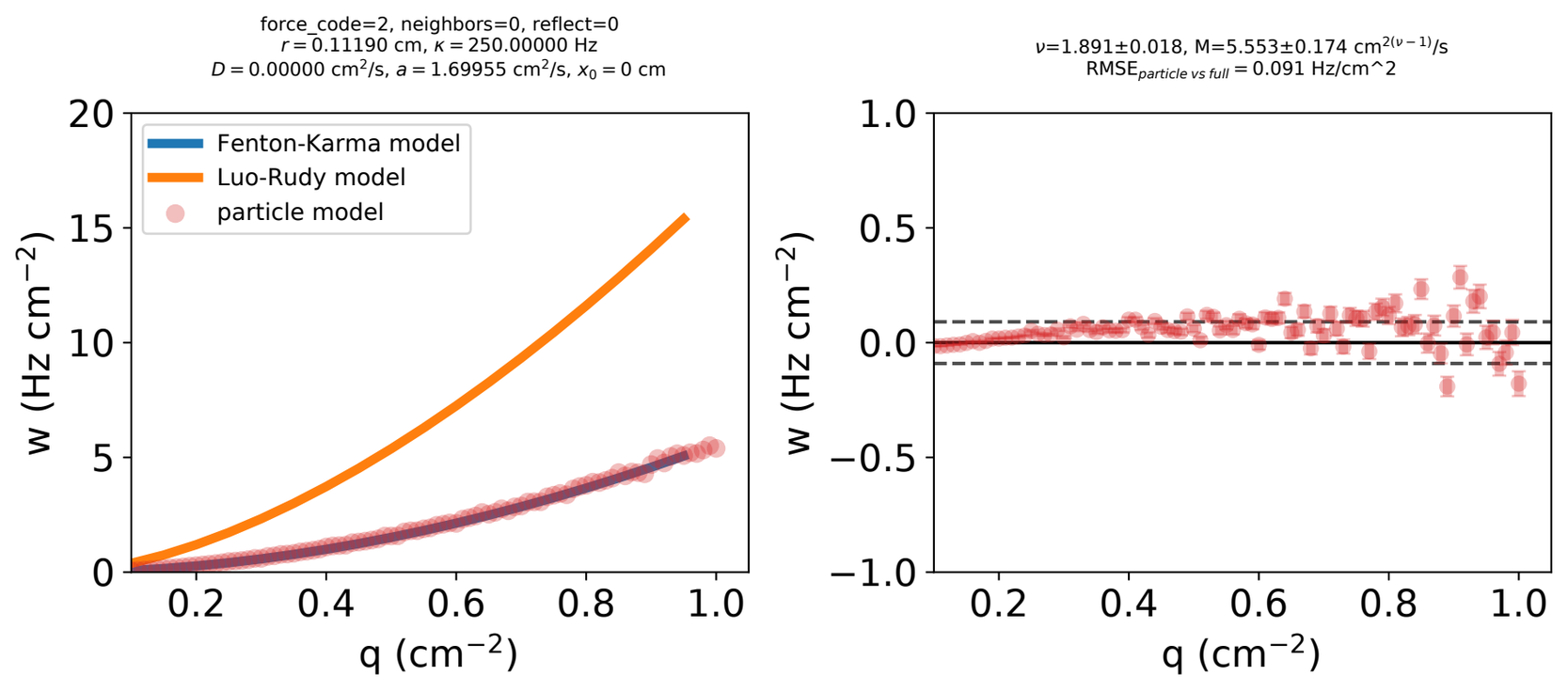

force_code=2, neighbors=0, reflect=0
$r = 0.10184$ cm, $\kappa = 300.00000$ Hz
$D = 0.00000$ cm^2/s, $a = 1.66697$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})

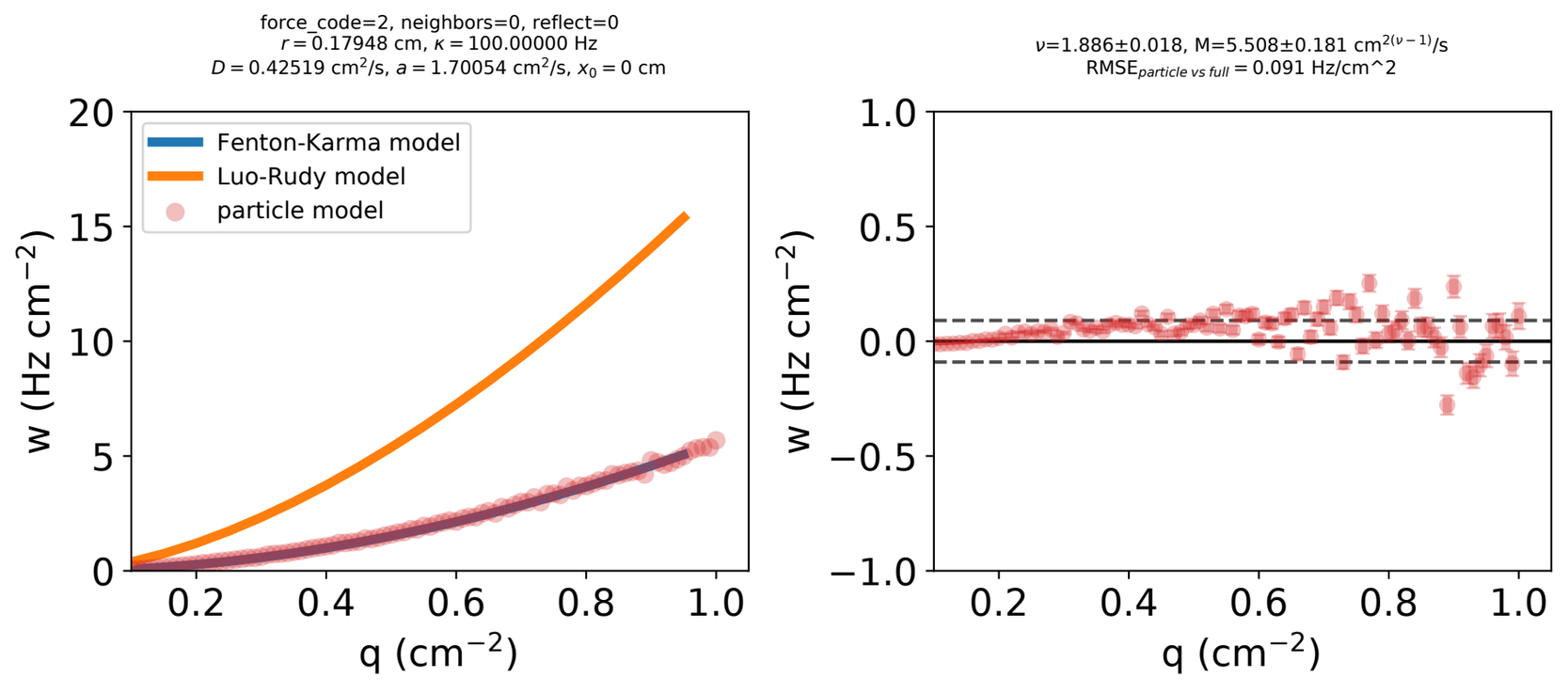

ν=1.894±0.018, M=5.542±0.174 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.087 Hz/cm^2
w (Hz cm^{-2})
q (cm^{-2})

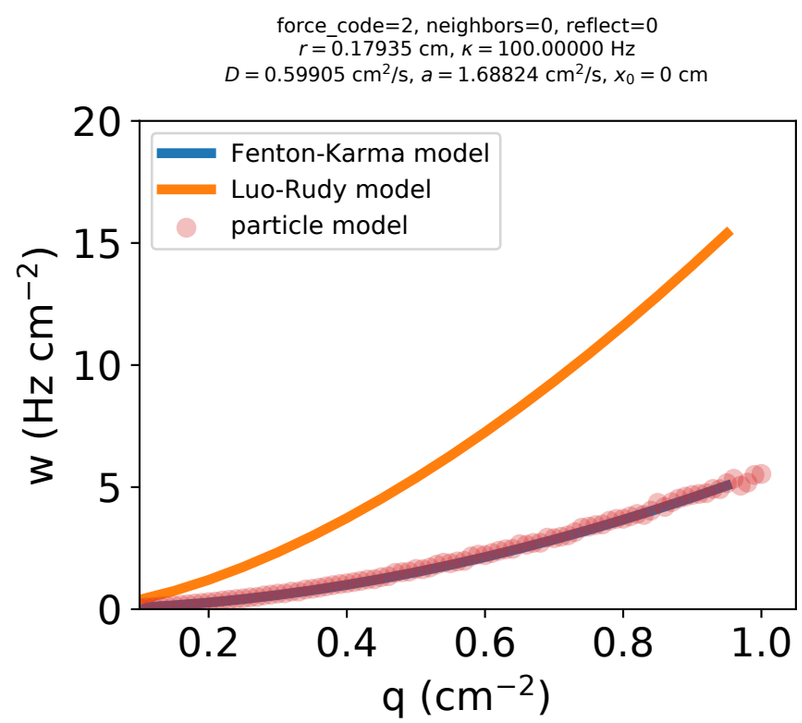

force_code=2, neighbors=0, reflect=0
$r = 0.18080$ cm, $\kappa = 100.00000$ Hz
$D = 0.20000$ cm^2/s, $a = 1.71958$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})

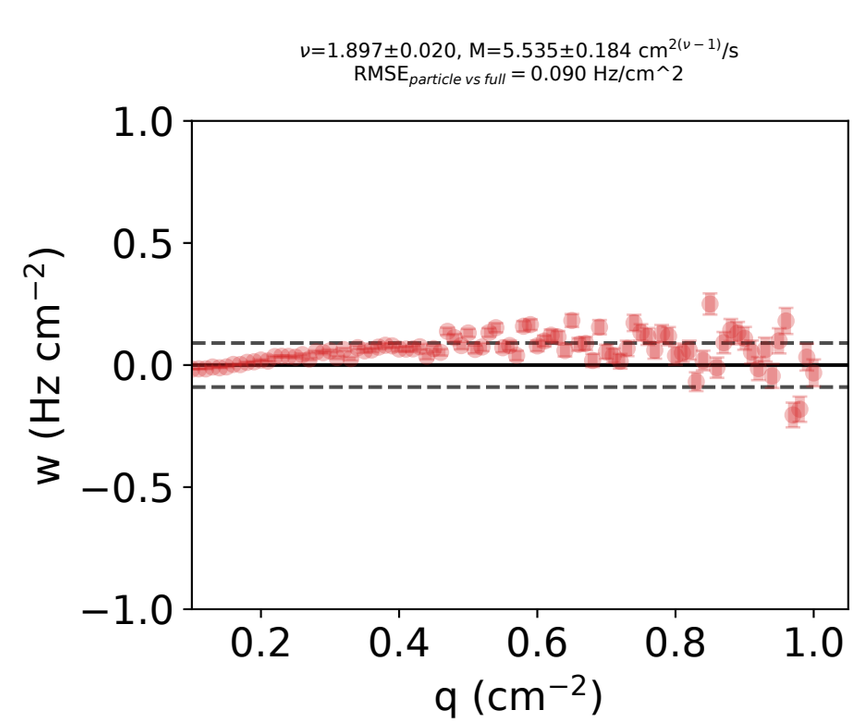

ν=1.882±0.016, M=5.543±0.164 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.089 Hz/cm^2
w (Hz cm^{-2})
q (cm^{-2})

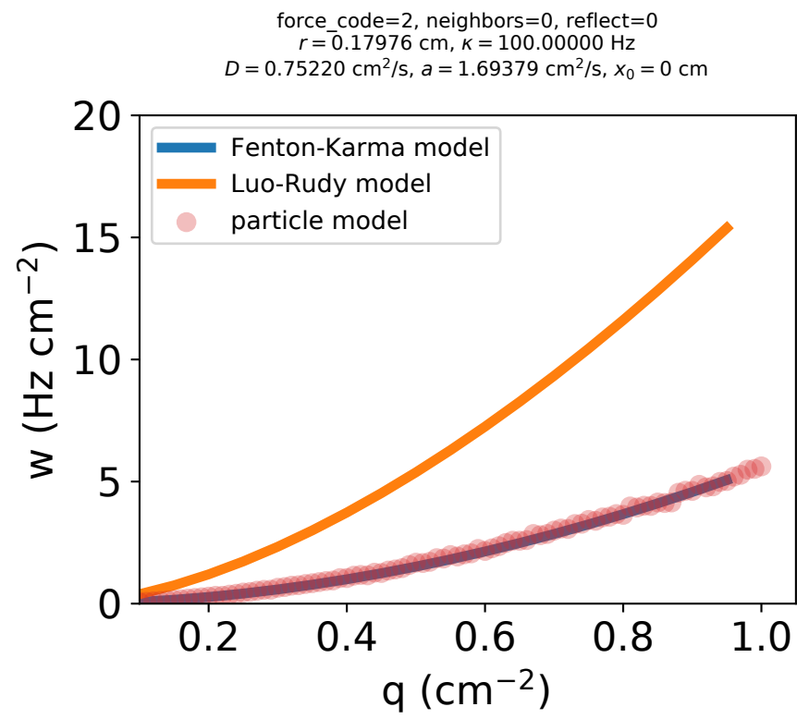

force_code=2, neighbors=0, reflect=0
$r = 0.18103$ cm, $\kappa = 100.00000$ Hz
$D = 0.10000$ cm^2/s, $a = 1.71648$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})
ν=1.888±0.017, M=5.544±0.170 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.089 Hz/cm^2
w (Hz cm^{-2})
q (cm^{-2})

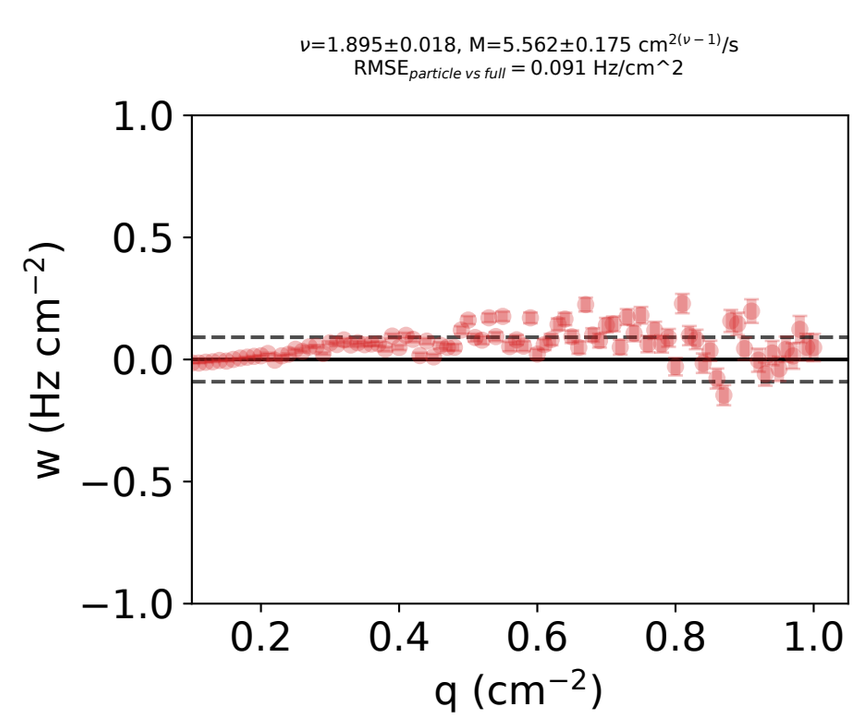

force_code=2, neighbors=0, reflect=0
$r = 0.11190$ cm, $\kappa = 250.00000$ Hz
$D = 0.00000$ cm^2/s, $a = 1.69955$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})
ν=1.891±0.018, M=5.553±0.174 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.091 Hz/cm^2
w (Hz cm^{-2})
q (cm^{-2})

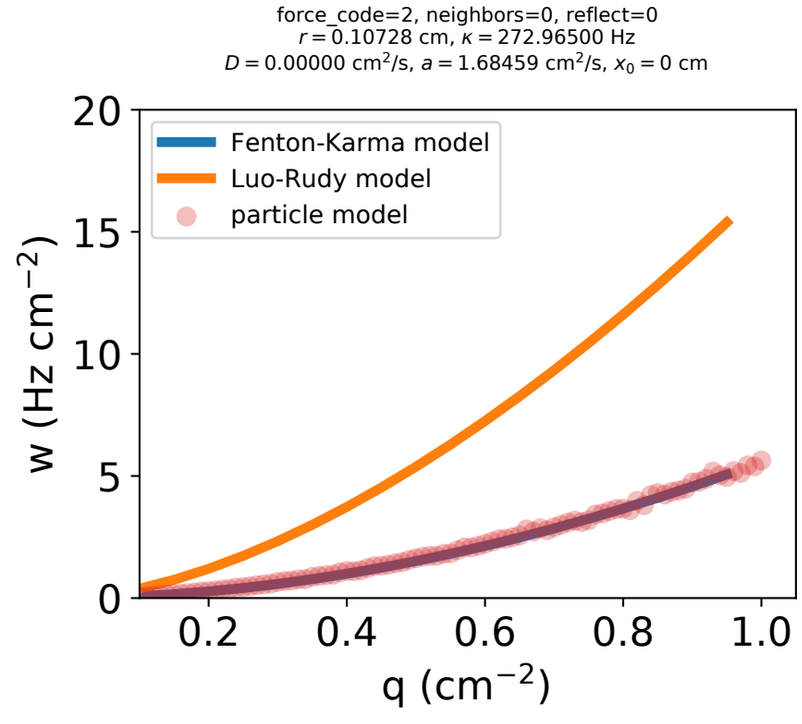

force_code=2, neighbors=0, reflect=0
$r = 0.17948$ cm, $\kappa = 100.00000$ Hz
$D = 0.42519$ cm^2/s, $a = 1.70054$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})
ν=1.886±0.018, M=5.508±0.181 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.091 Hz/cm^2
w (Hz cm^{-2})
q (cm^{-2})

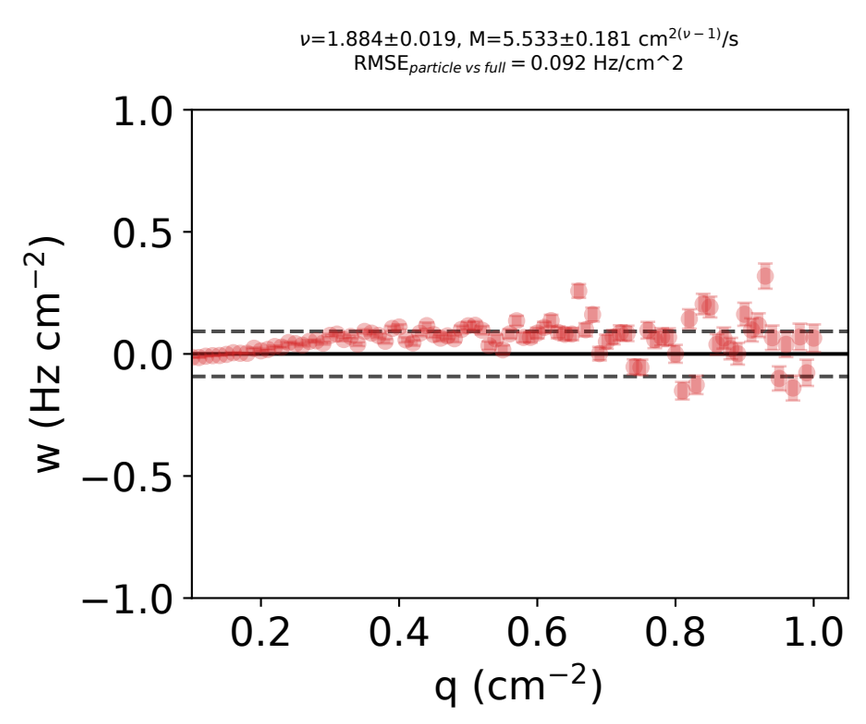

force_code=2, neighbors=0, reflect=0
$r = 0.17935$ cm, $\kappa = 100.00000$ Hz
$D = 0.59905$ cm^2/s, $a = 1.68824$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})

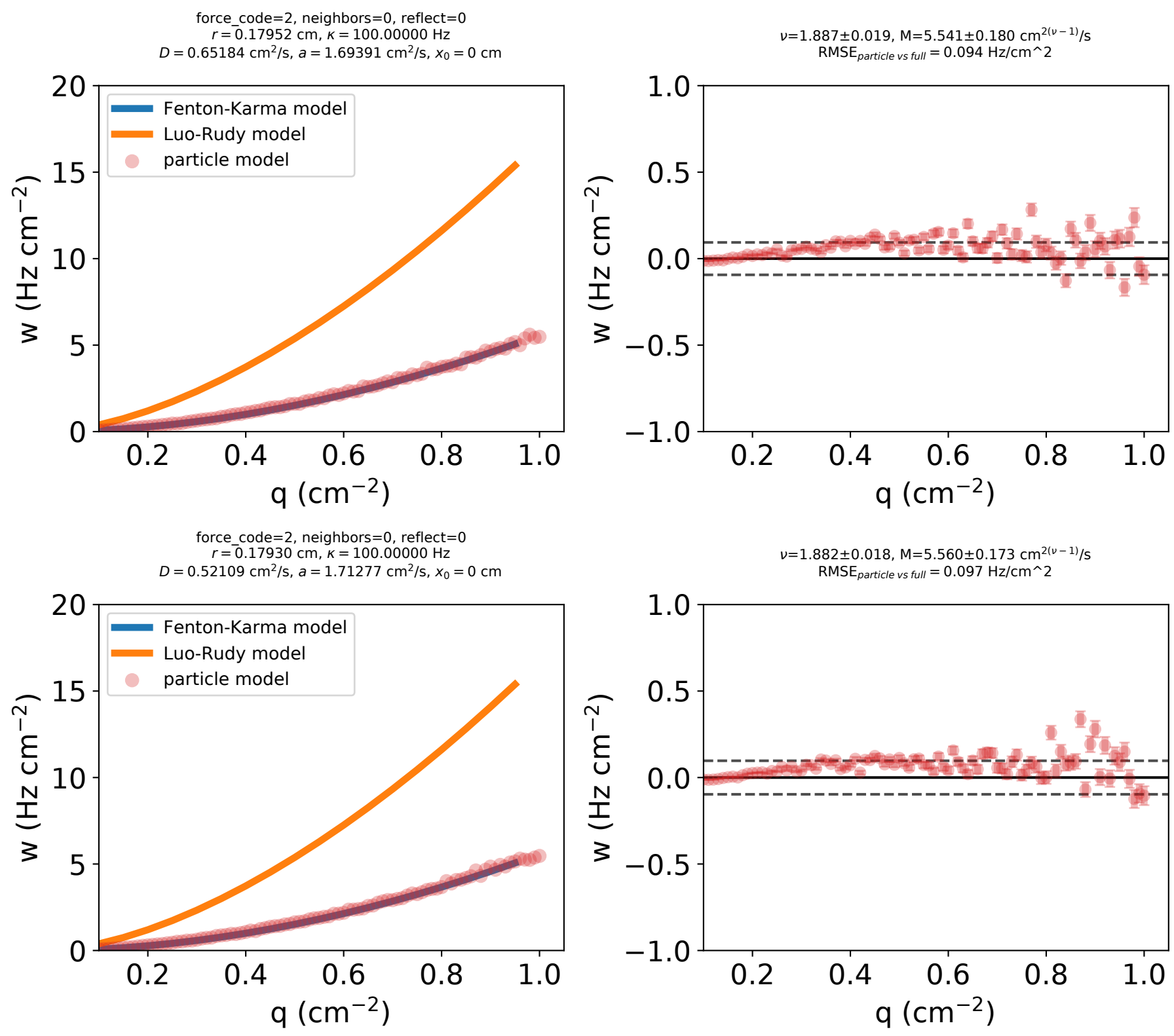

ν=1.897±0.020, M=5.535±0.184 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.090 Hz/cm^2
w (Hz cm^{-2})
q (cm^{-2})


force_code=2, neighbors=0, reflect=0
$r = 0.17976$ cm, $\kappa = 100.00000$ Hz
$D = 0.75220$ cm^2/s, $a = 1.69379$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})


ν=1.895±0.018, M=5.562±0.175 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.091 Hz/cm^2
w (Hz cm^{-2})
q (cm^{-2})


force_code=2, neighbors=0, reflect=0
$r = 0.10728$ cm, $\kappa = 272.96500$ Hz
$D = 0.00000$ cm^2/s, $a = 1.68459$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})


ν=1.884±0.019, M=5.533±0.181 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.092 Hz/cm^2
w (Hz cm^{-2})
q (cm^{-2})


force_code=2, neighbors=0, reflect=0
$r = 0.17952$ cm, $\kappa = 100.00000$ Hz
$D = 0.65184$ cm^2/s, $a = 1.69391$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})
ν=1.887±0.019, M=5.541±0.180 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.094 Hz/cm^2
force_code=2, neighbors=0, reflect=0
$r = 0.17930$ cm, $\kappa = 100.00000$ Hz
$D = 0.52109$ cm^2/s, $a = 1.71277$ cm^2/s, $x_0 = 0$ cm
Fenton-Karma model
Luo-Rudy model
particle model
w (Hz cm^{-2})
q (cm^{-2})
ν=1.882±0.018, M=5.560±0.173 cm$^{2(\nu-1)}$/s
RMSE$_{particle\ vs\ full}$ = 0.097 Hz/cm^2