

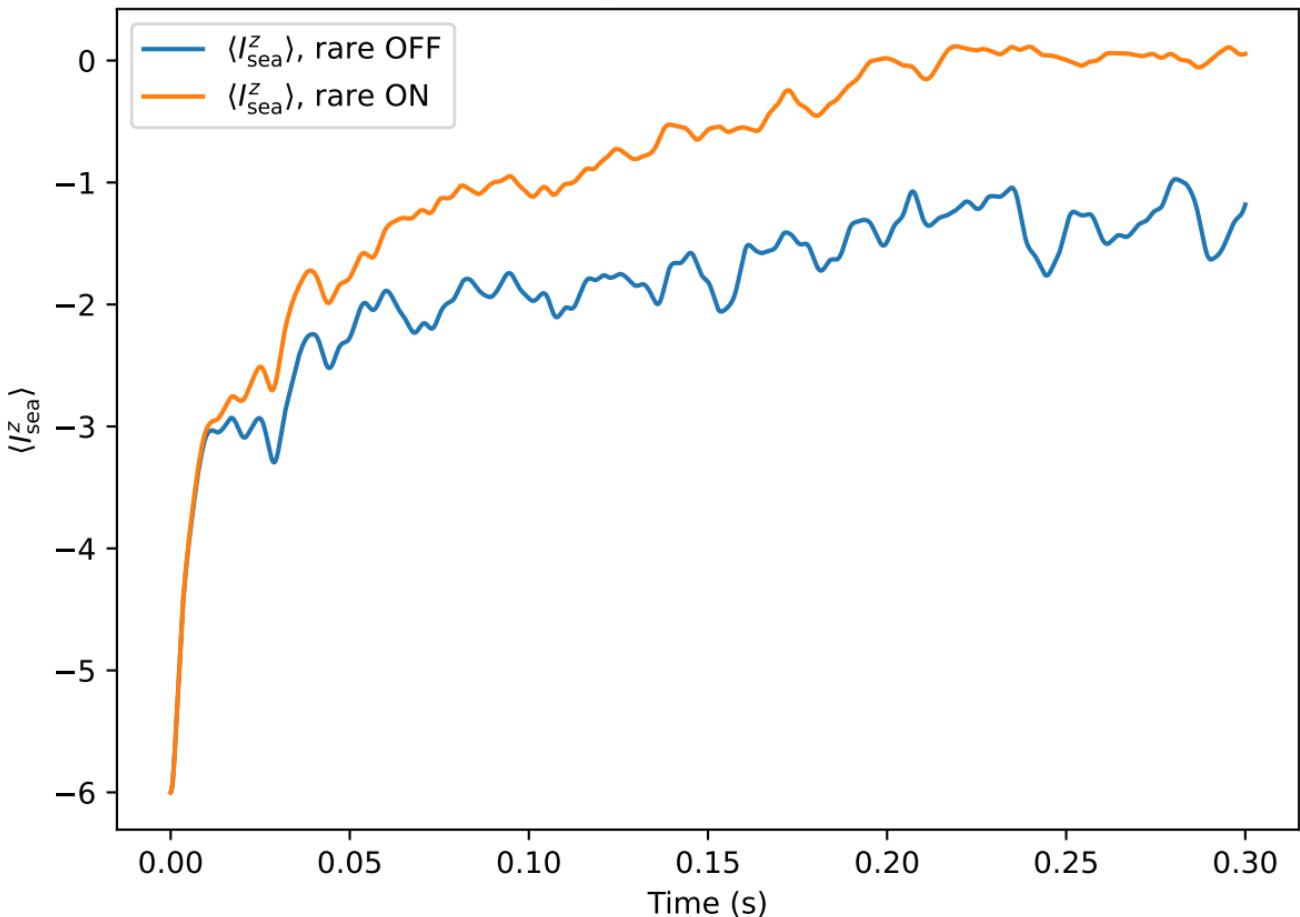
Sea detuning sweep report (Ga sea / Al rare)

Global parameters (constant across sweep):

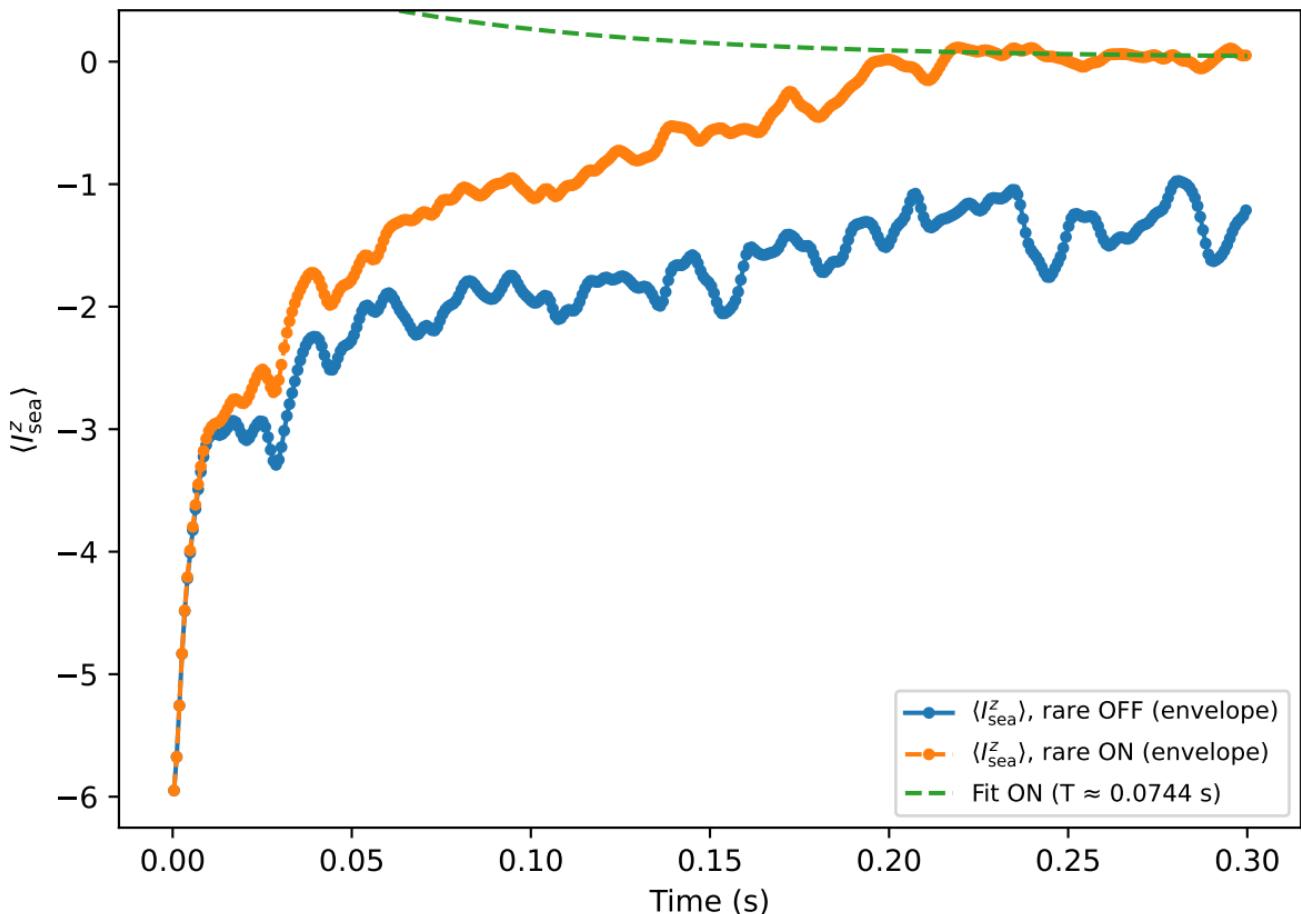
f_Az (sea Larmor)	= 34.062 MHz
f_Rz (rare Larmor)	= 33.308 MHz
f1A (sea Rabi)	= 0.020 kHz
f1R (rare Rabi)	= 0.010 kHz
gamma_sea	= 7.134e+07 rad·s <sup>-1</sup> ·T <sup>-1</sup>
gamma_rare	= 6.976e+07 rad·s <sup>-1</sup> ·T <sup>-1</sup>
B0_common	= 3.000 T
B1_sea	= 1.761e-06 T
B1_rare	= 9.007e-07 T
dipolar_scale_SI	= 1.055e-41
shell_scale	= 0.300 nm
t_final	= 3.000e-01 s
steps	= 20000
n_sea	= 12
phi_sea	= 0.000 rad
phi_rare	= 0.000 rad

Sea detunings ( $\delta_A = f_Az - f_rf, A$ ) in Hz:

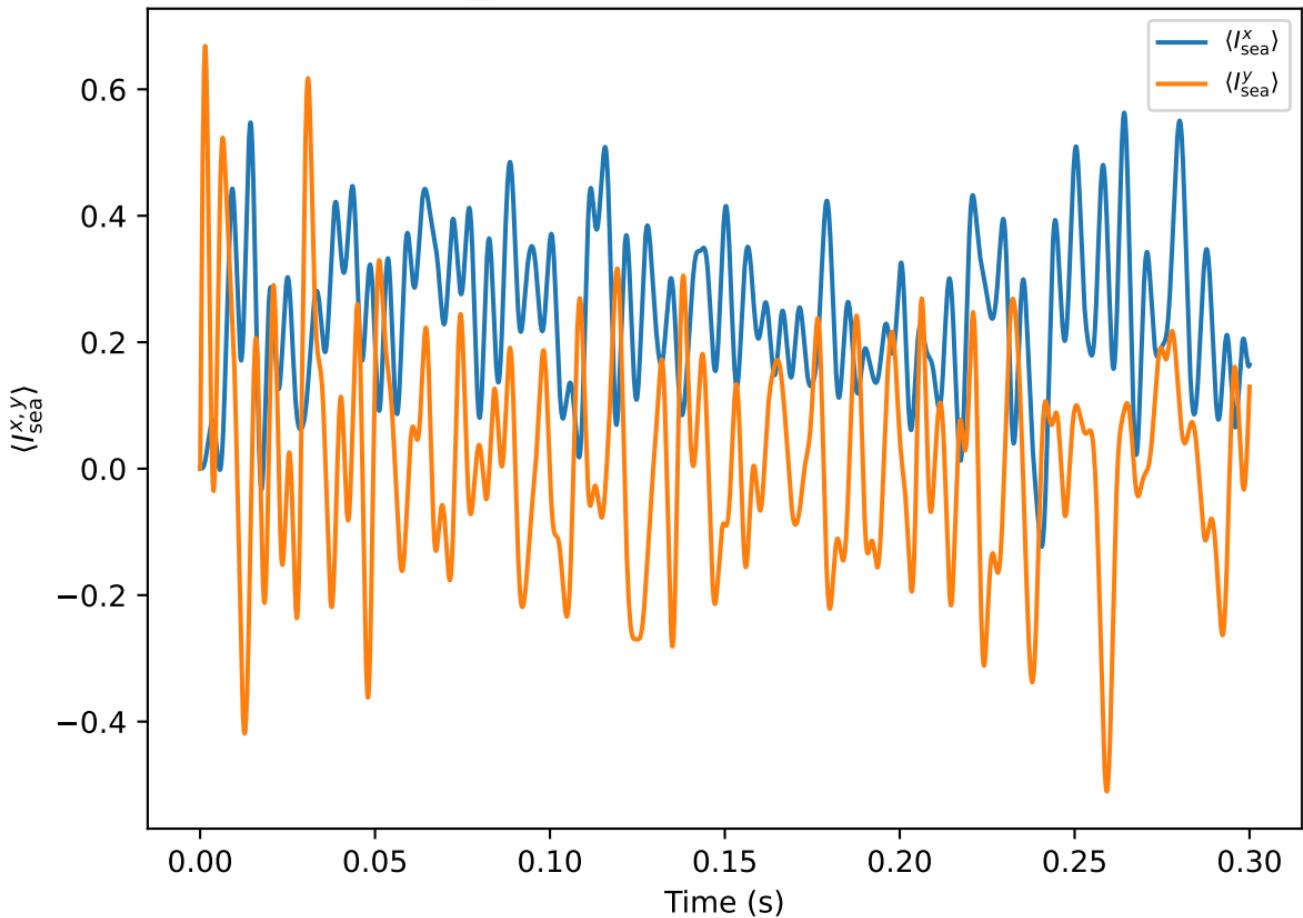
+0.0, +125.0, +250.0, +375.0, +500.0, +625.0, +750.0, +875.0, +1000.0

$\delta_A = +0.0 \text{ Hz}$ 

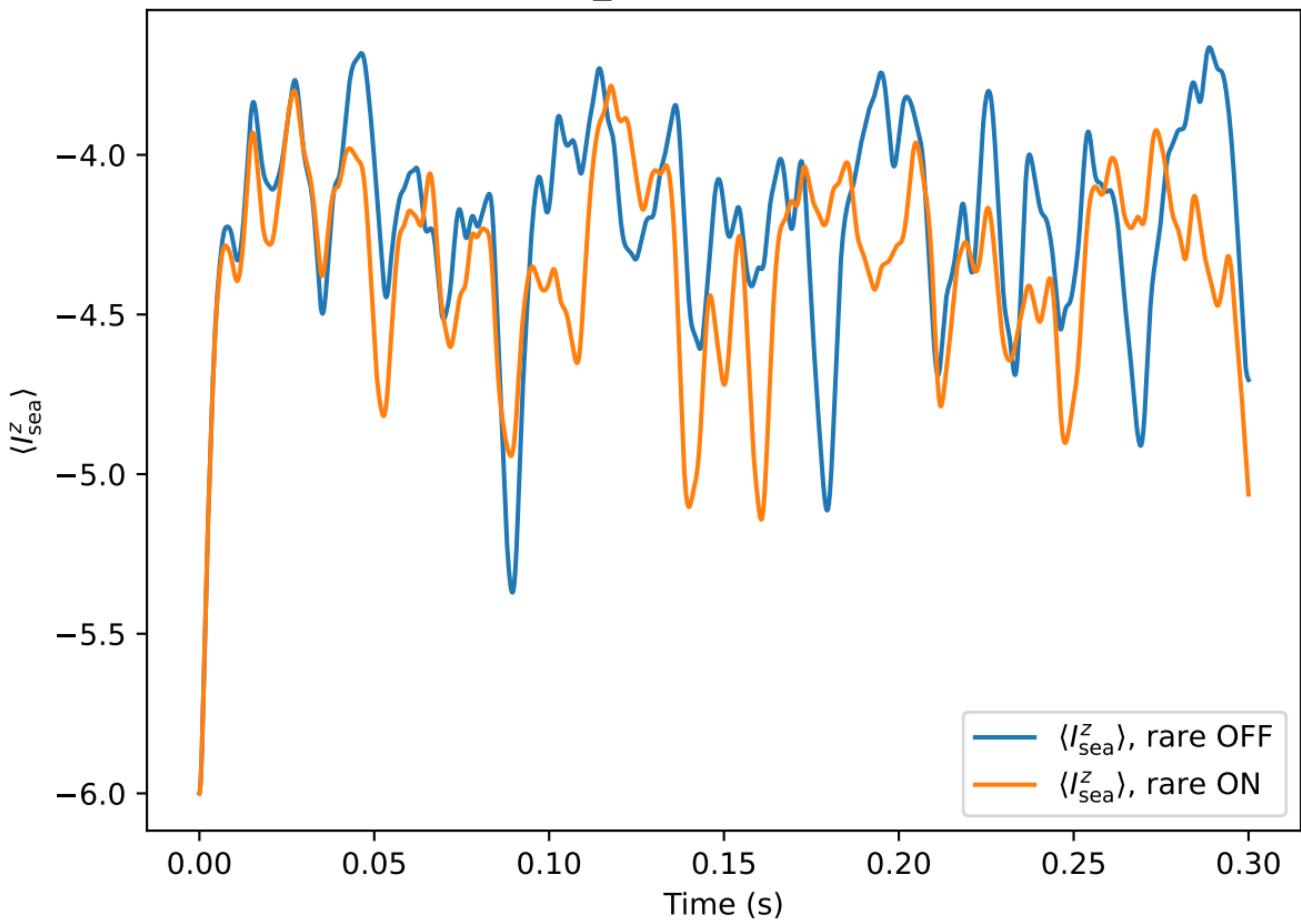
$\delta_A = +0.0$  Hz (pseudo  $T_1$  envelope)



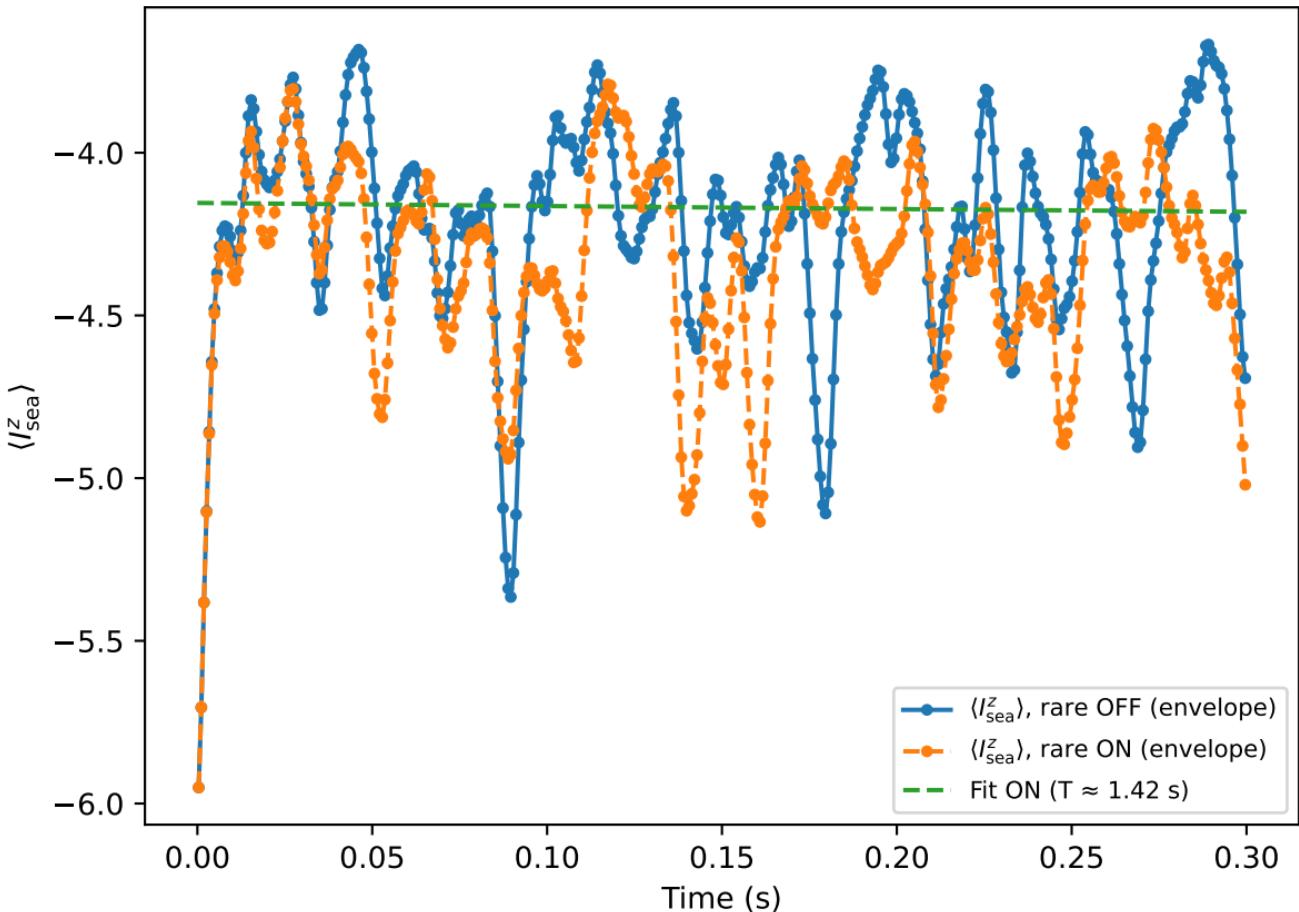
$\delta_A = +0.0 \text{ Hz}$  (rare drive OFF)



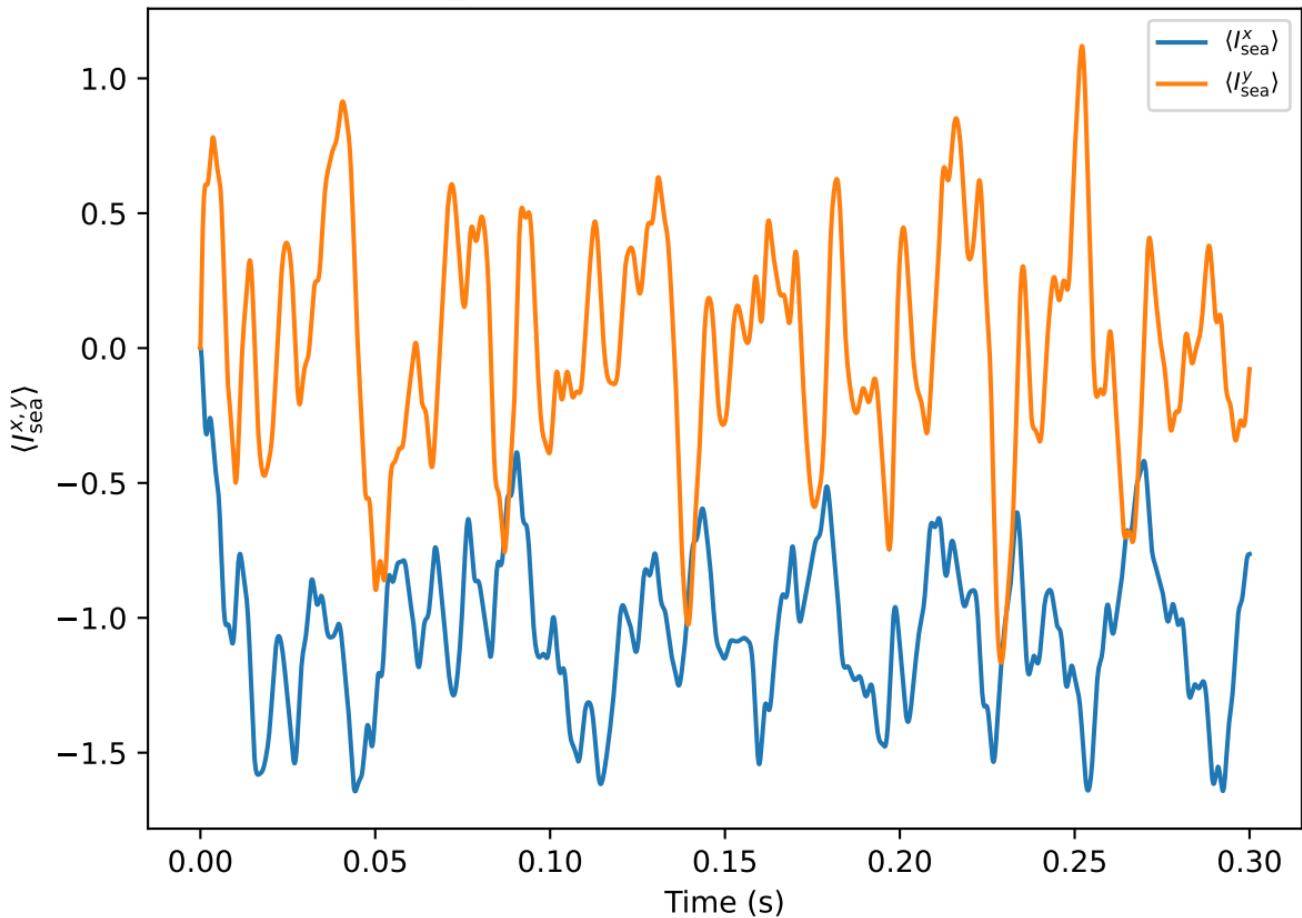
$\delta_A = +125.0$  Hz



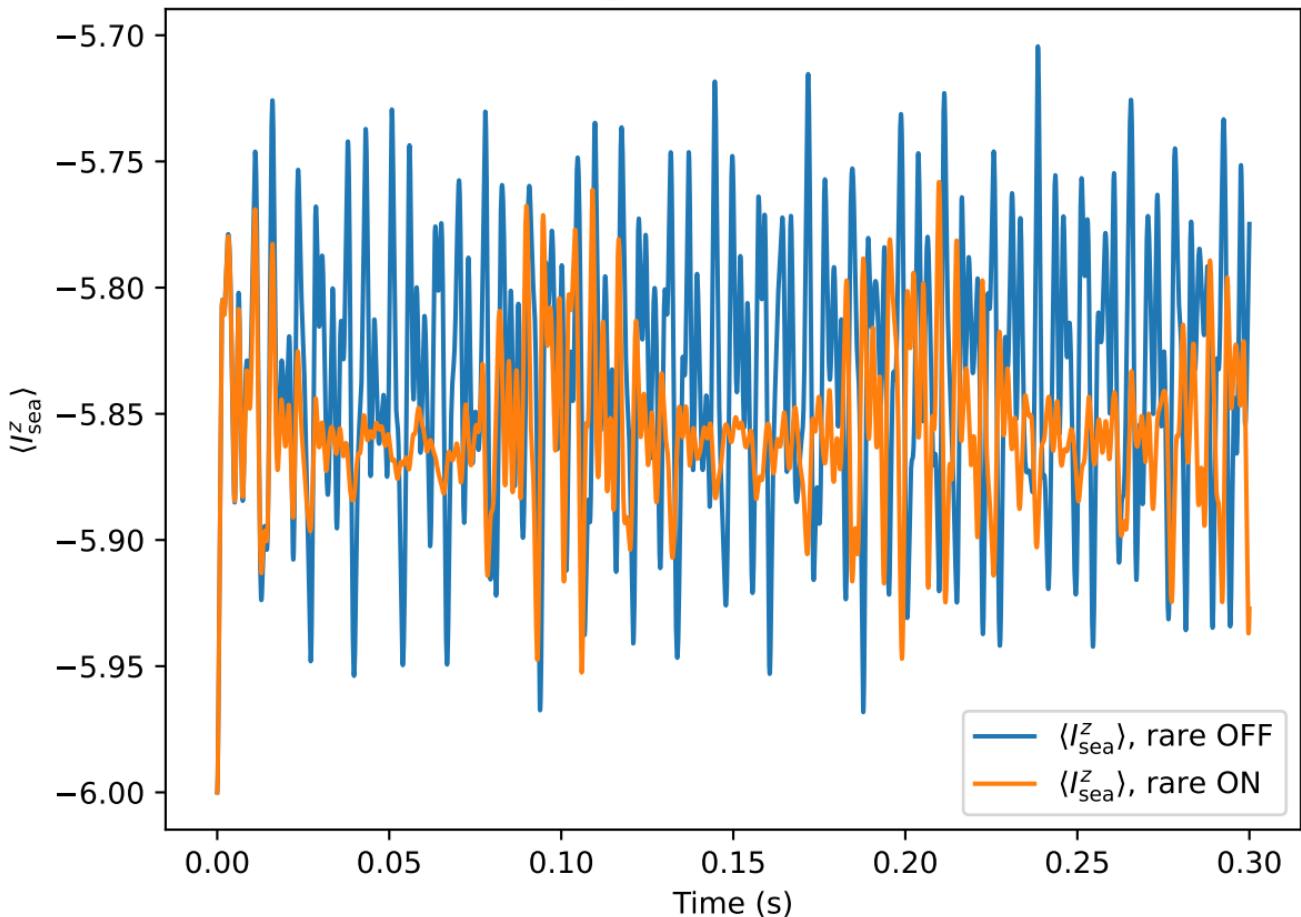
$\delta_A = +125.0$  Hz (pseudo  $T_1$  envelope)

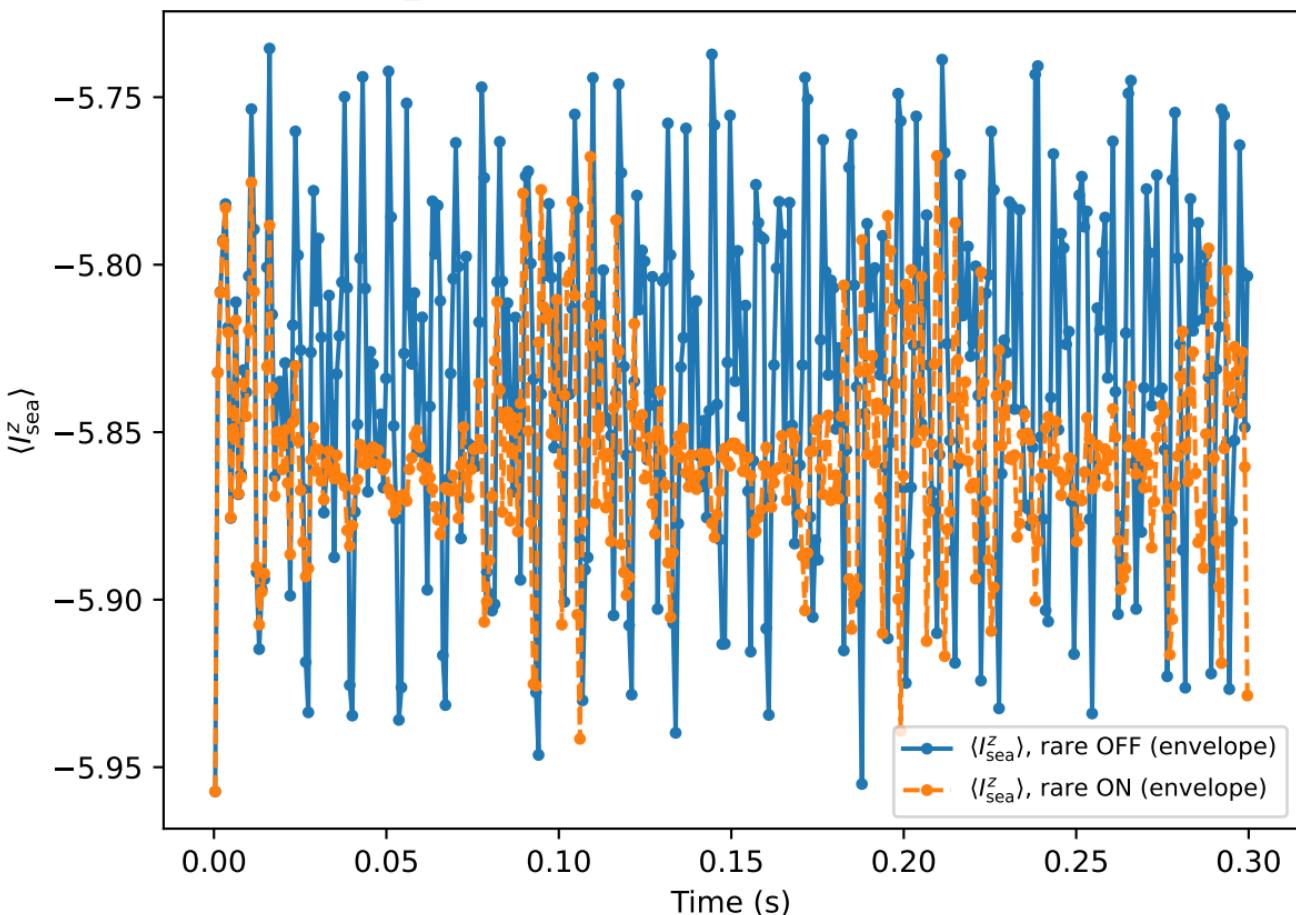


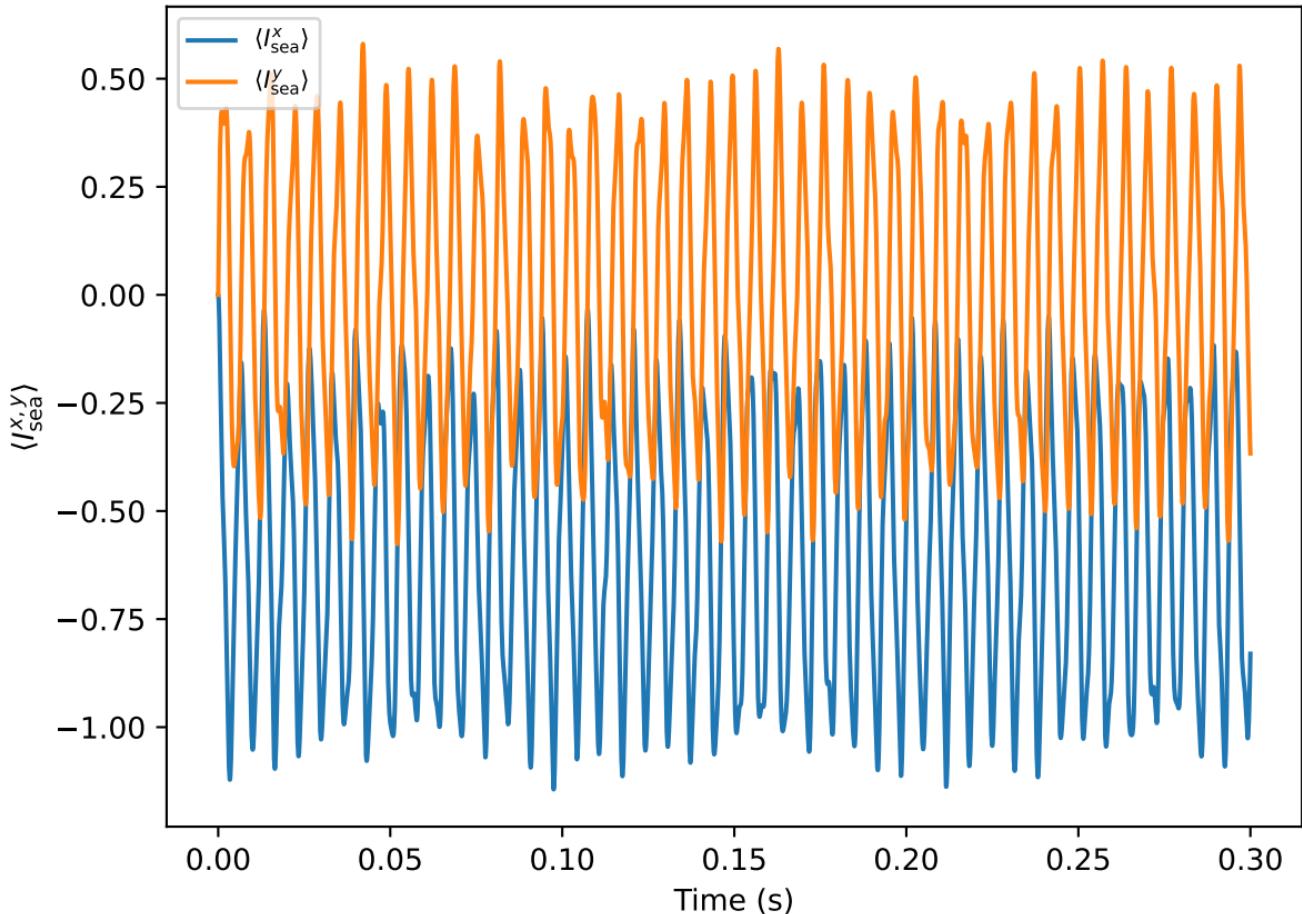
$\delta_A = +125.0$  Hz (rare drive OFF)



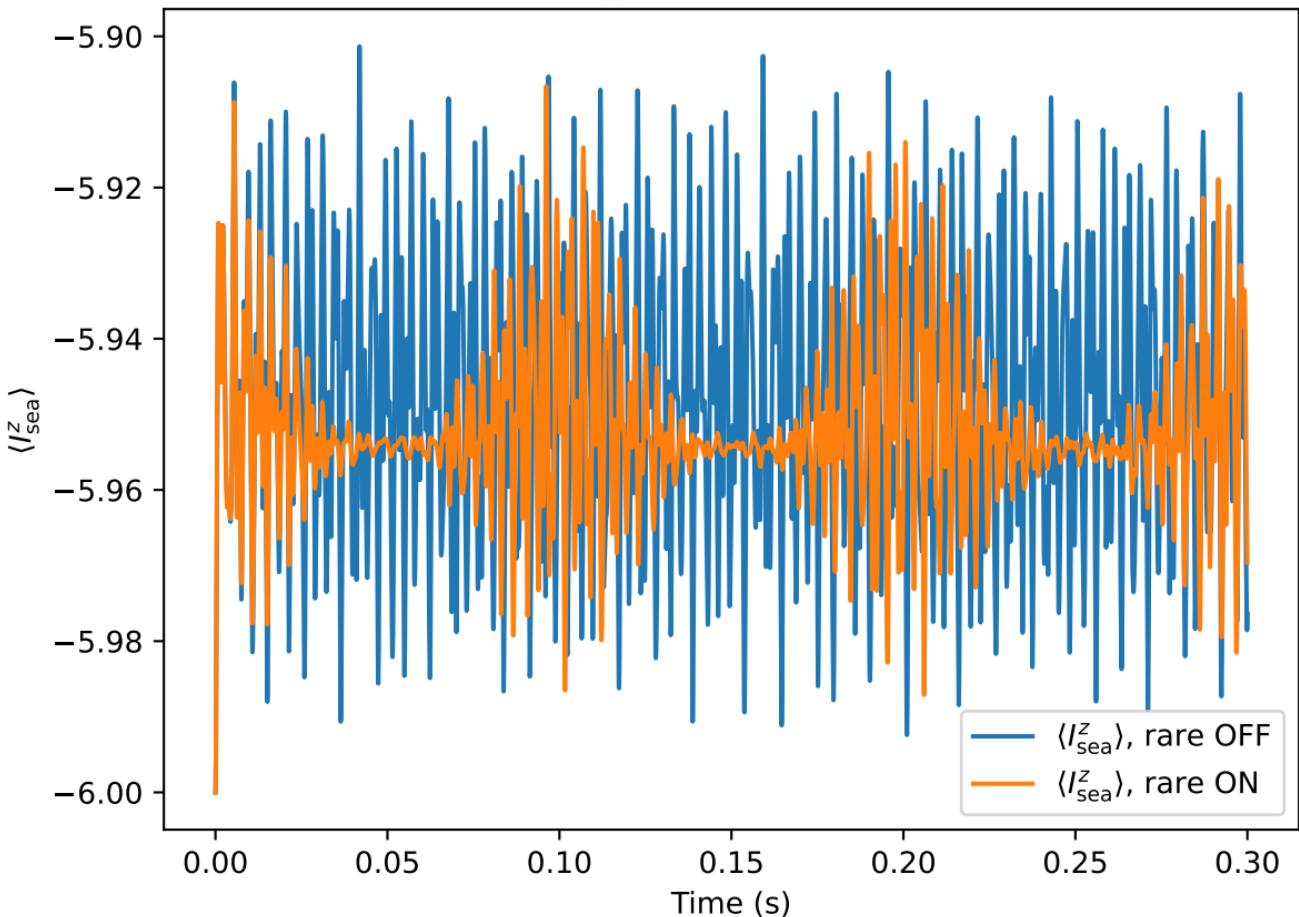
$\delta_A = +250.0$  Hz

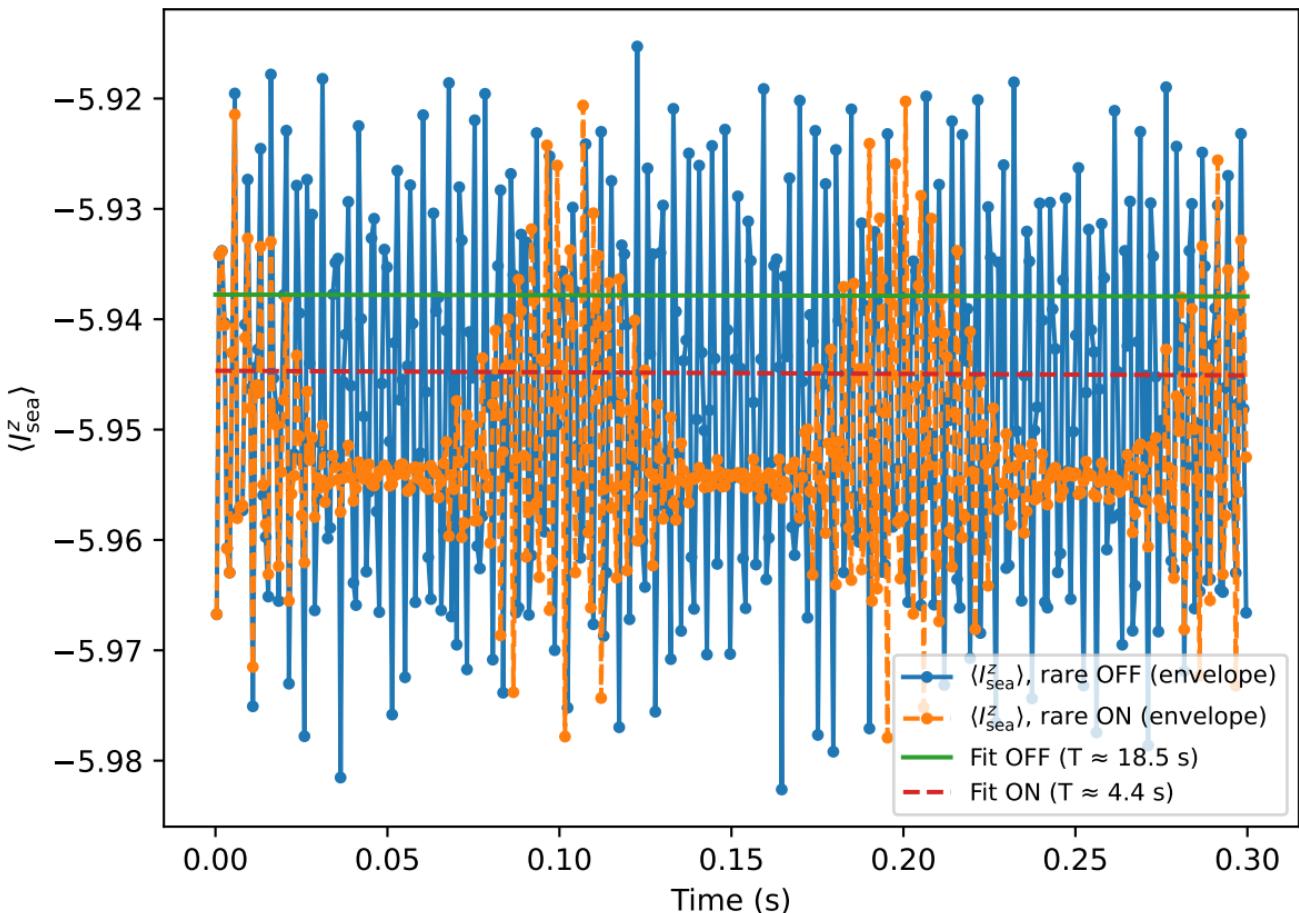


$\delta_A = +250.0 \text{ Hz}$  (pseudo  $T_1$  envelope)

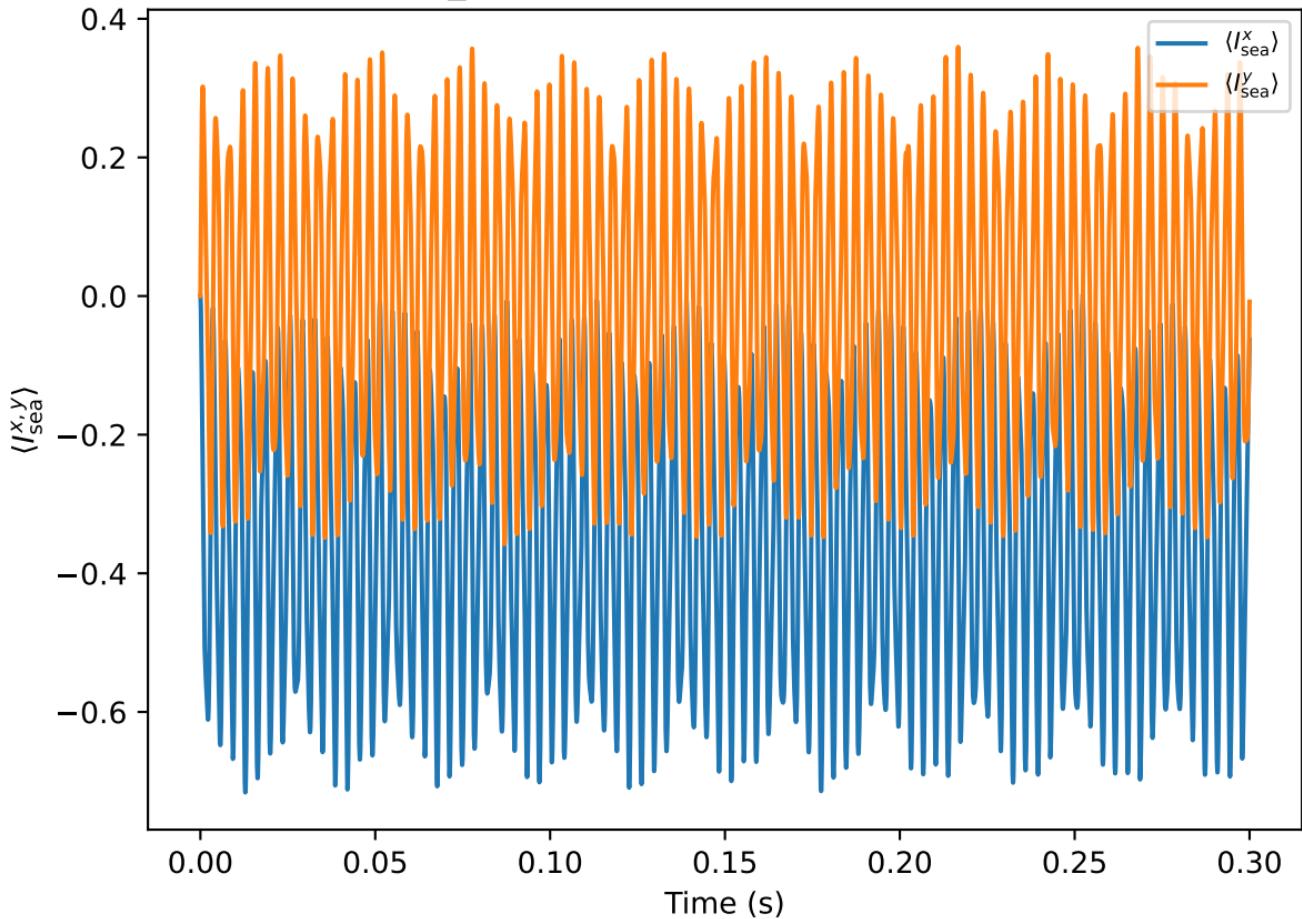
$\delta_A = +250.0 \text{ Hz} (\text{rare drive OFF})$ 

$\delta_A = +375.0$  Hz

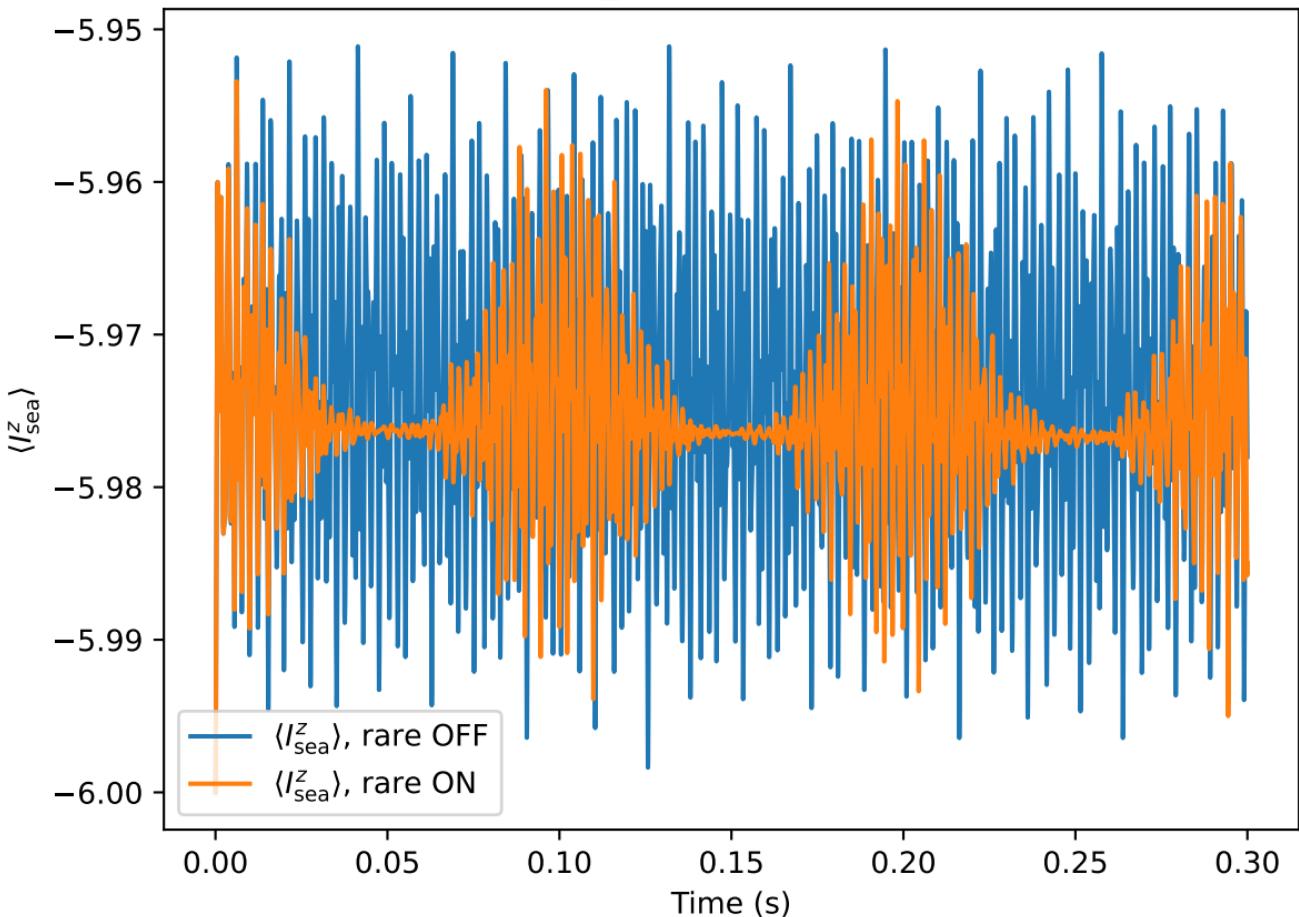


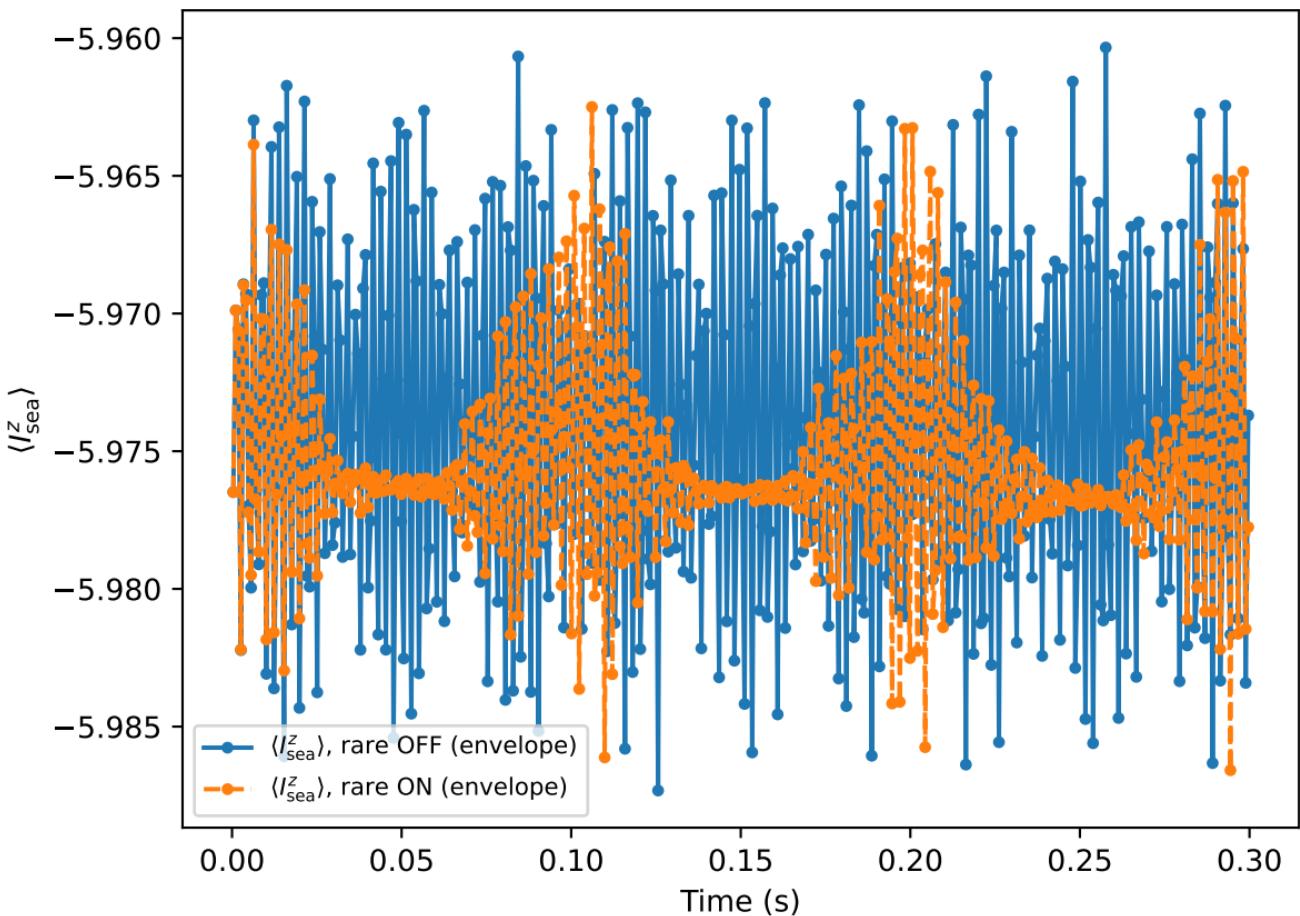
$\delta_A = +375.0 \text{ Hz}$  (pseudo  $T_1$  envelope)

$\delta_A = +375.0$  Hz (rare drive OFF)

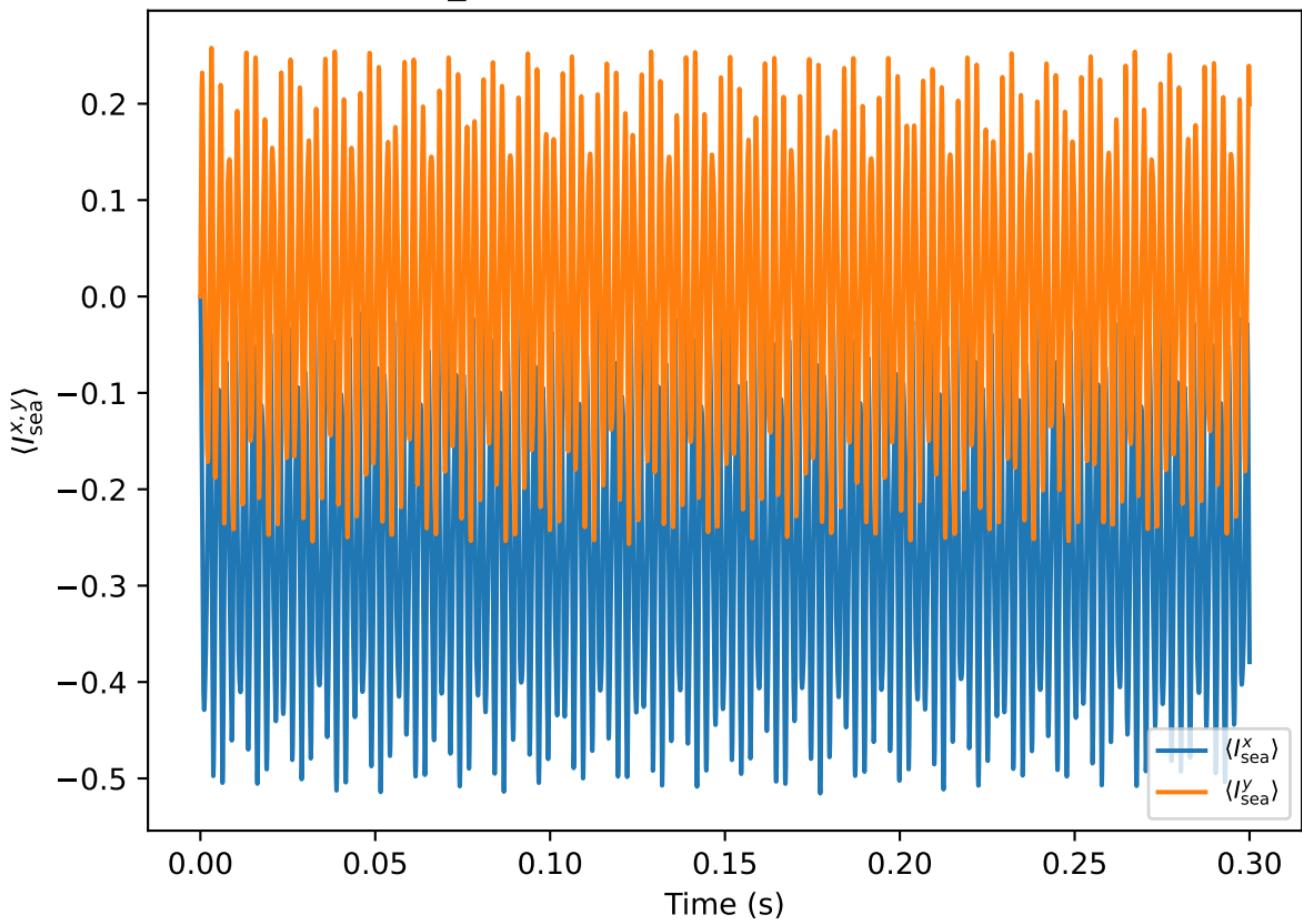


$\delta_A = +500.0$  Hz

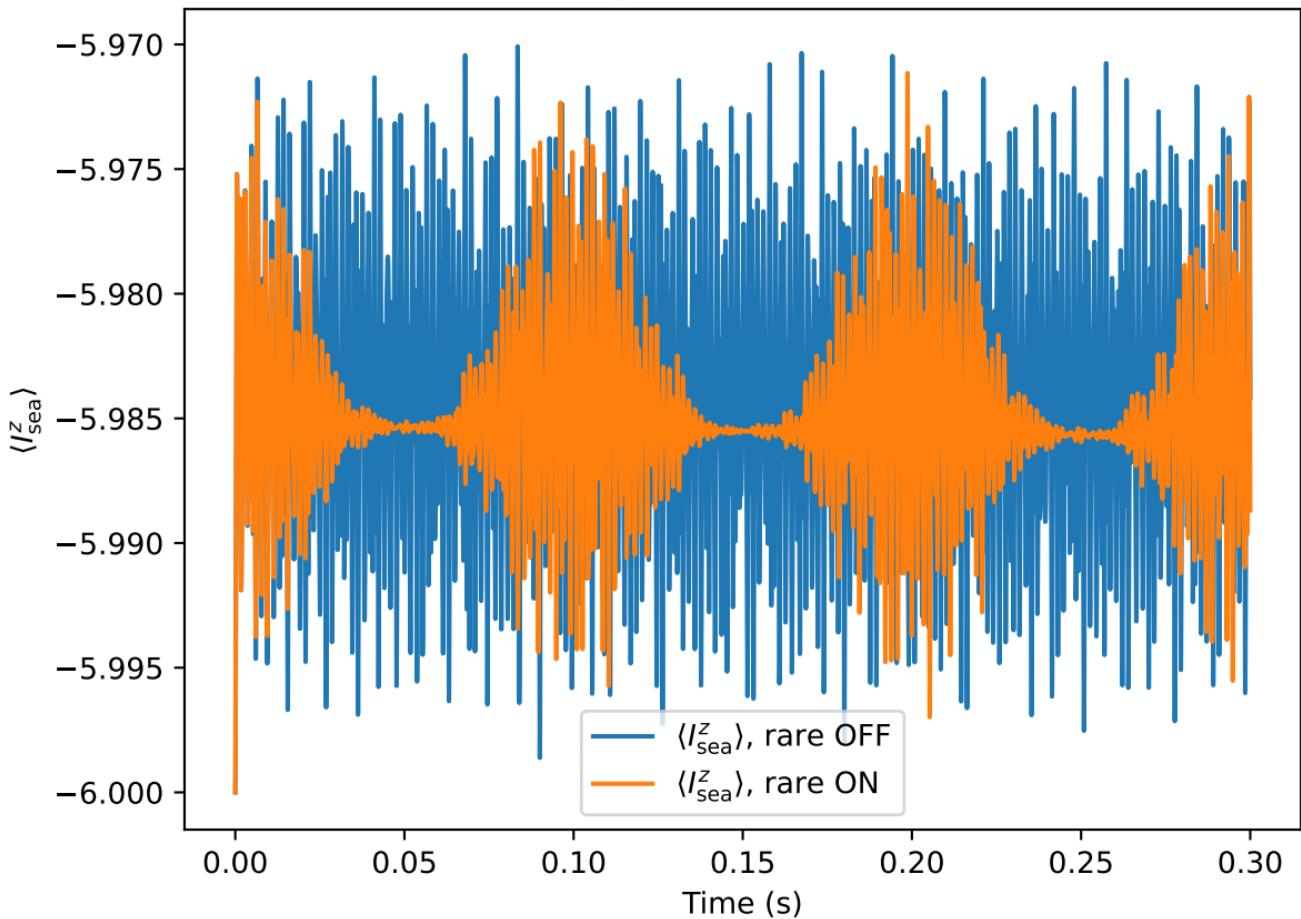


$\delta_A = +500.0 \text{ Hz}$  (pseudo  $T_1$  envelope)

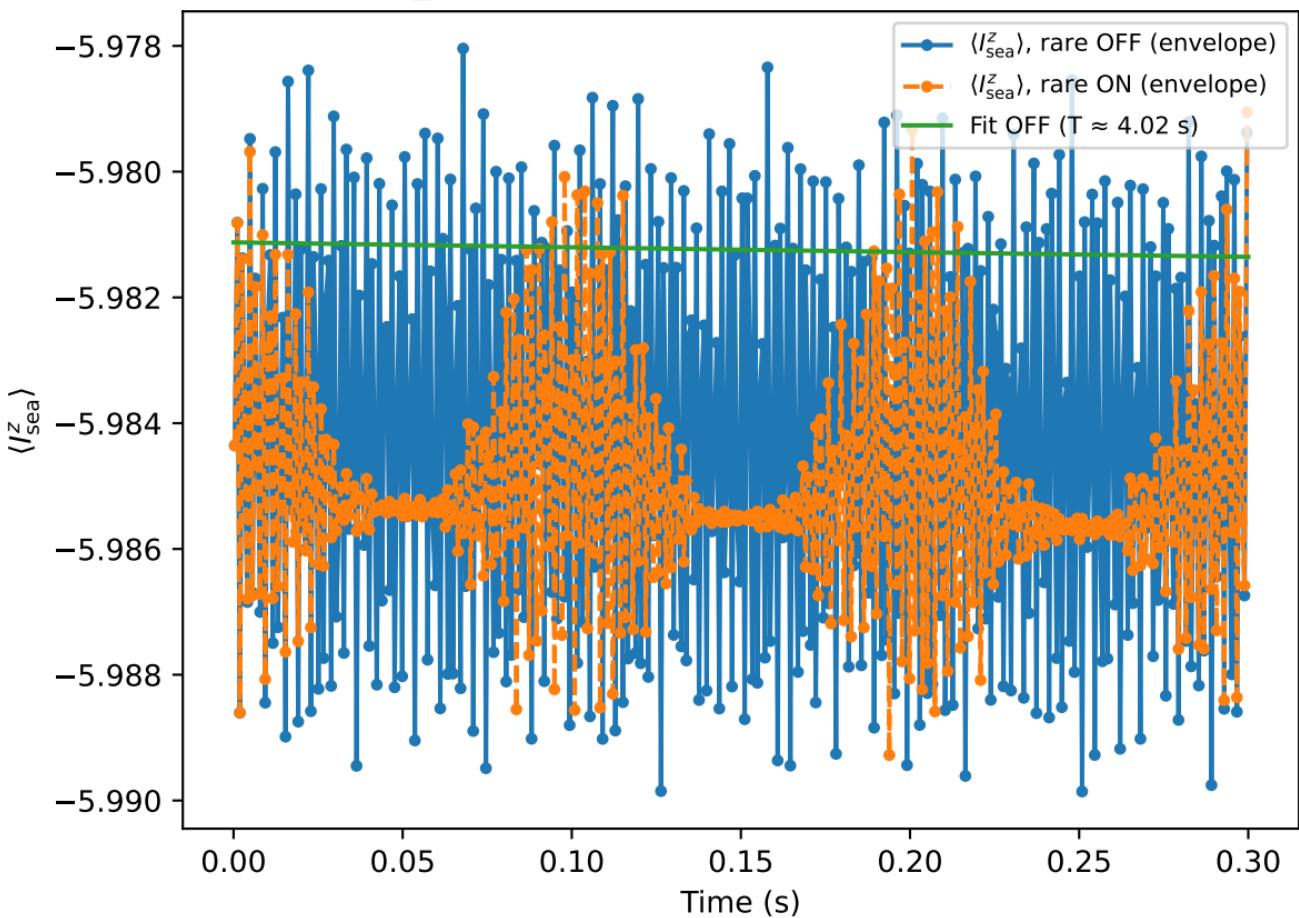
$\delta_A = +500.0$  Hz (rare drive OFF)



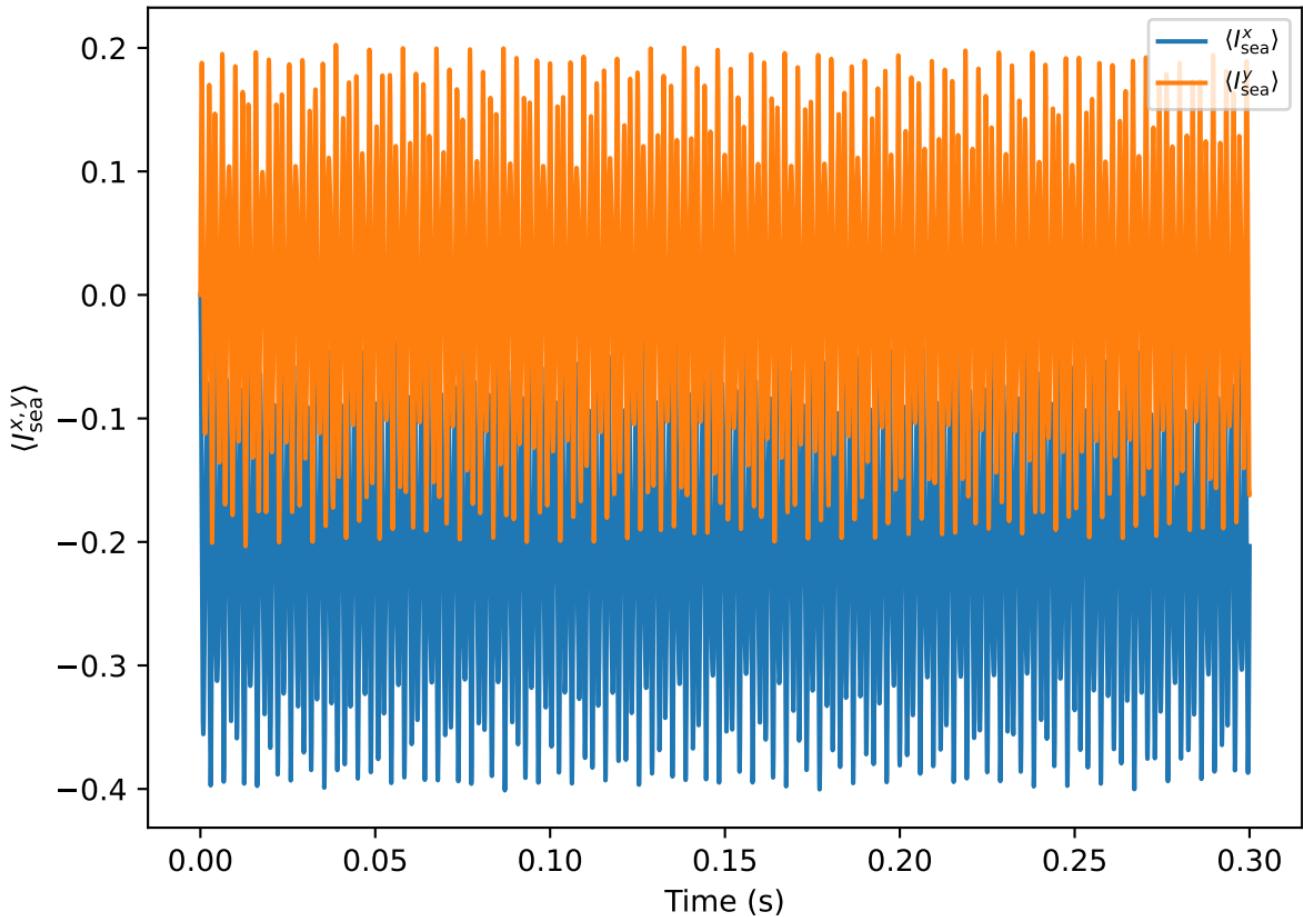
$$\delta_A = +625.0 \text{ Hz}$$



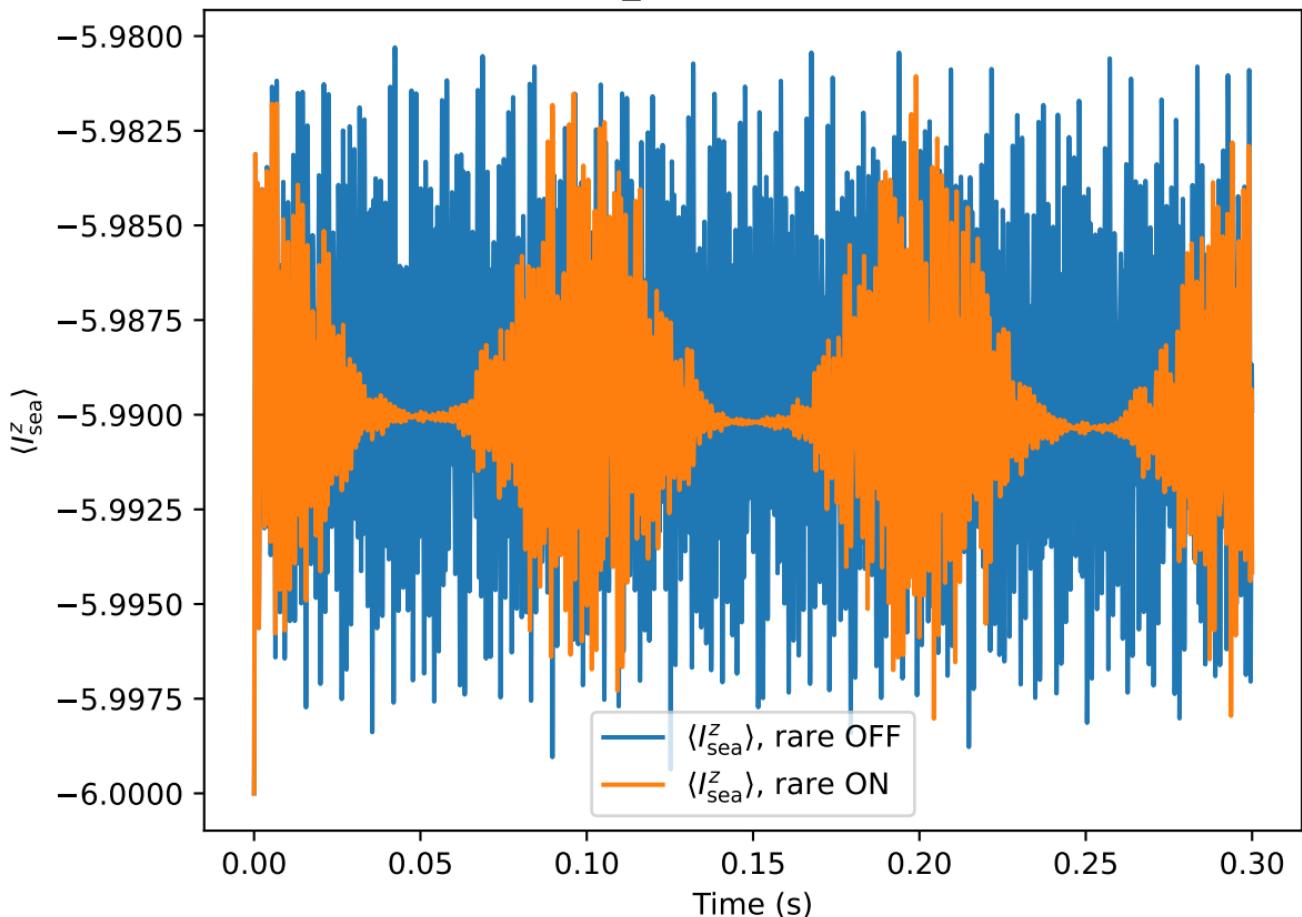
# $\delta_A = +625.0$ Hz (pseudo $T_1$ envelope)

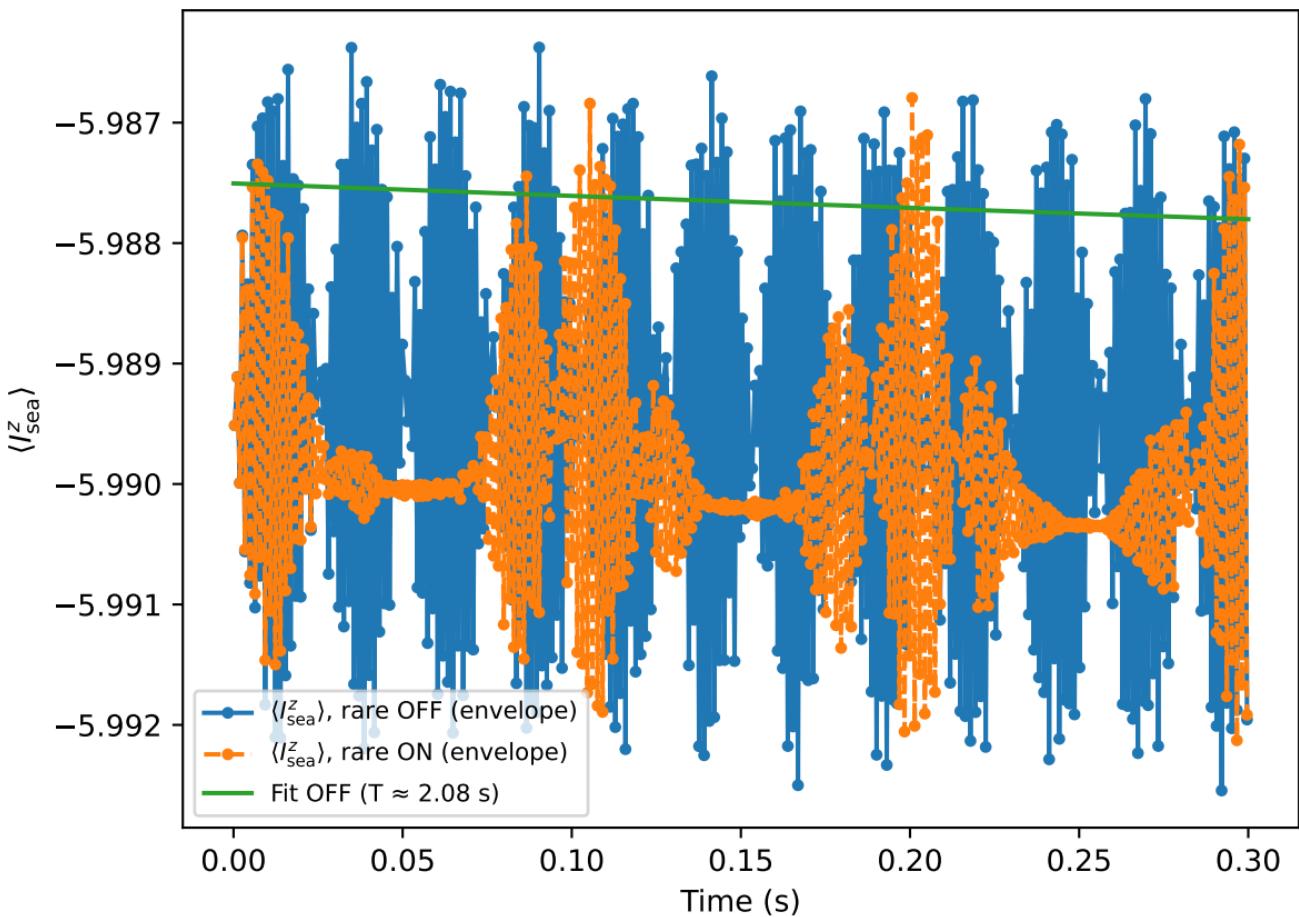


$\delta_A = +625.0$  Hz (rare drive OFF)

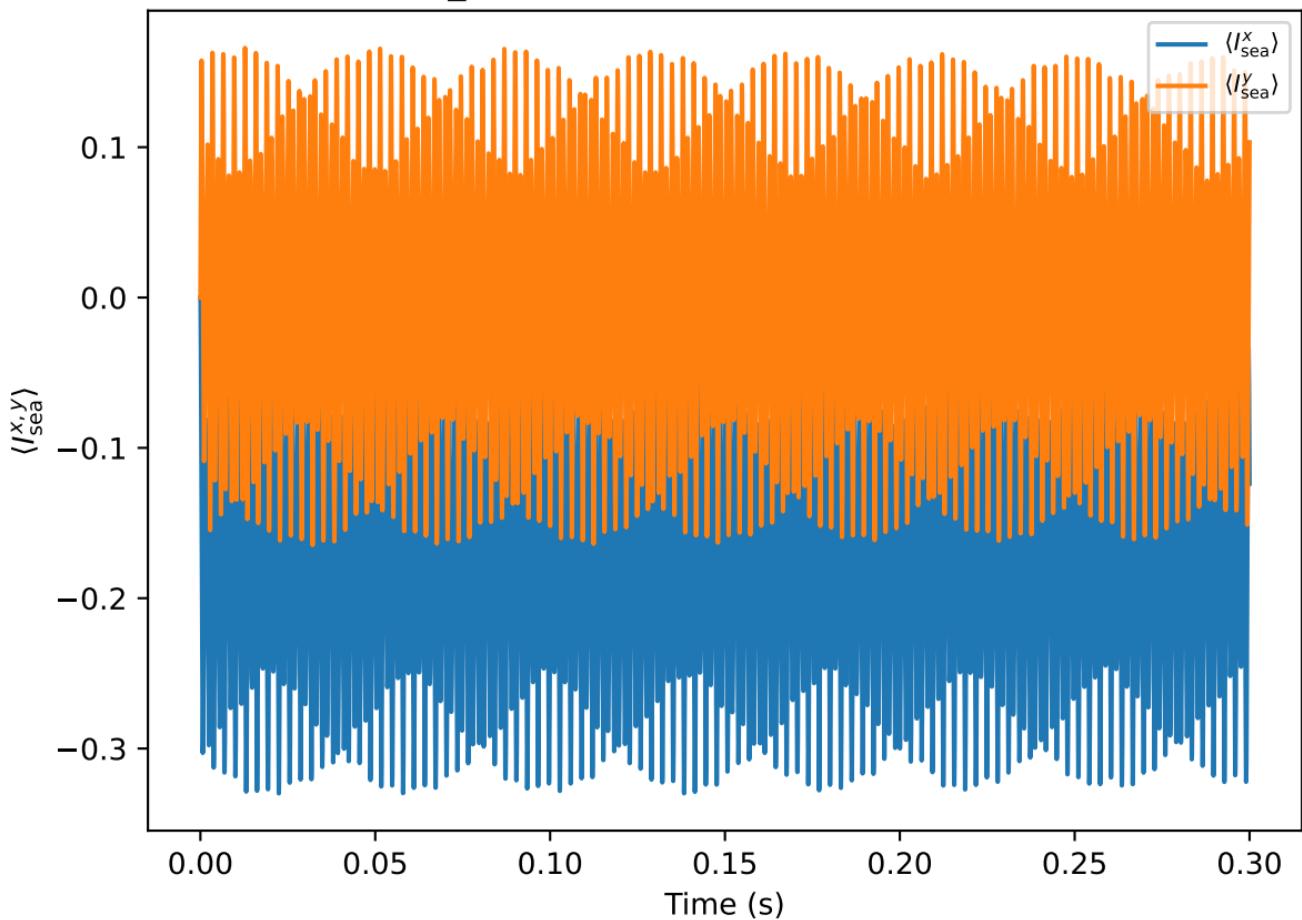


$$\delta_A = +750.0 \text{ Hz}$$

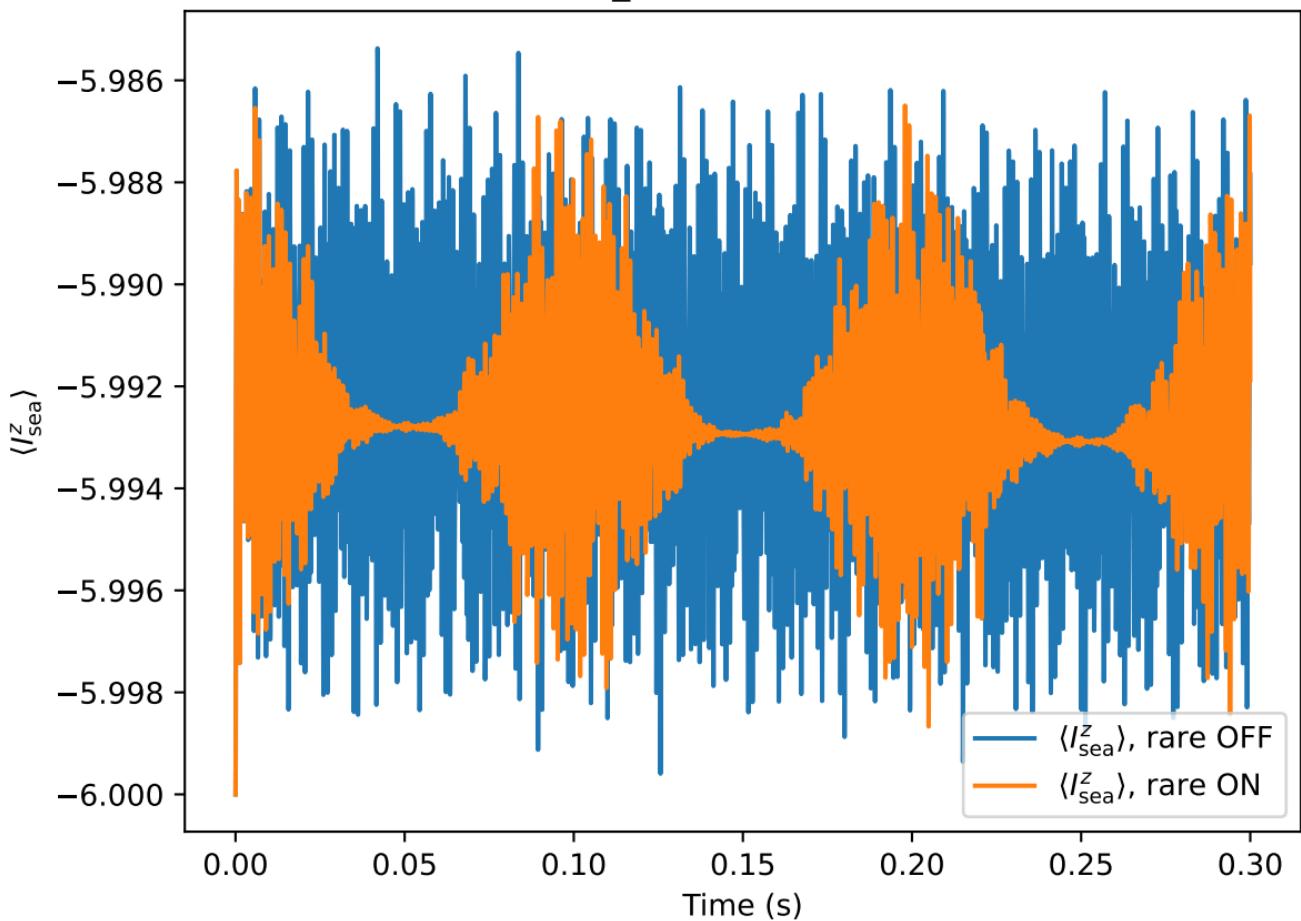


$\delta_A = +750.0 \text{ Hz}$  (pseudo  $T_1$  envelope)

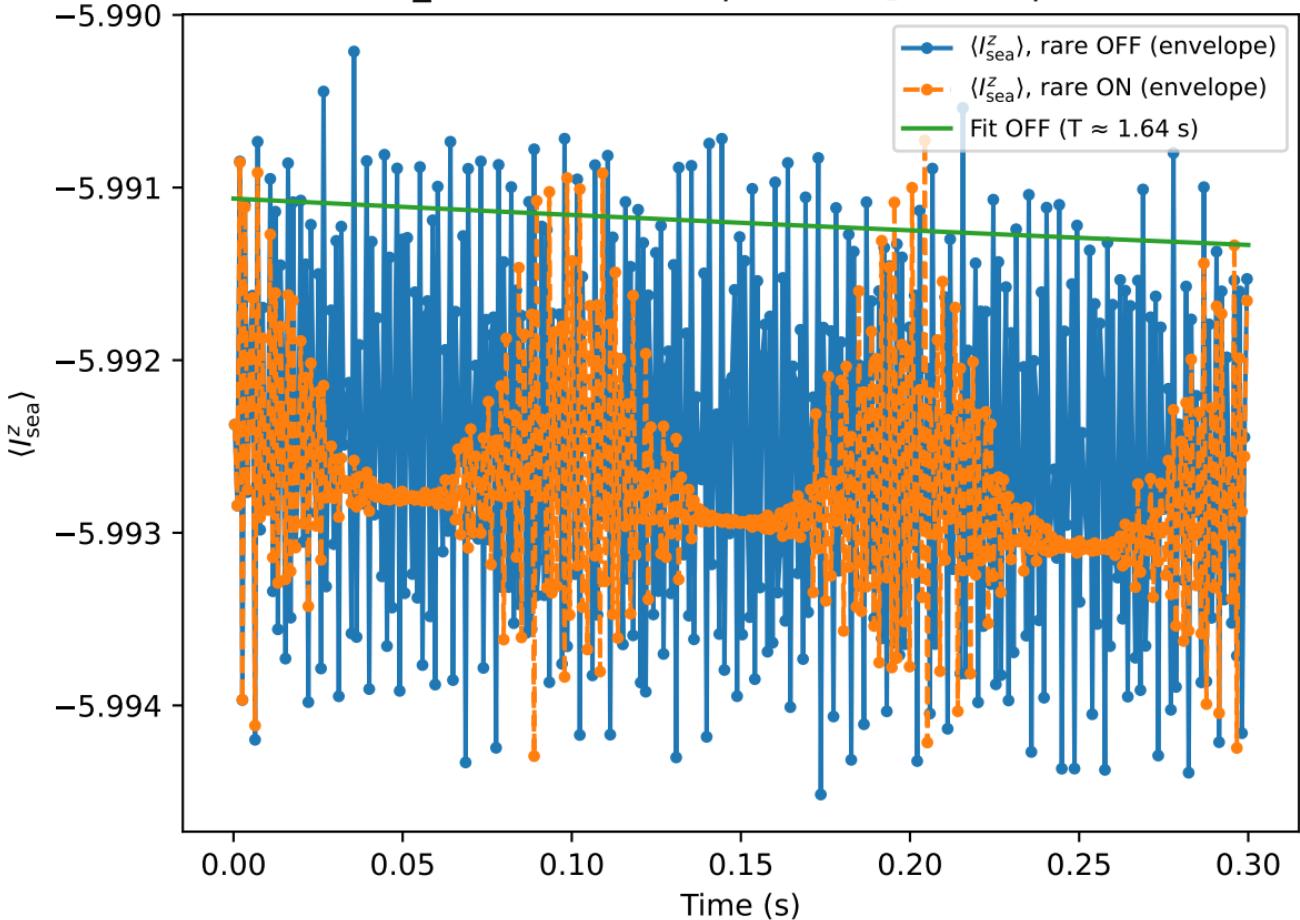
$\delta_A = +750.0$  Hz (rare drive OFF)



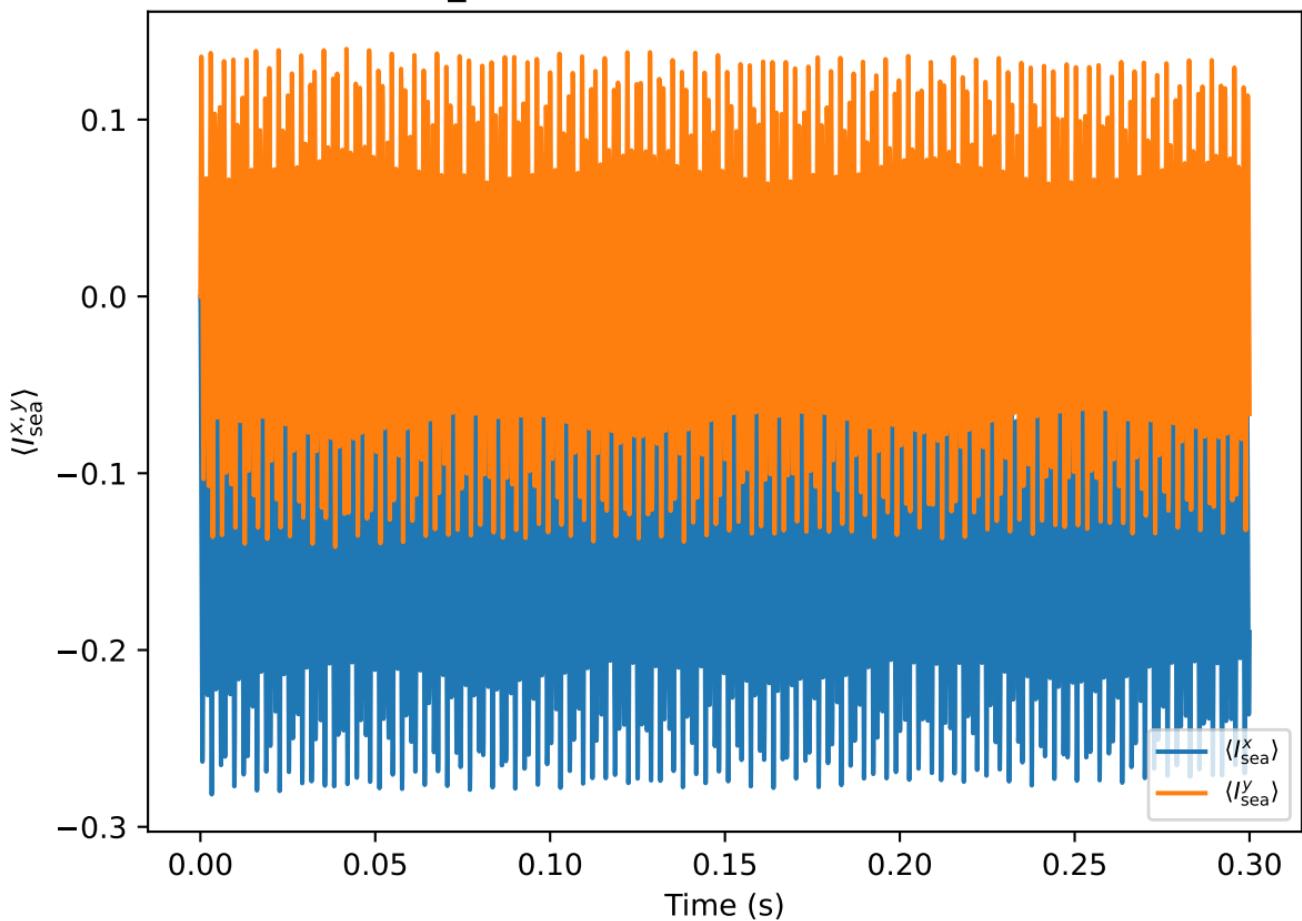
$$\delta_A = +875.0 \text{ Hz}$$



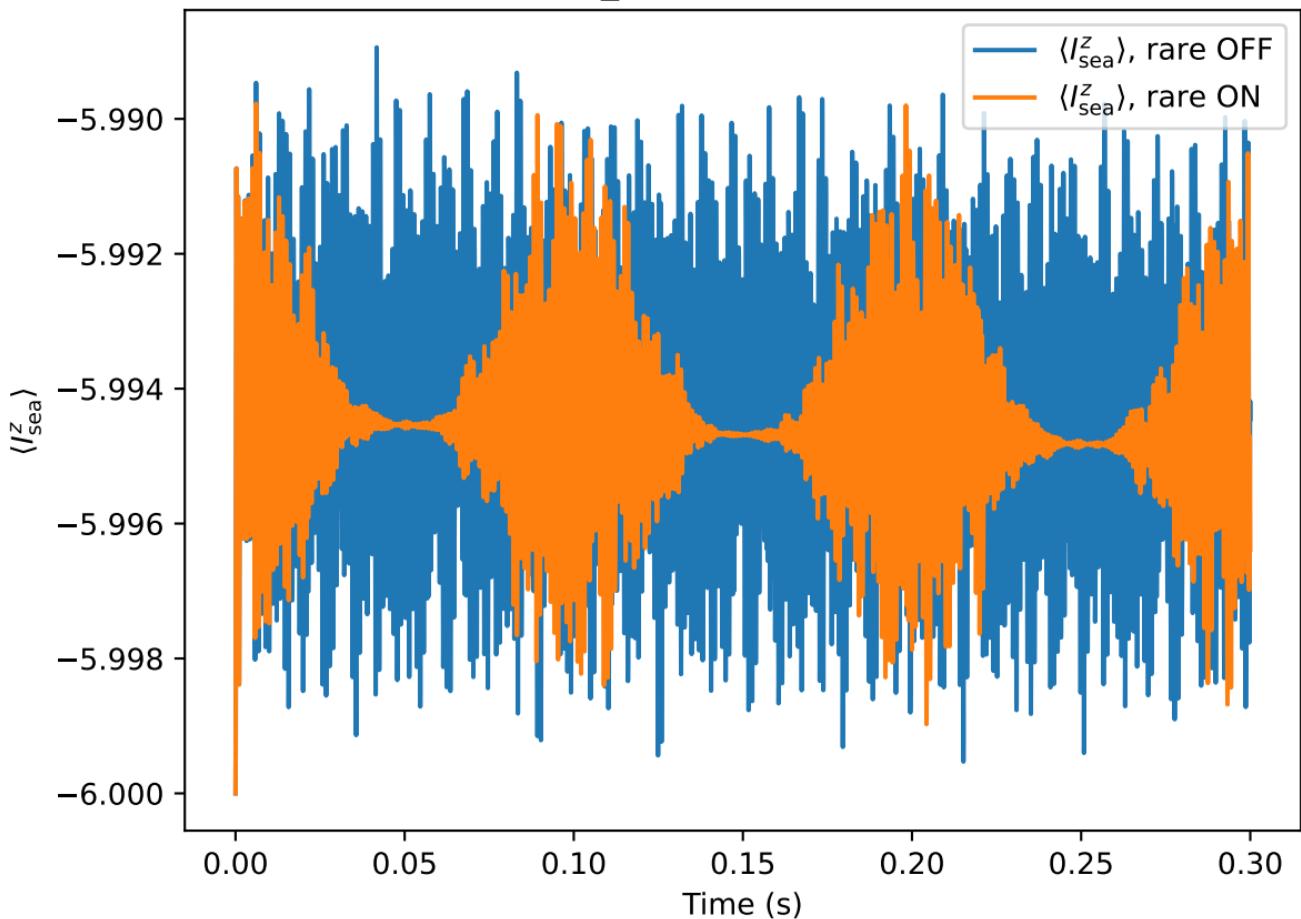
$\delta_A = +875.0$  Hz (pseudo  $T_1$  envelope)



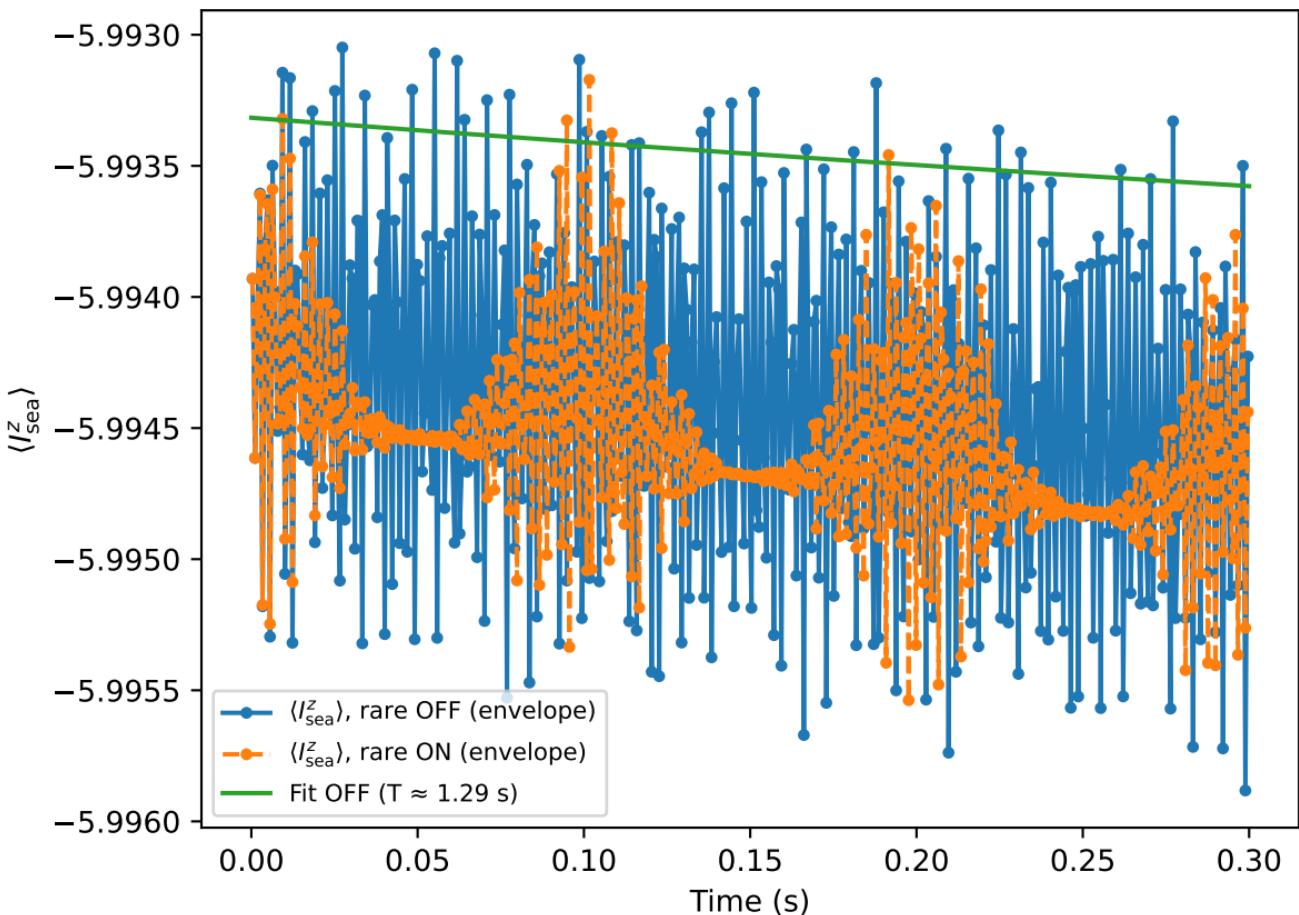
$\delta_A = +875.0$  Hz (rare drive OFF)



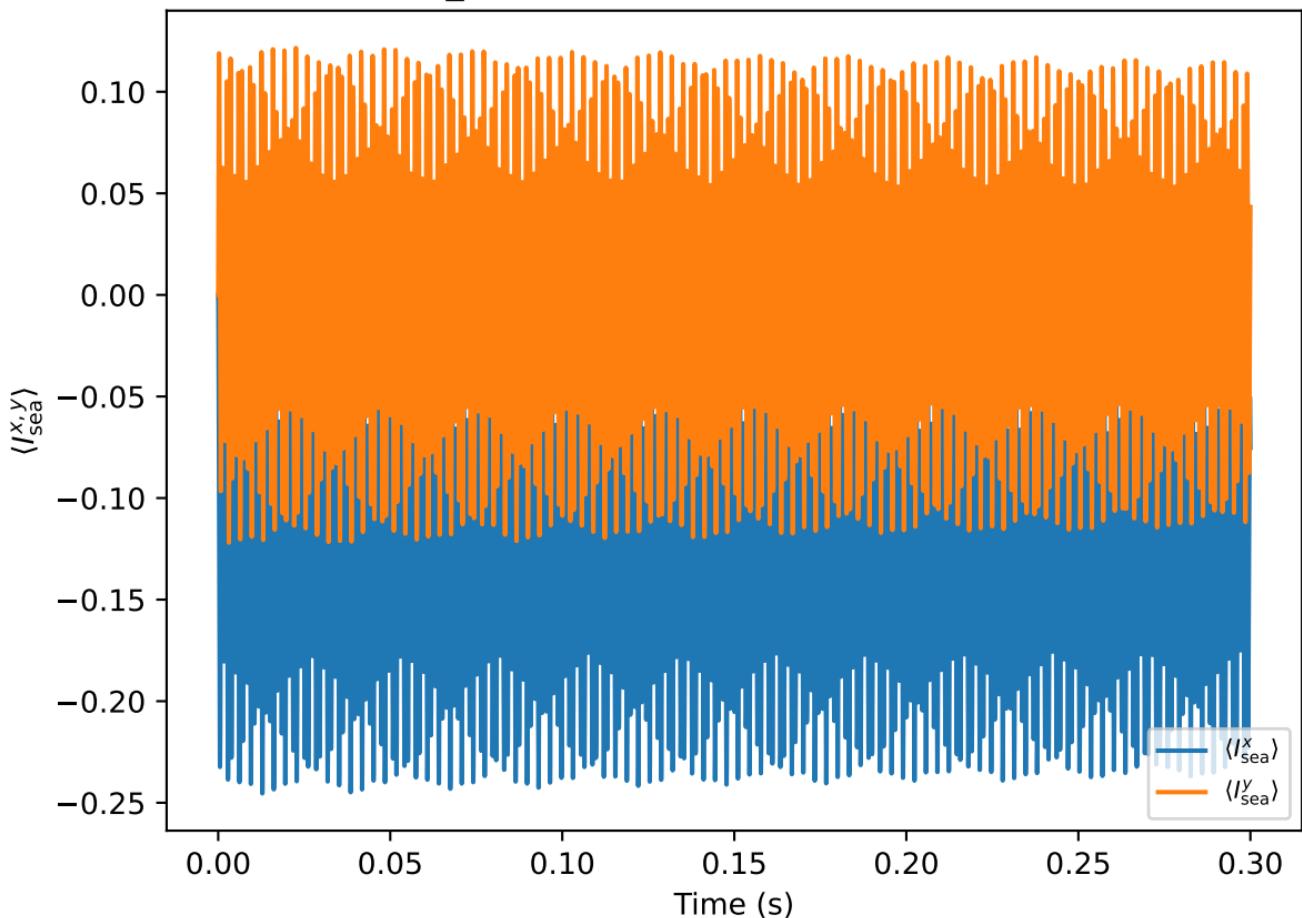
$\delta_A = +1000.0$  Hz



$\delta_A = +1000.0$  Hz (pseudo  $T_1$  envelope)



$\delta_A = +1000.0$  Hz (rare drive OFF)



T-like decay fits from  $\langle I^z_{\text{sea}} \rangle$  traces

delta_Hz	T_Iz_sea_off	T_Iz_sea_on
+0.0	NA	0.0744
+125.0	NA	1.42
+250.0	NA	NA
+375.0	18.5	4.4
+500.0	NA	NA
+625.0	4.02	NA
+750.0	2.08	NA
+875.0	1.64	NA
+1000.0	1.29	NA