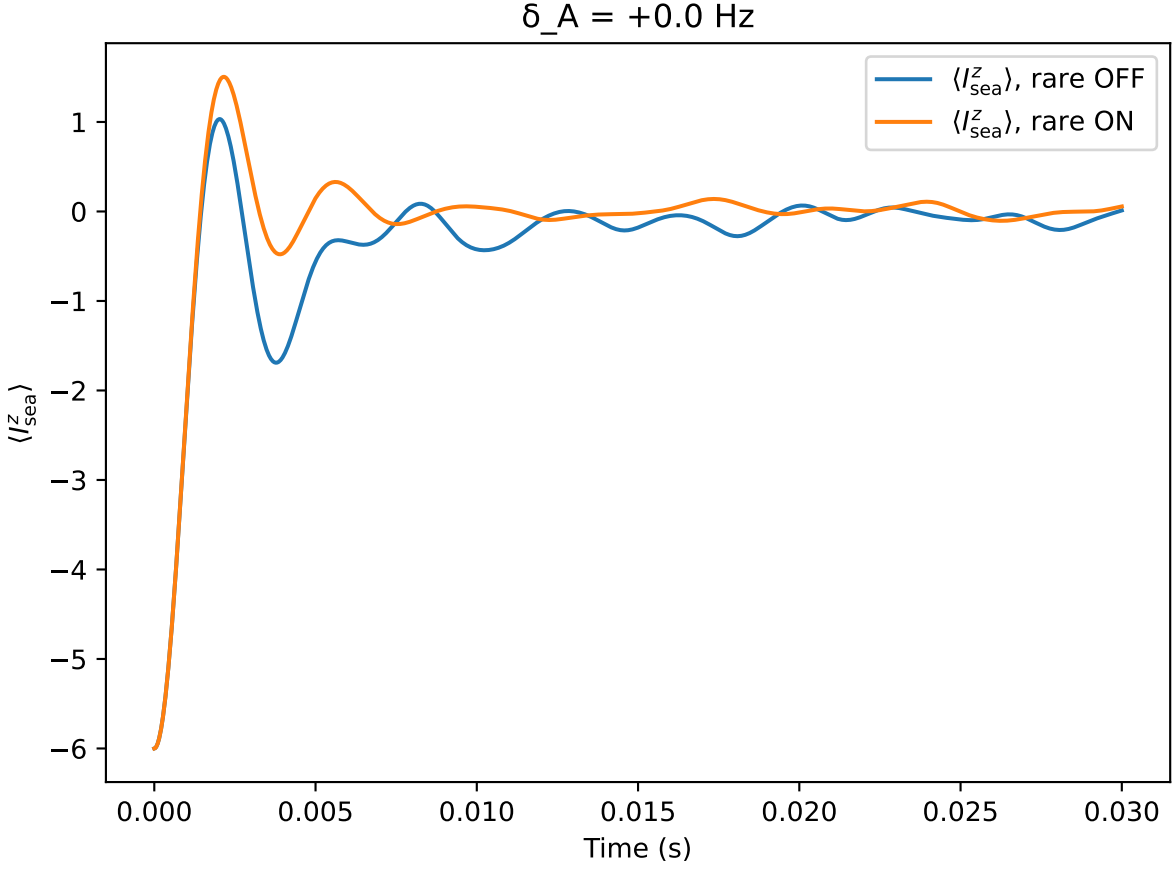
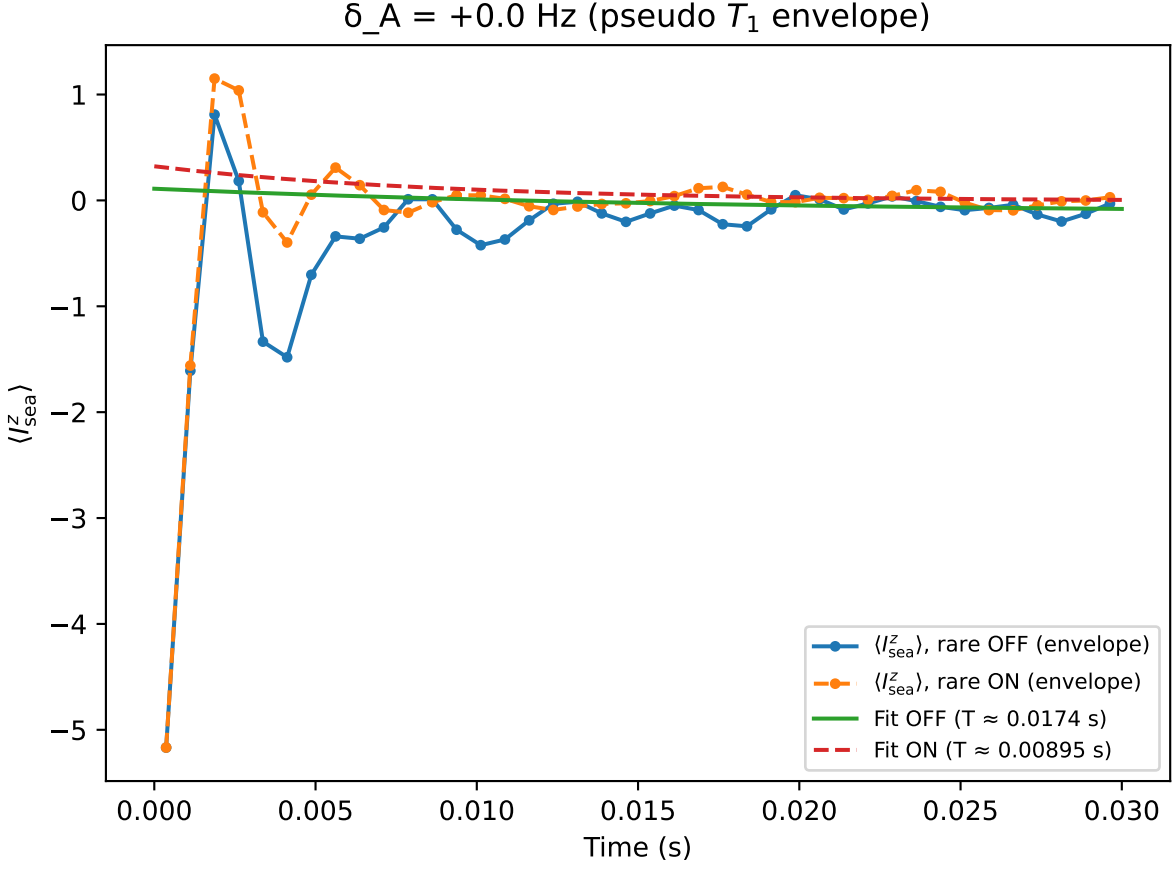
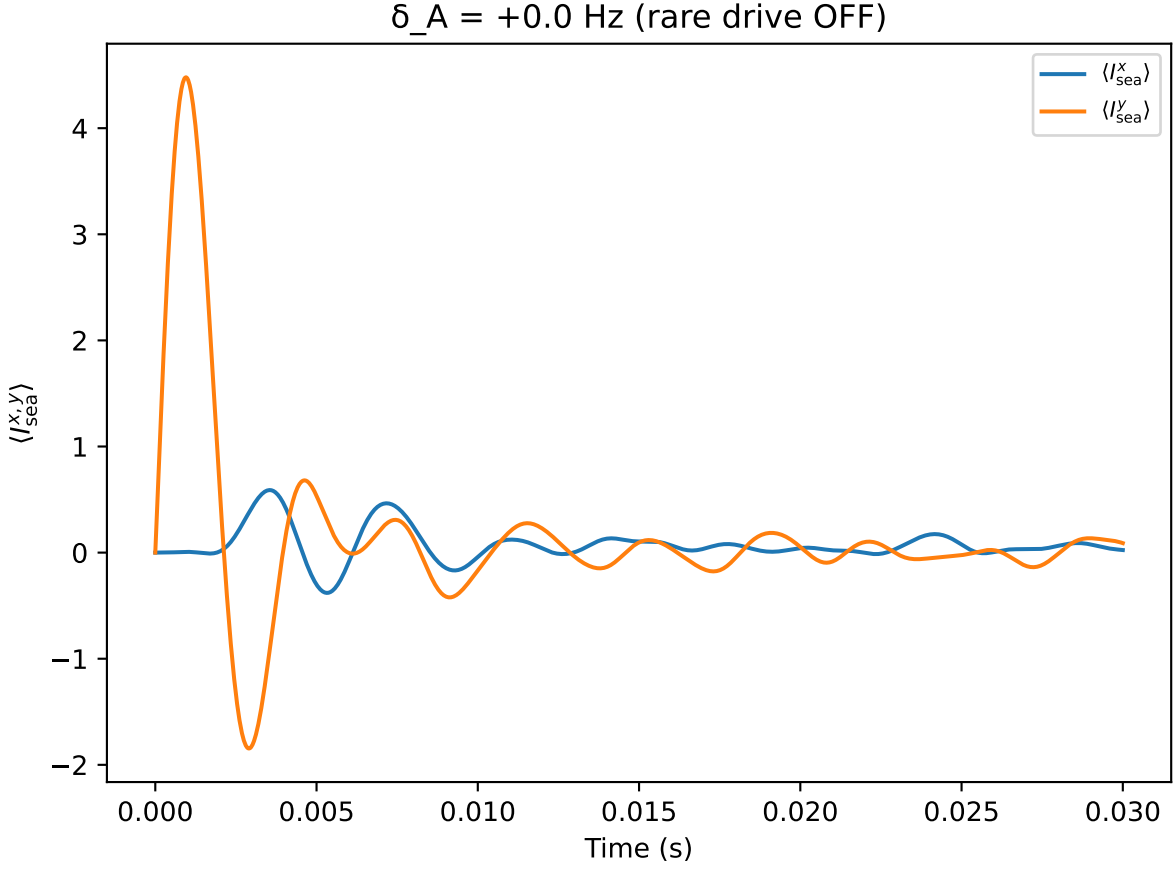
Sea detuning sweep report (Ga sea / Al rare)

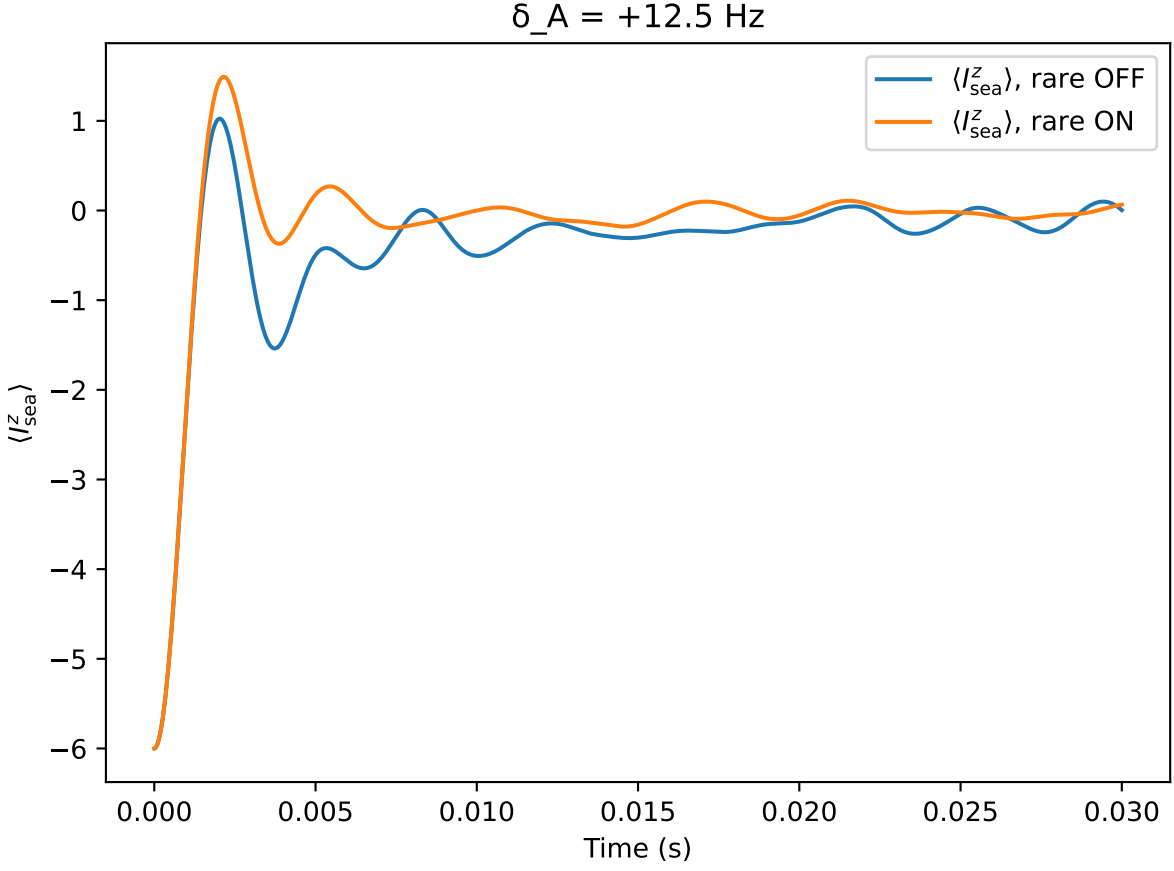
Global parameters (constant across sweep):
  f_Az (sea Larmor)   = 34.062 MHz
  f_Rz (rare Larmor)   = 33.308 MHz
  f1A (sea Rabi)   = 0.200 kHz
  f1R (rare Rabi)   = 0.100 kHz
  gamma_sea   = 7.134e+07 rad·s⁻¹·T⁻¹
  gamma_rare   = 6.976e+07 rad·s⁻¹·T⁻¹
  B0_common   = 3.000 T
  B1_sea   = 1.761e-05 T
  B1_rare   = 9.007e-06 T
  dipolar_scale_SI   = 1.055e-41
  shell_scale   = 0.300 nm
  t_final   = 3.000e-02 s
  steps   = 2000
  n_sea   = 12
  phi_sea   = 0.000 rad
  phi_rare   = 0.000 rad

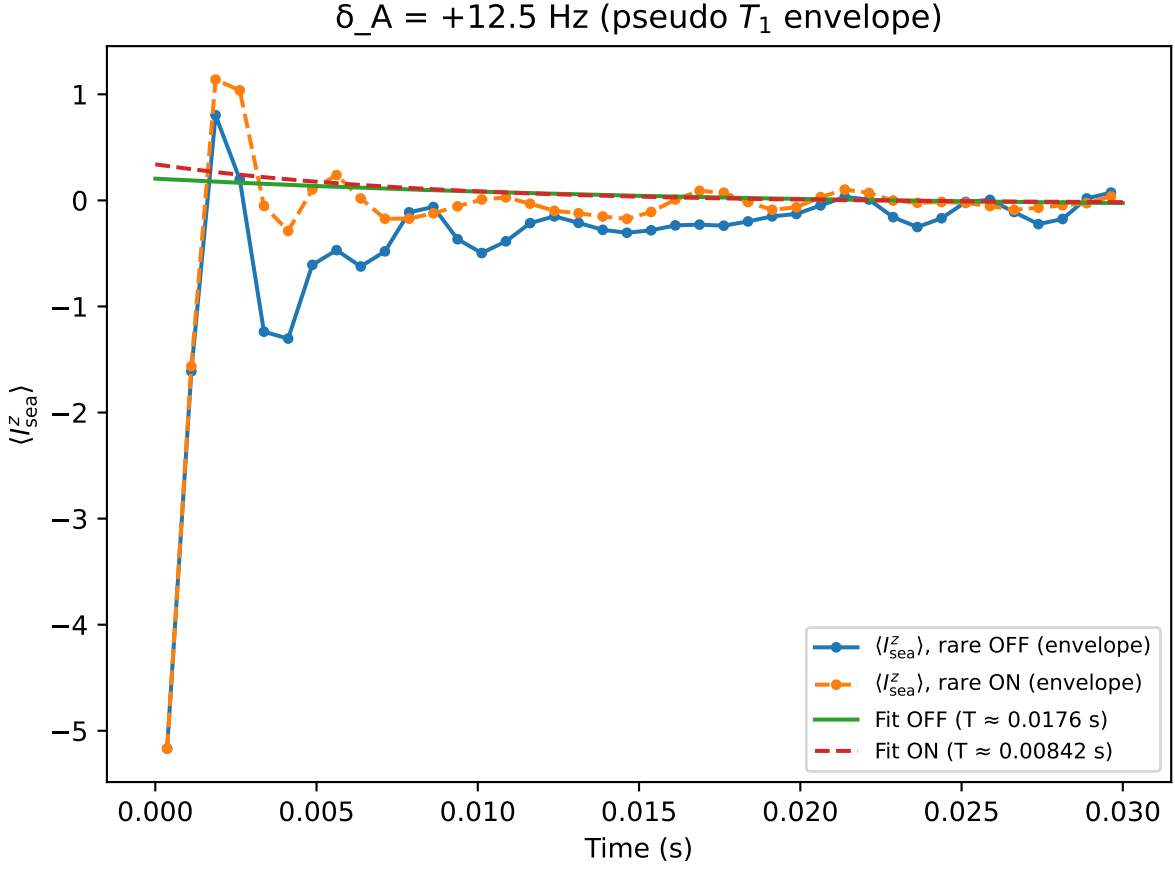
Sea detunings (δ_A = f_Az - f_rf,A) in Hz:
  +0.0, +12.5, +25.0, +37.5, +50.0, +62.5, +75.0, +87.5, +100.0

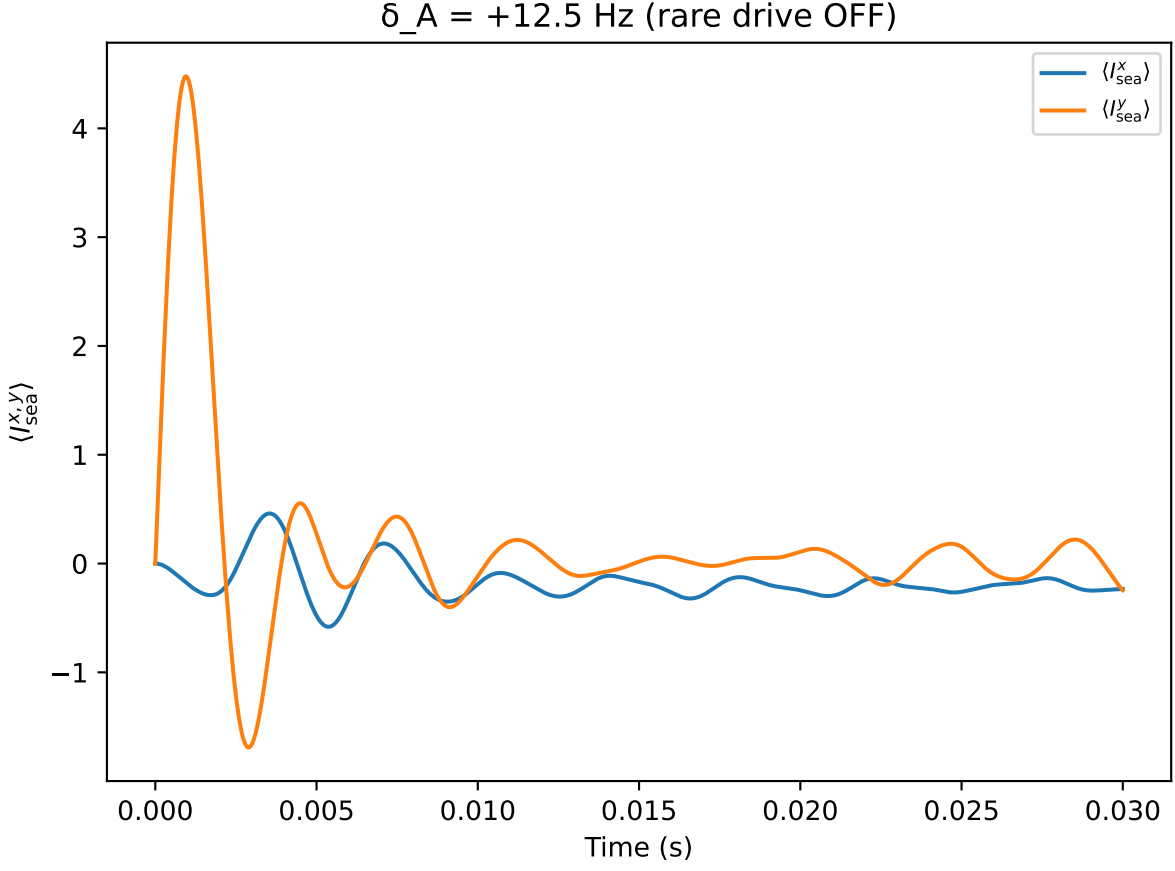

δ_A = +0.0 Hz
⟨I^z_{sea}⟩, rare OFF
⟨I^z_{sea}⟩, rare ON
⟨I^z_{sea}⟩
1
0
−1
−2
−3
−4
−5
−6
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)

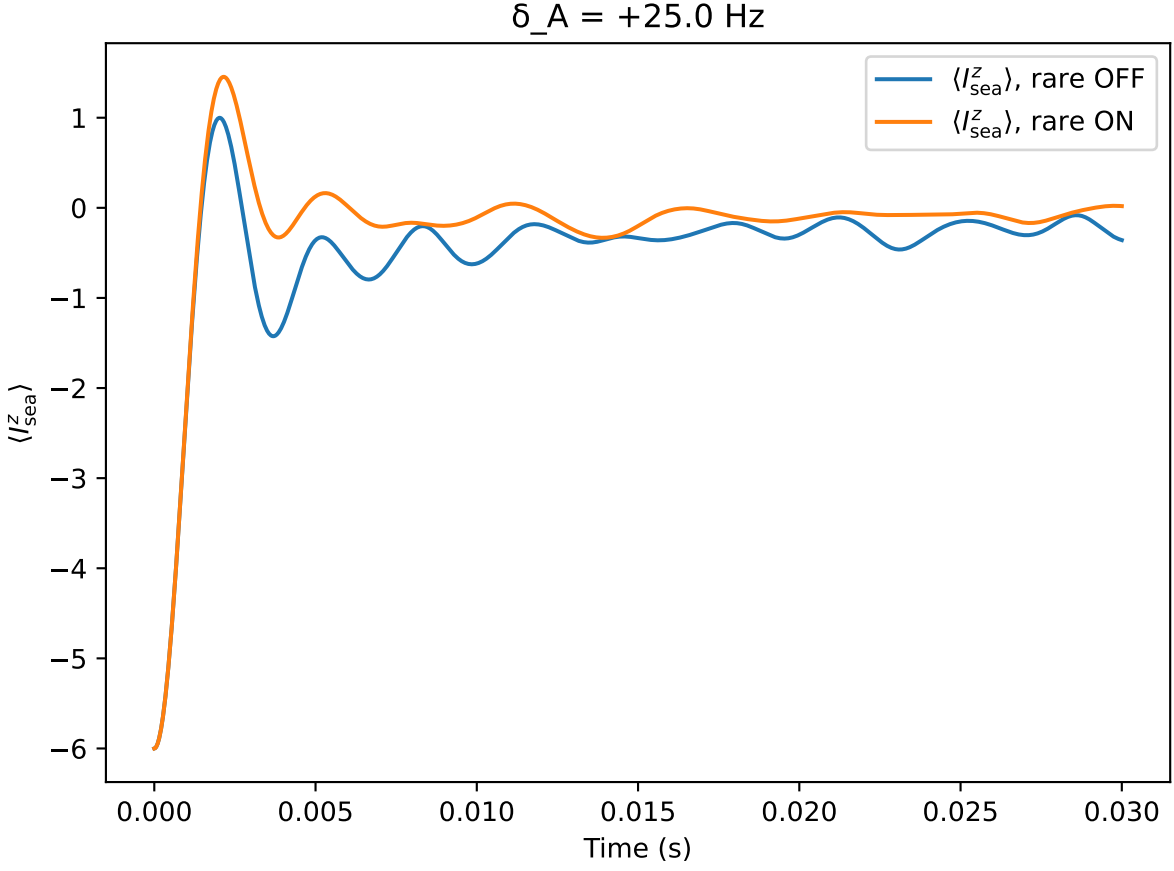

δ_A = +0.0 Hz (pseudo T_1 envelope)
$\langle I^z_{sea} \rangle$
Time (s)
1
0
−1
−2
−3
−4
−5
0.000
0.005
0.010
0.015
0.020
0.025
0.030
$\langle I^z_{sea} \rangle$, rare OFF (envelope)
$\langle I^z_{sea} \rangle$, rare ON (envelope)
Fit OFF (T ≈ 0.0174 s)
Fit ON (T ≈ 0.00895 s)

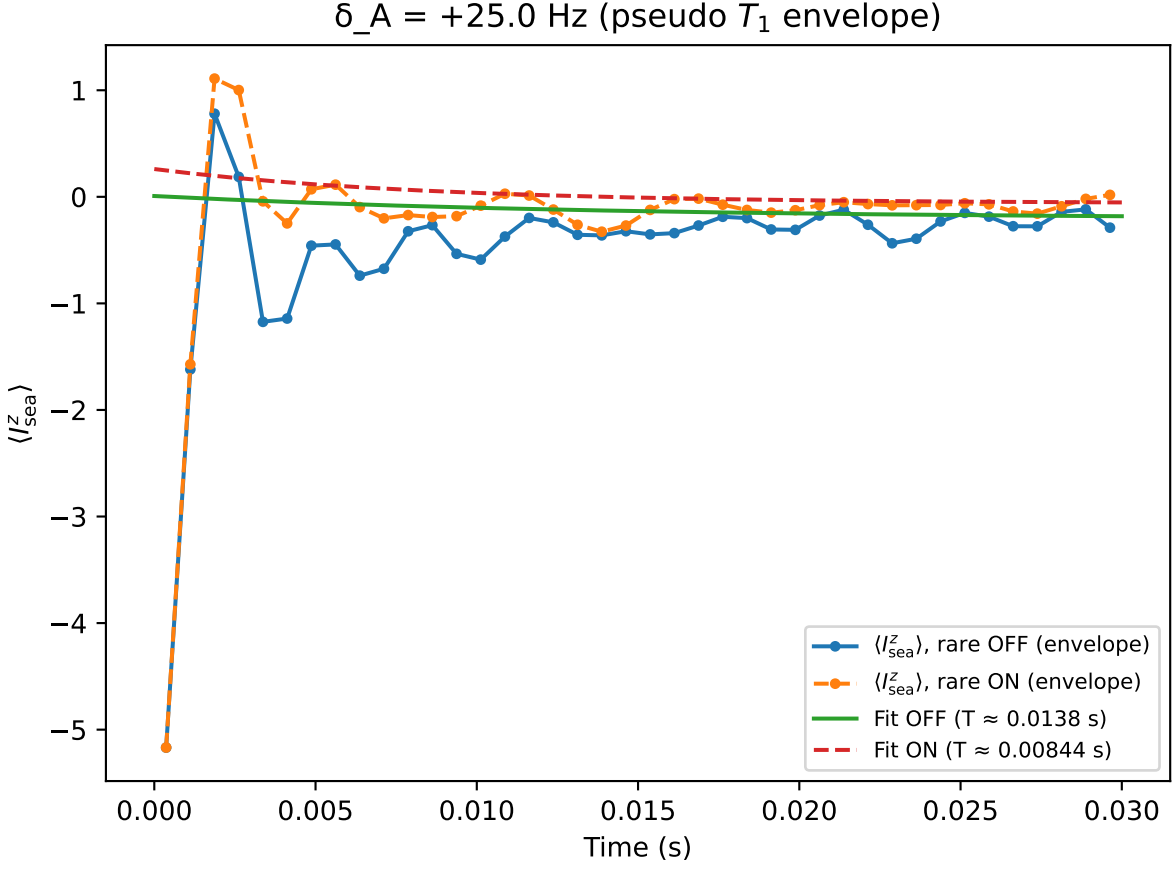

δ_A = +0.0 Hz (rare drive OFF)
$\langle I^x_{sea} \rangle$
$\langle I^y_{sea} \rangle$
$\langle I^{x,y}_{sea} \rangle$
4
3
2
1
0
−1
−2
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)

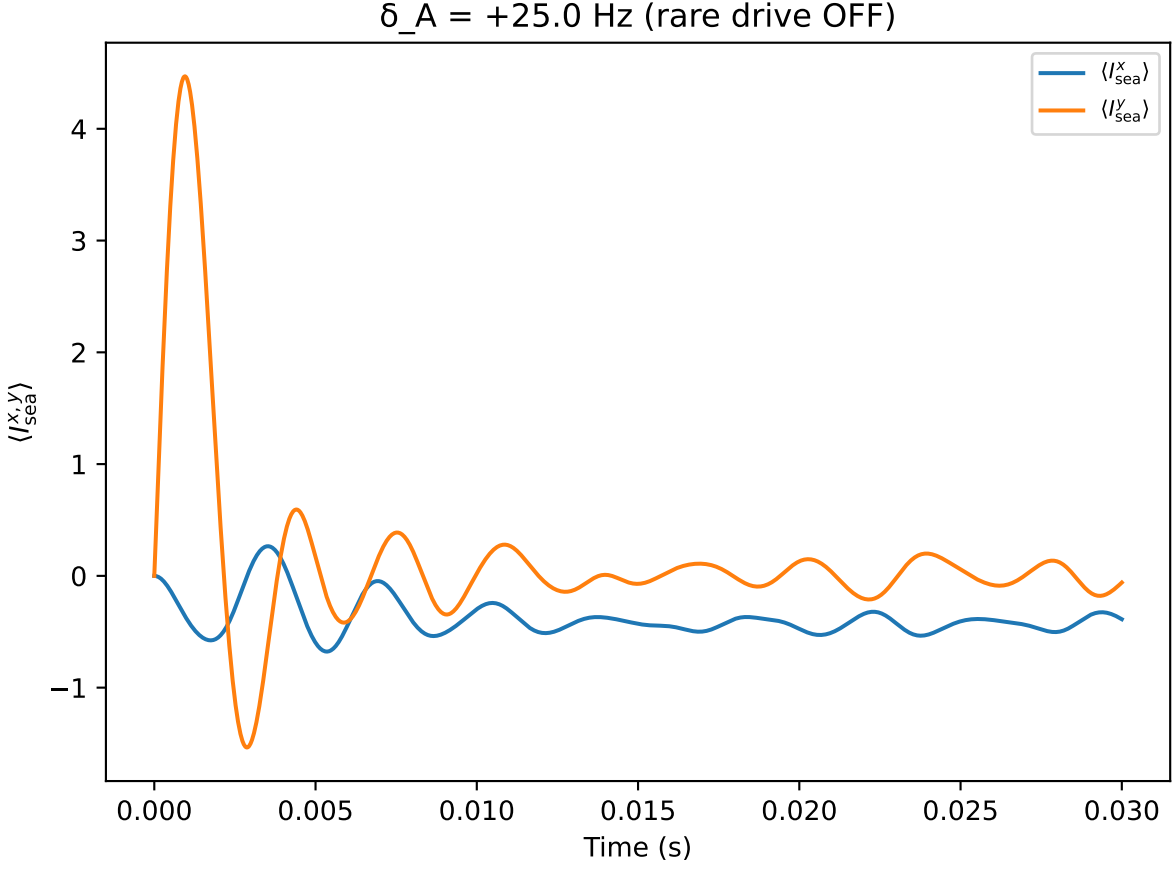

δ_A = +12.5 Hz
⟨I^z_sea⟩, rare OFF
⟨I^z_sea⟩, rare ON
⟨I^z_sea⟩
Time (s)
1
0
−1
−2
−3
−4
−5
−6
0.000
0.005
0.010
0.015
0.020
0.025
0.030

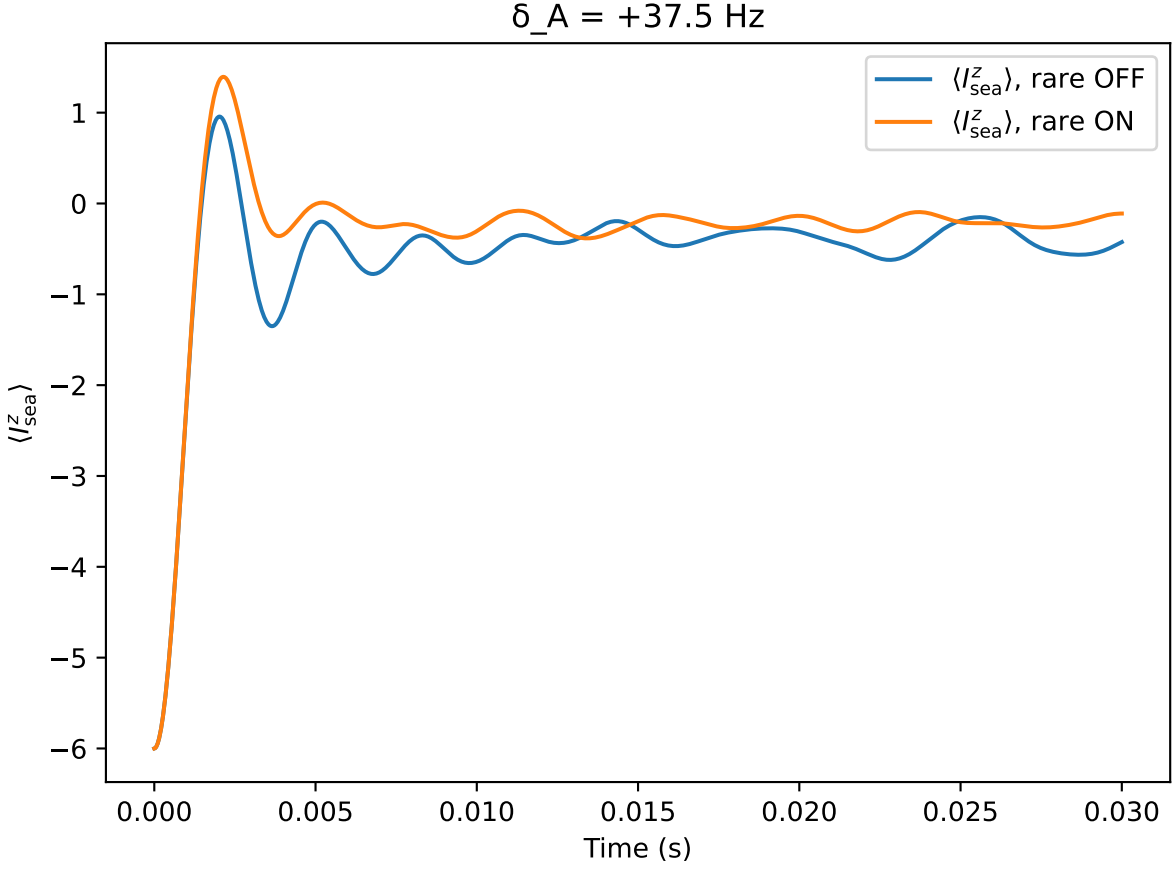

δ_A = +12.5 Hz (pseudo T_1 envelope)
$\langle I^z_{sea} \rangle$
Time (s)
1
0
−1
−2
−3
−4
−5
0.000
0.005
0.010
0.015
0.020
0.025
0.030
$\langle I^z_{sea} \rangle$, rare OFF (envelope)
$\langle I^z_{sea} \rangle$, rare ON (envelope)
Fit OFF (T ≈ 0.0176 s)
Fit ON (T ≈ 0.00842 s)

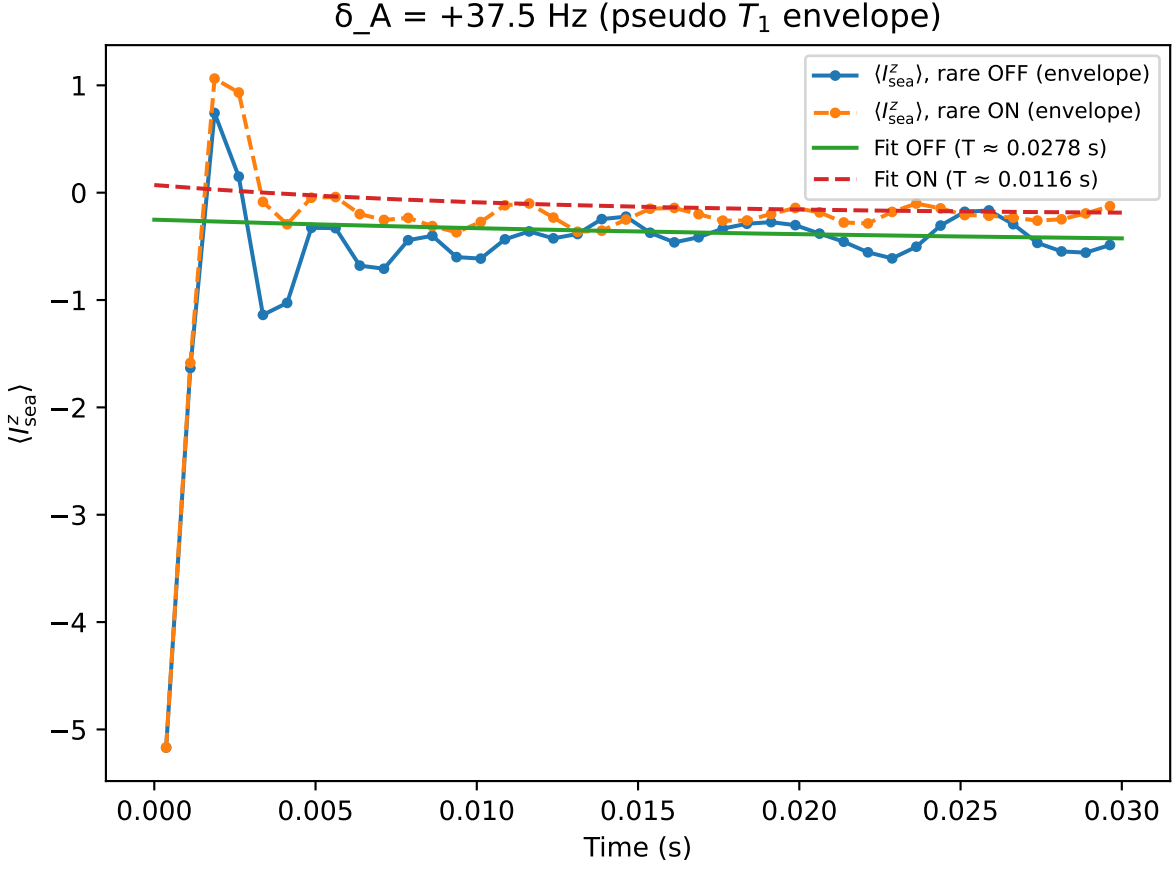

δ_A = +12.5 Hz (rare drive OFF)
$\langle I^x_{sea} \rangle$
$\langle I^y_{sea} \rangle$
$\langle I^{x,y}_{sea} \rangle$
4
3
2
1
0
−1
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)

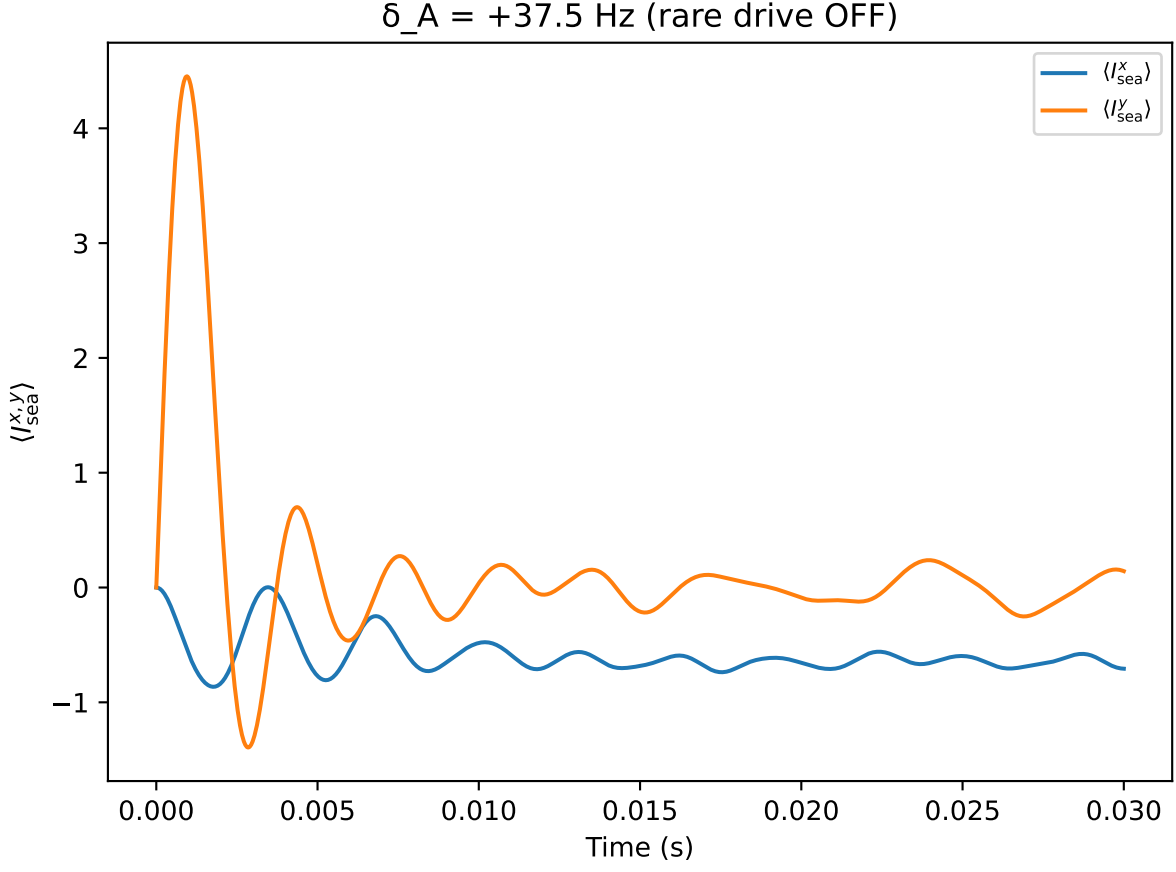

δ_A = +25.0 Hz
⟨I^z_{sea}⟩, rare OFF
⟨I^z_{sea}⟩, rare ON
⟨I^z_{sea}⟩
1
0
−1
−2
−3
−4
−5
−6
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)

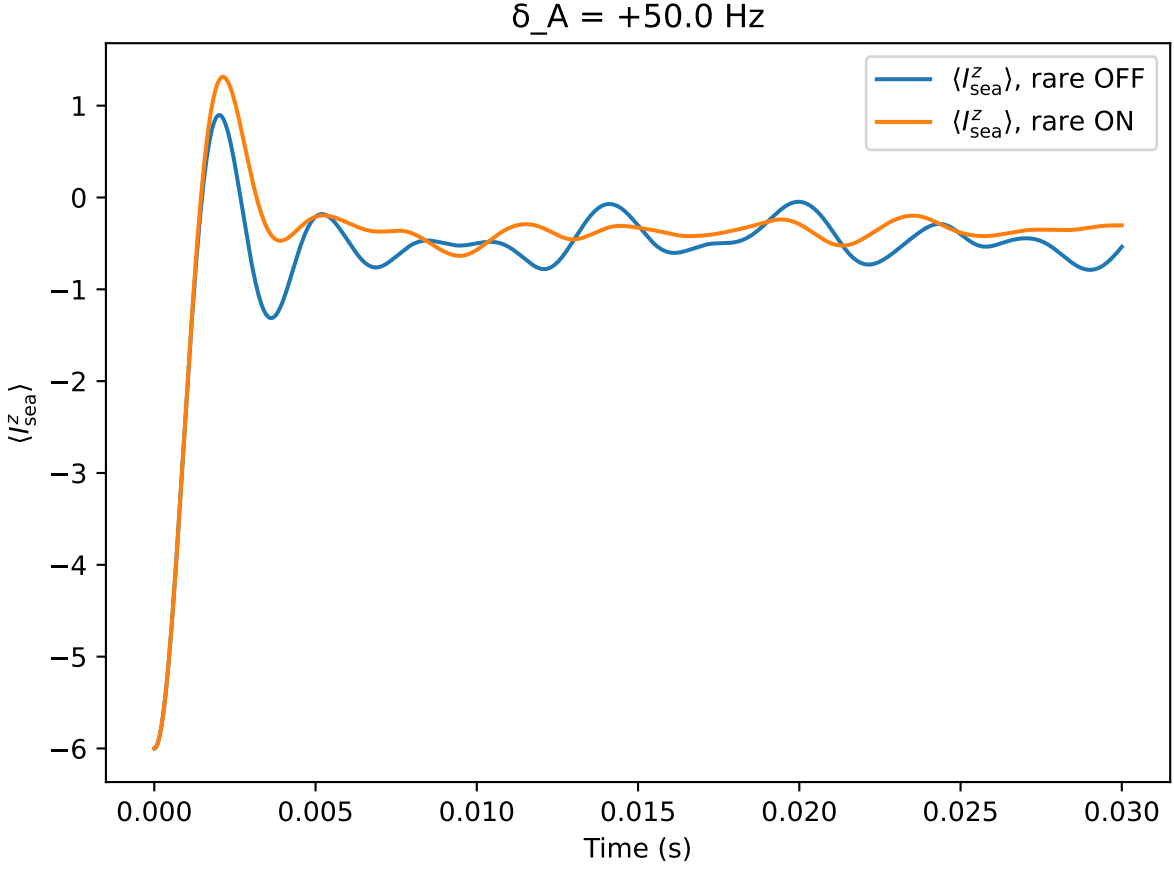

δ_A = +25.0 Hz (pseudo T_1 envelope)
$\langle I^z_{sea} \rangle$
Time (s)
1
0
−1
−2
−3
−4
−5
0.000
0.005
0.010
0.015
0.020
0.025
0.030
$\langle I^z_{sea} \rangle$, rare OFF (envelope)
$\langle I^z_{sea} \rangle$, rare ON (envelope)
Fit OFF (T ≈ 0.0138 s)
Fit ON (T ≈ 0.00844 s)

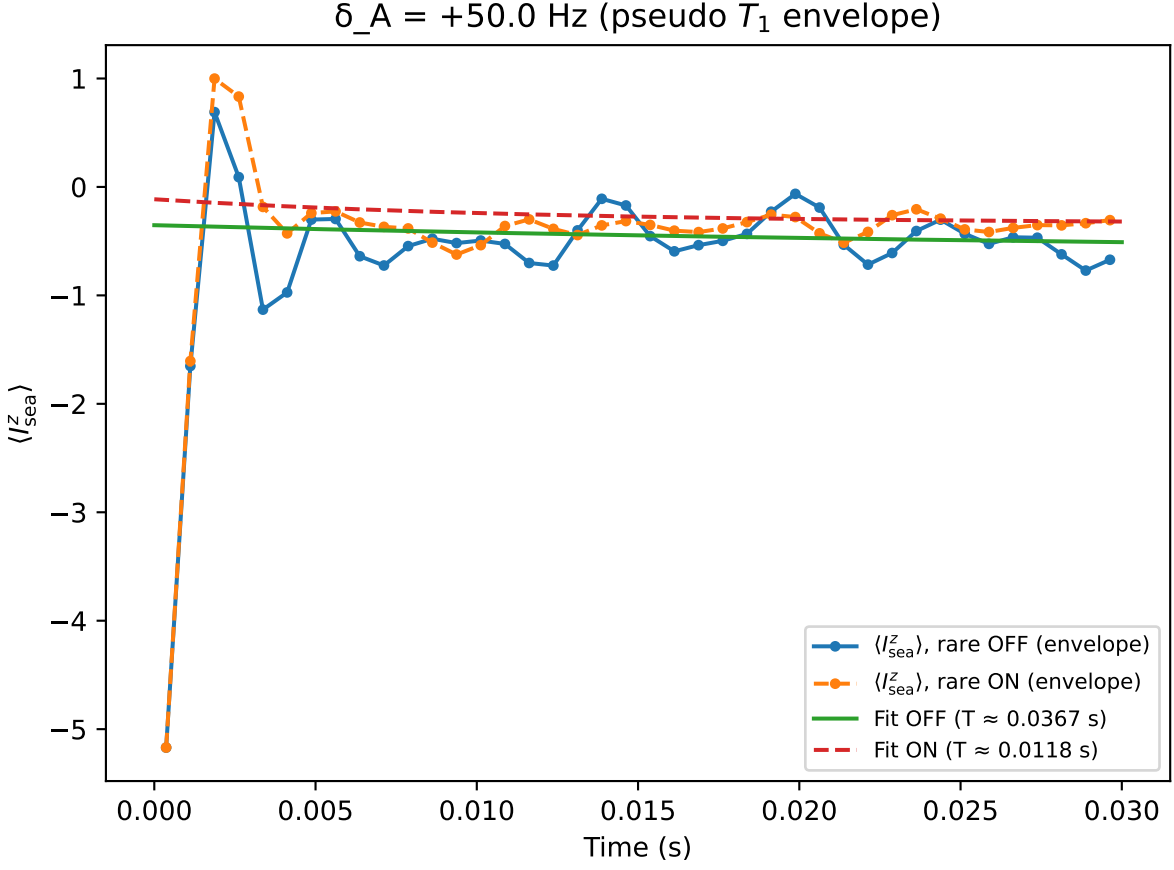

δ_A = +25.0 Hz (rare drive OFF)
$\langle I^x_{sea} \rangle$
$\langle I^y_{sea} \rangle$
$\langle I^{x,y}_{sea} \rangle$
4
3
2
1
0
−1
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)

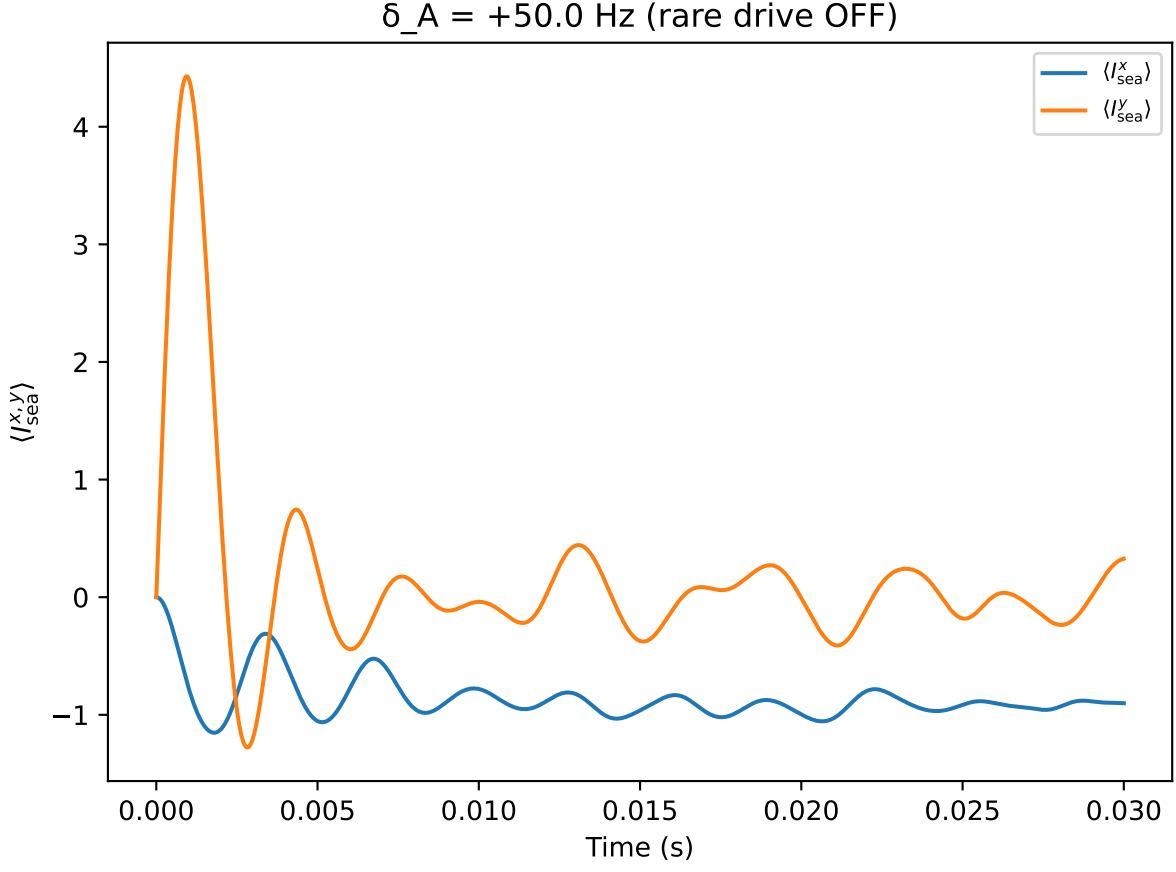

δ_A = +37.5 Hz
⟨I^z_{sea}⟩, rare OFF
⟨I^z_{sea}⟩, rare ON
⟨I^z_{sea}⟩
1
0
−1
−2
−3
−4
−5
−6
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)

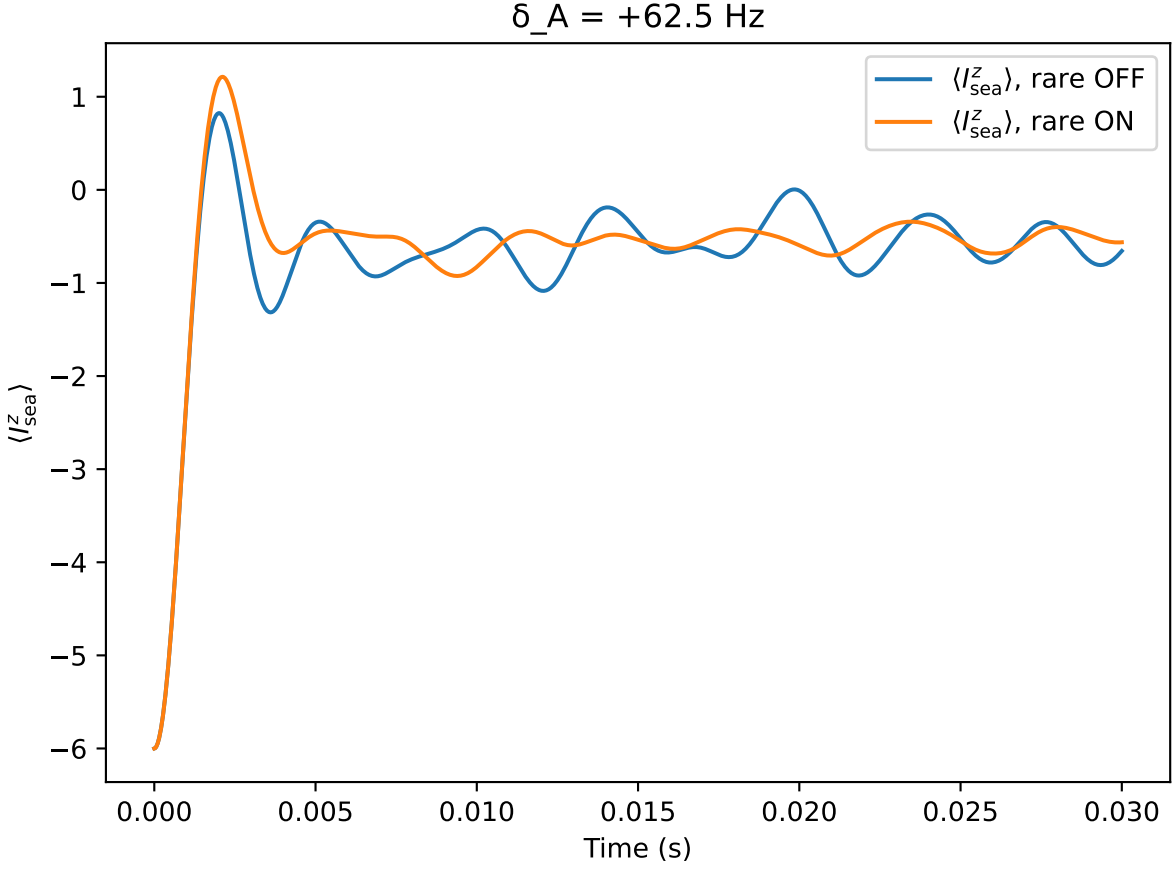

δ_A = +37.5 Hz (pseudo T_1 envelope)
$\langle I^z_{sea} \rangle$, rare OFF (envelope)
$\langle I^z_{sea} \rangle$, rare ON (envelope)
Fit OFF (T ≈ 0.0278 s)
Fit ON (T ≈ 0.0116 s)
$\langle I^z_{sea} \rangle$
Time (s)
1
0
−1
−2
−3
−4
−5
0.000
0.005
0.010
0.015
0.020
0.025
0.030

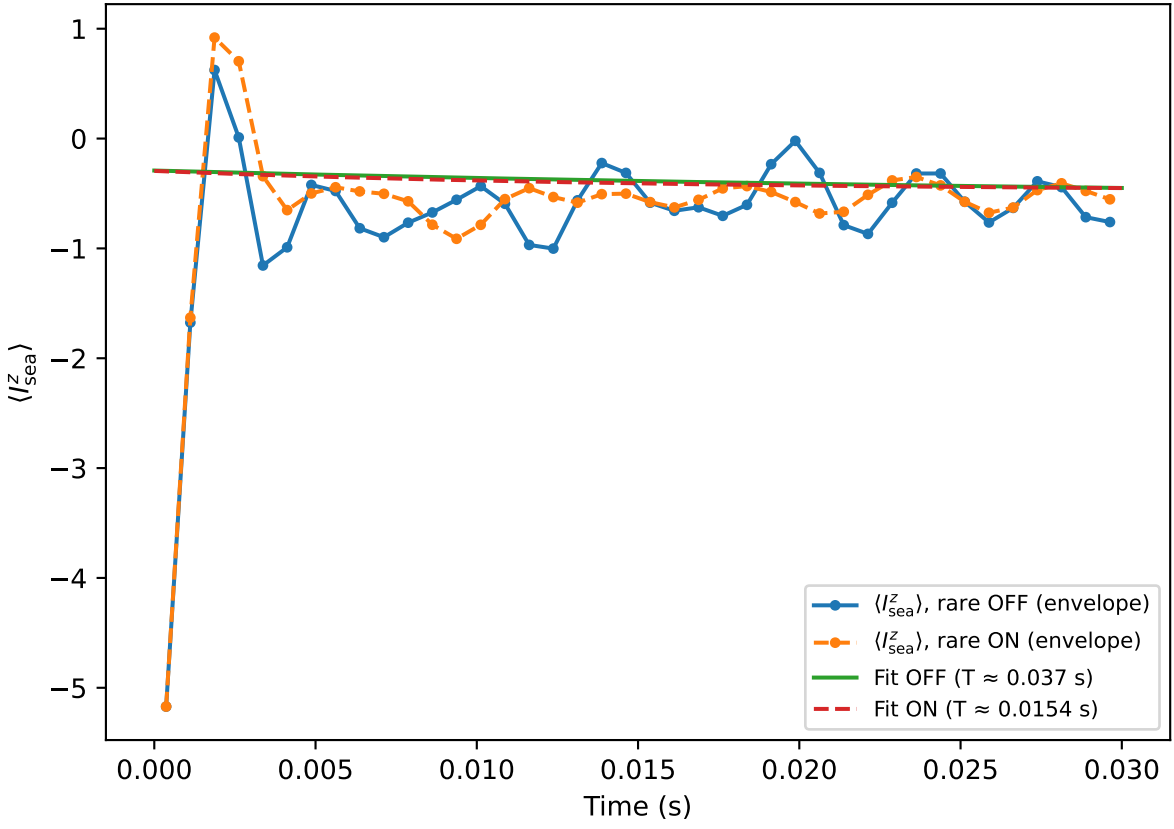

δ_A = +37.5 Hz (rare drive OFF)
$\langle I^{x}_{sea} \rangle$
$\langle I^{y}_{sea} \rangle$
$\langle I^{x,y}_{sea} \rangle$
4
3
2
1
0
−1
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)

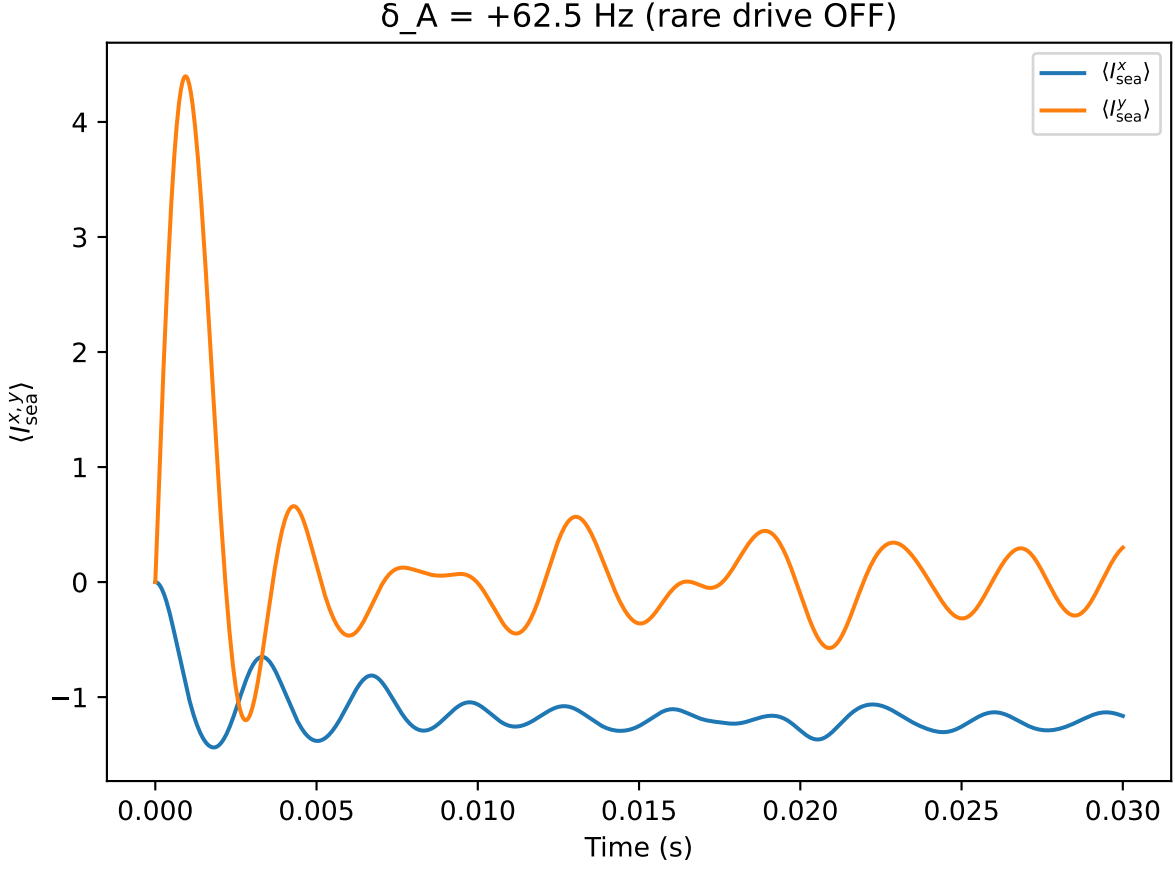

δ_A = +50.0 Hz
⟨I^z_{sea}⟩, rare OFF
⟨I^z_{sea}⟩, rare ON
⟨I^z_{sea}⟩
1
0
−1
−2
−3
−4
−5
−6
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)

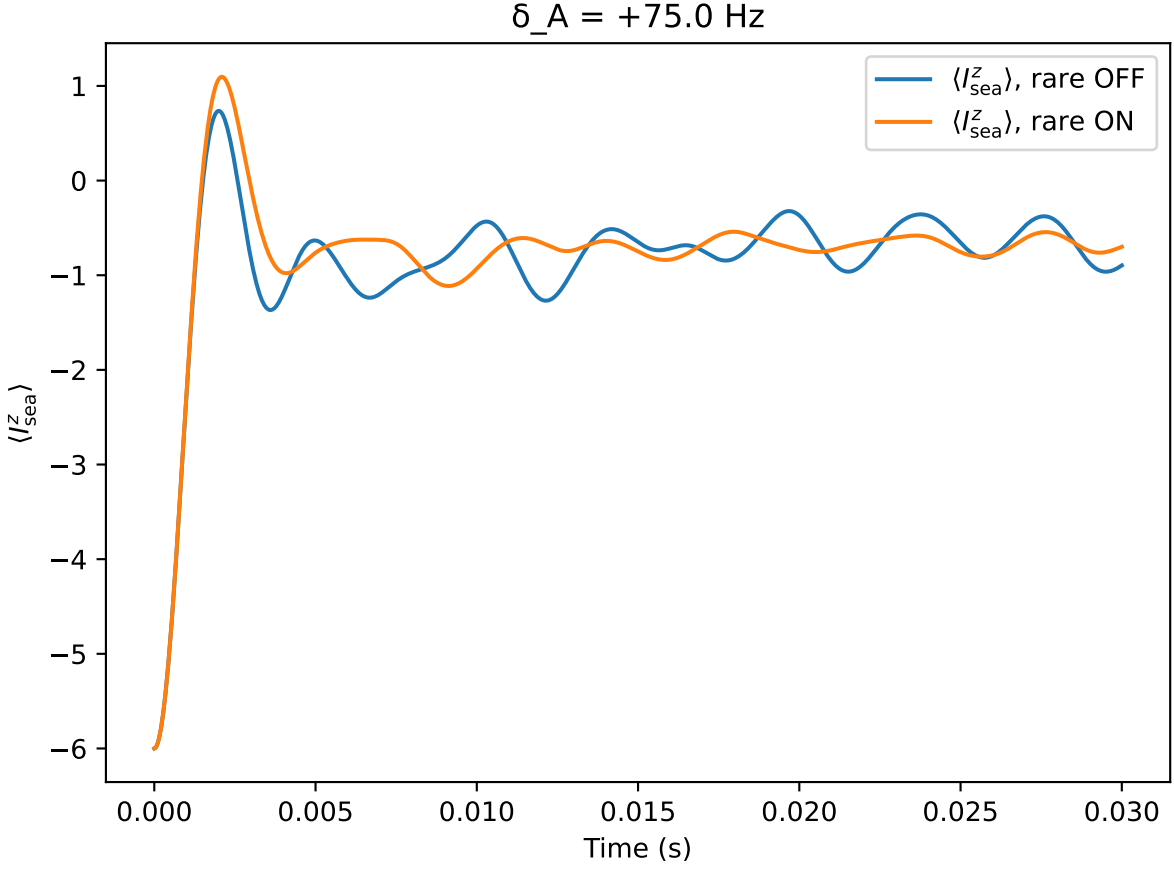

δ_A = +50.0 Hz (pseudo T_1 envelope)
$\langle I^z_{sea} \rangle$
Time (s)
1
0
−1
−2
−3
−4
−5
0.000
0.005
0.010
0.015
0.020
0.025
0.030
$\langle I^z_{sea} \rangle$, rare OFF (envelope)
$\langle I^z_{sea} \rangle$, rare ON (envelope)
Fit OFF (T ≈ 0.0367 s)
Fit ON (T ≈ 0.0118 s)

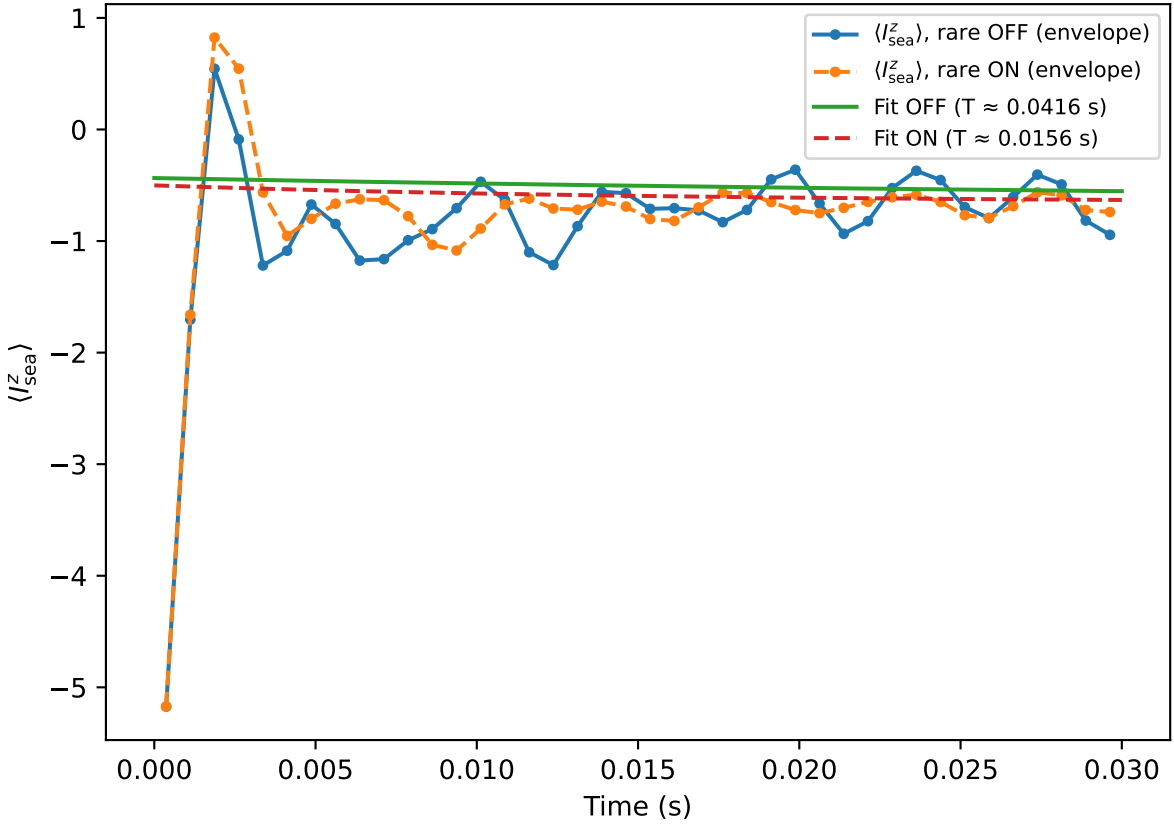

δ_A = +50.0 Hz (rare drive OFF)
$\langle I^x_{sea} \rangle$
$\langle I^y_{sea} \rangle$
$\langle I^{x,y}_{sea} \rangle$
4
3
2
1
0
−1
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)

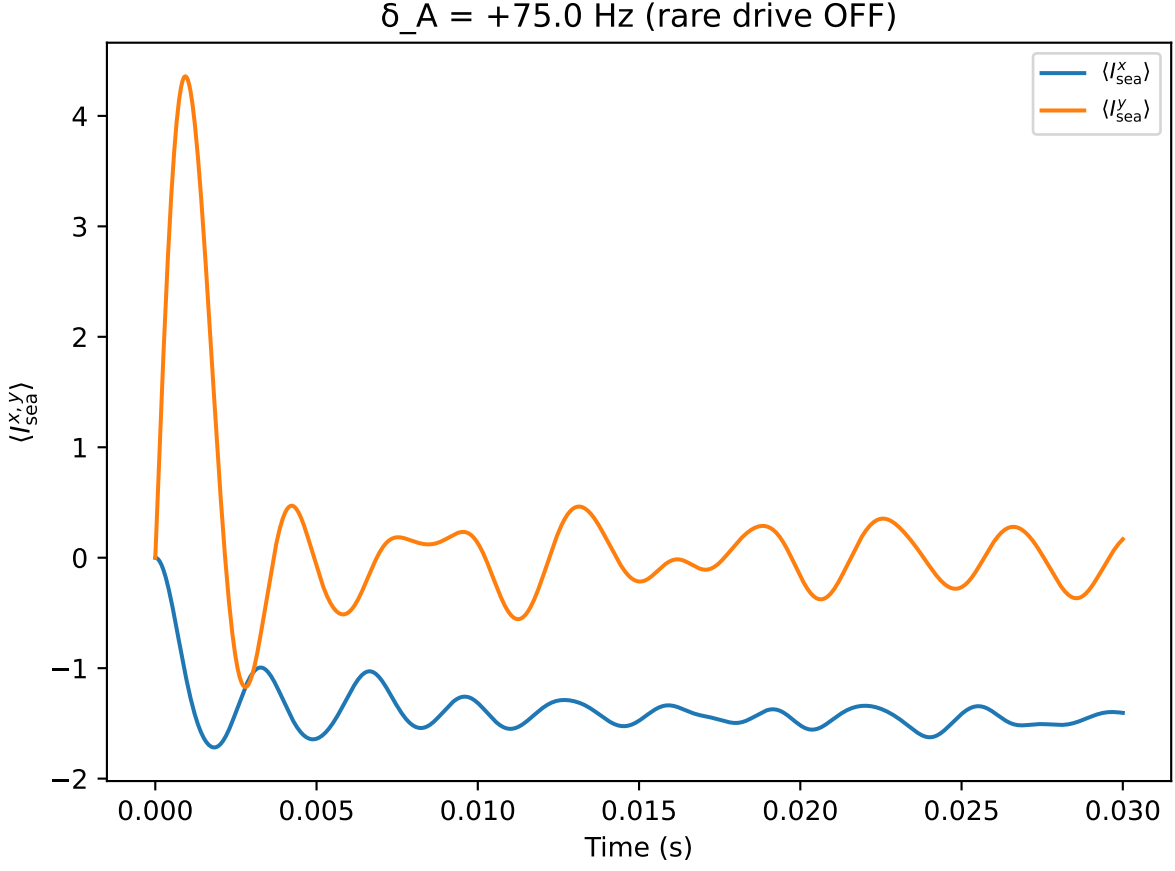

δ_A = +62.5 Hz
⟨I^z_{sea}⟩, rare OFF
⟨I^z_{sea}⟩, rare ON
⟨I^z_{sea}⟩
1
0
−1
−2
−3
−4
−5
−6
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)

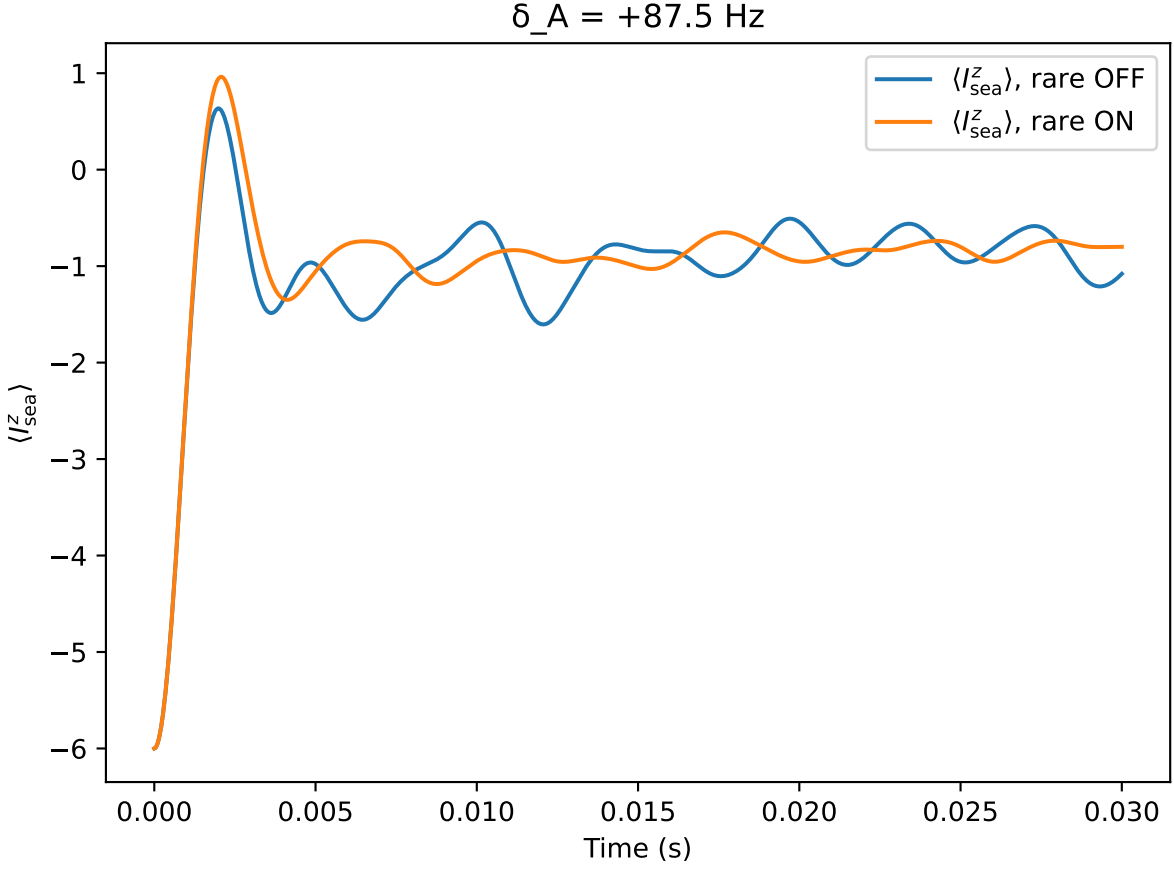

δ_A = +62.5 Hz (pseudo T_1 envelope)
$\langle I^z_{sea} \rangle$
Time (s)
1
0
−1
−2
−3
−4
−5
0.000
0.005
0.010
0.015
0.020
0.025
0.030
$\langle I^z_{sea} \rangle$, rare OFF (envelope)
$\langle I^z_{sea} \rangle$, rare ON (envelope)
Fit OFF (T ≈ 0.037 s)
Fit ON (T ≈ 0.0154 s)

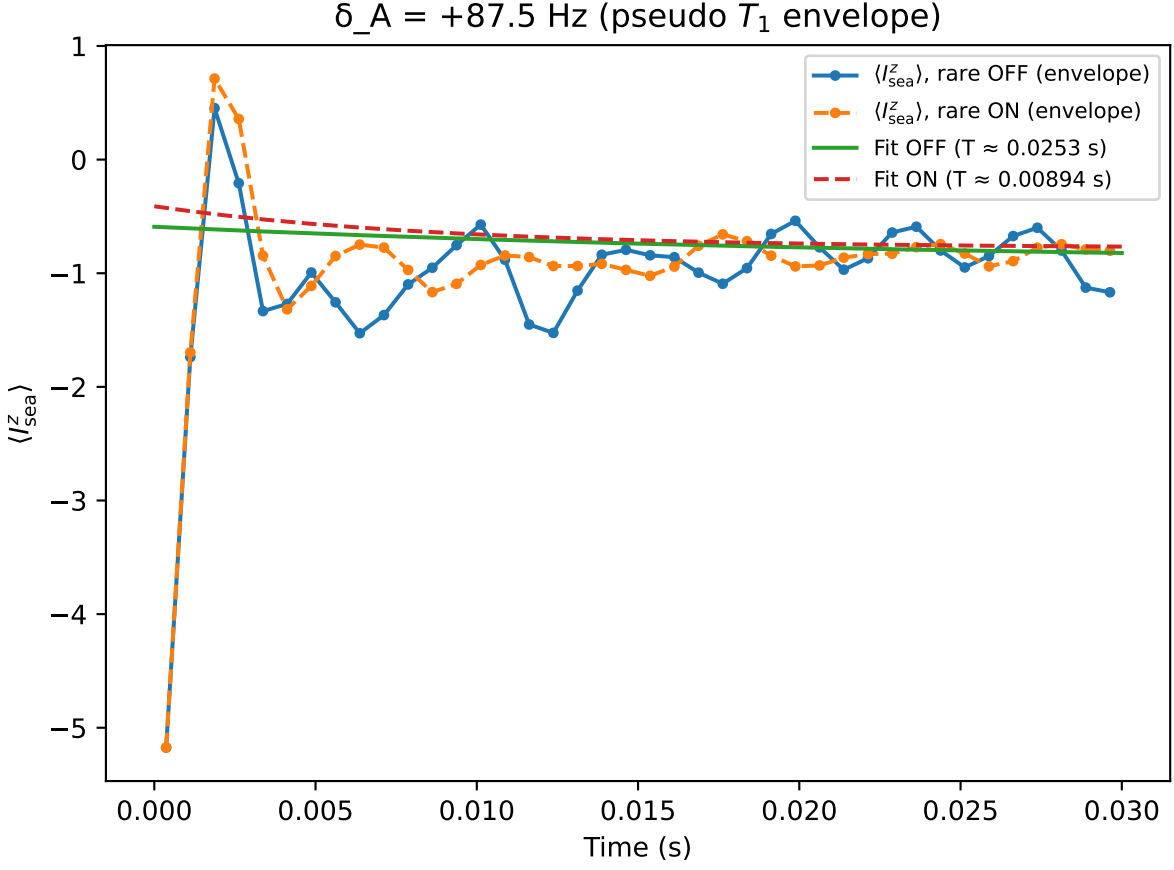

δ_A = +62.5 Hz (rare drive OFF)
$\langle I^x_{sea} \rangle$
$\langle I^y_{sea} \rangle$
$\langle I^{x,y}_{sea} \rangle$
4
3
2
1
0
−1
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)

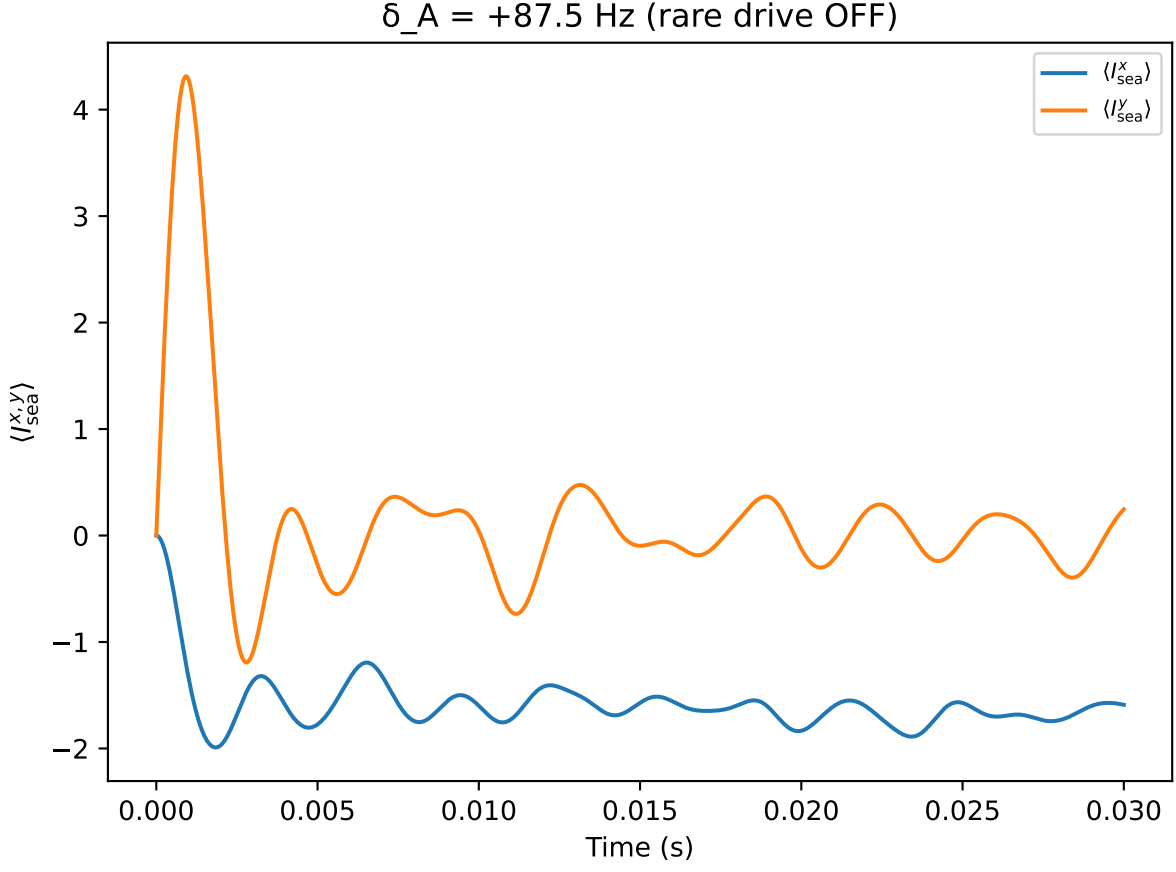

δ_A = +75.0 Hz
⟨I^z_{sea}⟩, rare OFF
⟨I^z_{sea}⟩, rare ON
⟨I^z_{sea}⟩
1
0
−1
−2
−3
−4
−5
−6
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)

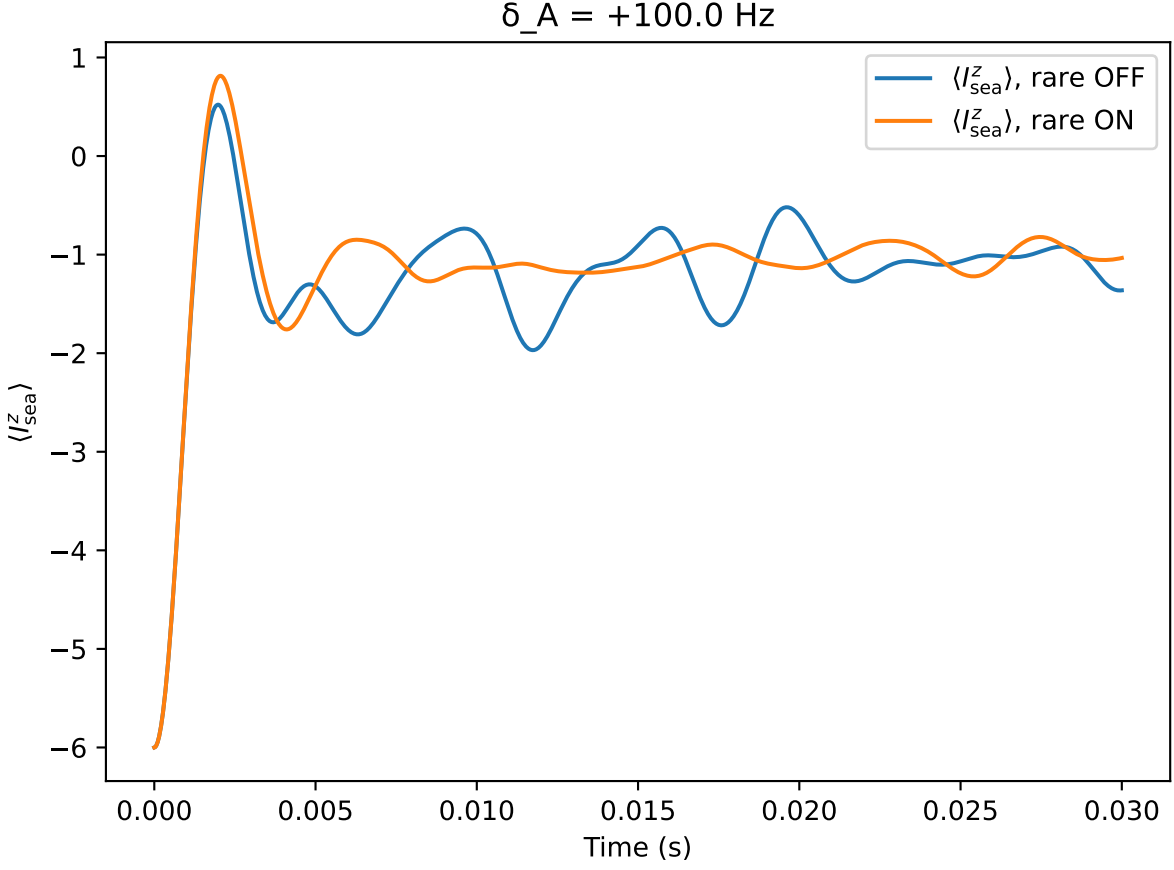

δ_A = +75.0 Hz (pseudo T_1 envelope)
$\langle I^z_{sea} \rangle$, rare OFF (envelope)
$\langle I^z_{sea} \rangle$, rare ON (envelope)
Fit OFF (T ≈ 0.0416 s)
Fit ON (T ≈ 0.0156 s)
$\langle I^z_{sea} \rangle$
Time (s)
1
0
−1
−2
−3
−4
−5
0.000
0.005
0.010
0.015
0.020
0.025
0.030

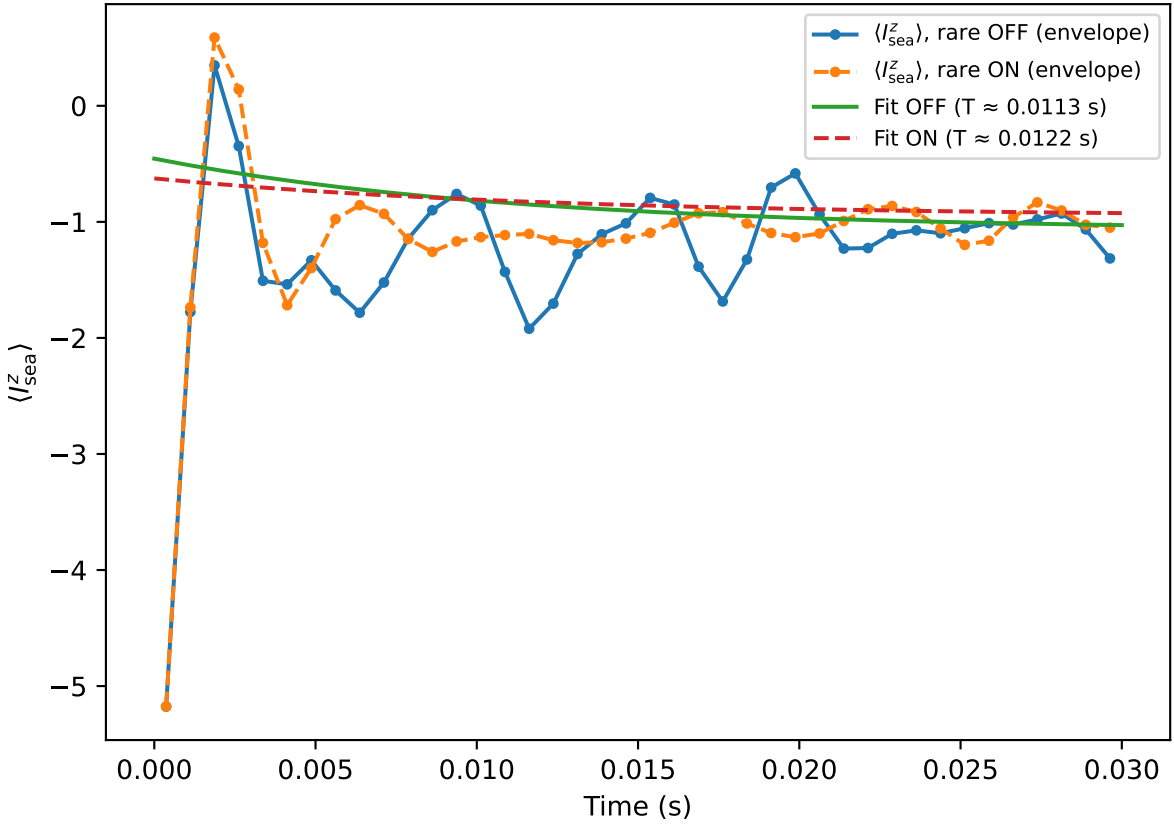

δ_A = +75.0 Hz (rare drive OFF)
$\langle I^x_{sea} \rangle$
$\langle I^y_{sea} \rangle$
$\langle I^{x,y}_{sea} \rangle$
4
3
2
1
0
−1
−2
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)

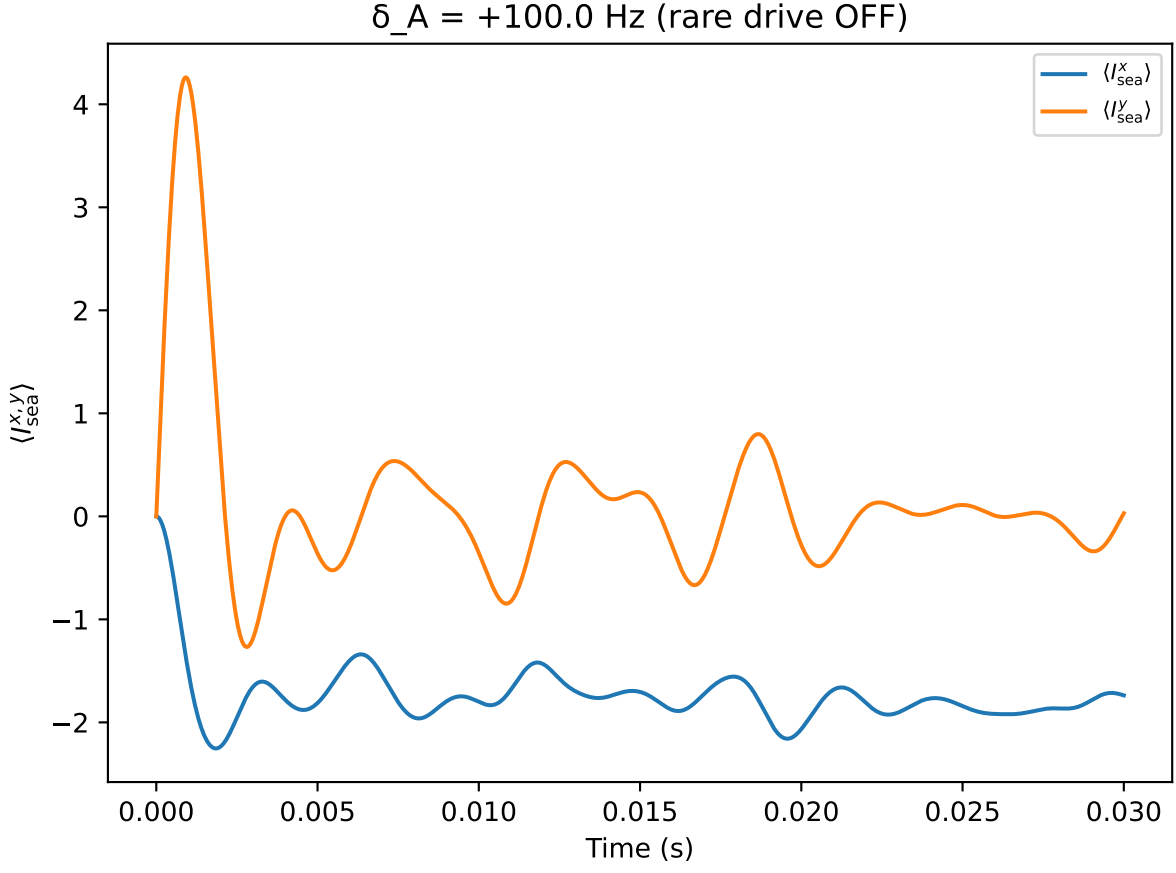

δ_A = +87.5 Hz
⟨I^z_{sea}⟩, rare OFF
⟨I^z_{sea}⟩, rare ON
⟨I^z_{sea}⟩
1
0
−1
−2
−3
−4
−5
−6
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)


δ_A = +87.5 Hz (pseudo T_1 envelope)
$\langle I^z_{sea} \rangle$, rare OFF (envelope)
$\langle I^z_{sea} \rangle$, rare ON (envelope)
Fit OFF (T ≈ 0.0253 s)
Fit ON (T ≈ 0.00894 s)
$\langle I^z_{sea} \rangle$
Time (s)
1
0
−1
−2
−3
−4
−5
0.000
0.005
0.010
0.015
0.020
0.025
0.030


δ_A = +87.5 Hz (rare drive OFF)
$\langle I^x_{sea} \rangle$
$\langle I^y_{sea} \rangle$
$\langle I^{x,y}_{sea} \rangle$
4
3
2
1
0
−1
−2
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)


δ_A = +100.0 Hz
⟨I^z_{sea}⟩, rare OFF
⟨I^z_{sea}⟩, rare ON
⟨I^z_{sea}⟩
Time (s)
1
0
−1
−2
−3
−4
−5
−6
0.000
0.005
0.010
0.015
0.020
0.025
0.030


δ_A = +100.0 Hz (pseudo T_1 envelope)
$\langle I^z_{sea} \rangle$, rare OFF (envelope)
$\langle I^z_{sea} \rangle$, rare ON (envelope)
Fit OFF (T ≈ 0.0113 s)
Fit ON (T ≈ 0.0122 s)
$\langle I^z_{sea} \rangle$
Time (s)
0
−1
−2
−3
−4
−5
0.000
0.005
0.010
0.015
0.020
0.025
0.030


δ_A = +100.0 Hz (rare drive OFF)
$\langle I^{x}_{sea} \rangle$
$\langle I^{y}_{sea} \rangle$
$\langle I^{x,y}_{sea} \rangle$
4
3
2
1
0
−1
−2
0.000
0.005
0.010
0.015
0.020
0.025
0.030
Time (s)

T-like decay fits from ⟨I^z_sea⟩ traces

delta_Hz	T_Iz_sea_off	T_Iz_sea_on
+0.0	0.0174	0.00895
+12.5	0.0176	0.00842
+25.0	0.0138	0.00844
+37.5	0.0278	0.0116
+50.0	0.0367	0.0118
+62.5	0.037	0.0154
+75.0	0.0416	0.0156
+87.5	0.0253	0.00894
+100.0	0.0113	0.0122