

Weekly Research Updates

From

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Research Activities

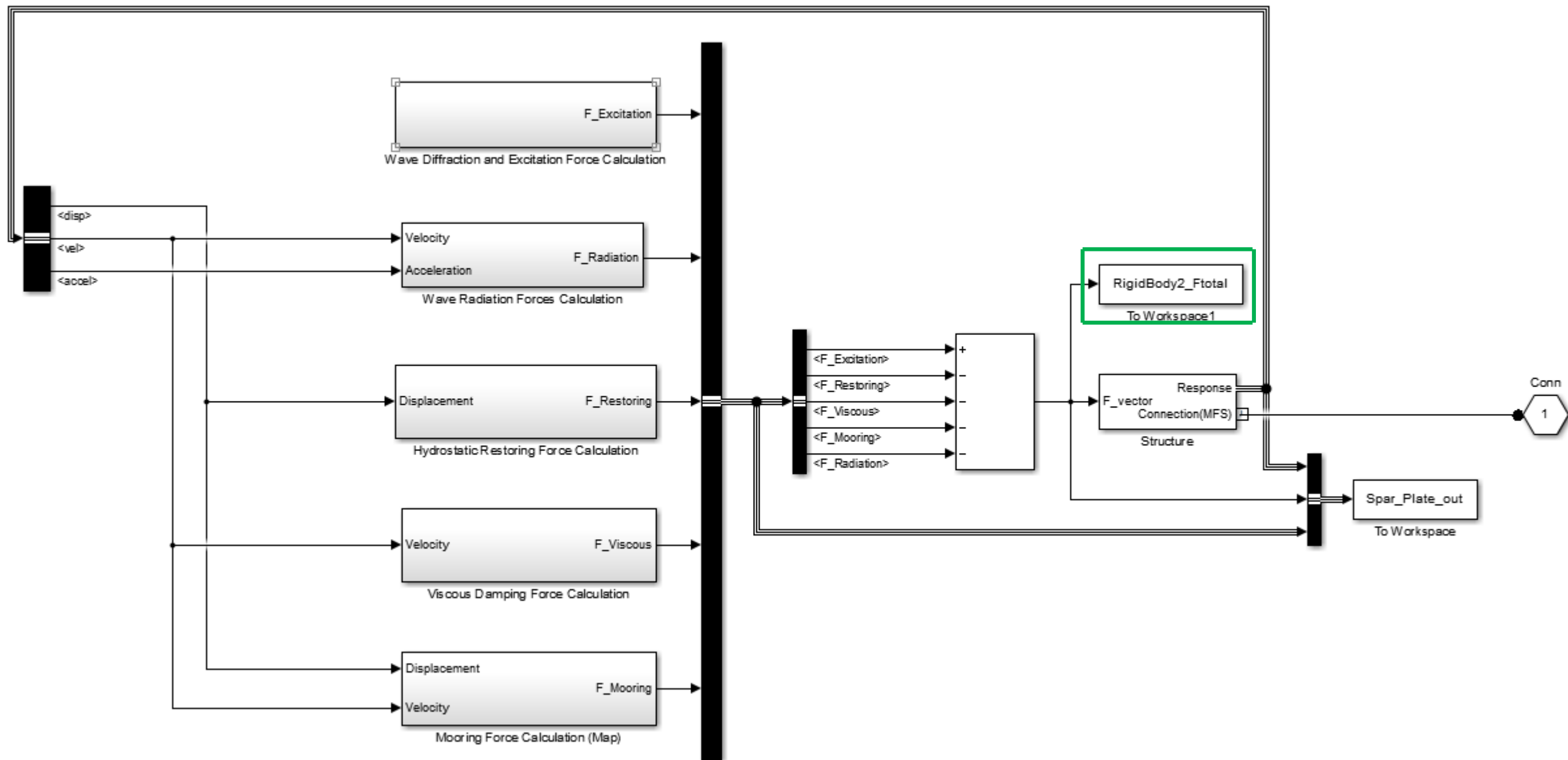
Last Week:

- Reviewed WEC-Sim code:
 - preProcessing
 - objects
 - lib
 - functions
 - documentation
 - application
 - RM3
- Looked at RM3.slx
- Looked at RM3's workspace:
 - output
 - constraint
 - pto
 - simu
 - test
 - waves

Research Activities

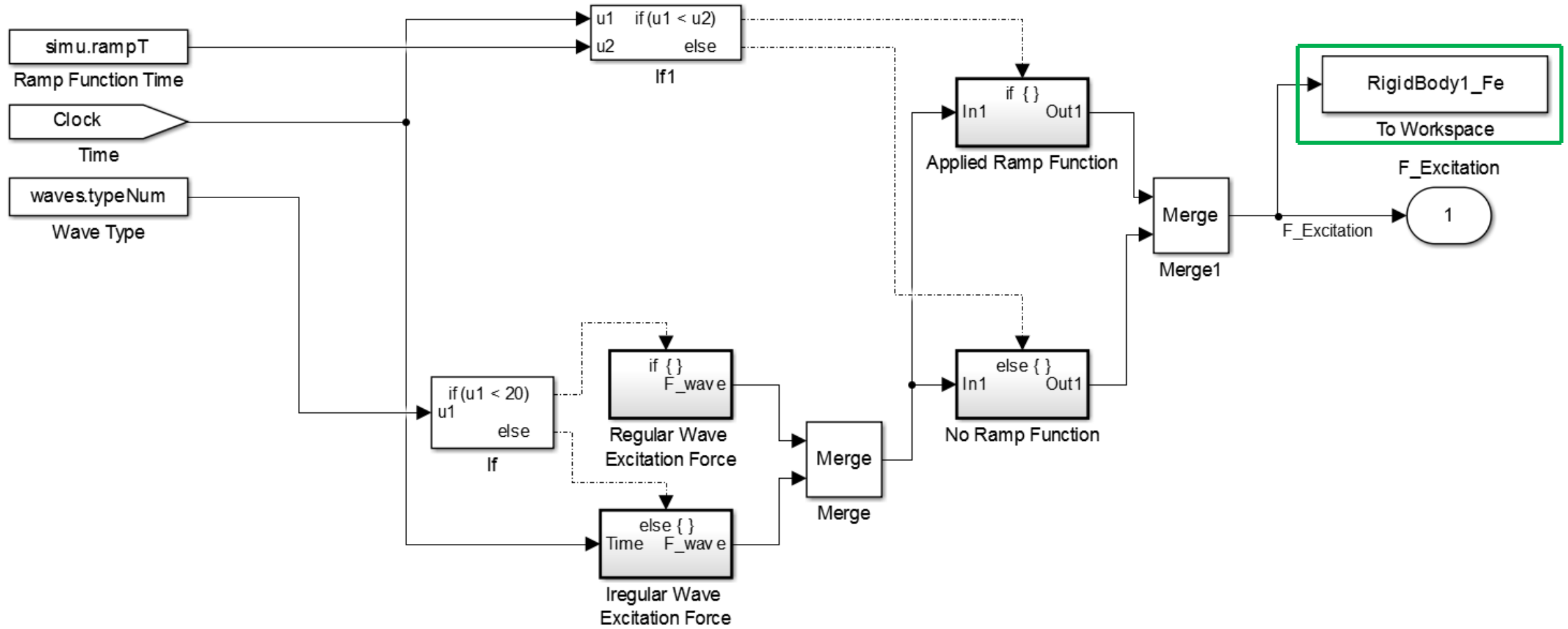
Next Week:

- Continue reviewing RM3.slx
- Try to build the following blocks:
 - Wave Diffraction and Excitation Force Calculation
 - Wave Radiation Force Calculation
 - Hydrostatic Restoring Force Calculation



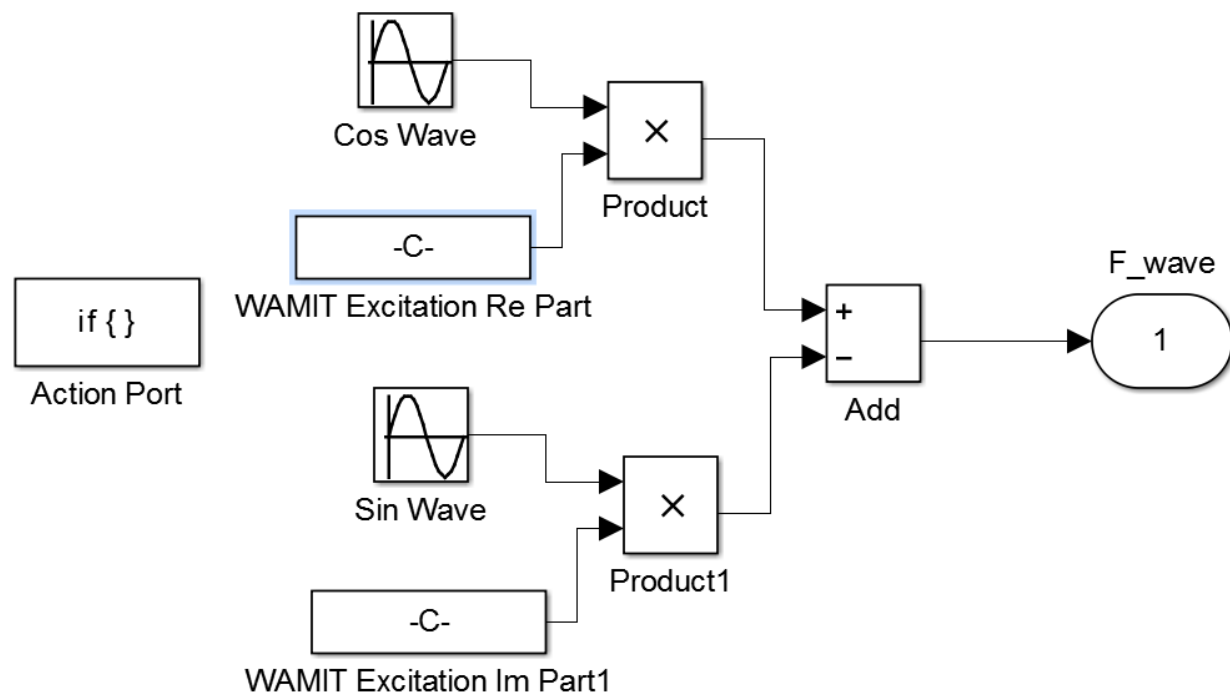
output × output.bodies × output.bodies(2).forceTotal × RigidBody2_Ftotal ×							
4001x6 double							
	1	2	3	4	5	6	7
3978	-5.4364e+05	-1.0531	-1.9552e+04	-35.2448	-2.5544e+06	0.2839	
3979	-5.5380e+05	-0.7656	-7.8640e+04	-33.6657	-2.6021e+06	0.2828	
3980	-5.6054e+05	-0.4735	-1.3724e+05	-31.8790	-2.6338e+06	0.2800	
3981	-5.6382e+05	-0.1784	-1.9500e+05	-29.8958	-2.6492e+06	0.2755	
3982	-5.6363e+05	0.1178	-2.5155e+05	-27.7283	-2.6484e+06	0.2693	
3983	-5.5997e+05	0.4133	-3.0656e+05	-25.3898	-2.6312e+06	0.2614	
3984	-5.5285e+05	0.7062	-3.5967e+05	-22.8948	-2.5977e+06	0.2519	
3985	-5.4232e+05	0.9947	-4.1057e+05	-20.2586	-2.5483e+06	0.2409	
3986	-5.2845e+05	1.2772	-4.5893e+05	-17.4976	-2.4831e+06	0.2284	
3987	-5.1132e+05	1.5517	-5.0446e+05	-14.6286	-2.4027e+06	0.2144	
3988	-4.9104e+05	1.8167	-5.4689e+05	-11.6695	-2.3074e+06	0.1992	
3989	-4.6773e+05	2.0705	-5.8594e+05	-8.6384	-2.1979e+06	0.1827	
3990	-4.4153e+05	2.3115	-6.2138e+05	-5.5541	-2.0748e+06	0.1651	
3991	-4.1262e+05	2.5382	-6.5299e+05	-2.4355	-1.9390e+06	0.1464	
3992	-3.8116e+05	2.7494	-6.8058e+05	0.6981	-1.7912e+06	0.1269	
3993	-3.4735e+05	2.9435	-7.0396e+05	3.8274	-1.6323e+06	0.1066	
3994	-3.1140e+05	3.1195	-7.2301e+05	6.9331	-1.4634e+06	0.0856	
3995	-2.7353e+05	3.2763	-7.3760e+05	9.9961	-1.2855e+06	0.0641	
3996	-2.3397e+05	3.4129	-7.4764e+05	12.9974	-1.0996e+06	0.0422	
3997	-1.9297e+05	3.5285	-7.5308e+05	15.9186	-9.0701e+05	0.0200	
3998	-1.5079e+05	3.6222	-7.5387e+05	18.7416	-7.0879e+05	-0.0022	
3999	-1.0767e+05	3.6937	-7.5001e+05	21.4491	-5.0619e+05	-0.0245	
4000	-6.3884e+04	3.7424	-7.4153e+05	24.0244	-3.0047e+05	-0.0466	
4001	-1.9708e+04	3.7680	-7.2847e+05	26.4515	-9.2900e+04	-0.0684	

output × output.bodies × output.bodies(2).forceTotal × RigidBody2_Ftotal ×							
1x1 double timeseries							
Time series name:							
Time	Data:1	Data:2	Data:3	Data:4	Data:5	Data:6	
398.1000	-5.6363e+05	0.1178	-2.5155e+05	-27.7283	-2.6484e+06	0.2693	
398.2000	-5.5997e+05	0.4133	-3.0656e+05	-25.3898	-2.6312e+06	0.2614	
398.3000	-5.5285e+05	0.7062	-3.5967e+05	-22.8948	-2.5977e+06	0.2519	
398.4000	-5.4232e+05	0.9947	-4.1057e+05	-20.2586	-2.5483e+06	0.2409	
398.5000	-5.2845e+05	1.2772	-4.5893e+05	-17.4976	-2.4831e+06	0.2284	
398.6000	-5.1132e+05	1.5517	-5.0446e+05	-14.6286	-2.4027e+06	0.2144	
398.7000	-4.9104e+05	1.8167	-5.4689e+05	-11.6695	-2.3074e+06	0.1992	
398.8000	-4.6773e+05	2.0705	-5.8594e+05	-8.6384	-2.1979e+06	0.1827	
398.9000	-4.4153e+05	2.3115	-6.2138e+05	-5.5541	-2.0748e+06	0.1651	
399	-4.1262e+05	2.5382	-6.5299e+05	-2.4355	-1.9390e+06	0.1464	
399.1000	-3.8116e+05	2.7494	-6.8058e+05	0.6981	-1.7912e+06	0.1269	
399.2000	-3.4735e+05	2.9435	-7.0396e+05	3.8274	-1.6323e+06	0.1066	
399.3000	-3.1140e+05	3.1195	-7.2301e+05	6.9331	-1.4634e+06	0.0856	
399.4000	-2.7353e+05	3.2763	-7.3760e+05	9.9961	-1.2855e+06	0.0641	
399.5000	-2.3397e+05	3.4129	-7.4764e+05	12.9974	-1.0996e+06	0.0422	
399.6000	-1.9297e+05	3.5285	-7.5308e+05	15.9186	-9.0701e+05	0.0200	
399.7000	-1.5079e+05	3.6222	-7.5387e+05	18.7416	-7.0879e+05	-0.0022	
399.8000	-1.0767e+05	3.6937	-7.5001e+05	21.4491	-5.0619e+05	-0.0245	
399.9000	-6.3884e+04	3.7424	-7.4153e+05	24.0244	-3.0047e+05	-0.0466	
400	-1.9708e+04	3.7680	-7.2847e+05	26.4515	-9.2900e+04	-0.0684	



output x output.bodies x output.bodies(1).forceExcitation x RigidBody1_Fe x							
4001x6 double							
	1	2	3	4	5	6	7
3978	-5.8691e+05	-0.1643	1.1497e+05	2.1131	-5.0541e+06	-0.5774	
3979	-5.9787e+05	-0.3745	2.6210e+05	1.8654	-5.1485e+06	-0.5421	
3980	-6.0515e+05	-0.5824	4.0762e+05	1.6062	-5.2112e+06	-0.5034	
3981	-6.0869e+05	-0.7867	5.5062e+05	1.3370	-5.2417e+06	-0.4617	
3982	-6.0848e+05	-0.9862	6.9022e+05	1.0596	-5.2399e+06	-0.4171	
3983	-6.0452e+05	-1.1795	8.2558e+05	0.7757	-5.2058e+06	-0.3699	
3984	-5.9684e+05	-1.3657	9.5584e+05	0.4870	-5.1396e+06	-0.3205	
3985	-5.8547e+05	-1.5433	1.0802e+06	0.1953	-5.0417e+06	-0.2691	
3986	-5.7049e+05	-1.7115	1.1979e+06	-0.0977	-4.9127e+06	-0.2160	
3987	-5.5200e+05	-1.8691	1.3082e+06	-0.3900	-4.7535e+06	-0.1616	
3988	-5.3010e+05	-2.0152	1.4105e+06	-0.6799	-4.5649e+06	-0.1062	
3989	-5.0494e+05	-2.1489	1.5041e+06	-0.9656	-4.3482e+06	-0.0501	
3990	-4.7666e+05	-2.2693	1.5883e+06	-1.2454	-4.1047e+06	0.0063	
3991	-4.4544e+05	-2.3758	1.6628e+06	-1.5175	-3.8359e+06	0.0626	
3992	-4.1148e+05	-2.4676	1.7271e+06	-1.7802	-3.5434e+06	0.1185	
3993	-3.7498e+05	-2.5441	1.7807e+06	-2.0319	-3.2291e+06	0.1738	
3994	-3.3617e+05	-2.6050	1.8233e+06	-2.2712	-2.8948e+06	0.2279	
3995	-2.9528e+05	-2.6499	1.8547e+06	-2.4964	-2.5428e+06	0.2807	
3996	-2.5257e+05	-2.6784	1.8746e+06	-2.7062	-2.1750e+06	0.3317	
3997	-2.0831e+05	-2.6903	1.8830e+06	-2.8994	-1.7939e+06	0.3806	
3998	-1.6277e+05	-2.6857	1.8798e+06	-3.0747	-1.4016e+06	0.4272	
3999	-1.1621e+05	-2.6646	1.8650e+06	-3.2310	-1.0008e+06	0.4712	
4000	-6.8948e+04	-2.6270	1.8386e+06	-3.3674	-5.9374e+05	0.5123	
4001	-2.1256e+04	-2.5732	1.8010e+06	-3.4830	-1.8304e+05	0.5502	

output x output.bodies x output.bodies(1).forceExcitation x RigidBody1_Fe x						
1x1 double timeseries						
Time series name: F_Excitation						
Time	Data:1	Data:2	Data:3	Data:4	Data:5	Data:6
398.1000	-6.0848e+05	-0.9862	6.9022e+05	1.0596	-5.2399e+06	-0.4171
398.2000	-6.0452e+05	-1.1795	8.2558e+05	0.7757	-5.2058e+06	-0.3699
398.3000	-5.9684e+05	-1.3657	9.5584e+05	0.4870	-5.1396e+06	-0.3205
398.4000	-5.8547e+05	-1.5433	1.0802e+06	0.1953	-5.0417e+06	-0.2691
398.5000	-5.7049e+05	-1.7115	1.1979e+06	-0.0977	-4.9127e+06	-0.2160
398.6000	-5.5200e+05	-1.8691	1.3082e+06	-0.3900	-4.7535e+06	-0.1616
398.7000	-5.3010e+05	-2.0152	1.4105e+06	-0.6799	-4.5649e+06	-0.1062
398.8000	-5.0494e+05	-2.1489	1.5041e+06	-0.9656	-4.3482e+06	-0.0501
398.9000	-4.7666e+05	-2.2693	1.5883e+06	-1.2454	-4.1047e+06	0.0063
399	-4.4544e+05	-2.3758	1.6628e+06	-1.5175	-3.8359e+06	0.0626
399.1000	-4.1148e+05	-2.4676	1.7271e+06	-1.7802	-3.5434e+06	0.1185
399.2000	-3.7498e+05	-2.5441	1.7807e+06	-2.0319	-3.2291e+06	0.1738
399.3000	-3.3617e+05	-2.6050	1.8233e+06	-2.2712	-2.8948e+06	0.2279
399.4000	-2.9528e+05	-2.6499	1.8547e+06	-2.4964	-2.5428e+06	0.2807
399.5000	-2.5257e+05	-2.6784	1.8746e+06	-2.7062	-2.1750e+06	0.3317
399.6000	-2.0831e+05	-2.6903	1.8830e+06	-2.8994	-1.7939e+06	0.3806
399.7000	-1.6277e+05	-2.6857	1.8798e+06	-3.0747	-1.4016e+06	0.4272
399.8000	-1.1621e+05	-2.6646	1.8650e+06	-3.2310	-1.0008e+06	0.4712
399.9000	-6.8948e+04	-2.6270	1.8386e+06	-3.3674	-5.9374e+05	0.5123
400	-2.1256e+04	-2.5732	1.8010e+06	-3.4830	-1.8304e+05	0.5502



Source Block Parameters: WAMIT Excitation Re Part

Constant

Output the constant specified by the 'Constant value' parameter. If 'Constant value' is a vector and 'Interpret vector parameters as 1-D' is on, treat the constant value as a 1-D array. Otherwise, output a matrix with the same dimensions as the constant value.

Main **Signal Attributes**

Constant value:

☐ Interpret vector parameters as 1-D

Sampling mode: **Sample based**

Sample time:

OK **Cancel** **Help** **Apply**

body				
body(1, 1)				
body(1, 1).hydroForce				
body(1, 1).hydroForce.fExt				
1x1 struct with 2 fields				
Field	Value	Min	Max	
re	[-1.7005e+04,-2.0585,1.4408e+06,-2.7864,-1.4643e+05,0.4402]	-1.464...	1.4408...	
im	[-4.8695e+05,-0.6294,4.4049e+05,1.0696,-4.1933e+06,-0.3694]	-4.193...	4.4049...	