



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
 designed for 4145m Depth



By: P. Chua

13-Aug-2014

DCN: 3203-00012

REV: A

REF.DES. GP02FLMB

Source: 13-Aug-2014 10:55:11, ...Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

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### Revision History

3203-00012\_Global\_PAPA\_MFM-B\_2014\_Mooring\_Model\_Analysis\_2014-08-13\_RevA

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Rev# | Date       | Author | Description
-----|-----|-----|-----
  A  | 13-Aug-2014 | P.Chua | Initial Release, as deployed, ECR# 1303-01362
=====

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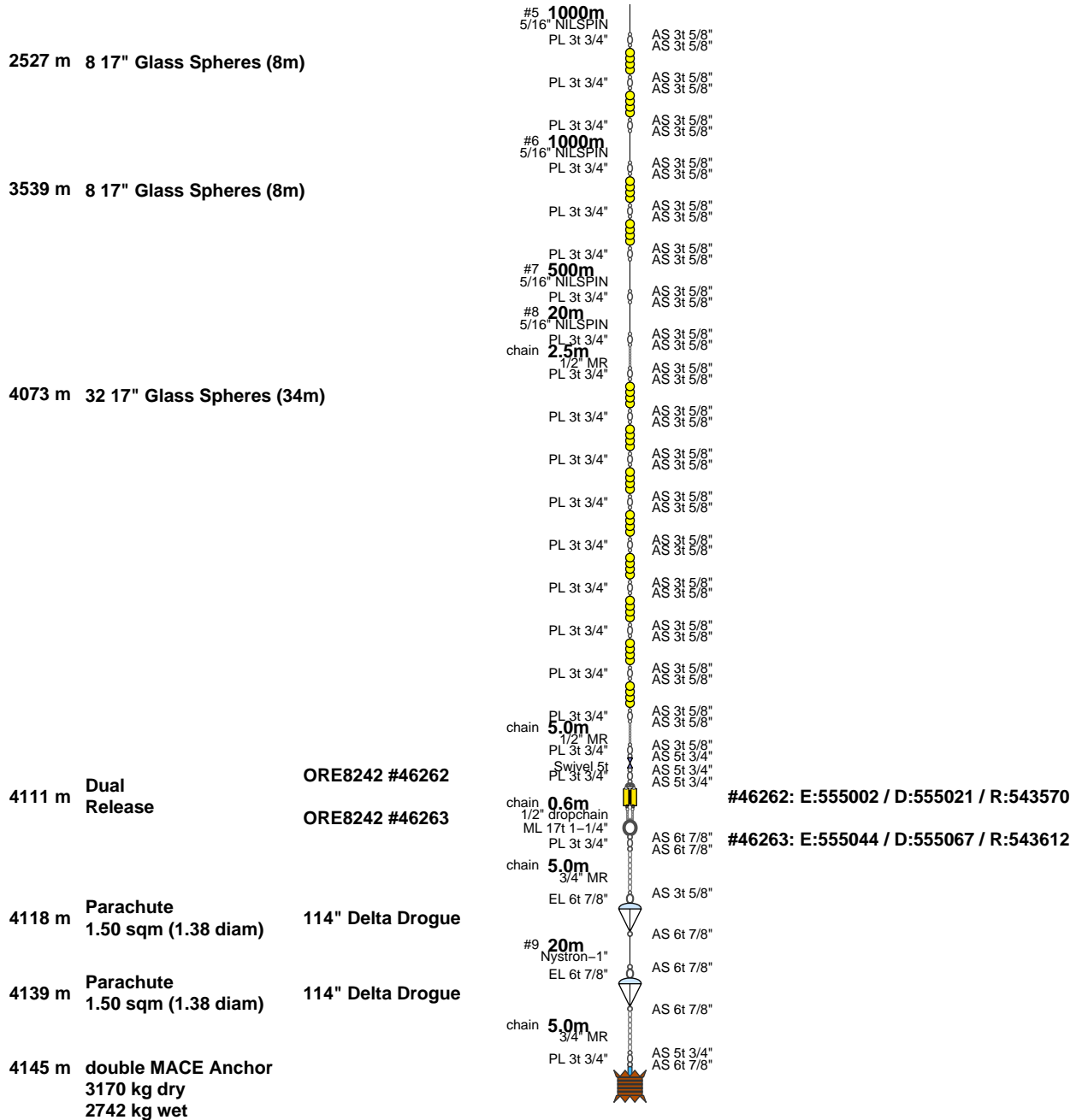
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depth (incl. stretch)	component instruments	rope # & Length	Distance from Upper / Lower rope end
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!!! Check for Cotter Pins !!!

06-20-2014 ??-??-2015





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### Element List

Code	Count	Label	Weight in air	/	water
-----					
Components					
13	6	Inductive Termination	18.0 kg		14.4 kg
15	2	Special Coupler Eye-Clevis	16.0 kg		12.0 kg
17	1	45deg Universal Joint	25.0 kg		16.3 kg
32	44	5/8" Bolt Type Anchor Shackles (AS) 3.2t	33.4 kg		29.1 kg
33	4	3/4" Bolt Type Anchor Shackles (AS) 4.7t	4.9 kg		4.3 kg
34	6	7/8" Bolt Type Anchor Shackles (AS) 6.5t	10.7 kg		9.3 kg
53	25	3/4" Pear Link (PL) 2.7t	21.5 kg		18.5 kg
64	2	7/8" End Link (EL) 6.3t	2.4 kg		2.1 kg
76	1	1-1/4" Master Link (ML) 17t	5.5 kg		4.8 kg
94	1	SS Swivel 5t	6.2 kg		5.3 kg
256	1	Cable Float CF14 1000m	25.0 kg		-13.0 kg
274	14	4 17" Glass Sphere 204HR on 4m chain	1344.0 kg		-1232.0 kg
300	1	Load Cage w/ Controller, ACOMM	50.0 kg		60.0 kg
306	1	64" Syntactic Sphere 1000m	1100.0 kg		-1180.0 kg
326	1	62" float 1500m, LR-ADCP	1150.0 kg		-750.0 kg
374	7	CTDMO-G P1000m IM, clamp on	26.6 kg		19.6 kg
375	3	CTDMO-H P3500m IM, clamp on	11.4 kg		8.4 kg
478	1	Dual Acoustic Release	77.0 kg		61.0 kg
479	1	Acoustic Release in Float	121.0 kg		-0.0 kg
480	1	DropChain 1/2"-4ft	7.8 kg		6.8 kg
491	2	Parachute	NaN kg		-0.0 kg
-----					
Components weight :			4056.5 kg		-2903.0 kg
-----					
Ropes					
103	3980m	5/16" 3x19 Jac. NILSPIN wire	1241.8 kg		847.7 kg
113	20m	Samson Nystron 1"	10.1 kg		2.0 kg
141	5m	EM chain 1/2", 2.7t	90.0 kg		35.0 kg
181	10m	Mooring (MR) chain 1/2", 2.7t	35.0 kg		30.4 kg
183	10m	Mooring (MR) chain 3/4", 6.0t	76.0 kg		66.1 kg
-----					
Ropes weight :			1452.9 kg		981.2 kg
-----					
Summary					
Components			4056.5 kg		-2903.0 kg
Ropes			1452.9 kg		981.2 kg
522	1	double MACE Anchor	3170.0 kg		2742.1 kg
-----					
Mooring total weight :			8679.4 kg		820.2 kg



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### Rope List

#	Code	Length	Label	Weight in air	/	water
1	141	5m	EM chain 1/2", 2.7t	90.0 kg		35.0 kg
2x	103	440m	5/16" 3x19 Jac. NILSPIN wire	137.3 kg		93.7 kg
3x	103	20m	5/16" 3x19 Jac. NILSPIN wire	6.2 kg		4.3 kg
4x	103	1000m	5/16" 3x19 Jac. NILSPIN wire	312.0 kg		213.0 kg
	181	3m	Mooring (MR) chain 1/2", 2.7t	8.8 kg		7.6 kg
5	103	1000m	5/16" 3x19 Jac. NILSPIN wire	312.0 kg		213.0 kg
6	103	1000m	5/16" 3x19 Jac. NILSPIN wire	312.0 kg		213.0 kg
7	103	500m	5/16" 3x19 Jac. NILSPIN wire	156.0 kg		106.5 kg
8	103	20m	5/16" 3x19 Jac. NILSPIN wire	6.2 kg		4.3 kg
	181	3m	Mooring (MR) chain 1/2", 2.7t	8.8 kg		7.6 kg
	181	5m	Mooring (MR) chain 1/2", 2.7t	17.5 kg		15.2 kg
	183	5m	Mooring (MR) chain 3/4", 6.0t	38.0 kg		33.1 kg
9	113	20m	Samson Nystroon 1"	10.1 kg		2.0 kg
	183	5m	Mooring (MR) chain 3/4", 6.0t	38.0 kg		33.1 kg

Symmetric Marker: 20

#	Length	Type	Position of Markers [m]
2x	440m	5/16" NILSPIN:	3, 23, 53, 93, 127, 143, 213, 227 297, 313, 347, 387, 417, 437
4x	1000m	5/16" NILSPIN:	5, 245, 495, 505, 755, 995



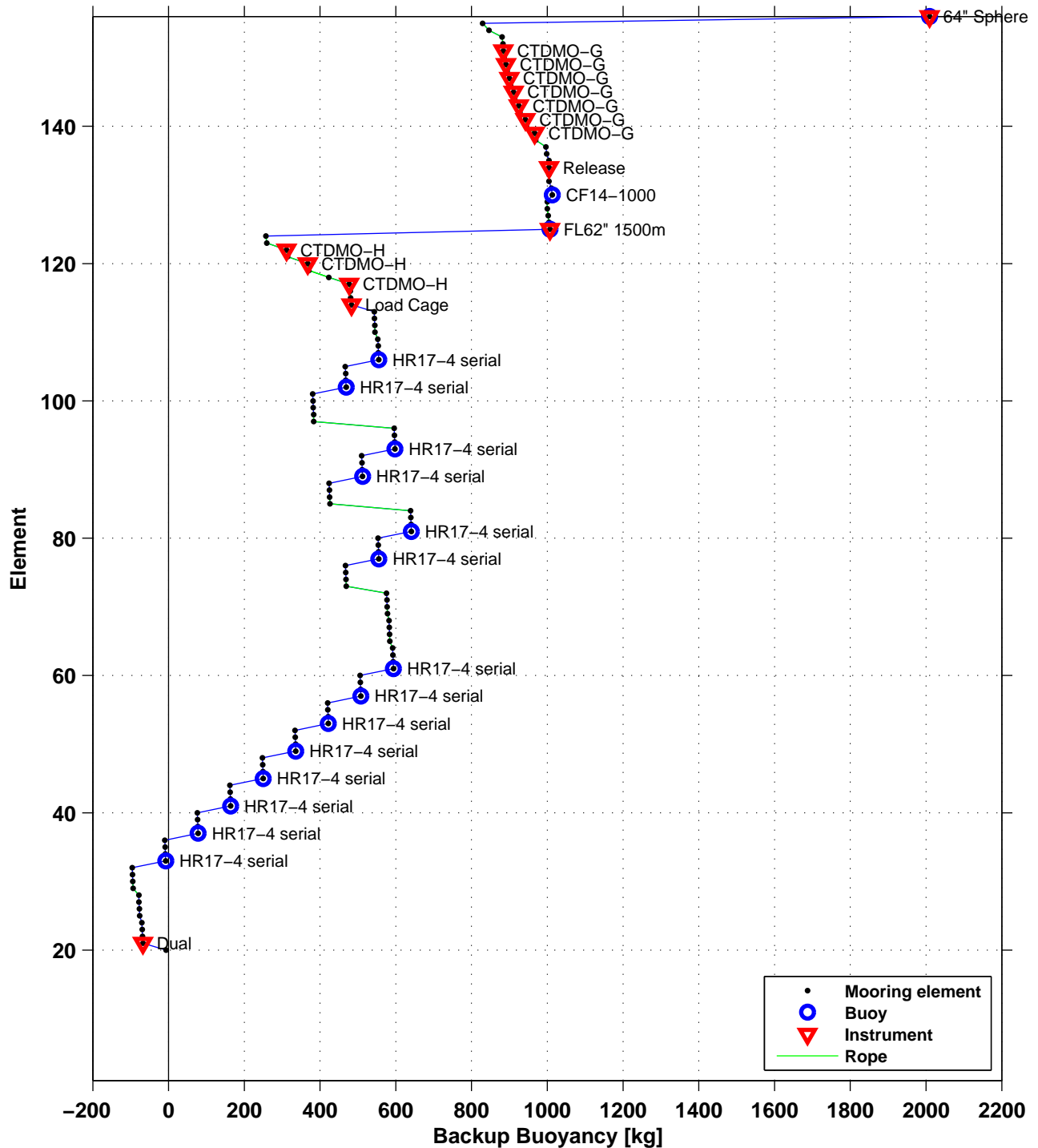
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### Backup Buoyancy



**NO Current Vertical anchor load : 1922 kg**  
**Wet safe anchor weight : 2402 kg (125%, max: 500 kg)**  
**Wet / Dry MACE anchor weight : 2742 kg / 3170 kg**



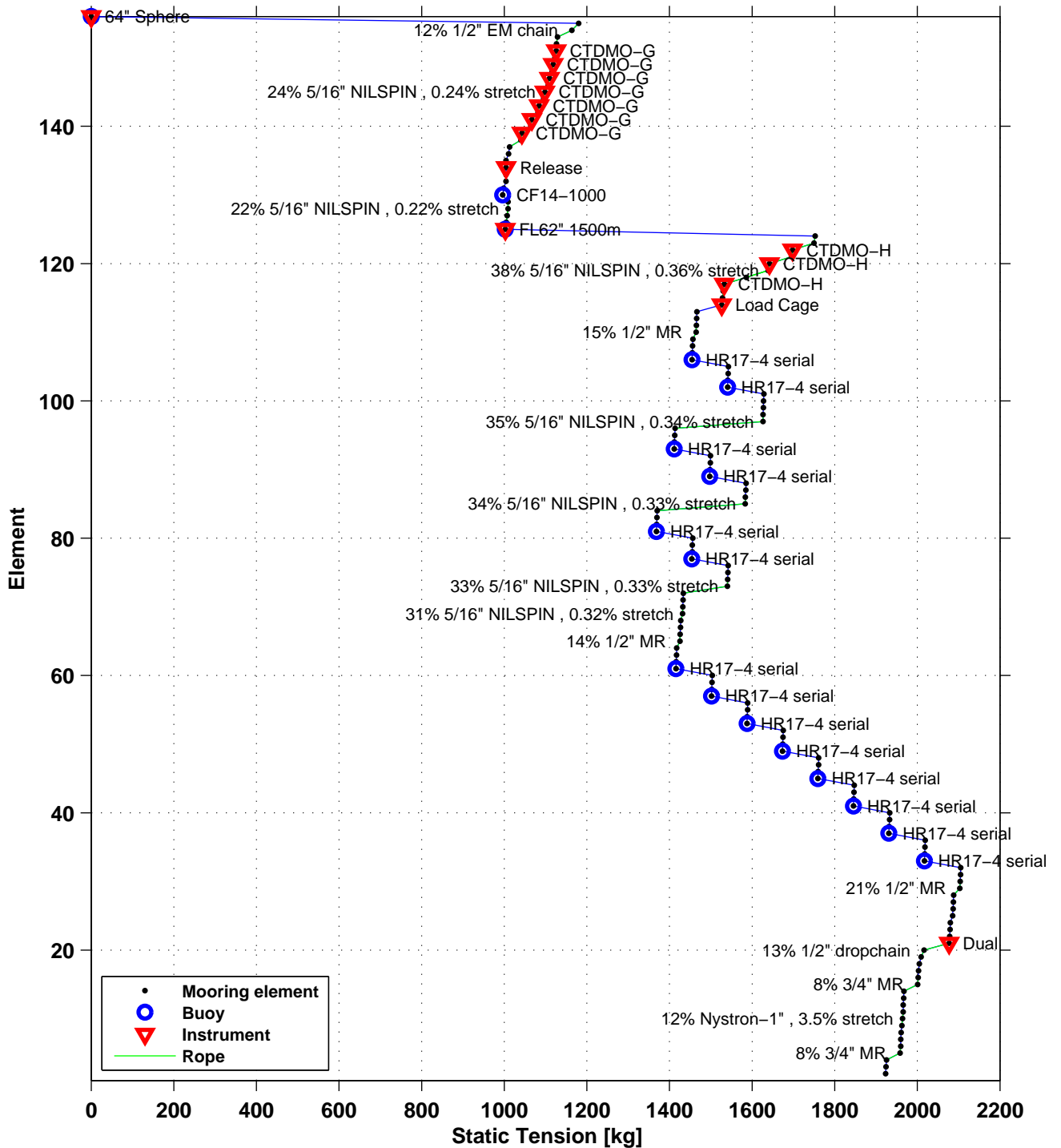
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### No Current Static Tension



**NO Current Vertical anchor load : 1922 kg**  
**Wet safe anchor weight : 2402 kg (125%, max: 500 kg)**  
**Wet / Dry MACE anchor weight : 2742 kg / 3170 kg**





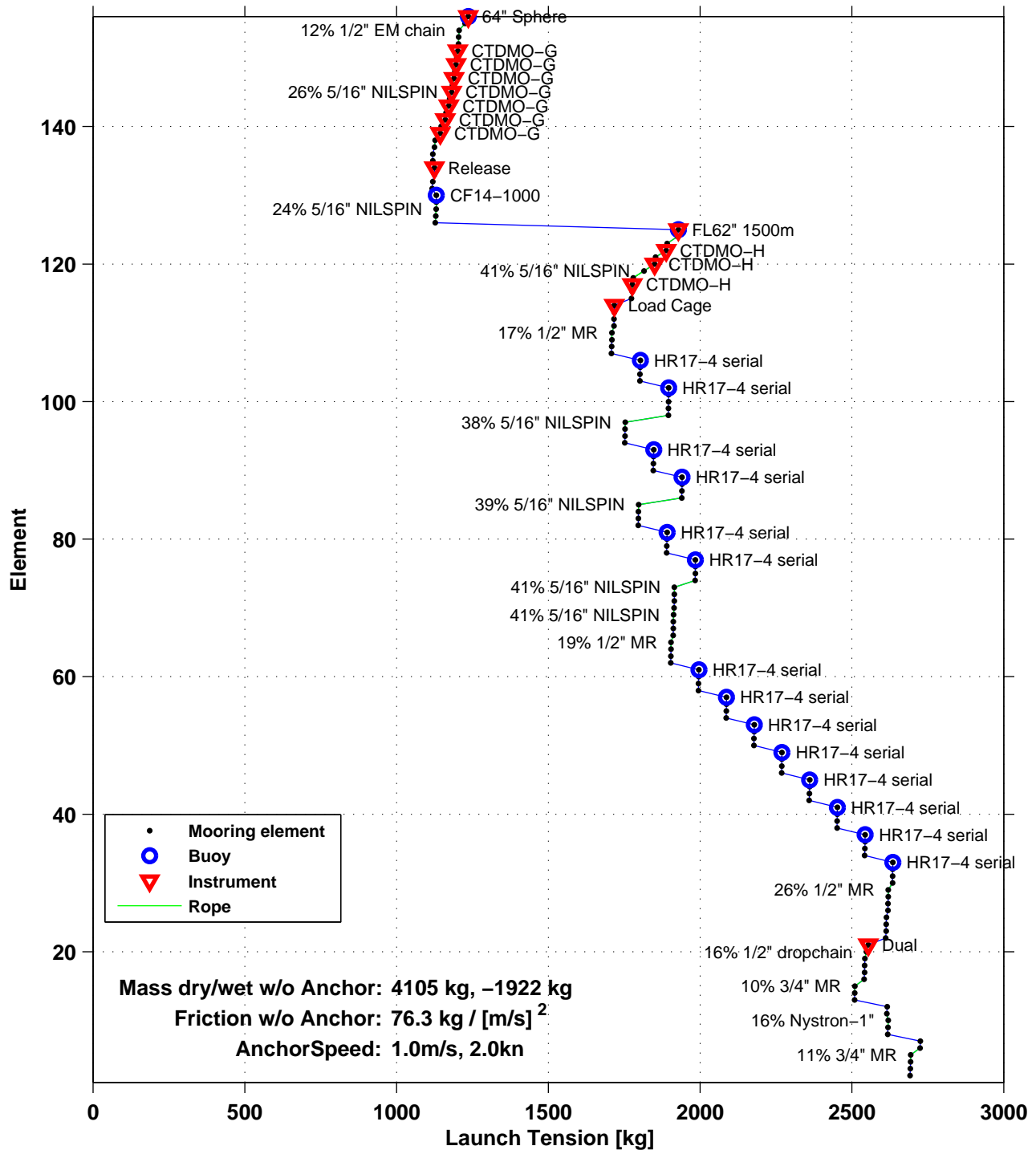
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### Steady State Launch Tension



**NO Current Vertical anchor load: 1922 kg**  
**Wet safe anchor weight: 2402 kg (125%, max: 500 kg)**  
**Wet / Dry MACE anchor weight: 2742 kg / 3170 kg**



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**No Current Static Solution - Parameter**

#	ID	Mooring Element	Length [m]	Buoy [kg]	Backup B. [kg]	Height [m]	Design Dpt [m]	Tension [kg]	[%]	Stretch [m]	[%]
156	306	64" Sphere	2.3	1180.0	2009.4	4113.5	31.5	0.0	0.0	0.00	0.00
155	17	U-Joint	0.3	-16.3	829.4	4111.3	33.9	1180.0	7.4	0.00	0.00
154	141	1/2" EM chain	5.0	-35.0	845.7	4111.0	36.5	1163.7	11.6	0.00	0.00
153	13	ind. term	0.1	-2.4	880.7	4106.0	39.1	1128.7	7.1	0.00	0.00
152	103	5/16" NILSPIN	3.0	-0.6	883.1	4105.9	40.6	1126.3	24.2	0.01	0.25
151	374	CTDMO-G P1000m	0.0	-2.8	883.7	4102.9	42.1	1125.7	11.3	0.00	0.00
150	103	5/16" NILSPIN	20.0	-4.3	886.5	4102.9	52.1	1122.9	24.1	0.05	0.25
149	374	CTDMO-G P1000m	0.0	-2.8	890.8	4082.8	62.2	1118.6	11.2	0.00	0.00
148	103	5/16" NILSPIN	30.1	-6.4	893.6	4082.8	77.2	1115.8	24.0	0.07	0.25
147	374	CTDMO-G P1000m	0.0	-2.8	899.9	4052.8	92.2	1109.4	11.1	0.00	0.00
146	103	5/16" NILSPIN	40.1	-8.5	902.7	4052.8	112.3	1106.6	23.8	0.10	0.24
145	374	CTDMO-G P1000m	0.0	-2.8	911.3	4012.7	132.3	1098.1	11.0	0.00	0.00
144	103	5/16" NILSPIN	50.1	-10.6	914.1	4012.7	157.4	1095.3	23.5	0.12	0.24
143	374	CTDMO-G P1000m	0.0	-2.8	924.7	3962.5	182.5	1084.6	10.8	0.00	0.00
142	103	5/16" NILSPIN	70.2	-14.9	927.5	3962.5	217.5	1081.8	23.3	0.17	0.24
141	374	CTDMO-G P1000m	0.0	-2.8	942.4	3892.4	252.6	1066.9	10.7	0.00	0.00
140	103	5/16" NILSPIN	100.2	-21.3	945.2	3892.4	302.7	1064.1	22.9	0.23	0.23
139	374	CTDMO-G P1000m	0.0	-2.8	966.5	3792.1	352.9	1042.8	10.4	0.00	0.00
138	103	5/16" NILSPIN	127.3	-27.1	969.3	3792.1	416.5	1040.0	22.4	0.29	0.23
137	13	ind. term	0.1	-2.4	996.4	3664.9	480.2	1013.0	6.3	0.00	0.00
136	15	coupler ec	0.2	-6.0	998.8	3664.8	480.3	1010.6	6.3	0.00	0.00
134	479	Release Float	1.0	0.0	1004.8	3664.6	480.9	1004.6	10.0	0.00	0.00
132	15	coupler ec	0.2	-6.0	1004.8	3663.6	481.5	1004.6	6.3	0.00	0.00
131	13	ind. term	0.1	-2.4	1010.8	3663.4	481.7	998.6	6.2	0.00	0.00
130	256	CF14-1000	0.0	13.0	1013.2	3663.3	481.7	996.2	16.6	0.00	0.00
128	103	5/16" NILSPIN	10.0	-2.1	1000.2	3663.3	486.8	1009.2	21.7	0.02	0.22
127	103	5/16" NILSPIN	10.0	-2.1	1002.3	3653.2	496.8	1007.1	21.6	0.02	0.22



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**No Current Static Solution – Parameter, cont.**

#	ID	Mooring Element	Length [m]	Buoy [kg]	Backup B. [kg]	Height [m]	Design Dpt [m]	Tension [kg]	[%]	Stretch [m]	[%]
126	13	ind. term	0.1	-2.4	1004.4	3643.2	501.8	1004.9	6.3	0.00	0.00
125	326	FL62" 1500m ADC	2.8	750.0	1006.8	3643.1	503.3	1002.5	10.0	0.00	0.00
124	13	ind. term	0.1	-2.4	256.8	3640.3	504.8	1752.5	11.0	0.00	0.00
123	103	5/16" NILSPIN	245.9	-52.2	259.2	3640.2	627.8	1750.1	37.6	0.94	0.38
122	375	CTDMO-H P3500m	0.0	-2.8	311.4	3394.3	750.7	1697.9	17.0	0.00	0.00
121	103	5/16" NILSPIN	250.9	-53.3	314.2	3394.3	876.2	1695.1	36.4	0.92	0.37
120	375	CTDMO-H P3500m	0.0	-2.8	367.5	3143.3	1001.7	1641.9	16.4	0.00	0.00
119	103	5/16" NILSPIN	250.9	-53.3	370.3	3143.3	1127.1	1639.1	35.2	0.89	0.36
118	103	5/16" NILSPIN	250.9	-53.3	423.5	2892.4	1378.0	1585.8	34.1	0.86	0.35
117	375	CTDMO-H P3500m	0.0	-2.8	476.8	2641.6	1503.4	1532.6	15.3	0.00	0.00
116	103	5/16" NILSPIN	5.0	-1.1	479.6	2641.6	1505.9	1529.8	32.9	0.02	0.34
115	13	ind. term	0.1	-2.4	480.6	2636.6	1508.5	1528.7	9.6	0.00	0.00
114	300	Load Cage	1.5	-60.0	483.0	2636.5	1509.3	1526.3	15.3	0.00	0.00
113	32	AS 3t 5/8"	0.1	-0.7	543.0	2635.0	1510.1	1466.3	12.2	0.00	0.00
112	53	PL 3t 3/4"	0.1	-0.7	543.7	2634.9	1510.2	1465.7	12.2	0.00	0.00
111	32	AS 3t 5/8"	0.1	-0.7	544.4	2634.8	1510.3	1464.9	12.2	0.00	0.00
110	181	1/2" MR	2.5	-7.6	545.1	2634.7	1511.5	1464.3	14.6	0.00	0.00
109	32	AS 3t 5/8"	0.1	-0.7	552.7	2632.2	1512.8	1456.7	12.1	0.00	0.00
108	53	PL 3t 3/4"	0.1	-0.7	553.4	2632.1	1512.9	1456.0	12.1	0.00	0.00
107	32	AS 3t 5/8"	0.1	-0.7	554.1	2632.0	1513.0	1455.3	12.1	0.00	0.00
106	274	HR17-4 serial	4.0	88.0	554.8	2632.0	1515.0	1454.6	14.5	0.00	0.00
105	32	AS 3t 5/8"	0.1	-0.7	466.8	2628.0	1517.1	1542.6	12.9	0.00	0.00
104	53	PL 3t 3/4"	0.1	-0.7	467.4	2627.9	1517.2	1541.9	12.8	0.00	0.00
103	32	AS 3t 5/8"	0.1	-0.7	468.2	2627.8	1517.2	1541.2	12.8	0.00	0.00
102	274	HR17-4 serial	4.0	88.0	468.8	2627.7	1519.3	1540.5	15.4	0.00	0.00
101	32	AS 3t 5/8"	0.1	-0.7	380.8	2623.7	1521.3	1628.5	13.6	0.00	0.00
100	53	PL 3t 3/4"	0.1	-0.7	381.5	2623.7	1521.4	1627.9	13.6	0.00	0.00



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**No Current Static Solution – Parameter, cont.**

#	ID	Mooring Element	Length [m]	Buoy [kg]	Backup B. [kg]	Height [m]	Design Dpt [m]	Tension [kg]	[%]	Stretch [m]	[%]
99	32	AS 3t 5/8"	0.1	-0.7	382.2	2623.5	1521.5	1627.1	13.6	0.00	0.00
97	103	5/16" NILSPIN	1003.4	-213.0	382.9	2623.5	2023.2	1626.5	35.0	3.37	0.34
96	32	AS 3t 5/8"	0.1	-0.7	595.9	1620.1	2524.9	1413.5	11.8	0.00	0.00
95	53	PL 3t 3/4"	0.1	-0.7	596.5	1620.0	2525.0	1412.8	11.8	0.00	0.00
94	32	AS 3t 5/8"	0.1	-0.7	597.3	1619.9	2525.1	1412.1	11.8	0.00	0.00
93	274	HR17-4 serial	4.0	88.0	597.9	1619.9	2527.1	1411.4	14.1	0.00	0.00
92	32	AS 3t 5/8"	0.1	-0.7	509.9	1615.9	2529.2	1499.4	12.5	0.00	0.00
91	53	PL 3t 3/4"	0.1	-0.7	510.6	1615.8	2529.3	1498.7	12.5	0.00	0.00
90	32	AS 3t 5/8"	0.1	-0.7	511.4	1615.7	2529.3	1498.0	12.5	0.00	0.00
89	274	HR17-4 serial	4.0	88.0	512.0	1615.6	2531.4	1497.3	15.0	0.00	0.00
88	32	AS 3t 5/8"	0.1	-0.7	424.0	1611.6	2533.4	1585.3	13.2	0.00	0.00
87	53	PL 3t 3/4"	0.1	-0.7	424.7	1611.6	2533.5	1584.7	13.2	0.00	0.00
86	32	AS 3t 5/8"	0.1	-0.7	425.4	1611.4	2533.6	1583.9	13.2	0.00	0.00
85	103	5/16" NILSPIN	1003.3	-213.0	426.1	1611.4	3035.3	1583.3	34.0	3.27	0.33
84	32	AS 3t 5/8"	0.1	-0.7	639.1	608.1	3536.9	1370.3	11.4	0.00	0.00
83	53	PL 3t 3/4"	0.1	-0.7	639.7	608.0	3537.0	1369.6	11.4	0.00	0.00
82	32	AS 3t 5/8"	0.1	-0.7	640.5	607.9	3537.1	1368.9	11.4	0.00	0.00
81	274	HR17-4 serial	4.0	88.0	641.1	607.9	3539.1	1368.2	13.7	0.00	0.00
80	32	AS 3t 5/8"	0.1	-0.7	553.1	603.9	3541.2	1456.2	12.1	0.00	0.00
79	53	PL 3t 3/4"	0.1	-0.7	553.8	603.8	3541.3	1455.6	12.1	0.00	0.00
78	32	AS 3t 5/8"	0.1	-0.7	554.5	603.7	3541.4	1454.8	12.1	0.00	0.00
77	274	HR17-4 serial	4.0	88.0	555.2	603.6	3543.4	1454.2	14.5	0.00	0.00
76	32	AS 3t 5/8"	0.1	-0.7	467.2	599.6	3545.4	1542.2	12.9	0.00	0.00
75	53	PL 3t 3/4"	0.1	-0.7	467.9	599.6	3545.5	1541.5	12.8	0.00	0.00
74	32	AS 3t 5/8"	0.1	-0.7	468.6	599.4	3545.6	1540.8	12.8	0.00	0.00
73	103	5/16" NILSPIN	501.6	-106.5	469.3	599.4	3796.5	1540.1	33.1	1.65	0.33
72	32	AS 3t 5/8"	0.1	-0.7	575.8	97.7	4047.3	1433.6	11.9	0.00	0.00



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**No Current Static Solution – Parameter, cont.**

#	ID	Mooring Element	Length [m]	Buoy [kg]	Backup B. [kg]	Height [m]	Design Dpt [m]	Tension [kg]	[%]	Stretch [m]	[%]
71	53	PL 3t 3/4"	0.1	-0.7	576.4	97.7	4047.4	1432.9	11.9	0.00	0.00
70	32	AS 3t 5/8"	0.1	-0.7	577.2	97.5	4047.5	1432.2	11.9	0.00	0.00
69	103	5/16" NILSPIN	20.1	-4.3	577.8	97.5	4057.6	1431.5	30.8	0.06	0.32
68	32	AS 3t 5/8"	0.1	-0.7	582.1	77.4	4067.6	1427.3	11.9	0.00	0.00
67	53	PL 3t 3/4"	0.1	-0.7	582.7	77.4	4067.7	1426.6	11.9	0.00	0.00
66	32	AS 3t 5/8"	0.1	-0.7	583.5	77.2	4067.8	1425.9	11.9	0.00	0.00
65	181	1/2" MR	2.5	-7.6	584.1	77.2	4069.1	1425.2	14.3	0.00	0.00
64	32	AS 3t 5/8"	0.1	-0.7	591.7	74.7	4070.4	1417.6	11.8	0.00	0.00
63	53	PL 3t 3/4"	0.1	-0.7	592.4	74.6	4070.4	1417.0	11.8	0.00	0.00
62	32	AS 3t 5/8"	0.1	-0.7	593.1	74.5	4070.5	1416.2	11.8	0.00	0.00
61	274	HR17-4 serial	4.0	88.0	593.8	74.4	4072.6	1415.6	14.2	0.00	0.00
60	32	AS 3t 5/8"	0.1	-0.7	505.8	70.4	4074.6	1503.6	12.5	0.00	0.00
59	53	PL 3t 3/4"	0.1	-0.7	506.5	70.4	4074.7	1502.9	12.5	0.00	0.00
58	32	AS 3t 5/8"	0.1	-0.7	507.2	70.2	4074.8	1502.2	12.5	0.00	0.00
57	274	HR17-4 serial	4.0	88.0	507.9	70.2	4076.8	1501.5	15.0	0.00	0.00
56	32	AS 3t 5/8"	0.1	-0.7	419.9	66.2	4078.8	1589.5	13.2	0.00	0.00
55	53	PL 3t 3/4"	0.1	-0.7	420.5	66.1	4078.9	1588.8	13.2	0.00	0.00
54	32	AS 3t 5/8"	0.1	-0.7	421.3	66.0	4079.0	1588.1	13.2	0.00	0.00
53	274	HR17-4 serial	4.0	88.0	421.9	65.9	4081.1	1587.4	15.9	0.00	0.00
52	32	AS 3t 5/8"	0.1	-0.7	333.9	61.9	4083.1	1675.4	14.0	0.00	0.00
51	53	PL 3t 3/4"	0.1	-0.7	334.6	61.9	4083.2	1674.8	14.0	0.00	0.00
50	32	AS 3t 5/8"	0.1	-0.7	335.3	61.8	4083.3	1674.0	14.0	0.00	0.00
49	274	HR17-4 serial	4.0	88.0	336.0	61.7	4085.3	1673.4	16.7	0.00	0.00
48	32	AS 3t 5/8"	0.1	-0.7	248.0	57.7	4087.3	1761.4	14.7	0.00	0.00
47	53	PL 3t 3/4"	0.1	-0.7	248.7	57.6	4087.4	1760.7	14.7	0.00	0.00
46	32	AS 3t 5/8"	0.1	-0.7	249.4	57.5	4087.5	1760.0	14.7	0.00	0.00
45	274	HR17-4 serial	4.0	88.0	250.1	57.5	4089.5	1759.3	17.6	0.00	0.00



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**No Current Static Solution – Parameter, cont.**

#	ID	Mooring Element	Length [m]	Buoy [kg]	Backup B. [kg]	Height [m]	Design Dpt [m]	Tension [kg]	[%]	Stretch [m]	[%]
44	32	AS 3t 5/8"	0.1	-0.7	162.1	53.5	4091.6	1847.3	15.4	0.00	0.00
43	53	PL 3t 3/4"	0.1	-0.7	162.7	53.4	4091.7	1846.6	15.4	0.00	0.00
42	32	AS 3t 5/8"	0.1	-0.7	163.5	53.3	4091.8	1845.9	15.4	0.00	0.00
41	274	HR17-4 serial	4.0	88.0	164.1	53.2	4093.8	1845.2	18.5	0.00	0.00
40	32	AS 3t 5/8"	0.1	-0.7	76.1	49.2	4095.8	1933.2	16.1	0.00	0.00
39	53	PL 3t 3/4"	0.1	-0.7	76.8	49.1	4095.9	1932.6	16.1	0.00	0.00
38	32	AS 3t 5/8"	0.1	-0.7	77.5	49.0	4096.0	1931.8	16.1	0.00	0.00
37	274	HR17-4 serial	4.0	88.0	78.2	49.0	4098.0	1931.2	19.3	0.00	0.00
36	32	AS 3t 5/8"	0.1	-0.7	-9.8	45.0	4100.1	2019.2	16.8	0.00	0.00
35	53	PL 3t 3/4"	0.1	-0.7	-9.2	44.9	4100.2	2018.5	16.8	0.00	0.00
34	32	AS 3t 5/8"	0.1	-0.7	-8.4	44.8	4100.2	2017.8	16.8	0.00	0.00
33	274	HR17-4 serial	4.0	88.0	-7.8	44.7	4102.3	2017.1	20.2	0.00	0.00
32	32	AS 3t 5/8"	0.1	-0.7	-95.8	40.7	4104.3	2105.1	17.5	0.00	0.00
31	53	PL 3t 3/4"	0.1	-0.7	-95.1	40.7	4104.4	2104.5	17.5	0.00	0.00
30	32	AS 3t 5/8"	0.1	-0.7	-94.4	40.5	4104.5	2103.7	17.5	0.00	0.00
29	181	1/2" MR	5.0	-15.2	-93.7	40.5	4107.0	2103.1	21.0	0.00	0.00
28	32	AS 3t 5/8"	0.1	-0.7	-78.5	35.5	4109.6	2087.9	17.4	0.00	0.00
27	53	PL 3t 3/4"	0.1	-0.7	-77.8	35.4	4109.6	2087.2	17.4	0.00	0.00
26	33	AS 5t 3/4"	0.1	-1.1	-77.1	35.3	4109.7	2086.5	11.6	0.00	0.00
25	94	Swivel 5t	0.2	-5.3	-76.0	35.2	4109.9	2085.4	20.9	0.00	0.00
24	33	AS 5t 3/4"	0.1	-1.1	-70.7	35.0	4110.0	2080.0	11.6	0.00	0.00
23	53	PL 3t 3/4"	0.1	-0.7	-69.6	34.9	4110.1	2079.0	17.3	0.00	0.00
22	33	AS 5t 3/4"	0.1	-1.1	-68.9	34.8	4110.2	2078.2	11.5	0.00	0.00
21	478	Dual Release	1.0	-61.0	-67.8	34.7	4110.8	2077.2	20.8	0.00	0.00
20	480	1/2" dropchain	0.6	-6.8	-6.8	33.7	4111.6	2016.2	12.6	0.00	0.00
19	76	ML 17t 1-1/4"	0.2	-4.8	NaN	33.1	4112.0	2009.4	4.6	0.00	0.00
18	34	AS 6t 7/8"	0.1	-1.6	NaN	32.8	4112.2	2004.5	8.4	0.00	0.00



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**No Current Static Solution – Parameter, cont.**

#	ID	Mooring Element	Length [m]	Buoy [kg]	Backup B. [kg]	Height [m]	Design Dpt [m]	Tension [kg]	[%]	Stretch [m]	[%]
17	53	PL 3t 3/4"	0.1	-0.7	NaN	32.8	4112.3	2003.0	16.7	0.00	0.00
16	34	AS 6t 7/8"	0.1	-1.6	NaN	32.6	4112.4	2002.2	8.3	0.00	0.00
15	183	3/4" MR	5.0	-33.1	NaN	32.6	4114.9	2000.7	8.3	0.00	0.00
14	32	AS 3t 5/8"	0.1	-0.7	NaN	27.6	4117.5	1967.6	16.4	0.00	0.00
13	64	EL 6t 7/8"	0.1	-1.0	NaN	27.5	4117.6	1966.9	8.2	0.00	0.00
12	491	Parachute	0.0	0.0	NaN	27.4	4117.6	1965.9	19.7	0.00	0.00
11	34	AS 6t 7/8"	0.1	-1.6	NaN	27.4	4117.7	1965.9	8.2	0.00	0.00
10	113	Nystron-1"	20.7	-2.0	NaN	27.3	4128.1	1964.4	11.7	0.70	3.51
9	34	AS 6t 7/8"	0.1	-1.6	NaN	6.6	4138.5	1962.4	8.2	0.00	0.00
8	64	EL 6t 7/8"	0.1	-1.0	NaN	6.5	4138.6	1960.8	8.2	0.00	0.00
7	491	Parachute	0.0	0.0	NaN	6.4	4138.6	1959.8	19.6	0.00	0.00
6	34	AS 6t 7/8"	0.1	-1.6	NaN	6.4	4138.7	1959.8	8.2	0.00	0.00
5	183	3/4" MR	5.0	-33.1	NaN	6.3	4141.2	1958.3	8.2	0.00	0.00
4	33	AS 5t 3/4"	0.1	-1.1	NaN	1.3	4143.8	1925.2	10.7	0.00	0.00
3	53	PL 3t 3/4"	0.1	-0.7	NaN	1.2	4143.9	1924.1	16.0	0.00	0.00
2	34	AS 6t 7/8"	0.1	-1.6	NaN	1.1	4144.0	1923.4	8.0	0.00	0.00
1	522	double MACE Anch	1.0	-2742.1	NaN	1.0	4145.0	1921.8	32.0	0.00	0.00

Max. 37.6% Static Tension at:  
 123 103 5/16" NILSPIN 245.9 -52.2 259.2 3640.2 627.8 1750.1 37.6 0.94 0.38

Vertical anchor load : 1922 kg  
 Wet MACE Anchor weight : 2742 kg  
 Safe MACE Anchor weight : 2402 kg



## Global PAPA MFM-B 2014 Mooring Model Analysis

designed for 4145m Depth



By: P. Chua

13-Aug-2014

DCN: 3203-00012

REV: A

REF.DES. GP02FLMB

Source: 13-Aug-2014 10:55:11, ...Paul's m-files\OONPAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

### Steady State Launch Tension – Parameter: descent at 1.01 m/s, 2.0 kn

#	ID	Mooring Element	Length [m]	Buoy [kg]	Diameter [m]	Area [m <sup>2</sup> ]	Ct	Drag [kg]	LaunchTension [kg]	[%]	
156	306	64" Sphere	100	2.3	1180.0	1.630	2.087	0.50	56.19	1236.2	12.4
155	17	U-Joint	0.3	-16.3	0.300	0.071	1.50	5.71	1225.6	7.7	
154	141	1/2" EM chain	5.0	-35.0	0.200	3.142	0.09	15.90	1206.5	12.1	
153	13	ind. term	0.1	-2.4	0.050	0.002	1.50	0.16	1204.3	7.5	
152	103	5/16" NILSPIN	3.0	-0.6	0.010	0.090	0.05	0.24	1203.9	25.9	
151	374	CTDMO-G P1000m	0.0	-2.8	0.075	0.004	1.00	0.24	1201.3	12.0	
150	103	5/16" NILSPIN	20.0	-4.3	0.010	0.600	0.05	1.57	1198.6	25.8	
149	374	CTDMO-G P1000m	0.0	-2.8	0.075	0.004	1.00	0.24	1196.0	12.0	
148	103	5/16" NILSPIN	30.1	-6.4	0.010	0.899	0.05	2.36	1192.0	25.6	
147	374	CTDMO-G P1000m	0.0	-2.8	0.075	0.004	1.00	0.24	1189.5	11.9	
146	103	5/16" NILSPIN	40.1	-8.5	0.010	1.199	0.05	3.15	1184.1	25.4	
145	374	CTDMO-G P1000m	0.0	-2.8	0.075	0.004	1.00	0.24	1181.5	11.8	
144	103	5/16" NILSPIN	50.1	-10.6	0.010	1.499	0.05	3.93	1174.8	25.2	
143	374	CTDMO-G P1000m	0.0	-2.8	0.075	0.004	1.00	0.24	1172.2	11.7	
142	103	5/16" NILSPIN	70.2	-14.9	0.010	2.098	0.05	5.51	1162.8	25.0	
141	374	CTDMO-G P1000m	0.0	-2.8	0.075	0.004	1.00	0.24	1160.3	11.6	
140	103	5/16" NILSPIN	100.2	-21.3	0.010	2.997	0.05	7.87	1146.8	24.6	
139	374	CTDMO-G P1000m	0.0	-2.8	0.075	0.004	1.00	0.24	1144.3	11.4	
138	103	5/16" NILSPIN	127.3	-27.1	0.010	3.807	0.05	9.99	1127.2	24.2	
137	13	ind. term	0.1	-2.4	0.050	0.002	1.50	0.16	1125.0	7.0	
136	15	coupler ec	0.2	-6.0	0.100	0.008	1.50	0.63	1119.6	7.0	
134	479	Release Float	1.0	0.0	0.370	0.108	0.90	5.21	1124.8	11.2	
132	15	coupler ec	0.2	-6.0	0.100	0.008	1.50	0.63	1119.4	7.0	
131	13	ind. term	0.1	-2.4	0.050	0.002	1.50	0.16	1117.2	7.0	
130	256	CF14-1000	0.0	13.0	0.300	0.071	0.30	1.14	1131.3	18.9	
128	103	5/16" NILSPIN	10.0	-2.1	0.010	0.300	0.08	1.22	1130.4	24.3	
127	103	5/16" NILSPIN	10.0	-2.1	0.010	0.300	0.08	1.22	1129.5	24.3	
126	13	ind. term	0.1	-2.4	0.050	0.002	1.50	0.16	1127.3	7.0	
125	326	FL62" 1500m ADC	2.8	750.0	1.550	1.887	0.50	50.81	1928.1	19.3	
124	13	ind. term	0.1	-2.4	0.050	0.002	1.50	0.16	1925.8	12.0	
123	103	5/16" NILSPIN	245.9	-52.2	0.010	7.349	0.04	17.38	1891.0	40.6	
122	375	CTDMO-H P3500m	0.0	-2.8	0.075	0.004	1.00	0.24	1888.5	18.9	
121	103	5/16" NILSPIN	250.9	-53.3	0.010	7.499	0.04	17.73	1853.0	39.8	
120	375	CTDMO-H P3500m	0.0	-2.8	0.075	0.004	1.00	0.24	1850.4	18.5	
119	103	5/16" NILSPIN	250.9	-53.3	0.010	7.498	0.04	17.73	1814.9	39.0	
118	103	5/16" NILSPIN	250.9	-53.3	0.010	7.498	0.04	17.73	1779.3	38.2	
117	375	CTDMO-H P3500m	0.0	-2.8	0.075	0.004	1.00	0.24	1776.8	17.8	
116	103	5/16" NILSPIN	5.0	-1.1	0.010	0.150	0.04	0.35	1776.1	38.2	
115	13	ind. term	0.1	-2.4	0.050	0.002	1.50	0.16	1773.8	11.1	
114	300	Load Cage	1.5	-60.0	0.300	0.071	0.90	3.43	1717.3	17.2	
113	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1716.9	14.3	
112	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	1716.3	14.3	
111	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1715.9	14.3	
110	181	1/2" MR	2.5	-7.6	0.020	0.157	0.11	0.90	1709.2	17.1	
109	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1708.8	14.2	
108	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	1708.3	14.2	





## Global PAPA MFM-B 2014 Mooring Model Analysis

designed for 4145m Depth



By: P. Chua

13-Aug-2014

DCN: 3203-00012

REV: A

REF.DES. GP02FLMB

Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OONPAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

### Steady State Launch Tension – Parameter: descent at 1.01 m/s, 2.0 kn, cont.

#	ID	Mooring Element	Length [m]	Buoy [kg]	Diameter [m]	Area [m <sup>2</sup> ]	Ct	Drag [kg]	LaunchTension [kg]	[%]
107	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1707.9	14.2
106	274	HR17-4 serial	4.0	88.0	0.500	0.196	0.67	7.03	1803.0	18.0
105	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1802.6	15.0
104	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	1802.0	15.0
103	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1801.6	15.0
102	274	HR17-4 serial	4.0	88.0	0.500	0.196	0.67	7.03	1896.7	19.0
101	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1896.3	15.8
100	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	1895.8	15.8
99	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1895.4	15.8
97	103	5/16" NILSPIN	1003.4	-213.0	0.010	29.990	0.04	70.90	1753.3	37.7
96	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1752.9	14.6
95	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	1752.3	14.6
94	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1751.9	14.6
93	274	HR17-4 serial	4.0	88.0	0.500	0.196	0.67	7.03	1847.0	18.5
92	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1846.6	15.4
91	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	1846.1	15.4
90	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1845.7	15.4
89	274	HR17-4 serial	4.0	88.0	0.500	0.196	0.67	7.03	1940.7	19.4
88	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1940.3	16.2
87	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	1939.8	16.2
86	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1939.4	16.2
85	103	5/16" NILSPIN	1003.3	-213.0	0.010	29.988	0.04	70.90	1797.3	38.6
84	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1796.9	15.0
83	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	1796.4	15.0
82	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1796.0	15.0
81	274	HR17-4 serial	4.0	88.0	0.500	0.196	0.67	7.03	1891.0	18.9
80	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1890.6	15.8
79	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	1890.1	15.8
78	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1889.7	15.7
77	274	HR17-4 serial	4.0	88.0	0.500	0.196	0.67	7.03	1984.7	19.8
76	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1984.3	16.5
75	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	1983.8	16.5
74	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1983.4	16.5
73	103	5/16" NILSPIN	501.6	-106.5	0.010	14.994	0.05	38.70	1915.6	41.2
72	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1915.2	16.0
71	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	1914.7	16.0
70	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1914.3	16.0
69	103	5/16" NILSPIN	20.1	-4.3	0.010	0.600	0.08	2.43	1912.5	41.1
68	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1912.1	15.9
67	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	1911.5	15.9
66	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1911.1	15.9
65	181	1/2" MR	2.5	-7.6	0.020	0.157	0.11	0.90	1904.4	19.0
64	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1904.0	15.9
63	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	1903.5	15.9
62	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1903.1	15.9
61	274	HR17-4 serial	4.0	88.0	0.500	0.196	0.44	4.61	1995.7	20.0



## Global PAPA MFM-B 2014 Mooring Model Analysis

designed for 4145m Depth



By: P. Chua

13-Aug-2014

DCN: 3203-00012

REV: A

REF.DES. GP02FLMB

Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OONPAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

### Steady State Launch Tension – Parameter: descent at 1.01 m/s, 2.0 kn, cont.

#	ID	Mooring Element	Length [m]	Buoy [kg]	Diameter [m]	Area [m <sup>2</sup> ]	Ct	Drag [kg]	LaunchTension [kg]	[%]
60	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1995.3	16.6
59	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	1994.8	16.6
58	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	1994.4	16.6
57	274	HR17-4 serial	4.0	88.0	0.500	0.196	0.44	4.61	2087.0	20.9
56	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2086.6	17.4
55	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	2086.1	17.4
54	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2085.7	17.4
53	274	HR17-4 serial	4.0	88.0	0.500	0.196	0.44	4.61	2178.3	21.8
52	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2177.9	18.1
51	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	2177.4	18.1
50	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2177.0	18.1
49	274	HR17-4 serial	4.0	88.0	0.500	0.196	0.44	4.61	2269.6	22.7
48	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2269.2	18.9
47	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	2268.7	18.9
46	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2268.3	18.9
45	274	HR17-4 serial	4.0	88.0	0.500	0.196	0.44	4.61	2360.9	23.6
44	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2360.5	19.7
43	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	2360.0	19.7
42	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2359.6	19.7
41	274	HR17-4 serial	4.0	88.0	0.500	0.196	0.44	4.61	2452.2	24.5
40	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2451.8	20.4
39	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	2451.3	20.4
38	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2450.9	20.4
37	274	HR17-4 serial	4.0	88.0	0.500	0.196	0.44	4.61	2543.5	25.4
36	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2543.1	21.2
35	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	2542.6	21.2
34	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2542.2	21.2
33	274	HR17-4 serial	4.0	88.0	0.500	0.196	0.44	4.61	2634.8	26.3
32	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2634.4	22.0
31	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	2633.9	21.9
30	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2633.5	21.9
29	181	1/2" MR	5.0	-15.2	0.020	0.314	0.09	1.59	2619.9	26.2
28	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2619.5	21.8
27	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	2619.0	21.8
26	33	AS 5t 3/4"	0.1	-1.1	0.080	0.005	1.50	0.41	2618.3	14.5
25	94	Swivel 5t	0.2	-5.3	0.100	0.008	1.20	0.51	2613.5	26.1
24	33	AS 5t 3/4"	0.1	-1.1	0.080	0.005	1.50	0.41	2612.8	14.5
23	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	2612.3	21.8
22	33	AS 5t 3/4"	0.1	-1.1	0.080	0.005	1.50	0.41	2611.7	14.5
21	478	Dual Release	1.0	-61.0	0.300	0.071	0.90	3.43	2554.1	25.5
20	480	1/2" dropchain	0.6	-6.8	0.040	0.001	1.00	0.07	2547.3	15.9
19	76	ML 17t 1-1/4"	0.2	-4.8	0.085	0.006	1.50	0.46	2543.0	5.8
18	34	AS 6t 7/8"	0.1	-1.6	0.088	0.006	1.50	0.49	2541.9	10.6
17	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	2541.4	21.2
16	34	AS 6t 7/8"	0.1	-1.6	0.088	0.006	1.50	0.49	2540.3	10.6
15	183	3/4" MR	5.0	-33.1	0.030	0.471	0.09	2.39	2509.7	10.5



## Global PAPA MFM-B 2014 Mooring Model Analysis

designed for 4145m Depth



By: P. Chua

13-Aug-2014

DCN: 3203-00012

REV: A

REF.DES. GP02FLMB

Source: 13-Aug-2014 10:55:11, ...Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

### Steady State Launch Tension – Parameter: descent at 1.01 m/s, 2.0 kn, cont.

#	ID	Mooring Element	Length [m]	Buoy [kg]	Diameter [m]	Area [m <sup>2</sup> ]	Ct	Drag [kg]	LaunchTension [kg]	[%]
14	32	AS 3t 5/8"	0.1	-0.7	0.064	0.003	1.50	0.26	2509.2	20.9
13	64	EL 6t 7/8"	0.1	-1.0	0.066	0.003	1.50	0.28	2508.5	10.5
12	491	Parachute	0.0	0.0	1.382	1.500	1.33	107.44	2615.9	26.2
11	34	AS 6t 7/8"	0.1	-1.6	0.088	0.006	1.50	0.49	2614.9	10.9
10	113	Nystron-1"	20.7	-2.0	0.026	1.662	0.08	6.74	2619.6	15.6
9	34	AS 6t 7/8"	0.1	-1.6	0.088	0.006	1.50	0.49	2618.6	10.9
8	64	EL 6t 7/8"	0.1	-1.0	0.066	0.003	1.50	0.28	2617.8	10.9
7	491	Parachute	0.0	0.0	1.382	1.500	1.33	107.44	2725.3	27.3
6	34	AS 6t 7/8"	0.1	-1.6	0.088	0.006	1.50	0.49	2724.2	11.4
5	183	3/4" MR	5.0	-33.1	0.030	0.471	0.09	2.39	2693.5	11.2
4	33	AS 5t 3/4"	0.1	-1.1	0.080	0.005	1.50	0.41	2692.9	15.0
3	53	PL 3t 3/4"	0.1	-0.7	0.060	0.003	1.50	0.23	2692.4	22.4
2	34	AS 6t 7/8"	0.1	-1.6	0.088	0.006	1.50	0.49	2691.3	11.2
1	522	double MACE Anch	1.0	-2742.1	1.000	0.785	1.20	50.75	0.0	0.0

Max. 41.2% Launch Tension at:

73	103	5/16" NILSPIN	501.6	-106.5	0.010	14.994	0.05	38.70	1915.6	41.2
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Mass dry / wet w/o Anchor: 4105 kg, -1922 kg

Drag / Friction w/o Anchor: 769.5 kg, 748.6 kg/[m/s]<sup>2</sup>

Dry/Wet MACE Anchor weight: 3170 kg, 2742 kg

Steady State AnchorSpeed : 1.01 m/s, 2.0 kn



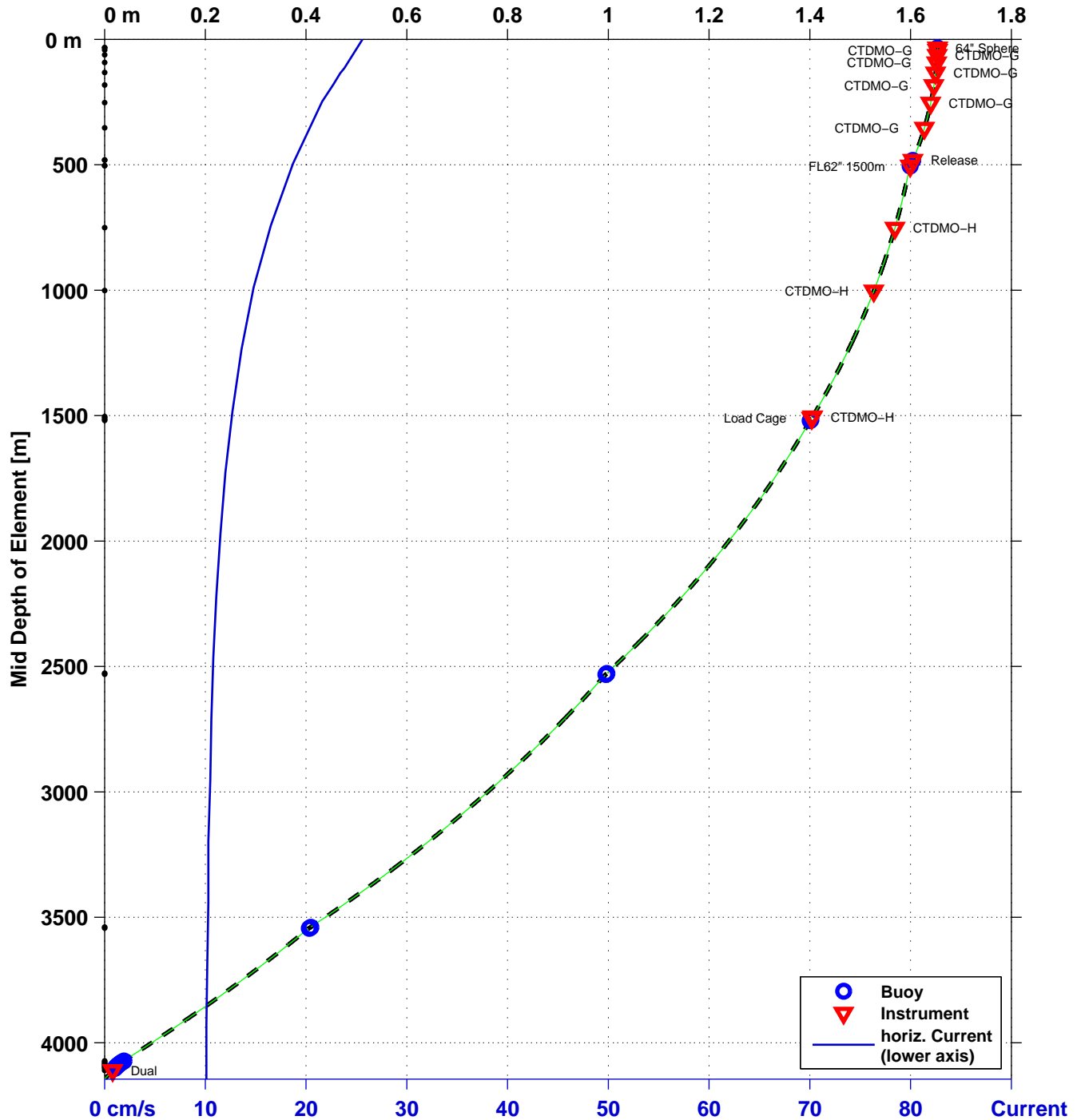
## Global PAPA MFM-B 2014 Mooring Model Analysis designed for 4145m Depth



By: P. Chua	13-Aug-2014	DCN: 3203-00012	REV: A	REF.DES. GP02FLMB
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg  
 Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**Event #001 – Subduction [m]: max. 2m, Top at 34m**  
 Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf



Event #001: Vert / Horiz anchor load: 1921 kg / 62 kg  
 Vert / Horiz anchor safety : 125 % / 120 %,  
 Safe Wet MACE anchor weight: 2402 kg, (max. 500 kg or Horiz. safety)  
 Wet / Dry MACE anchor weight : 2742 kg / 3170 kg



## Global PAPA MFM-B 2014 Mooring Model Analysis designed for 4145m Depth

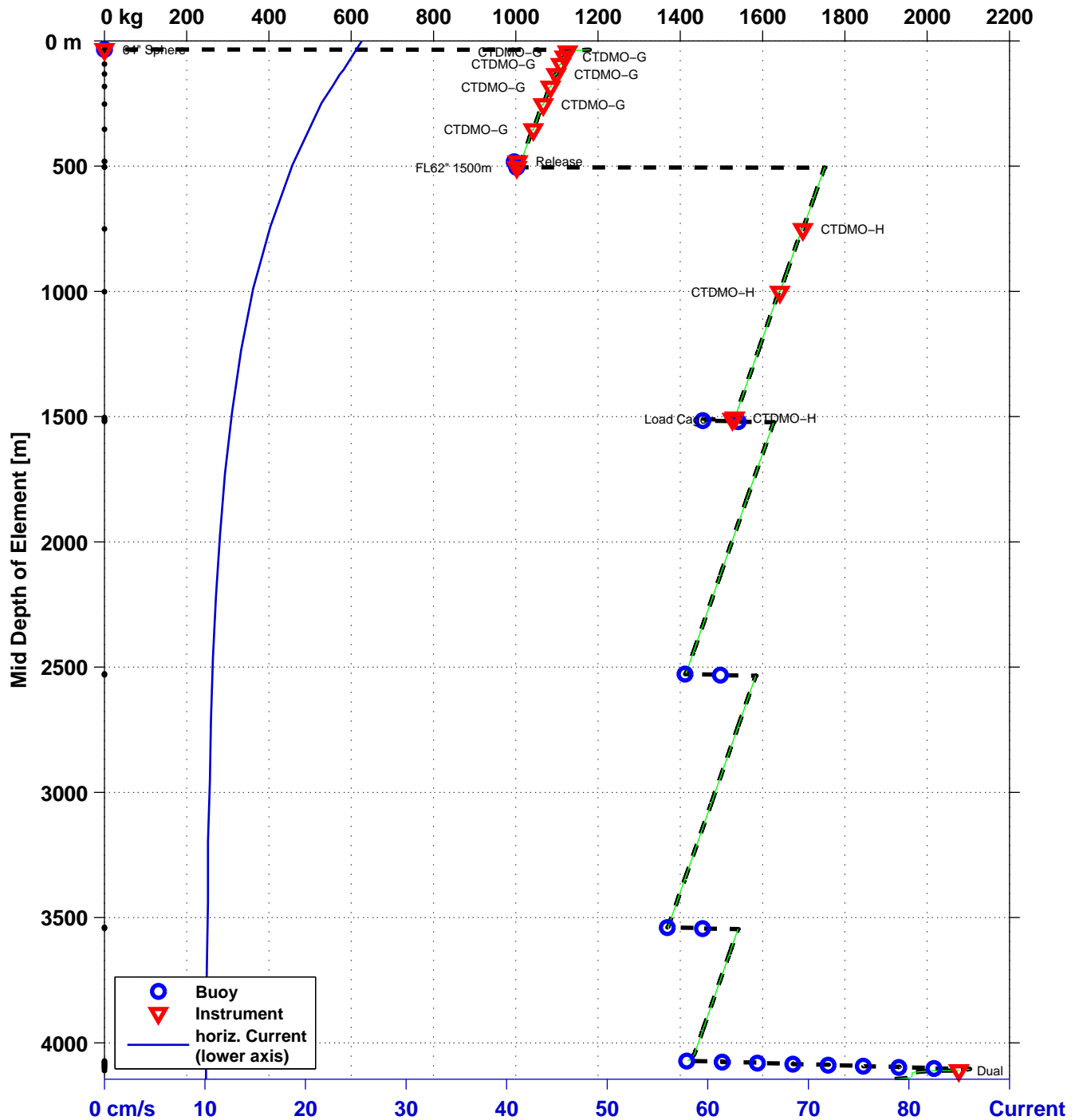


By: P. Chua	13-Aug-2014	DCN: 3203-00012	REV: A	REF.DES. GP02FLMB
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Source: 13-Aug-2014 10:55:11, ...Paul's m-files\OON\PAPA2014Deploy\gp2014FLMBdeployed.cfg  
 Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

### Event #001 – Tension [kg]

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf



Event #001: Vert / Horiz anchor load: 1921 kg / 62 kg  
 Vert / Horiz anchor safety : 125 % / 120 %,  
 Safe Wet MACE anchor weight: 2402 kg, (max. 500 kg or Horiz. safety)  
 Wet / Dry MACE anchor weight : 2742 kg / 3170 kg



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PAPA2014Deploy\gpp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**Event #001 – Simulation Result**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	[%]	Stretch [m]	[%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
156	306	64" Sphere 100	2.3	1180.0	2.087	0.50	0.25	3.4	0.0	0.0	0.00	0.00	33.1	1.7	111.7	0.2
155	17	U-Joint	0.3	-16.3	0.090	1.50	0.25	0.4	1180.0	7.4	0.00	0.00	35.5	1.7	111.7	0.2
154	141	1/2" EM chain	5.0	-35.0	1.000	1.30	0.25	4.2	1163.7	11.6	0.00	0.00	36.2	1.7	111.7	0.4
153	13	ind. term	0.1	-2.4	0.005	1.50	0.25	0.0	1128.7	7.1	0.00	0.00	40.7	1.7	111.7	0.4
152	103	5/16" NILSPIN	3.0	-0.6	0.029	1.10	0.25	0.1	1126.3	24.2	0.01	0.25	41.3	1.7	111.7	0.4
151	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.25	0.2	1125.7	11.3	0.00	0.00	43.8	1.7	111.7	0.4
150	103	5/16" NILSPIN	20.0	-4.3	0.191	1.10	0.25	0.7	1122.9	24.1	0.05	0.25	44.3	1.7	111.7	0.5
149	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.25	0.2	1118.6	11.2	0.00	0.00	63.8	1.7	111.5	0.5
148	103	5/16" NILSPIN	30.1	-6.4	0.286	1.10	0.24	1.0	1115.8	24.0	0.07	0.25	64.3	1.7	111.5	0.5
147	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.24	0.2	1109.4	11.1	0.00	0.00	93.9	1.7	111.3	0.5
146	103	5/16" NILSPIN	40.1	-8.5	0.381	1.10	0.24	1.2	1106.6	23.8	0.10	0.24	94.4	1.7	111.3	0.6
145	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.23	0.2	1098.1	11.0	0.00	0.00	134.0	1.6	110.9	0.6
144	103	5/16" NILSPIN	50.1	-10.6	0.476	1.10	0.23	1.5	1095.3	23.5	0.12	0.24	134.5	1.6	110.9	0.7
143	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.23	0.2	1084.7	10.8	0.00	0.00	184.1	1.6	110.3	0.7
142	103	5/16" NILSPIN	70.2	-14.9	0.667	1.10	0.22	1.9	1081.9	23.3	0.17	0.24	184.6	1.6	110.3	0.8
141	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.22	0.1	1066.9	10.7	0.00	0.00	254.3	1.6	109.3	0.8
140	103	5/16" NILSPIN	100.2	-21.3	0.953	1.10	0.21	2.4	1064.1	22.9	0.23	0.23	254.8	1.6	109.3	1.0
139	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.20	0.1	1042.8	10.4	0.00	0.00	354.5	1.6	107.7	1.0
138	103	5/16" NILSPIN	127.3	-27.1	1.210	1.10	0.20	2.7	1040.0	22.4	0.29	0.23	355.0	1.6	107.7	1.2
137	13	ind. term	0.1	-2.4	0.005	1.50	0.19	0.0	1013.0	6.3	0.00	0.00	481.8	1.6	105.3	1.2
136	15	coupler ec	0.2	-6.0	0.020	1.50	0.19	0.1	1010.6	6.3	0.00	0.00	482.0	1.6	105.3	1.2
134	479	Release Float	1.0	0.0	0.592	1.20	0.19	1.3	1004.6	10.0	0.00	0.00	482.6	1.6	105.3	1.2
132	15	coupler ec	0.2	-6.0	0.020	1.50	0.19	0.1	1004.6	6.3	0.00	0.00	483.2	1.6	105.3	1.3
131	13	ind. term	0.1	-2.4	0.005	1.50	0.19	0.0	998.6	6.2	0.00	0.00	483.3	1.6	105.3	1.3
130	256	CF14-1000	0.0	13.0	0.225	0.50	0.19	0.2	996.2	16.6	0.00	0.00	483.4	1.6	105.3	1.3
128	103	5/16" NILSPIN	10.0	-2.1	0.095	1.10	0.19	0.2	1009.2	21.7	0.02	0.22	483.9	1.6	105.3	1.3
127	103	5/16" NILSPIN	10.0	-2.1	0.095	1.10	0.19	0.2	1007.1	21.6	0.02	0.22	493.9	1.6	105.1	1.3
126	13	ind. term	0.1	-2.4	0.005	1.50	0.19	0.0	1004.9	6.3	0.00	0.00	503.4	1.6	104.9	1.3
125	326	FL62" 1500m ADC	2.8	750.0	1.887	0.50	0.19	1.7	1002.5	10.0	0.00	0.00	504.9	1.6	104.9	1.3



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
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<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**Event #001 - Simulation Result, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	[%]	Stretch [m]	[%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
124	13	ind. term	0.1	-2.4	0.005	1.50	0.19	0.0	1752.5	11.0	0.00	0.00	506.4	1.6	104.8	0.8
123	103	5/16" NILSPIN	245.9	-52.2	2.335	1.10	0.18	4.1	1750.1	37.6	0.94	0.38	506.9	1.6	104.8	1.0
122	375	CTDMO-H P3500m	0.0	-2.8	0.042	1.40	0.16	0.1	1697.9	17.0	0.00	0.00	752.3	1.6	101.0	1.0
121	103	5/16" NILSPIN	250.9	-53.3	2.382	1.10	0.16	3.3	1695.1	36.4	0.92	0.37	752.8	1.6	101.0	1.1
120	375	CTDMO-H P3500m	0.0	-2.8	0.042	1.40	0.15	0.1	1641.8	16.4	0.00	0.00	1003.2	1.5	96.4	1.1
119	103	5/16" NILSPIN	250.9	-53.3	2.382	1.10	0.14	2.7	1639.0	35.2	0.89	0.36	1003.7	1.5	96.4	1.3
118	103	5/16" NILSPIN	250.9	-53.3	2.382	1.10	0.13	2.4	1585.8	34.1	0.86	0.35	1254.5	1.5	91.2	1.4
117	375	CTDMO-H P3500m	0.0	-2.8	0.042	1.40	0.13	0.0	1532.6	15.3	0.00	0.00	1504.8	1.4	85.4	1.4
116	103	5/16" NILSPIN	5.0	-1.1	0.048	1.10	0.13	0.0	1529.8	32.9	0.02	0.34	1505.3	1.4	85.4	1.4
115	13	ind. term	0.1	-2.4	0.005	1.50	0.13	0.0	1528.7	9.6	0.00	0.00	1509.9	1.4	85.3	1.4
114	300	Load Cage	1.5	-60.0	0.300	1.30	0.13	0.3	1526.3	15.3	0.00	0.00	1510.7	1.4	85.3	1.4
113	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.13	0.0	1466.3	12.2	0.00	0.00	1511.5	1.4	85.2	1.5
112	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.13	0.0	1465.7	12.2	0.00	0.00	1511.6	1.4	85.2	1.5
111	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.13	0.0	1464.9	12.2	0.00	0.00	1511.7	1.4	85.2	1.5
110	181	1/2" MR	2.5	-7.6	0.050	1.60	0.13	0.1	1464.3	14.6	0.00	0.00	1512.1	1.4	85.2	1.5
109	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.13	0.0	1456.7	12.1	0.00	0.00	1514.2	1.4	85.1	1.5
108	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.13	0.0	1456.0	12.1	0.00	0.00	1514.3	1.4	85.1	1.5
107	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.13	0.0	1455.3	12.1	0.00	0.00	1514.4	1.4	85.1	1.5
106	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.13	0.5	1454.6	14.5	0.00	0.00	1516.4	1.4	85.1	1.5
105	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.13	0.0	1542.6	12.9	0.00	0.00	1518.5	1.4	85.0	1.4
104	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.13	0.0	1541.9	12.8	0.00	0.00	1518.6	1.4	85.0	1.4
103	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.13	0.0	1541.2	12.8	0.00	0.00	1518.6	1.4	85.0	1.4
102	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.13	0.5	1540.5	15.4	0.00	0.00	1520.7	1.4	85.0	1.4
101	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.13	0.0	1628.5	13.6	0.00	0.00	1522.7	1.4	84.9	1.4
100	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.13	0.0	1627.8	13.6	0.00	0.00	1522.8	1.4	84.9	1.4
99	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.13	0.0	1627.1	13.6	0.00	0.00	1522.9	1.4	84.9	1.4
97	103	5/16" NILSPIN	1003.4	-213.0	9.530	1.10	0.11	7.3	1626.4	35.0	3.37	0.34	1523.4	1.4	84.9	1.9
96	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.11	0.0	1413.5	11.8	0.00	0.00	2525.9	1.0	56.6	1.9
95	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.11	0.0	1412.8	11.8	0.00	0.00	2526.0	1.0	56.6	1.9



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**Event #001 - Simulation Result, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	[%]	Stretch [m]	[%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
94	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.11	0.0	1412.1	11.8	0.00	0.00	2526.1	1.0	56.6	1.9
93	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.11	0.4	1411.4	14.1	0.00	0.00	2528.1	1.0	56.6	1.9
92	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.11	0.0	1499.4	12.5	0.00	0.00	2530.2	1.0	56.5	1.8
91	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.11	0.0	1498.7	12.5	0.00	0.00	2530.3	1.0	56.5	1.8
90	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.11	0.0	1498.0	12.5	0.00	0.00	2530.3	1.0	56.5	1.8
89	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.11	0.4	1497.3	15.0	0.00	0.00	2532.4	1.0	56.5	1.8
88	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.11	0.0	1585.3	13.2	0.00	0.00	2534.4	1.0	56.4	1.7
87	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.11	0.0	1584.6	13.2	0.00	0.00	2534.5	1.0	56.4	1.7
86	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.11	0.0	1583.9	13.2	0.00	0.00	2534.6	1.0	56.4	1.7
85	103	5/16" NILSPIN	1003.3	-213.0	9.530	1.10	0.10	6.1	1583.2	34.0	3.27	0.33	2535.1	1.0	56.4	2.2
84	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1370.4	11.4	0.00	0.00	3537.3	0.4	22.3	2.2
83	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	1369.7	11.4	0.00	0.00	3537.4	0.4	22.3	2.2
82	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1369.0	11.4	0.00	0.00	3537.5	0.4	22.3	2.2
81	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.10	0.3	1368.3	13.7	0.00	0.00	3539.6	0.4	22.2	2.2
80	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1456.2	12.1	0.00	0.00	3541.6	0.4	22.1	2.1
79	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	1455.6	12.1	0.00	0.00	3541.7	0.4	22.1	2.1
78	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1454.8	12.1	0.00	0.00	3541.8	0.4	22.1	2.1
77	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.10	0.3	1454.2	14.5	0.00	0.00	3543.8	0.4	22.1	2.1
76	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1542.1	12.9	0.00	0.00	3545.8	0.4	21.9	2.0
75	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	1541.5	12.8	0.00	0.00	3545.9	0.4	21.9	2.0
74	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1540.7	12.8	0.00	0.00	3546.0	0.4	21.9	2.0
73	103	5/16" NILSPIN	501.6	-106.5	4.765	1.10	0.10	2.9	1540.1	33.1	1.65	0.33	3546.5	0.4	21.9	2.3
72	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1433.6	11.9	0.00	0.00	4047.4	0.1	3.3	2.3
71	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	1433.0	11.9	0.00	0.00	4047.5	0.1	3.3	2.3
70	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1432.2	11.9	0.00	0.00	4047.5	0.1	3.3	2.3
69	103	5/16" NILSPIN	20.1	-4.3	0.191	1.10	0.10	0.1	1431.6	30.8	0.06	0.32	4048.1	0.1	3.3	2.3
68	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1427.3	11.9	0.00	0.00	4067.7	0.0	2.5	2.3
67	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	1426.7	11.9	0.00	0.00	4067.7	0.0	2.5	2.3
66	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1425.9	11.9	0.00	0.00	4067.8	0.0	2.5	2.3





**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**Event #001 - Simulation Result, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	[%]	Stretch [m]	[%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
65	181	1/2" MR	2.5	-7.6	0.050	1.60	0.10	0.0	1425.3	14.3	0.00	0.00	4068.3	0.0	2.5	2.3
64	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1417.7	11.8	0.00	0.00	4070.4	0.0	2.4	2.3
63	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	1417.0	11.8	0.00	0.00	4070.5	0.0	2.4	2.3
62	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1416.3	11.8	0.00	0.00	4070.6	0.0	2.4	2.3
61	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.10	0.3	1415.6	14.2	0.00	0.00	4072.6	0.0	2.4	2.3
60	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1503.5	12.5	0.00	0.00	4074.6	0.0	2.2	2.2
59	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	1502.9	12.5	0.00	0.00	4074.7	0.0	2.2	2.2
58	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1502.1	12.5	0.00	0.00	4074.8	0.0	2.2	2.2
57	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.10	0.3	1501.5	15.0	0.00	0.00	4076.9	0.0	2.2	2.2
56	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1589.4	13.2	0.00	0.00	4078.9	0.0	2.0	2.1
55	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	1588.8	13.2	0.00	0.00	4079.0	0.0	2.0	2.1
54	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1588.0	13.2	0.00	0.00	4079.1	0.0	2.0	2.1
53	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.10	0.3	1587.4	15.9	0.00	0.00	4081.1	0.0	2.0	2.1
52	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1675.3	14.0	0.00	0.00	4083.1	0.0	1.9	2.0
51	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	1674.6	14.0	0.00	0.00	4083.2	0.0	1.9	2.0
50	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1673.9	13.9	0.00	0.00	4083.3	0.0	1.9	2.0
49	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.10	0.3	1673.2	16.7	0.00	0.00	4085.3	0.0	1.9	2.0
48	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1761.2	14.7	0.00	0.00	4087.4	0.0	1.7	1.9
47	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	1760.5	14.7	0.00	0.00	4087.5	0.0	1.7	1.9
46	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1759.8	14.7	0.00	0.00	4087.5	0.0	1.7	1.9
45	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.10	0.3	1759.1	17.6	0.00	0.00	4089.6	0.0	1.7	1.9
44	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1847.1	15.4	0.00	0.00	4091.6	0.0	1.6	1.8
43	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	1846.4	15.4	0.00	0.00	4091.7	0.0	1.6	1.8
42	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1845.7	15.4	0.00	0.00	4091.8	0.0	1.6	1.8
41	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.10	0.3	1845.0	18.5	0.00	0.00	4093.8	0.0	1.6	1.8
40	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1933.0	16.1	0.00	0.00	4095.8	0.0	1.5	1.7
39	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	1932.3	16.1	0.00	0.00	4095.9	0.0	1.5	1.7
38	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1931.6	16.1	0.00	0.00	4096.0	0.0	1.5	1.7
37	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.10	0.3	1930.9	19.3	0.00	0.00	4098.1	0.0	1.5	1.7



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**Event #001 - Simulation Result, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	[%]	Stretch [m]	[%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
36	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	2018.9	16.8	0.00	0.00	4100.1	0.0	1.3	1.7
35	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	2018.2	16.8	0.00	0.00	4100.2	0.0	1.3	1.7
34	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	2017.5	16.8	0.00	0.00	4100.3	0.0	1.3	1.7
33	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.10	0.3	2016.8	20.2	0.00	0.00	4102.3	0.0	1.3	1.7
32	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	2104.8	17.5	0.00	0.00	4104.3	0.0	1.2	1.6
31	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	2104.1	17.5	0.00	0.00	4104.4	0.0	1.2	1.6
30	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	2103.4	17.5	0.00	0.00	4104.5	0.0	1.2	1.6
29	181	1/2" MR	5.0	-15.2	0.100	1.60	0.10	0.1	2102.7	21.0	0.00	0.00	4105.0	0.0	1.2	1.6
28	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	2087.5	17.4	0.00	0.00	4109.6	0.0	1.1	1.6
27	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	2086.9	17.4	0.00	0.00	4109.7	0.0	1.1	1.6
26	33	AS 5t 3/4"	0.1	-1.1	0.010	1.50	0.10	0.0	2086.1	11.6	0.00	0.00	4109.8	0.0	1.1	1.6
25	94	Swivel 5t	0.2	-5.3	0.025	1.20	0.10	0.0	2085.1	20.9	0.00	0.00	4109.9	0.0	1.1	1.6
24	33	AS 5t 3/4"	0.1	-1.1	0.010	1.50	0.10	0.0	2079.7	11.6	0.00	0.00	4110.1	0.0	1.0	1.6
23	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	2078.6	17.3	0.00	0.00	4110.2	0.0	1.0	1.6
22	33	AS 5t 3/4"	0.1	-1.1	0.010	1.50	0.10	0.0	2077.9	11.5	0.00	0.00	4110.2	0.0	1.0	1.6
21	478	Dual Release	1.0	-61.0	0.288	1.20	0.10	0.2	2076.8	20.8	0.00	0.00	4110.8	0.0	1.0	1.6
20	480	1/2" dropchain	0.6	-6.8	0.024	1.60	0.10	0.0	2015.9	12.6	0.00	0.00	4111.6	0.0	1.0	1.7
19	76	ML 17t 1-1/4"	0.2	-4.8	0.026	1.50	0.10	0.0	2009.1	4.6	0.00	0.00	4112.1	0.0	1.0	1.7
18	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.10	0.0	2004.2	8.4	0.00	0.00	4112.2	0.0	1.0	1.7
17	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	2002.7	16.7	0.00	0.00	4112.3	0.0	1.0	1.7
16	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.10	0.0	2001.9	8.3	0.00	0.00	4112.4	0.0	1.0	1.7
15	183	3/4" MR	5.0	-33.1	0.150	1.60	0.10	0.1	2000.4	8.3	0.00	0.00	4113.0	0.0	1.0	1.7
14	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.10	0.0	1967.3	16.4	0.00	0.00	4117.5	0.0	0.8	1.8
13	64	EL 6t 7/8"	0.1	-1.0	0.012	1.50	0.10	0.0	1966.7	8.2	0.00	0.00	4117.6	0.0	0.8	1.8
12	491	Parachute	0.0	0.0	1.500	0.50	0.10	0.4	1965.6	19.7	0.00	0.00	4117.7	0.0	0.8	1.8
11	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.10	0.0	1965.6	8.2	0.00	0.00	4117.7	0.0	0.8	1.8
10	113	Nystron-1"	20.7	-2.0	0.520	1.30	0.10	0.4	1964.1	11.7	0.70	3.51	4118.3	0.0	0.8	1.8
9	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.10	0.0	1962.1	8.2	0.00	0.00	4138.5	0.0	0.2	1.8
8	64	EL 6t 7/8"	0.1	-1.0	0.012	1.50	0.10	0.0	1960.6	8.2	0.00	0.00	4138.6	0.0	0.2	1.8



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**Event #001 - Simulation Result, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	Tension [%]	Stretch [m]	Stretch [%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
7	491	Parachute	0.0	0.0	1.500	0.50	0.10	0.4	1959.6	19.6	0.00	0.00	4138.6	0.0	0.2	1.8
6	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.10	0.0	1959.6	8.2	0.00	0.00	4138.7	0.0	0.2	1.8
5	183	3/4" MR	5.0	-33.1	0.150	1.60	0.10	0.1	1958.0	8.2	0.00	0.00	4139.2	0.0	0.2	1.8
4	33	AS 5t 3/4"	0.1	-1.1	0.010	1.50	0.10	0.0	1925.0	10.7	0.00	0.00	4143.8	0.0	0.0	1.8
3	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.10	0.0	1923.9	16.0	0.00	0.00	4143.9	0.0	0.0	1.8
2	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.10	0.0	1923.2	8.0	0.00	0.00	4144.0	0.0	0.0	1.8
1	522	double MACE Anch	1.0	-2742.1	1.200	1.20	0.10	0.8	1921.6	32.0	0.00	0.00	4145.0	0.0	0.0	0.0

Max. 37.6% Static Tension at:

123	103	5/16" NILSPIN	245.9	-52.2	2.335	1.10	0.18	4.1	1750.1	37.6	0.94	0.38	506.9	1.6	104.8	1.0
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Vert/Horiz Anchor Load : 1921 kg / 62 kg  
 Wet MACE Anchor Weight : 2742 kg  
 Safe MACE Anchor Weight : 2402 kg



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**Event #001 – Simulation Parameter**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m^2	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
156	306	64" Sphere	2.087	2.087	2.087	0.50	0.50	0.50	0.25	3.4	0.0	0.0	0.0	1180.0	0.0	0.0	0.0	0.2
155	17	U-Joint	0.090	0.090	0.000	1.50	1.50	1.50	0.25	0.4	0.0	0.0	-0.0	-16.3	3.4	0.0	1180.0	0.2
154	141	1/2" EM chai	1.000	1.000	0.005	1.30	1.30	1.00	0.25	4.2	0.0	0.0	-0.0	-35.0	5.6	0.0	1149.7	0.4
153	13	ind. term	0.005	0.005	0.000	1.50	1.50	1.50	0.25	0.0	0.0	0.0	-0.0	-2.4	8.1	0.0	1128.7	0.4
152	103	5/16" NILSPI	0.029	0.029	0.000	1.10	1.10	0.00	0.25	0.1	0.0	0.0	-0.0	-0.6	8.2	0.0	1126.1	0.4
151	374	CTDMO-G P100	0.042	0.042	0.000	1.40	1.40	1.00	0.25	0.2	0.0	0.0	-0.0	-2.8	8.2	0.0	1125.6	0.4
150	103	5/16" NILSPI	0.191	0.191	0.001	1.10	1.10	0.00	0.25	0.7	0.0	0.0	-0.0	-4.3	8.8	0.0	1120.8	0.5
149	374	CTDMO-G P100	0.042	0.042	0.000	1.40	1.40	1.00	0.25	0.2	0.0	0.0	-0.0	-2.8	9.1	0.0	1118.6	0.5
148	103	5/16" NILSPI	0.286	0.286	0.003	1.10	1.10	0.00	0.24	1.0	0.0	0.0	-0.0	-6.4	9.8	0.0	1112.7	0.5
147	374	CTDMO-G P100	0.042	0.042	0.000	1.40	1.40	1.00	0.24	0.2	0.0	0.0	-0.0	-2.8	10.3	0.0	1109.4	0.5
146	103	5/16" NILSPI	0.381	0.381	0.004	1.10	1.10	0.00	0.24	1.2	0.0	0.0	-0.0	-8.5	11.1	0.0	1102.4	0.6
145	374	CTDMO-G P100	0.042	0.042	0.000	1.40	1.40	1.00	0.23	0.2	0.0	0.0	-0.0	-2.8	11.7	0.0	1098.0	0.6
144	103	5/16" NILSPI	0.476	0.476	0.006	1.10	1.10	0.00	0.23	1.5	0.0	0.0	-0.0	-10.7	12.6	0.0	1090.0	0.7
143	374	CTDMO-G P100	0.042	0.042	0.001	1.40	1.40	1.00	0.23	0.2	0.0	0.0	-0.0	-2.8	13.3	0.0	1084.6	0.7
142	103	5/16" NILSPI	0.667	0.667	0.009	1.10	1.10	0.00	0.22	1.9	0.0	0.0	-0.0	-14.9	14.4	0.0	1074.4	0.8
141	374	CTDMO-G P100	0.042	0.042	0.001	1.40	1.40	1.00	0.22	0.1	0.0	0.0	-0.0	-2.8	15.4	0.0	1066.8	0.8
140	103	5/16" NILSPI	0.953	0.953	0.015	1.10	1.10	0.00	0.21	2.4	0.0	0.0	-0.0	-21.3	16.7	0.0	1053.5	1.0
139	374	CTDMO-G P100	0.042	0.042	0.001	1.40	1.40	1.00	0.20	0.1	0.0	0.0	-0.0	-2.8	17.9	0.0	1042.7	1.0
138	103	5/16" NILSPI	1.210	1.210	0.023	1.10	1.10	0.00	0.20	2.7	0.0	0.0	-0.1	-27.1	19.4	0.0	1026.4	1.2
137	13	ind. term	0.005	0.005	0.000	1.50	1.50	1.50	0.19	0.0	0.0	0.0	-0.0	-2.4	20.7	0.0	1012.8	1.2
136	15	coupler ec	0.020	0.020	0.000	1.50	1.50	1.50	0.19	0.1	0.0	0.0	-0.0	-6.0	20.7	0.0	1010.4	1.2
134	479	Release Floa	0.592	0.592	0.012	1.20	1.20	0.90	0.19	1.3	0.0	0.0	-0.0	0.0	20.8	0.0	1004.4	1.2
132	15	coupler ec	0.020	0.020	0.000	1.50	1.50	1.50	0.19	0.1	0.0	0.0	-0.0	-6.0	22.1	0.0	1004.4	1.3
131	13	ind. term	0.005	0.005	0.000	1.50	1.50	1.50	0.19	0.0	0.0	0.0	-0.0	-2.4	22.2	0.0	998.4	1.3
130	256	CF14-1000	0.225	0.225	0.005	0.50	0.50	0.40	0.19	0.2	0.0	0.0	-0.0	13.0	22.2	0.0	996.0	1.3
128	103	5/16" NILSPI	0.095	0.095	0.002	1.10	1.10	0.00	0.19	0.2	0.0	0.0	-0.0	-2.1	22.5	0.0	1008.0	1.3
127	103	5/16" NILSPI	0.095	0.095	0.002	1.10	1.10	0.00	0.19	0.2	0.0	0.0	-0.0	-2.1	22.7	0.0	1005.9	1.3
126	13	ind. term	0.005	0.005	0.000	1.50	1.50	1.50	0.19	0.0	0.0	0.0	-0.0	-2.4	22.8	0.0	1004.7	1.3
125	326	FL62" 1500m	1.887	1.887	1.887	0.50	0.50	0.50	0.19	1.7	0.0	0.0	0.0	750.0	22.8	0.0	1002.3	1.3



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**Event #001 – Simulation Parameter, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m <sup>2</sup>	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
124	13	ind. term	0.005	0.005	0.000	1.50	1.50	1.50	0.19	0.0	0.0	0.0	-0.0	-2.4	24.5	0.0	1752.3	0.8
123	103	5/16" NILSPI	2.335	2.335	0.036	1.10	1.10	0.00	0.18	4.1	0.0	0.0	-0.1	-52.2	26.7	0.0	1723.9	1.0
122	375	CTDMO-H P350	0.042	0.042	0.001	1.40	1.40	1.00	0.16	0.1	0.0	0.0	-0.0	-2.8	28.6	0.0	1697.6	1.0
121	103	5/16" NILSPI	2.382	2.382	0.043	1.10	1.10	0.00	0.16	3.3	0.0	0.0	-0.1	-53.3	30.5	0.0	1668.3	1.1
120	375	CTDMO-H P350	0.042	0.042	0.001	1.40	1.40	1.00	0.15	0.1	0.0	0.0	-0.0	-2.8	32.1	0.0	1641.5	1.1
119	103	5/16" NILSPI	2.382	2.382	0.050	1.10	1.10	0.00	0.14	2.7	0.0	0.0	-0.1	-53.3	33.5	0.0	1612.2	1.3
118	103	5/16" NILSPI	2.382	2.382	0.055	1.10	1.10	0.00	0.13	2.4	0.0	0.0	-0.1	-53.3	36.1	0.0	1558.9	1.4
117	375	CTDMO-H P350	0.042	0.042	0.001	1.40	1.40	1.00	0.13	0.0	0.0	0.0	-0.0	-2.8	37.2	0.0	1532.1	1.4
116	103	5/16" NILSPI	0.048	0.048	0.001	1.10	1.10	0.00	0.13	0.0	0.0	0.0	-0.0	-1.1	37.3	0.0	1528.9	1.4
115	13	ind. term	0.005	0.005	0.000	1.50	1.50	1.50	0.13	0.0	0.0	0.0	-0.0	-2.4	37.3	0.0	1528.2	1.4
114	300	Load Cage	0.300	0.300	0.007	1.30	1.30	0.90	0.13	0.3	0.0	0.0	-0.0	-60.0	37.3	0.0	1525.8	1.4
113	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.13	0.0	0.0	0.0	-0.0	-0.7	37.7	0.0	1465.8	1.5
112	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.13	0.0	0.0	0.0	-0.0	-0.7	37.7	0.0	1465.2	1.5
111	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.13	0.0	0.0	0.0	-0.0	-0.7	37.7	0.0	1464.4	1.5
110	181	1/2" MR	0.050	0.050	0.001	1.60	1.60	1.00	0.13	0.1	0.0	0.0	-0.0	-7.6	37.7	0.0	1461.2	1.5
109	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.13	0.0	0.0	0.0	-0.0	-0.7	37.8	0.0	1456.2	1.5
108	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.13	0.0	0.0	0.0	-0.0	-0.7	37.8	0.0	1455.5	1.5
107	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.13	0.0	0.0	0.0	-0.0	-0.7	37.8	0.0	1454.8	1.5
106	274	HR17-4 seria	1.000	1.000	0.026	0.60	0.60	1.06	0.13	0.5	0.0	0.0	-0.0	88.0	37.8	0.0	1454.1	1.5
105	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.13	0.0	0.0	0.0	-0.0	-0.7	38.3	0.0	1542.1	1.4
104	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.13	0.0	0.0	0.0	-0.0	-0.7	38.3	0.0	1541.4	1.4
103	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.13	0.0	0.0	0.0	-0.0	-0.7	38.3	0.0	1540.7	1.4
102	274	HR17-4 seria	1.000	1.000	0.025	0.60	0.60	1.06	0.13	0.5	0.0	0.0	-0.0	88.0	38.3	0.0	1540.0	1.4
101	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.13	0.0	0.0	0.0	-0.0	-0.7	38.8	0.0	1628.0	1.4
100	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.13	0.0	0.0	0.0	-0.0	-0.7	38.8	0.0	1627.4	1.4
99	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.13	0.0	0.0	0.0	-0.0	-0.7	38.8	0.0	1626.6	1.4
97	103	5/16" NILSPI	9.526	9.530	0.269	1.10	1.10	0.00	0.11	7.3	0.0	0.0	-0.2	-213.0	42.7	0.0	1519.5	1.9
96	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.11	0.0	0.0	0.0	-0.0	-0.7	46.2	0.0	1412.8	1.9
95	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.11	0.0	0.0	0.0	-0.0	-0.7	46.2	0.0	1412.1	1.9



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**Event #001 – Simulation Parameter, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m <sup>2</sup>	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
94	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.11	0.0	0.0	0.0	-0.0	-0.7	46.2	0.0	1411.4	1.9
93	274	HR17-4 seria	0.999	1.000	0.033	0.60	0.60	1.06	0.11	0.4	0.0	0.0	-0.0	88.0	46.2	0.0	1410.7	1.9
92	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.11	0.0	0.0	0.0	-0.0	-0.7	46.6	0.0	1498.7	1.8
91	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.11	0.0	0.0	0.0	-0.0	-0.7	46.6	0.0	1498.0	1.8
90	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.11	0.0	0.0	0.0	-0.0	-0.7	46.6	0.0	1497.3	1.8
89	274	HR17-4 seria	1.000	1.000	0.031	0.60	0.60	1.06	0.11	0.4	0.0	0.0	-0.0	88.0	46.6	0.0	1496.6	1.8
88	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.11	0.0	0.0	0.0	-0.0	-0.7	47.0	0.0	1584.6	1.7
87	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.11	0.0	0.0	0.0	-0.0	-0.7	47.0	0.0	1583.9	1.7
86	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.11	0.0	0.0	0.0	-0.0	-0.7	47.0	0.0	1583.2	1.7
85	103	5/16" NILSPI	9.524	9.530	0.324	1.10	1.10	0.00	0.10	6.1	0.0	0.0	-0.2	-213.0	50.0	0.0	1476.0	2.2
84	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	53.0	0.0	1369.3	2.2
83	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	53.0	0.0	1368.7	2.2
82	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	53.0	0.0	1367.9	2.2
81	274	HR17-4 seria	0.999	1.000	0.039	0.60	0.60	1.06	0.10	0.3	0.0	0.0	-0.0	88.0	53.1	0.0	1367.3	2.2
80	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	53.4	0.0	1455.3	2.1
79	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	53.4	0.0	1454.6	2.1
78	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	53.4	0.0	1453.9	2.1
77	274	HR17-4 seria	0.999	1.000	0.037	0.60	0.60	1.06	0.10	0.3	0.0	0.0	-0.0	88.0	53.4	0.0	1453.2	2.1
76	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	53.7	0.0	1541.2	2.0
75	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	53.8	0.0	1540.5	2.0
74	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	53.8	0.0	1539.8	2.0
73	103	5/16" NILSPI	4.762	4.765	0.177	1.10	1.10	0.00	0.10	2.9	0.0	0.0	-0.1	-106.5	55.2	0.0	1485.9	2.3
72	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	56.6	0.0	1432.5	2.3
71	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	56.6	0.0	1431.9	2.3
70	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	56.7	0.0	1431.1	2.3
69	103	5/16" NILSPI	0.190	0.191	0.008	1.10	1.10	0.00	0.10	0.1	0.0	0.0	-0.0	-4.3	56.7	0.0	1428.4	2.3
68	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	56.8	0.0	1426.2	2.3
67	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	56.8	0.0	1425.5	2.3
66	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	56.8	0.0	1424.8	2.3



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PAPA2014Deploy\gpp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**Event #001 – Simulation Parameter, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m <sup>2</sup>	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
65	181	1/2" MR	0.050	0.050	0.002	1.60	1.60	1.00	0.10	0.0	0.0	0.0	-0.0	-7.6	56.8	0.0	1421.6	2.3
64	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	56.8	0.0	1416.5	2.3
63	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	56.8	0.0	1415.9	2.3
62	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	56.8	0.0	1415.1	2.3
61	274	HR17-4 seria	0.999	1.000	0.040	0.60	0.60	1.06	0.10	0.3	0.0	0.0	-0.0	88.0	56.9	0.0	1414.5	2.3
60	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	57.2	0.0	1502.4	2.2
59	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	57.2	0.0	1501.8	2.2
58	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	57.2	0.0	1501.0	2.2
57	274	HR17-4 seria	0.999	1.000	0.038	0.60	0.60	1.06	0.10	0.3	0.0	0.0	-0.0	88.0	57.2	0.0	1500.4	2.2
56	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	57.5	0.0	1588.4	2.1
55	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	57.5	0.0	1587.7	2.1
54	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	57.5	0.0	1587.0	2.1
53	274	HR17-4 seria	0.999	1.000	0.036	0.60	0.60	1.06	0.10	0.3	0.0	0.0	-0.0	88.0	57.5	0.0	1586.3	2.1
52	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	57.9	0.0	1674.3	2.0
51	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	57.9	0.0	1673.6	2.0
50	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	57.9	0.0	1672.9	2.0
49	274	HR17-4 seria	0.999	1.000	0.035	0.60	0.60	1.06	0.10	0.3	0.0	0.0	-0.0	88.0	57.9	0.0	1672.2	2.0
48	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	58.2	0.0	1760.2	1.9
47	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	58.2	0.0	1759.6	1.9
46	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	58.2	0.0	1758.8	1.9
45	274	HR17-4 seria	0.999	1.000	0.033	0.60	0.60	1.06	0.10	0.3	0.0	0.0	-0.0	88.0	58.2	0.0	1758.2	1.9
44	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	58.6	0.0	1846.2	1.8
43	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	58.6	0.0	1845.5	1.8
42	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	58.6	0.0	1844.8	1.8
41	274	HR17-4 seria	0.999	1.000	0.032	0.60	0.60	1.06	0.10	0.3	0.0	0.0	-0.0	88.0	58.6	0.0	1844.1	1.8
40	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	58.9	0.0	1932.1	1.7
39	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	58.9	0.0	1931.4	1.7
38	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	58.9	0.0	1930.7	1.7
37	274	HR17-4 seria	1.000	1.000	0.031	0.60	0.60	1.06	0.10	0.3	0.0	0.0	-0.0	88.0	58.9	0.0	1930.0	1.7



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**Event #001 – Simulation Parameter, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m <sup>2</sup>	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
36	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	59.3	0.0	2018.0	1.7
35	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	59.3	0.0	2017.3	1.7
34	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	59.3	0.0	2016.6	1.7
33	274	HR17-4 seria	1.000	1.000	0.029	0.60	0.60	1.06	0.10	0.3	0.0	0.0	-0.0	88.0	59.3	0.0	2015.9	1.7
32	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	59.6	0.0	2103.9	1.6
31	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	59.6	0.0	2103.3	1.6
30	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	59.6	0.0	2102.5	1.6
29	181	1/2" MR	0.100	0.100	0.003	1.60	1.60	1.00	0.10	0.1	0.0	0.0	-0.0	-15.2	59.7	0.0	2095.8	1.6
28	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	59.7	0.0	2086.7	1.6
27	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	59.7	0.0	2086.0	1.6
26	33	AS 5t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-1.1	59.7	0.0	2085.3	1.6
25	94	Swivel 5t	0.025	0.025	0.001	1.20	1.20	1.20	0.10	0.0	0.0	0.0	-0.0	-5.3	59.7	0.0	2084.2	1.6
24	33	AS 5t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-1.1	59.8	0.0	2078.8	1.6
23	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	59.8	0.0	2077.8	1.6
22	33	AS 5t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-1.1	59.8	0.0	2077.0	1.6
21	478	Dual Release	0.288	0.288	0.008	1.20	1.20	0.90	0.10	0.2	0.0	0.0	-0.0	-61.0	59.8	0.0	2076.0	1.6
20	480	1/2" dropcha	0.024	0.024	0.001	1.60	1.60	1.00	0.10	0.0	0.0	0.0	-0.0	-6.8	60.0	0.0	2015.0	1.7
19	76	ML 17t 1-1/4	0.025	0.026	0.001	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-4.8	60.0	0.0	2008.2	1.7
18	34	AS 6t 7/8"	0.012	0.012	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-1.6	60.0	0.0	2003.3	1.7
17	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	60.0	0.0	2001.8	1.7
16	34	AS 6t 7/8"	0.012	0.012	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-1.6	60.0	0.0	2001.0	1.7
15	183	3/4" MR	0.150	0.150	0.005	1.60	1.60	1.00	0.10	0.1	0.0	0.0	-0.0	-33.0	60.1	0.0	1986.2	1.7
14	32	AS 3t 5/8"	0.006	0.006	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	60.2	0.0	1966.4	1.8
13	64	EL 6t 7/8"	0.012	0.012	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-1.0	60.2	0.0	1965.7	1.8
12	491	Parachute	1.500	1.500	1.500	0.50	0.50	1.33	0.10	0.4	0.0	0.0	0.0	0.0	60.2	0.0	1964.7	1.8
11	34	AS 6t 7/8"	0.012	0.012	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-1.6	60.6	0.0	1964.7	1.8
10	113	Nystron-1"	0.520	0.520	0.016	1.30	1.30	0.02	0.10	0.4	0.0	0.0	-0.0	-2.0	60.8	0.0	1962.2	1.8
9	34	AS 6t 7/8"	0.012	0.012	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-1.6	61.0	0.0	1961.2	1.8
8	64	EL 6t 7/8"	0.012	0.012	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-1.0	61.0	0.0	1959.6	1.8





**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**Event #001 – Simulation Parameter, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m <sup>2</sup>	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
7	491	Parachute	1.500	1.500	1.500	0.50	0.50	1.33	0.10	0.4	0.0	0.0	0.0	0.0	61.0	0.0	1958.6	1.8
6	34	AS 6t 7/8"	0.012	0.012	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-1.6	61.4	0.0	1958.6	1.8
5	183	3/4" MR	0.150	0.150	0.005	1.60	1.60	1.00	0.10	0.1	0.0	0.0	-0.0	-33.0	61.5	0.0	1943.8	1.8
4	33	AS 5t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-1.1	61.5	0.0	1924.0	1.8
3	53	PL 3t 3/4"	0.010	0.010	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-0.7	61.5	0.0	1922.9	1.8
2	34	AS 6t 7/8"	0.012	0.012	0.000	1.50	1.50	1.50	0.10	0.0	0.0	0.0	-0.0	-1.6	61.6	0.0	1922.2	1.8
1	522	double MACE	1.200	1.200	0.000	1.20	1.20	1.20	0.10	0.8	0.0	0.0	0.0	-2742.1	61.6	0.0	1920.6	0.0



## Global PAPA MFM-B 2014 Mooring Model Analysis

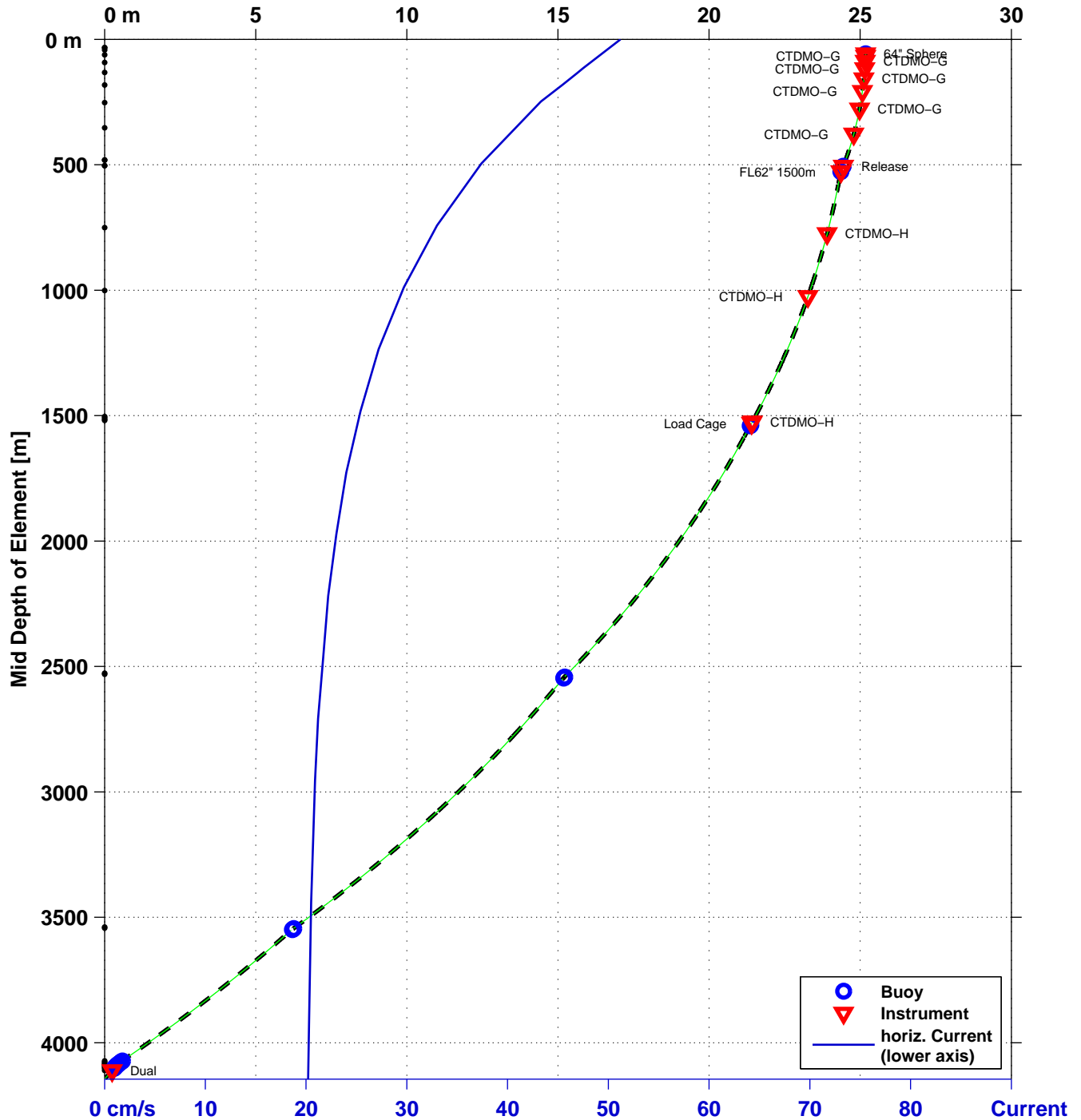
designed for 4145m Depth



By: P. Chua	13-Aug-2014	DCN: 3203-00012	REV: A	REF.DES. GP02FLMB
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Source: 13-Aug-2014 10:55:11, ...Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg  
 Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**Event #002 – Subduction [m]: max. 25m, Top at 58m**  
 Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf



**Event #002: Vert / Horiz anchor load: 1903 kg / 241 kg**  
**Vert / Horiz anchor safety : 125 % / 120 %,**  
**Safe Wet MACE anchor weight: 2402 kg, (max. 500 kg or Horiz. safety)**  
**Wet / Dry MACE anchor weight : 2742 kg / 3170 kg**



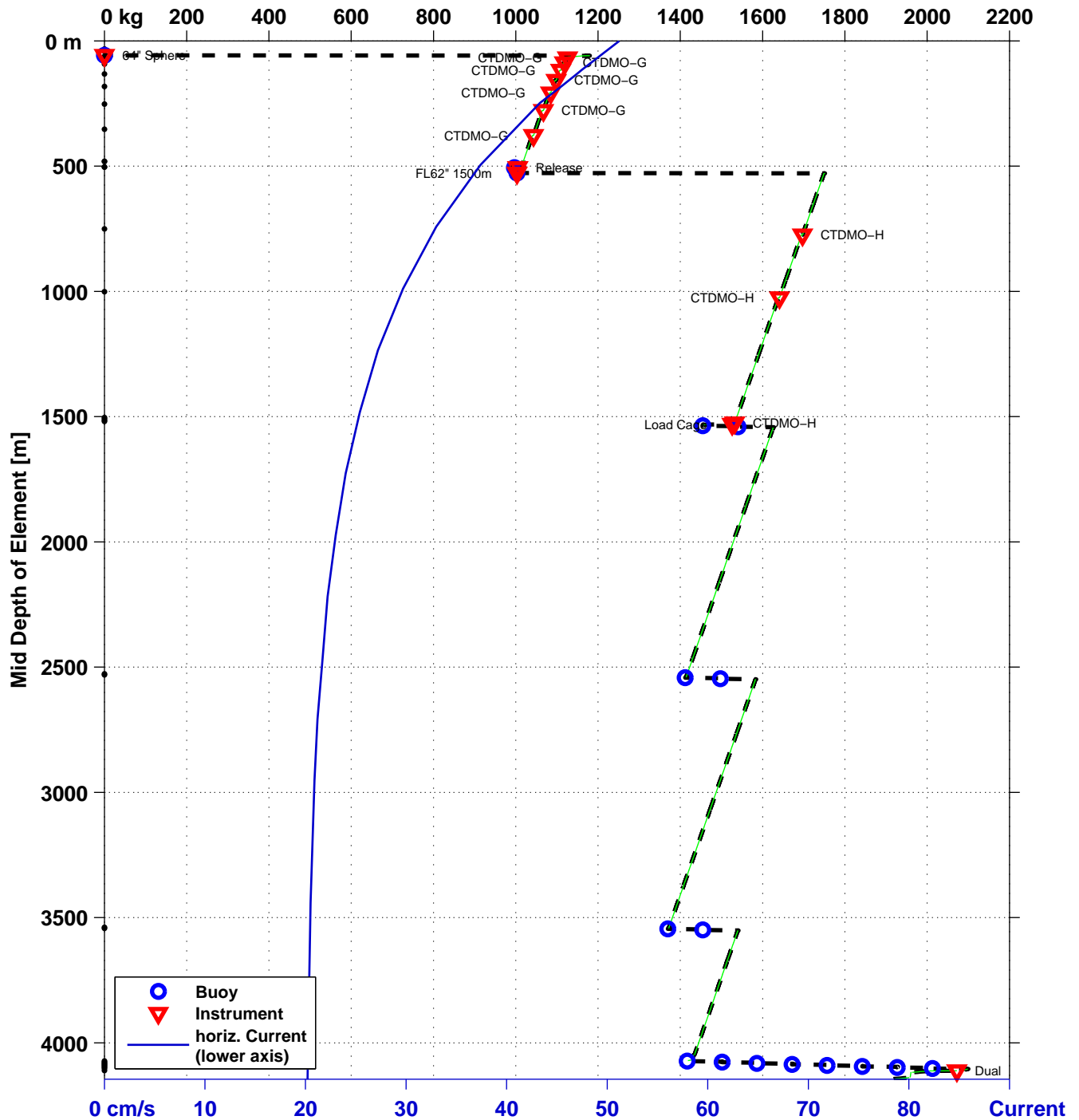
## Global PAPA MFM-B 2014 Mooring Model Analysis designed for 4145m Depth



By: P. Chua	13-Aug-2014	DCN: 3203-00012	REV: A	REF.DES. GP02FLMB
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Source: 13-Aug-2014 10:55:11, ...Paul's m-files\OON\PAPA2014Deploy\gp2014FLMBdeployed.cfg  
 Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

### Event #002 – Tension [kg] Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf



Event #002: Vert / Horiz anchor load: 1903 kg / 241 kg  
 Vert / Horiz anchor safety : 125 % / 120 %,  
 Safe Wet MACE anchor weight: 2402 kg, (max. 500 kg or Horiz. safety)  
 Wet / Dry MACE anchor weight : 2742 kg / 3170 kg



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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**Source:** 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

**Author:** 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #002 – Simulation Result**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	[%]	Stretch [m]	[%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
156	306	64" Sphere 100	2.3	1180.0	2.087	0.50	0.49	13.3	0.0	0.0	0.00	0.00	56.6	25.2	435.1	0.6
155	17	U-Joint	0.3	-16.3	0.090	1.50	0.49	1.7	1180.1	7.4	0.00	0.00	59.0	25.2	435.1	0.6
154	141	1/2" EM chain	5.0	-35.0	1.000	1.30	0.49	16.5	1163.8	11.6	0.00	0.00	59.7	25.2	435.1	1.4
153	13	ind. term	0.1	-2.4	0.005	1.50	0.49	0.1	1128.8	7.1	0.00	0.00	64.2	25.2	435.0	1.6
152	103	5/16" NILSPIN	3.0	-0.6	0.029	1.10	0.49	0.4	1126.4	24.2	0.01	0.25	64.8	25.2	435.0	1.6
151	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.49	0.7	1125.8	11.3	0.00	0.00	67.3	25.2	434.9	1.6
150	103	5/16" NILSPIN	20.0	-4.3	0.191	1.10	0.49	2.6	1123.0	24.1	0.05	0.25	67.8	25.2	434.9	1.8
149	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.48	0.7	1118.7	11.2	0.00	0.00	87.3	25.2	434.3	1.8
148	103	5/16" NILSPIN	30.1	-6.4	0.286	1.10	0.48	3.8	1115.9	24.0	0.07	0.25	87.8	25.2	434.3	2.0
147	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.47	0.7	1109.5	11.1	0.00	0.00	117.4	25.2	433.3	2.1
146	103	5/16" NILSPIN	40.1	-8.5	0.381	1.10	0.47	4.8	1106.7	23.8	0.10	0.24	117.9	25.2	433.3	2.4
145	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.46	0.7	1098.2	11.0	0.00	0.00	157.5	25.1	431.7	2.4
144	103	5/16" NILSPIN	50.1	-10.6	0.476	1.10	0.45	5.6	1095.4	23.5	0.12	0.24	158.0	25.1	431.7	2.7
143	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.45	0.6	1084.8	10.8	0.00	0.00	207.5	25.1	429.5	2.7
142	103	5/16" NILSPIN	70.2	-14.9	0.667	1.10	0.44	7.2	1082.0	23.3	0.17	0.24	208.0	25.1	429.5	3.2
141	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.43	0.6	1067.1	10.7	0.00	0.00	277.6	25.0	425.8	3.2
140	103	5/16" NILSPIN	100.2	-21.3	0.953	1.10	0.41	9.4	1064.3	22.9	0.23	0.23	278.1	25.0	425.8	3.8
139	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.40	0.5	1043.0	10.4	0.00	0.00	377.6	24.8	419.7	3.8
138	103	5/16" NILSPIN	127.3	-27.1	1.210	1.10	0.39	10.4	1040.3	22.4	0.29	0.23	378.1	24.8	419.7	4.5
137	13	ind. term	0.1	-2.4	0.005	1.50	0.37	0.1	1013.3	6.3	0.00	0.00	504.6	24.4	410.3	4.5
136	15	coupler ec	0.2	-6.0	0.020	1.50	0.37	0.2	1010.9	6.3	0.00	0.00	504.8	24.4	410.3	4.6
134	479	Release Float	1.0	0.0	0.592	1.20	0.37	5.2	1004.9	10.0	0.00	0.00	505.4	24.4	410.3	4.6
132	15	coupler ec	0.2	-6.0	0.020	1.50	0.37	0.2	1004.9	6.3	0.00	0.00	506.0	24.4	410.2	4.9
131	13	ind. term	0.1	-2.4	0.005	1.50	0.37	0.1	999.0	6.2	0.00	0.00	506.1	24.4	410.2	4.9
130	256	CF14-1000	0.0	13.0	0.225	0.50	0.37	0.8	996.6	16.6	0.00	0.00	506.2	24.4	410.2	5.0
128	103	5/16" NILSPIN	10.0	-2.1	0.095	1.10	0.37	0.7	1009.5	21.7	0.02	0.22	506.7	24.4	410.2	5.0
127	103	5/16" NILSPIN	10.0	-2.1	0.095	1.10	0.37	0.7	1007.4	21.7	0.02	0.22	516.7	24.4	409.3	5.0
126	13	ind. term	0.1	-2.4	0.005	1.50	0.37	0.1	1005.3	6.3	0.00	0.00	526.2	24.4	408.5	5.0
125	326	FL62" 1500m ADC	2.8	750.0	1.887	0.50	0.37	6.7	1002.9	10.0	0.00	0.00	527.7	24.4	408.5	5.1



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #002 - Simulation Result, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	[%]	Stretch [m]	[%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
124	13	ind. term	0.1	-2.4	0.005	1.50	0.37	0.1	1751.6	10.9	0.00	0.00	529.1	24.4	408.2	3.1
123	103	5/16" NILSPIN	245.9	-52.2	2.335	1.10	0.35	16.1	1749.2	37.6	0.94	0.38	529.7	24.4	408.2	3.8
122	375	CTDMO-H P3500m	0.0	-2.8	0.042	1.40	0.33	0.3	1697.1	17.0	0.00	0.00	774.7	23.9	393.4	3.8
121	103	5/16" NILSPIN	250.9	-53.3	2.382	1.10	0.31	13.0	1694.3	36.4	0.92	0.37	775.2	23.9	393.4	4.4
120	375	CTDMO-H P3500m	0.0	-2.8	0.042	1.40	0.29	0.3	1641.2	16.4	0.00	0.00	1024.9	23.3	375.6	4.4
119	103	5/16" NILSPIN	250.9	-53.3	2.382	1.10	0.28	10.8	1638.4	35.2	0.89	0.36	1025.4	23.3	375.6	4.9
118	103	5/16" NILSPIN	250.9	-53.3	2.382	1.10	0.26	9.2	1585.3	34.1	0.86	0.35	1275.5	22.4	355.3	5.4
117	375	CTDMO-H P3500m	0.0	-2.8	0.042	1.40	0.25	0.2	1532.3	15.3	0.00	0.00	1524.9	21.4	332.7	5.4
116	103	5/16" NILSPIN	5.0	-1.1	0.048	1.10	0.25	0.2	1529.5	32.9	0.02	0.34	1525.4	21.4	332.7	5.4
115	13	ind. term	0.1	-2.4	0.005	1.50	0.25	0.0	1528.4	9.6	0.00	0.00	1529.9	21.4	332.3	5.5
114	300	Load Cage	1.5	-60.0	0.300	1.30	0.25	1.3	1526.0	15.3	0.00	0.00	1530.7	21.4	332.3	5.5
113	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.25	0.0	1466.3	12.2	0.00	0.00	1531.5	21.4	332.1	5.7
112	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.25	0.0	1465.7	12.2	0.00	0.00	1531.6	21.4	332.1	5.7
111	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.25	0.0	1464.9	12.2	0.00	0.00	1531.7	21.4	332.1	5.7
110	181	1/2" MR	2.5	-7.6	0.050	1.60	0.25	0.3	1464.3	14.6	0.00	0.00	1532.1	21.4	332.1	5.8
109	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.25	0.0	1456.7	12.1	0.00	0.00	1534.2	21.4	331.8	5.8
108	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.25	0.0	1456.1	12.1	0.00	0.00	1534.3	21.4	331.8	5.8
107	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.25	0.0	1455.3	12.1	0.00	0.00	1534.4	21.4	331.8	5.8
106	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.25	2.0	1454.7	14.5	0.00	0.00	1536.4	21.4	331.8	5.8
105	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.25	0.0	1542.3	12.9	0.00	0.00	1538.4	21.4	331.4	5.5
104	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.25	0.0	1541.6	12.8	0.00	0.00	1538.5	21.4	331.4	5.5
103	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.25	0.0	1540.9	12.8	0.00	0.00	1538.6	21.4	331.4	5.6
102	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.25	2.0	1540.2	15.4	0.00	0.00	1540.6	21.4	331.4	5.6
101	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.25	0.0	1627.8	13.6	0.00	0.00	1542.7	21.3	331.0	5.3
100	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.25	0.0	1627.2	13.6	0.00	0.00	1542.7	21.3	331.0	5.3
99	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.25	0.0	1626.4	13.6	0.00	0.00	1542.8	21.3	331.0	5.3
97	103	5/16" NILSPIN	1003.4	-213.0	9.530	1.10	0.23	28.6	1625.8	34.9	3.37	0.34	1543.4	21.3	331.0	7.3
96	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.22	0.0	1414.1	11.8	0.00	0.00	2540.1	15.2	220.8	7.3
95	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.22	0.0	1413.4	11.8	0.00	0.00	2540.2	15.2	220.8	7.3



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #002 – Simulation Result, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	[%]	Stretch [m]	[%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
94	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.22	0.0	1412.7	11.8	0.00	0.00	2540.3	15.2	220.8	7.3
93	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.22	1.5	1412.0	14.1	0.00	0.00	2542.4	15.2	220.8	7.3
92	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.22	0.0	1499.4	12.5	0.00	0.00	2544.4	15.2	220.3	7.0
91	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.22	0.0	1498.7	12.5	0.00	0.00	2544.4	15.2	220.2	7.0
90	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.22	0.0	1498.0	12.5	0.00	0.00	2544.5	15.2	220.2	7.0
89	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.22	1.5	1497.3	15.0	0.00	0.00	2546.6	15.2	220.2	7.0
88	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.22	0.0	1584.7	13.2	0.00	0.00	2548.6	15.2	219.7	6.6
87	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.22	0.0	1584.1	13.2	0.00	0.00	2548.7	15.2	219.7	6.6
86	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.22	0.0	1583.3	13.2	0.00	0.00	2548.7	15.2	219.7	6.6
85	103	5/16" NILSPIN	1003.3	-213.0	9.530	1.10	0.21	23.6	1582.7	34.0	3.27	0.33	2549.3	15.2	219.7	8.7
84	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1371.6	11.4	0.00	0.00	3543.2	6.3	86.8	8.7
83	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	1370.9	11.4	0.00	0.00	3543.3	6.3	86.8	8.7
82	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1370.2	11.4	0.00	0.00	3543.4	6.3	86.7	8.7
81	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.20	1.3	1369.5	13.7	0.00	0.00	3545.4	6.3	86.7	8.7
80	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1456.6	12.1	0.00	0.00	3547.4	6.2	86.1	8.2
79	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	1455.9	12.1	0.00	0.00	3547.5	6.2	86.1	8.2
78	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1455.2	12.1	0.00	0.00	3547.6	6.2	86.1	8.2
77	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.20	1.3	1454.6	14.5	0.00	0.00	3549.6	6.2	86.1	8.2
76	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1541.7	12.8	0.00	0.00	3551.6	6.2	85.5	7.8
75	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	1541.1	12.8	0.00	0.00	3551.7	6.2	85.5	7.8
74	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1540.3	12.8	0.00	0.00	3551.8	6.2	85.5	7.8
73	103	5/16" NILSPIN	501.6	-106.5	4.765	1.10	0.20	11.2	1539.7	33.1	1.65	0.33	3552.3	6.2	85.5	8.9
72	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1434.3	12.0	0.00	0.00	4048.2	0.9	12.8	8.9
71	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	1433.7	11.9	0.00	0.00	4048.3	0.9	12.8	8.9
70	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1432.9	11.9	0.00	0.00	4048.4	0.9	12.8	8.9
69	103	5/16" NILSPIN	20.1	-4.3	0.191	1.10	0.20	0.4	1432.3	30.8	0.06	0.32	4048.9	0.9	12.8	8.9
68	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1428.1	11.9	0.00	0.00	4068.2	0.6	9.7	8.9
67	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	1427.4	11.9	0.00	0.00	4068.3	0.6	9.7	8.9
66	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1426.7	11.9	0.00	0.00	4068.4	0.6	9.7	8.9



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #002 – Simulation Result, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	[%]	Stretch [m]	[%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
65	181	1/2" MR	2.5	-7.6	0.050	1.60	0.20	0.2	1426.0	14.3	0.00	0.00	4068.9	0.6	9.7	9.0
64	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1418.5	11.8	0.00	0.00	4071.0	0.6	9.3	9.0
63	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	1417.9	11.8	0.00	0.00	4071.0	0.6	9.3	9.0
62	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1417.1	11.8	0.00	0.00	4071.1	0.6	9.2	9.0
61	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.20	1.3	1416.5	14.2	0.00	0.00	4073.2	0.6	9.2	9.0
60	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1503.5	12.5	0.00	0.00	4075.1	0.5	8.6	8.5
59	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	1502.8	12.5	0.00	0.00	4075.2	0.5	8.6	8.5
58	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1502.1	12.5	0.00	0.00	4075.3	0.5	8.6	8.5
57	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.20	1.3	1501.4	15.0	0.00	0.00	4077.4	0.5	8.6	8.5
56	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1588.5	13.2	0.00	0.00	4079.3	0.5	8.0	8.1
55	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	1587.9	13.2	0.00	0.00	4079.4	0.5	8.0	8.1
54	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1587.1	13.2	0.00	0.00	4079.5	0.5	8.0	8.1
53	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.20	1.3	1586.5	15.9	0.00	0.00	4081.6	0.5	7.9	8.1
52	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1673.7	13.9	0.00	0.00	4083.5	0.5	7.4	7.8
51	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	1673.0	13.9	0.00	0.00	4083.6	0.5	7.4	7.8
50	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1672.3	13.9	0.00	0.00	4083.7	0.4	7.4	7.8
49	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.20	1.3	1671.6	16.7	0.00	0.00	4085.8	0.4	7.3	7.8
48	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1758.9	14.7	0.00	0.00	4087.7	0.4	6.8	7.4
47	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	1758.2	14.7	0.00	0.00	4087.8	0.4	6.8	7.4
46	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1757.5	14.6	0.00	0.00	4087.9	0.4	6.8	7.4
45	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.20	1.3	1756.8	17.6	0.00	0.00	4090.0	0.4	6.8	7.4
44	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1844.1	15.4	0.00	0.00	4092.0	0.4	6.3	7.1
43	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	1843.5	15.4	0.00	0.00	4092.0	0.4	6.3	7.1
42	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1842.7	15.4	0.00	0.00	4092.1	0.4	6.2	7.1
41	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.20	1.3	1842.1	18.4	0.00	0.00	4094.2	0.4	6.2	7.1
40	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1929.4	16.1	0.00	0.00	4096.2	0.3	5.7	6.8
39	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	1928.8	16.1	0.00	0.00	4096.3	0.3	5.7	6.8
38	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1928.0	16.1	0.00	0.00	4096.3	0.3	5.7	6.9
37	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.20	1.3	1927.4	19.3	0.00	0.00	4098.4	0.3	5.7	6.9



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #002 – Simulation Result, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	[%]	Stretch [m]	[%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
36	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	2014.8	16.8	0.00	0.00	4100.4	0.3	5.2	6.6
35	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	2014.1	16.8	0.00	0.00	4100.5	0.3	5.2	6.6
34	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	2013.4	16.8	0.00	0.00	4100.6	0.3	5.2	6.6
33	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.20	1.3	2012.7	20.1	0.00	0.00	4102.6	0.3	5.2	6.6
32	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	2100.2	17.5	0.00	0.00	4104.6	0.3	4.7	6.4
31	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	2099.5	17.5	0.00	0.00	4104.7	0.3	4.7	6.4
30	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	2098.8	17.5	0.00	0.00	4104.8	0.3	4.7	6.4
29	181	1/2" MR	5.0	-15.2	0.100	1.60	0.20	0.3	2098.1	21.0	0.00	0.00	4105.3	0.3	4.7	6.4
28	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	2083.0	17.4	0.00	0.00	4109.8	0.3	4.2	6.4
27	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	2082.4	17.4	0.00	0.00	4109.9	0.3	4.1	6.4
26	33	AS 5t 3/4"	0.1	-1.1	0.010	1.50	0.20	0.0	2081.6	11.6	0.00	0.00	4110.0	0.3	4.1	6.4
25	94	Swivel 5t	0.2	-5.3	0.025	1.20	0.20	0.1	2080.6	20.8	0.00	0.00	4110.1	0.3	4.1	6.4
24	33	AS 5t 3/4"	0.1	-1.1	0.010	1.50	0.20	0.0	2075.3	11.5	0.00	0.00	4110.3	0.2	4.1	6.5
23	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	2074.2	17.3	0.00	0.00	4110.4	0.2	4.1	6.5
22	33	AS 5t 3/4"	0.1	-1.1	0.010	1.50	0.20	0.0	2073.5	11.5	0.00	0.00	4110.5	0.2	4.1	6.5
21	478	Dual Release	1.0	-61.0	0.288	1.20	0.20	0.8	2072.4	20.7	0.00	0.00	4111.0	0.2	4.1	6.5
20	480	1/2" dropchain	0.6	-6.8	0.024	1.60	0.20	0.1	2011.8	12.6	0.00	0.00	4111.9	0.2	4.0	6.7
19	76	ML 17t 1-1/4"	0.2	-4.8	0.026	1.50	0.20	0.1	2005.0	4.6	0.00	0.00	4112.3	0.2	3.9	6.7
18	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.20	0.0	2000.2	8.3	0.00	0.00	4112.4	0.2	3.9	6.7
17	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	1998.7	16.7	0.00	0.00	4112.5	0.2	3.8	6.7
16	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.20	0.0	1998.0	8.3	0.00	0.00	4112.6	0.2	3.8	6.7
15	183	3/4" MR	5.0	-33.1	0.150	1.60	0.20	0.5	1996.4	8.3	0.00	0.00	4113.2	0.2	3.8	6.8
14	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.20	0.0	1963.6	16.4	0.00	0.00	4117.7	0.2	3.2	6.9
13	64	EL 6t 7/8"	0.1	-1.0	0.012	1.50	0.20	0.0	1962.9	8.2	0.00	0.00	4117.8	0.2	3.2	6.9
12	491	Parachute	0.0	0.0	1.500	0.50	0.20	1.6	1961.9	19.6	0.00	0.00	4117.8	0.2	3.2	6.9
11	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.20	0.0	1962.1	8.2	0.00	0.00	4117.9	0.2	3.2	6.9
10	113	Nystron-1"	20.7	-2.0	0.520	1.30	0.20	1.5	1960.6	11.7	0.70	3.50	4118.4	0.2	3.2	7.0
9	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.20	0.0	1958.6	8.2	0.00	0.00	4138.5	0.0	0.7	7.0
8	64	EL 6t 7/8"	0.1	-1.0	0.012	1.50	0.20	0.0	1957.1	8.2	0.00	0.00	4138.6	0.0	0.7	7.0





**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #002 - Simulation Result, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	Tension [%]	Stretch [m]	Stretch [%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
7	491	Parachute	0.0	0.0	1.500	0.50	0.20	1.6	1956.1	19.6	0.00	0.00	4138.7	0.0	0.7	7.0
6	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.20	0.0	1956.3	8.2	0.00	0.00	4138.7	0.0	0.7	7.0
5	183	3/4" MR	5.0	-33.1	0.150	1.60	0.20	0.5	1954.7	8.1	0.00	0.00	4139.3	0.0	0.7	7.2
4	33	AS 5t 3/4"	0.1	-1.1	0.010	1.50	0.20	0.0	1921.9	10.7	0.00	0.00	4143.8	0.0	0.0	7.2
3	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.20	0.0	1920.9	16.0	0.00	0.00	4143.9	0.0	0.0	7.2
2	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.20	0.0	1920.1	8.0	0.00	0.00	4144.0	0.0	0.0	7.2
1	522	double MACE Anch	1.0	-2742.1	1.200	1.20	0.20	3.1	1918.6	32.0	0.00	0.00	4145.0	0.0	0.0	0.0

Max. 37.6% Static Tension at:

123	103	5/16" NILSPIN	245.9	-52.2	2.335	1.10	0.35	16.1	1749.2	37.6	0.94	0.38	529.7	24.4	408.2	3.8
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Vert/Horiz Anchor Load : 1903 kg / 241 kg  
 Wet MACE Anchor Weight : 2742 kg  
 Safe MACE Anchor Weight : 2402 kg



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #002 – Simulation Parameter**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m^2	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
156	306	64" Sphere	2.087	2.087	2.087	0.50	0.50	0.50	0.49	13.3	0.0	0.0	0.0	1180.0	0.0	0.0	0.0	0.6
155	17	U-Joint	0.090	0.090	0.001	1.50	1.50	1.50	0.49	1.7	0.0	0.0	-0.0	-16.3	13.3	0.0	1180.0	0.6
154	141	1/2" EM chai	1.000	1.000	0.019	1.30	1.30	1.00	0.49	16.5	0.0	0.0	-0.3	-35.0	21.6	0.0	1149.6	1.4
153	13	ind. term	0.005	0.005	0.000	1.50	1.50	1.50	0.49	0.1	0.0	0.0	-0.0	-2.4	31.5	0.0	1128.4	1.6
152	103	5/16" NILSPI	0.029	0.029	0.001	1.10	1.10	0.00	0.49	0.4	0.0	0.0	-0.0	-0.6	31.7	0.0	1125.8	1.6
151	374	CTDMO-G P100	0.042	0.042	0.001	1.40	1.40	1.00	0.49	0.7	0.0	0.0	-0.0	-2.8	32.0	0.0	1125.3	1.6
150	103	5/16" NILSPI	0.191	0.191	0.006	1.10	1.10	0.00	0.49	2.6	0.0	0.0	-0.1	-4.3	34.0	0.0	1120.4	1.8
149	374	CTDMO-G P100	0.042	0.042	0.001	1.40	1.40	1.00	0.48	0.7	0.0	0.0	-0.0	-2.8	35.3	0.0	1118.2	1.8
148	103	5/16" NILSPI	0.286	0.286	0.010	1.10	1.10	0.00	0.48	3.8	0.0	0.0	-0.1	-6.4	37.9	0.0	1112.2	2.0
147	374	CTDMO-G P100	0.042	0.042	0.002	1.40	1.40	1.00	0.47	0.7	0.0	0.0	-0.0	-2.8	39.8	0.0	1108.8	2.1
146	103	5/16" NILSPI	0.381	0.381	0.015	1.10	1.10	0.00	0.47	4.8	0.0	0.0	-0.2	-8.5	42.9	0.0	1101.7	2.4
145	374	CTDMO-G P100	0.042	0.042	0.002	1.40	1.40	1.00	0.46	0.7	0.0	0.0	-0.0	-2.8	45.3	0.0	1097.3	2.4
144	103	5/16" NILSPI	0.476	0.476	0.021	1.10	1.10	0.00	0.45	5.6	0.0	0.0	-0.3	-10.7	48.8	0.0	1089.1	2.7
143	374	CTDMO-G P100	0.042	0.042	0.002	1.40	1.40	1.00	0.45	0.6	0.0	0.0	-0.0	-2.8	51.6	0.0	1083.6	2.7
142	103	5/16" NILSPI	0.666	0.667	0.035	1.10	1.10	0.00	0.44	7.2	0.0	0.0	-0.4	-14.9	55.9	0.0	1073.2	3.2
141	374	CTDMO-G P100	0.042	0.042	0.002	1.40	1.40	1.00	0.43	0.6	0.0	0.0	-0.0	-2.8	59.5	0.0	1065.4	3.2
140	103	5/16" NILSPI	0.951	0.953	0.059	1.10	1.10	0.00	0.41	9.4	0.0	0.0	-0.6	-21.3	64.8	0.0	1051.8	3.8
139	374	CTDMO-G P100	0.042	0.042	0.003	1.40	1.40	1.00	0.40	0.5	0.0	0.0	-0.0	-2.8	69.4	0.0	1040.7	3.8
138	103	5/16" NILSPI	1.207	1.210	0.089	1.09	1.10	0.00	0.39	10.4	0.0	0.0	-0.8	-27.1	75.2	0.0	1024.1	4.5
137	13	ind. term	0.005	0.005	0.000	1.50	1.50	1.50	0.37	0.1	0.0	0.0	-0.0	-2.4	80.2	0.0	1010.1	4.5
136	15	coupler ec	0.020	0.020	0.002	1.50	1.50	1.50	0.37	0.2	0.0	0.0	-0.0	-6.0	80.3	0.0	1007.7	4.6
134	479	Release Floa	0.590	0.592	0.047	1.20	1.20	0.90	0.37	5.2	0.0	0.0	-0.4	0.0	80.5	0.0	1001.7	4.6
132	15	coupler ec	0.020	0.020	0.002	1.49	1.50	1.49	0.37	0.2	0.0	0.0	-0.0	-6.0	85.7	0.0	1001.3	4.9
131	13	ind. term	0.005	0.005	0.000	1.49	1.50	1.49	0.37	0.1	0.0	0.0	-0.0	-2.4	85.9	0.0	995.3	4.9
130	256	CF14-1000	0.224	0.225	0.019	0.50	0.50	0.40	0.37	0.8	0.0	0.0	-0.1	13.0	86.0	0.0	992.8	5.0
128	103	5/16" NILSPI	0.095	0.095	0.008	1.09	1.10	0.00	0.37	0.7	0.0	0.0	-0.1	-2.1	87.2	0.0	1004.8	5.0
127	103	5/16" NILSPI	0.095	0.095	0.008	1.09	1.10	0.00	0.37	0.7	0.0	0.0	-0.1	-2.1	87.9	0.0	1002.6	5.0
126	13	ind. term	0.005	0.005	0.000	1.49	1.50	1.49	0.37	0.1	0.0	0.0	-0.0	-2.4	88.3	0.0	1001.4	5.0
125	326	FL62" 1500m	1.887	1.887	1.887	0.50	0.50	0.50	0.37	6.7	0.0	0.0	0.0	750.0	88.4	0.0	999.0	5.1



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PA2014Deploy\gpp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #002 – Simulation Parameter, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m <sup>2</sup>	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
124	13	ind. term	0.005	0.005	0.000	1.50	1.50	1.50	0.37	0.1	0.0	0.0	-0.0	-2.4	95.1	0.0	1749.0	3.1
123	103	5/16" NILSPI	2.331	2.335	0.140	1.10	1.10	0.00	0.35	16.1	0.0	0.0	-1.0	-52.2	103.5	0.0	1720.1	3.8
122	375	CTDMO-H P350	0.042	0.042	0.003	1.40	1.40	1.00	0.33	0.3	0.0	0.0	-0.0	-2.8	111.2	0.0	1693.4	3.8
121	103	5/16" NILSPI	2.376	2.382	0.169	1.09	1.10	0.00	0.31	13.0	0.0	0.0	-0.9	-53.3	118.3	0.0	1663.6	4.4
120	375	CTDMO-H P350	0.042	0.042	0.003	1.40	1.40	1.00	0.29	0.3	0.0	0.0	-0.0	-2.8	124.6	0.0	1636.4	4.4
119	103	5/16" NILSPI	2.375	2.382	0.193	1.09	1.10	0.00	0.28	10.8	0.0	0.0	-0.9	-53.3	130.4	0.0	1606.7	4.9
118	103	5/16" NILSPI	2.373	2.382	0.214	1.09	1.10	0.00	0.26	9.2	0.0	0.0	-0.8	-53.3	140.3	0.0	1552.6	5.4
117	375	CTDMO-H P350	0.042	0.042	0.004	1.39	1.40	1.00	0.25	0.2	0.0	0.0	-0.0	-2.8	144.8	0.0	1525.4	5.4
116	103	5/16" NILSPI	0.047	0.048	0.005	1.09	1.10	0.00	0.25	0.2	0.0	0.0	-0.0	-1.1	145.1	0.0	1522.2	5.4
115	13	ind. term	0.005	0.005	0.000	1.49	1.50	1.49	0.25	0.0	0.0	0.0	-0.0	-2.4	145.2	0.0	1521.5	5.5
114	300	Load Cage	0.299	0.300	0.029	1.29	1.30	0.90	0.25	1.3	0.0	0.0	-0.1	-60.0	145.2	0.0	1519.1	5.5
113	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.25	0.0	0.0	0.0	-0.0	-0.7	146.5	0.0	1459.0	5.7
112	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.25	0.0	0.0	0.0	-0.0	-0.7	146.6	0.0	1458.3	5.7
111	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.25	0.0	0.0	0.0	-0.0	-0.7	146.6	0.0	1457.6	5.7
110	181	1/2" MR	0.050	0.050	0.005	1.59	1.60	0.99	0.25	0.3	0.0	0.0	-0.0	-7.6	146.7	0.0	1454.4	5.8
109	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.25	0.0	0.0	0.0	-0.0	-0.7	146.9	0.0	1449.3	5.8
108	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.25	0.0	0.0	0.0	-0.0	-0.7	146.9	0.0	1448.6	5.8
107	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.25	0.0	0.0	0.0	-0.0	-0.7	147.0	0.0	1447.9	5.8
106	274	HR17-4 seria	0.995	1.000	0.101	0.60	0.60	1.05	0.25	2.0	0.0	0.0	-0.2	88.0	147.0	0.0	1447.2	5.8
105	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.25	0.0	0.0	0.0	-0.0	-0.7	149.0	0.0	1535.0	5.5
104	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.25	0.0	0.0	0.0	-0.0	-0.7	149.1	0.0	1534.4	5.5
103	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.25	0.0	0.0	0.0	-0.0	-0.7	149.1	0.0	1533.6	5.6
102	274	HR17-4 seria	0.995	1.000	0.097	0.60	0.60	1.06	0.25	2.0	0.0	0.0	-0.2	88.0	149.2	0.0	1533.0	5.6
101	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.25	0.0	0.0	0.0	-0.0	-0.7	151.2	0.0	1620.8	5.3
100	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.25	0.0	0.0	0.0	-0.0	-0.7	151.2	0.0	1620.1	5.3
99	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.25	0.0	0.0	0.0	-0.0	-0.7	151.2	0.0	1619.4	5.3
97	103	5/16" NILSPI	9.472	9.530	1.046	1.09	1.10	0.00	0.23	28.6	0.0	0.0	-3.1	-213.0	166.3	0.0	1510.8	7.3
96	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.22	0.0	0.0	0.0	-0.0	-0.7	179.9	0.0	1402.6	7.3
95	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.22	0.0	0.0	0.0	-0.0	-0.7	179.9	0.0	1401.9	7.3



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #002 – Simulation Parameter, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m <sup>2</sup>	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
94	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.22	0.0	0.0	0.0	-0.0	-0.7	180.0	0.0	1401.2	7.3
93	274	HR17-4 seria	0.992	1.000	0.127	0.60	0.60	1.05	0.22	1.5	0.0	0.0	-0.2	88.0	180.0	0.0	1400.5	7.3
92	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.22	0.0	0.0	0.0	-0.0	-0.7	181.5	0.0	1488.3	7.0
91	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.22	0.0	0.0	0.0	-0.0	-0.7	181.5	0.0	1487.7	7.0
90	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.22	0.0	0.0	0.0	-0.0	-0.7	181.5	0.0	1486.9	7.0
89	274	HR17-4 seria	0.993	1.000	0.121	0.60	0.60	1.05	0.22	1.5	0.0	0.0	-0.2	88.0	181.6	0.0	1486.3	7.0
88	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.22	0.0	0.0	0.0	-0.0	-0.7	183.1	0.0	1574.1	6.6
87	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.22	0.0	0.0	0.0	-0.0	-0.7	183.1	0.0	1573.4	6.6
86	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.22	0.0	0.0	0.0	-0.0	-0.7	183.1	0.0	1572.7	6.6
85	103	5/16" NILSPI	9.445	9.530	1.263	1.08	1.10	0.00	0.21	23.6	0.0	0.0	-3.1	-213.0	195.1	0.0	1464.1	8.7
84	32	AS 3t 5/8"	0.006	0.006	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	206.7	0.0	1355.9	8.7
83	53	PL 3t 3/4"	0.009	0.010	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	206.7	0.0	1355.3	8.7
82	32	AS 3t 5/8"	0.006	0.006	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	206.7	0.0	1354.5	8.7
81	274	HR17-4 seria	0.989	1.000	0.151	0.59	0.60	1.05	0.20	1.3	0.0	0.0	-0.2	88.0	206.8	0.0	1353.8	8.7
80	32	AS 3t 5/8"	0.006	0.006	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	208.1	0.0	1441.7	8.2
79	53	PL 3t 3/4"	0.010	0.010	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	208.1	0.0	1441.0	8.2
78	32	AS 3t 5/8"	0.006	0.006	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	208.2	0.0	1440.2	8.2
77	274	HR17-4 seria	0.990	1.000	0.143	0.59	0.60	1.05	0.20	1.3	0.0	0.0	-0.2	88.0	208.2	0.0	1439.6	8.2
76	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	209.5	0.0	1527.4	7.8
75	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	209.6	0.0	1526.7	7.8
74	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	209.6	0.0	1526.0	7.8
73	103	5/16" NILSPI	4.715	4.765	0.690	1.07	1.10	0.00	0.20	11.2	0.0	0.0	-1.6	-106.5	215.2	0.0	1471.4	8.9
72	32	AS 3t 5/8"	0.006	0.006	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	220.8	0.0	1417.2	8.9
71	53	PL 3t 3/4"	0.009	0.010	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	220.8	0.0	1416.6	8.9
70	32	AS 3t 5/8"	0.006	0.006	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	220.8	0.0	1415.8	8.9
69	103	5/16" NILSPI	0.188	0.191	0.029	1.07	1.10	0.00	0.20	0.4	0.0	0.0	-0.1	-4.3	221.1	0.0	1413.1	8.9
68	32	AS 3t 5/8"	0.006	0.006	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	221.3	0.0	1410.8	8.9
67	53	PL 3t 3/4"	0.009	0.010	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	221.3	0.0	1410.2	8.9
66	32	AS 3t 5/8"	0.006	0.006	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	221.4	0.0	1409.4	8.9

	<b>Global PAPA MFM-B 2014 Mooring Model Analysis</b> designed for 4145m Depth	
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By: P. Chua	13-Aug-2014	DCN: 3203-00012	REV: A	REF.DES. GP02FLMB
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg  
 Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #002 – Simulation Parameter, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m <sup>2</sup>	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
65	181	1/2" MR	0.049	0.050	0.008	1.58	1.60	0.99	0.20	0.2	0.0	0.0	-0.0	-7.6	221.4	0.0	1406.2	9.0
64	32	AS 3t 5/8"	0.006	0.006	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	221.6	0.0	1401.1	9.0
63	53	PL 3t 3/4"	0.009	0.010	0.002	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	221.6	0.0	1400.5	9.0
62	32	AS 3t 5/8"	0.006	0.006	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	221.6	0.0	1399.7	9.0
61	274	HR17-4 seria	0.988	1.000	0.156	0.59	0.60	1.05	0.20	1.3	0.0	0.0	-0.2	88.0	221.6	0.0	1399.0	9.0
60	32	AS 3t 5/8"	0.006	0.006	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	223.0	0.0	1486.9	8.5
59	53	PL 3t 3/4"	0.009	0.010	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	223.0	0.0	1486.2	8.5
58	32	AS 3t 5/8"	0.006	0.006	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	223.0	0.0	1485.4	8.5
57	274	HR17-4 seria	0.989	1.000	0.149	0.59	0.60	1.05	0.20	1.3	0.0	0.0	-0.2	88.0	223.0	0.0	1484.8	8.5
56	32	AS 3t 5/8"	0.006	0.006	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	224.3	0.0	1572.6	8.1
55	53	PL 3t 3/4"	0.010	0.010	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	224.4	0.0	1571.9	8.1
54	32	AS 3t 5/8"	0.006	0.006	0.001	1.48	1.50	1.48	0.20	0.0	0.0	0.0	-0.0	-0.7	224.4	0.0	1571.2	8.1
53	274	HR17-4 seria	0.990	1.000	0.141	0.59	0.60	1.05	0.20	1.3	0.0	0.0	-0.2	88.0	224.4	0.0	1570.5	8.1
52	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	225.7	0.0	1658.4	7.8
51	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	225.8	0.0	1657.7	7.8
50	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	225.8	0.0	1657.0	7.8
49	274	HR17-4 seria	0.991	1.000	0.135	0.59	0.60	1.05	0.20	1.3	0.0	0.0	-0.2	88.0	225.8	0.0	1656.3	7.8
48	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	227.1	0.0	1744.1	7.4
47	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	227.2	0.0	1743.5	7.4
46	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	227.2	0.0	1742.7	7.4
45	274	HR17-4 seria	0.992	1.000	0.129	0.59	0.60	1.05	0.20	1.3	0.0	0.0	-0.2	88.0	227.2	0.0	1742.1	7.4
44	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	228.5	0.0	1829.9	7.1
43	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	228.6	0.0	1829.2	7.1
42	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	228.6	0.0	1828.5	7.1
41	274	HR17-4 seria	0.992	1.000	0.124	0.60	0.60	1.05	0.20	1.3	0.0	0.0	-0.2	88.0	228.6	0.0	1827.8	7.1
40	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	229.9	0.0	1915.7	6.8
39	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	230.0	0.0	1915.0	6.8
38	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	230.0	0.0	1914.3	6.9
37	274	HR17-4 seria	0.993	1.000	0.119	0.60	0.60	1.05	0.20	1.3	0.0	0.0	-0.1	88.0	230.0	0.0	1913.6	6.9



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #002 – Simulation Parameter, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m <sup>2</sup>	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
36	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	231.3	0.0	2001.5	6.6
35	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	231.4	0.0	2000.8	6.6
34	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	231.4	0.0	2000.0	6.6
33	274	HR17-4 seria	0.993	1.000	0.115	0.60	0.60	1.05	0.20	1.3	0.0	0.0	-0.1	88.0	231.4	0.0	1999.4	6.6
32	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	232.7	0.0	2087.2	6.4
31	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	232.8	0.0	2086.6	6.4
30	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	232.8	0.0	2085.8	6.4
29	181	1/2" MR	0.099	0.100	0.011	1.59	1.60	0.99	0.20	0.3	0.0	0.0	-0.0	-15.2	232.9	0.0	2079.1	6.4
28	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	233.1	0.0	2069.9	6.4
27	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	233.2	0.0	2069.3	6.4
26	33	AS 5t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-1.1	233.2	0.0	2068.5	6.4
25	94	Swivel 5t	0.025	0.025	0.003	1.19	1.20	1.19	0.20	0.1	0.0	0.0	-0.0	-5.3	233.2	0.0	2067.5	6.4
24	33	AS 5t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-1.1	233.3	0.0	2062.1	6.5
23	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	233.3	0.0	2061.0	6.5
22	33	AS 5t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-1.1	233.4	0.0	2060.3	6.5
21	478	Dual Release	0.286	0.288	0.032	1.19	1.20	0.89	0.20	0.8	0.0	0.0	-0.1	-61.0	233.4	0.0	2059.2	6.5
20	480	1/2" dropcha	0.024	0.024	0.003	1.59	1.60	0.99	0.20	0.1	0.0	0.0	-0.0	-6.8	234.2	0.0	1998.1	6.7
19	76	ML 17t 1-1/4	0.025	0.026	0.003	1.49	1.50	1.49	0.20	0.1	0.0	0.0	-0.0	-4.8	234.2	0.0	1991.3	6.7
18	34	AS 6t 7/8"	0.012	0.012	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-1.6	234.3	0.0	1986.5	6.7
17	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	234.4	0.0	1984.9	6.7
16	34	AS 6t 7/8"	0.012	0.012	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-1.6	234.4	0.0	1984.2	6.7
15	183	3/4" MR	0.149	0.150	0.018	1.59	1.60	0.99	0.20	0.5	0.0	0.0	-0.1	-33.0	234.7	0.0	1969.3	6.8
14	32	AS 3t 5/8"	0.006	0.006	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	235.0	0.0	1949.5	6.9
13	64	EL 6t 7/8"	0.012	0.012	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-1.0	235.0	0.0	1948.8	6.9
12	491	Parachute	1.500	1.500	1.500	0.50	0.50	1.33	0.20	1.6	0.0	0.0	0.0	0.0	235.0	0.0	1947.8	6.9
11	34	AS 6t 7/8"	0.012	0.012	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-1.6	236.7	0.0	1947.8	6.9
10	113	Nystron-1"	0.516	0.520	0.063	1.29	1.30	0.02	0.20	1.5	0.0	0.0	-0.2	-2.0	237.4	0.0	1945.2	7.0
9	34	AS 6t 7/8"	0.012	0.012	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-1.6	238.2	0.0	1944.1	7.0
8	64	EL 6t 7/8"	0.012	0.012	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-1.0	238.2	0.0	1942.5	7.0



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #002 – Simulation Parameter, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m <sup>2</sup>	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
7	491	Parachute	1.500	1.500	1.500	0.50	0.50	1.33	0.20	1.6	0.0	0.0	0.0	0.0	238.2	0.0	1941.5	7.0
6	34	AS 6t 7/8"	0.012	0.012	0.002	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-1.6	239.9	0.0	1941.5	7.0
5	183	3/4" MR	0.149	0.150	0.019	1.59	1.60	0.99	0.20	0.5	0.0	0.0	-0.1	-33.0	240.1	0.0	1926.7	7.2
4	33	AS 5t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-1.1	240.4	0.0	1906.8	7.2
3	53	PL 3t 3/4"	0.010	0.010	0.001	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-0.7	240.5	0.0	1905.7	7.2
2	34	AS 6t 7/8"	0.012	0.012	0.002	1.49	1.50	1.49	0.20	0.0	0.0	0.0	-0.0	-1.6	240.5	0.0	1905.0	7.2
1	522	double MACE	1.200	1.200	0.000	1.20	1.20	1.20	0.20	3.1	0.0	0.0	0.0	-2742.1	240.5	0.0	1903.4	0.0



## Global PAPA MFM-B 2014 Mooring Model Analysis

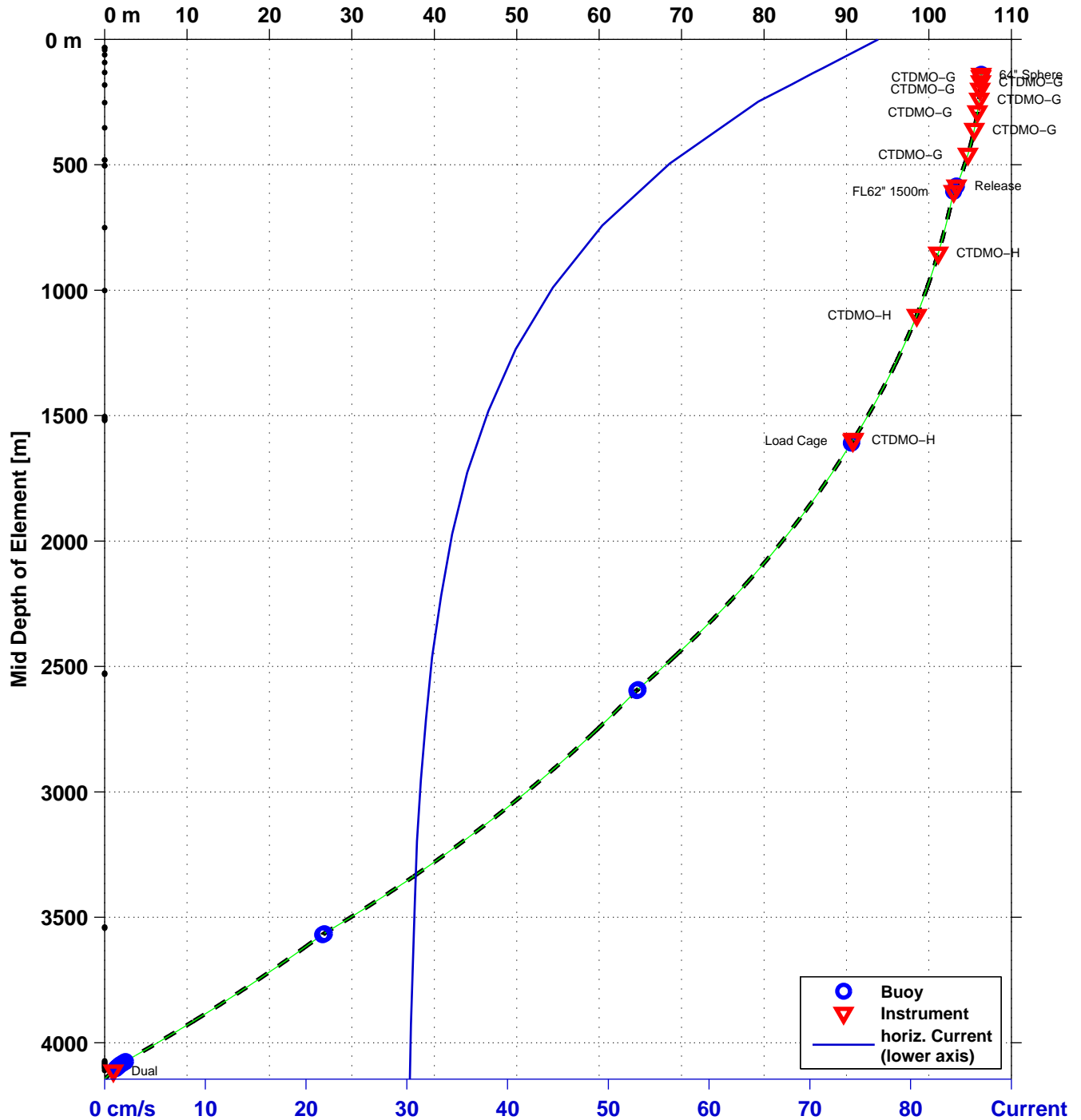
designed for 4145m Depth



By: P. Chua	13-Aug-2014	DCN: 3203-00012	REV: A	REF.DES. GP02FLMB
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg  
 Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

**Event #003 – Subduction [m]: max. 106m, Top at 139m**  
 Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf



**Event #003: Vert / Horiz anchor load: 1845 kg / 495 kg**  
**Vert / Horiz anchor safety: 125 % / 120 %,**  
**Safe Wet MACE anchor weight: 2440 kg, (max. 500 kg or Horiz. safety)**  
**Wet / Dry MACE anchor weight: 2742 kg / 3170 kg**





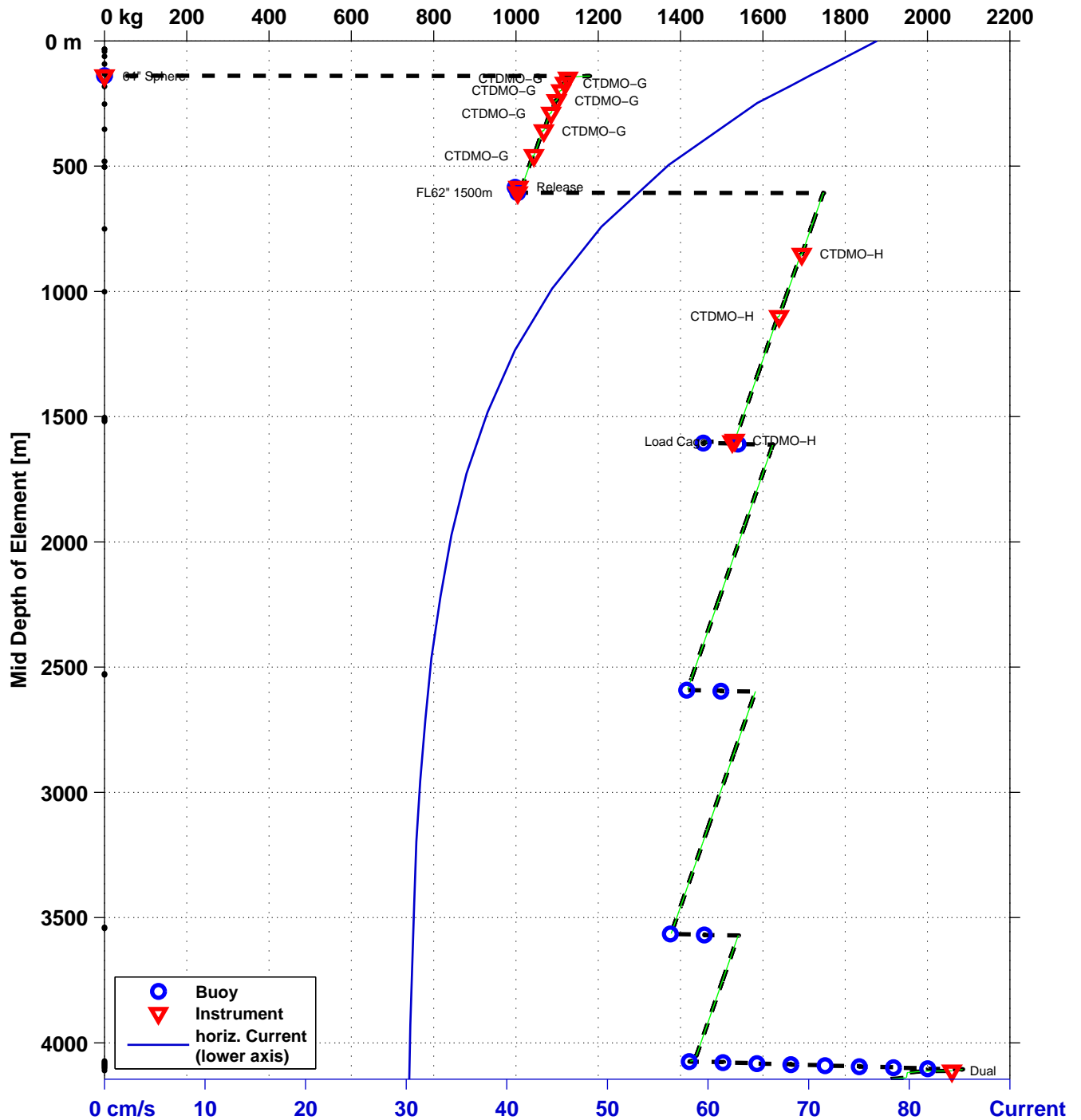
## Global PAPA MFM-B 2014 Mooring Model Analysis designed for 4145m Depth



By: P. Chua	13-Aug-2014	DCN: 3203-00012	REV: A	REF.DES. GP02FLMB
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Source: 13-Aug-2014 10:55:11, ...Paul's m-files\OOIPAPA2014Deploy\gp2014FLMBdeployed.cfg  
 Author: 13-Aug-2014 10:55:16, pchua@(PCWIN64)

### Event #003 – Tension [kg] Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf



Event #003: Vert / Horiz anchor load : 1845 kg / 495 kg  
 Vert / Horiz anchor safety : 125 % / 120 %,  
 Safe Wet MACE anchor weight : 2440 kg, (max. 500 kg or Horiz. safety)  
 Wet / Dry MACE anchor weight : 2742 kg / 3170 kg



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #003 – Simulation Result**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	[%]	Stretch [m]	[%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
156	306	64" Sphere 100	2.3	1180.0	2.087	0.50	0.70	26.9	0.0	0.0	0.00	0.00	137.8	106.3	887.7	1.3
155	17	U-Joint	0.3	-16.3	0.090	1.50	0.70	3.5	1180.3	7.4	0.00	0.00	140.2	106.3	887.6	1.3
154	141	1/2" EM chain	5.0	-35.0	1.000	1.30	0.70	33.2	1164.0	11.6	0.00	0.00	140.9	106.3	887.6	2.9
153	13	ind. term	0.1	-2.4	0.005	1.50	0.70	0.2	1129.2	7.1	0.00	0.00	145.4	106.3	887.4	3.2
152	103	5/16" NILSPIN	3.0	-0.6	0.029	1.10	0.70	0.8	1126.8	24.2	0.01	0.25	145.9	106.3	887.4	3.3
151	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.70	1.5	1126.1	11.3	0.00	0.00	148.4	106.3	887.2	3.3
150	103	5/16" NILSPIN	20.0	-4.3	0.191	1.10	0.69	5.2	1123.3	24.1	0.05	0.25	149.0	106.3	887.2	3.6
149	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.69	1.5	1119.1	11.2	0.00	0.00	168.5	106.3	886.0	3.7
148	103	5/16" NILSPIN	30.1	-6.4	0.286	1.10	0.68	7.6	1116.3	24.0	0.07	0.25	169.0	106.3	886.0	4.1
147	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.67	1.4	1109.9	11.1	0.00	0.00	198.5	106.2	883.9	4.2
146	103	5/16" NILSPIN	40.1	-8.5	0.381	1.10	0.66	9.6	1107.1	23.8	0.10	0.24	199.0	106.2	883.9	4.8
145	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.65	1.3	1098.6	11.0	0.00	0.00	238.4	106.1	880.8	4.8
144	103	5/16" NILSPIN	50.1	-10.6	0.476	1.10	0.64	11.2	1095.8	23.6	0.12	0.24	238.9	106.1	880.8	5.5
143	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.63	1.2	1085.2	10.9	0.00	0.00	288.4	105.9	876.3	5.5
142	103	5/16" NILSPIN	70.2	-14.9	0.667	1.10	0.62	14.6	1082.5	23.3	0.17	0.24	288.9	105.9	876.3	6.4
141	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.61	1.1	1067.6	10.7	0.00	0.00	358.1	105.5	868.9	6.4
140	103	5/16" NILSPIN	100.2	-21.3	0.953	1.10	0.59	18.8	1064.9	22.9	0.23	0.23	358.6	105.5	868.9	7.7
139	374	CTDMO-G P1000m	0.0	-2.8	0.042	1.40	0.57	1.0	1043.7	10.4	0.00	0.00	457.6	104.7	856.5	7.7
138	103	5/16" NILSPIN	127.3	-27.1	1.210	1.10	0.55	20.7	1041.0	22.4	0.29	0.23	458.1	104.7	856.5	9.1
137	13	ind. term	0.1	-2.4	0.005	1.50	0.54	0.1	1014.3	6.3	0.00	0.00	583.5	103.4	837.8	9.2
136	15	coupler ec	0.2	-6.0	0.020	1.50	0.54	0.5	1011.9	6.3	0.00	0.00	583.7	103.4	837.8	9.2
134	479	Release Float	1.0	0.0	0.592	1.20	0.54	10.8	1006.0	10.1	0.00	0.00	584.3	103.3	837.8	9.3
132	15	coupler ec	0.2	-6.0	0.020	1.50	0.54	0.5	1006.1	6.3	0.00	0.00	584.9	103.3	837.6	9.9
131	13	ind. term	0.1	-2.4	0.005	1.50	0.54	0.1	1000.2	6.3	0.00	0.00	585.0	103.3	837.6	10.0
130	256	CF14-1000	0.0	13.0	0.225	0.50	0.54	1.7	997.9	16.6	0.00	0.00	585.1	103.3	837.6	10.0
128	103	5/16" NILSPIN	10.0	-2.1	0.095	1.10	0.54	1.5	1010.7	21.7	0.02	0.22	585.6	103.3	837.6	10.1
127	103	5/16" NILSPIN	10.0	-2.1	0.095	1.10	0.53	1.5	1008.6	21.7	0.02	0.22	595.4	103.2	835.8	10.2
126	13	ind. term	0.1	-2.4	0.005	1.50	0.53	0.1	1006.5	6.3	0.00	0.00	604.9	103.0	834.0	10.2
125	326	FL62" 1500m ADC	2.8	750.0	1.887	0.50	0.53	14.0	1004.2	10.0	0.00	0.00	606.3	103.0	834.0	10.2



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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**Source:** 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

**Author:** 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #003 – Simulation Result, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	[%]	Stretch [m]	[%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
124	13	ind. term	0.1	-2.4	0.005	1.50	0.53	0.1	1748.8	10.9	0.00	0.00	607.7	103.0	833.5	6.3
123	103	5/16" NILSPIN	245.9	-52.2	2.335	1.10	0.50	32.8	1746.4	37.5	0.93	0.38	608.3	103.0	833.5	7.6
122	375	CTDMO-H P3500m	0.0	-2.8	0.042	1.40	0.47	0.7	1694.7	16.9	0.00	0.00	851.9	101.1	803.6	7.6
121	103	5/16" NILSPIN	250.9	-53.3	2.382	1.10	0.45	26.8	1691.9	36.4	0.92	0.37	852.4	101.1	803.6	8.9
120	375	CTDMO-H P3500m	0.0	-2.8	0.042	1.40	0.43	0.6	1639.3	16.4	0.00	0.00	1100.2	98.5	767.5	8.9
119	103	5/16" NILSPIN	250.9	-53.3	2.382	1.10	0.41	22.3	1636.5	35.2	0.89	0.36	1100.7	98.5	767.5	10.0
118	103	5/16" NILSPIN	250.9	-53.3	2.382	1.10	0.38	19.2	1584.0	34.0	0.86	0.35	1348.2	95.1	726.3	11.1
117	375	CTDMO-H P3500m	0.0	-2.8	0.042	1.40	0.37	0.4	1531.7	15.3	0.00	0.00	1594.3	90.9	680.3	11.1
116	103	5/16" NILSPIN	5.0	-1.1	0.048	1.10	0.37	0.4	1529.0	32.9	0.02	0.34	1594.8	90.9	680.3	11.1
115	13	ind. term	0.1	-2.4	0.005	1.50	0.37	0.1	1527.9	9.5	0.00	0.00	1599.3	90.8	679.4	11.1
114	300	Load Cage	1.5	-60.0	0.300	1.30	0.37	2.8	1525.6	15.3	0.00	0.00	1600.1	90.8	679.3	11.2
113	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.37	0.1	1466.8	12.2	0.00	0.00	1600.8	90.7	679.1	11.7
112	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.37	0.1	1466.2	12.2	0.00	0.00	1600.9	90.7	679.0	11.7
111	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.37	0.1	1465.5	12.2	0.00	0.00	1601.0	90.7	679.0	11.8
110	181	1/2" MR	2.5	-7.6	0.050	1.60	0.37	0.6	1464.8	14.6	0.00	0.00	1601.4	90.7	679.0	11.8
109	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.37	0.1	1457.4	12.1	0.00	0.00	1603.5	90.7	678.5	11.8
108	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.37	0.1	1456.8	12.1	0.00	0.00	1603.6	90.7	678.5	11.8
107	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.37	0.1	1456.0	12.1	0.00	0.00	1603.7	90.7	678.5	11.9
106	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.37	4.3	1455.4	14.6	0.00	0.00	1605.7	90.7	678.4	11.9
105	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.37	0.1	1541.7	12.8	0.00	0.00	1607.7	90.6	677.6	11.4
104	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.37	0.1	1541.0	12.8	0.00	0.00	1607.7	90.6	677.6	11.4
103	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.37	0.1	1540.3	12.8	0.00	0.00	1607.8	90.6	677.6	11.4
102	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.37	4.3	1539.7	15.4	0.00	0.00	1609.9	90.6	677.6	11.4
101	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.37	0.1	1626.1	13.6	0.00	0.00	1611.8	90.5	676.8	10.9
100	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.37	0.1	1625.5	13.5	0.00	0.00	1611.9	90.5	676.8	10.9
99	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.37	0.1	1624.7	13.5	0.00	0.00	1612.0	90.5	676.7	10.9
97	103	5/16" NILSPIN	1003.4	-213.0	9.530	1.10	0.34	59.5	1624.1	34.9	3.37	0.34	1612.5	90.5	676.7	15.0
96	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.32	0.1	1416.9	11.8	0.00	0.00	2589.6	64.7	451.7	15.1
95	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.32	0.1	1416.3	11.8	0.00	0.00	2589.7	64.7	451.7	15.1



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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**Source:** 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

**Author:** 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #003 – Simulation Result, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	[%]	Stretch [m]	[%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
94	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.32	0.1	1415.6	11.8	0.00	0.00	2589.8	64.7	451.7	15.1
93	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.32	3.2	1414.9	14.1	0.00	0.00	2591.8	64.7	451.6	15.1
92	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.32	0.1	1500.2	12.5	0.00	0.00	2593.7	64.6	450.6	14.3
91	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.32	0.1	1499.5	12.5	0.00	0.00	2593.8	64.6	450.6	14.3
90	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.32	0.1	1498.8	12.5	0.00	0.00	2593.9	64.6	450.5	14.4
89	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.32	3.2	1498.2	15.0	0.00	0.00	2595.9	64.6	450.5	14.4
88	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.32	0.1	1583.7	13.2	0.00	0.00	2597.9	64.4	449.5	13.7
87	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.32	0.1	1583.0	13.2	0.00	0.00	2597.9	64.4	449.5	13.7
86	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.32	0.1	1582.3	13.2	0.00	0.00	2598.0	64.4	449.5	13.7
85	103	5/16" NILSPIN	1003.3	-213.0	9.530	1.10	0.31	48.2	1581.7	34.0	3.28	0.33	2598.6	64.4	449.5	17.9
84	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.31	0.1	1377.2	11.5	0.00	0.00	3563.6	26.7	177.6	17.9
83	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.31	0.1	1376.6	11.5	0.00	0.00	3563.7	26.7	177.6	17.9
82	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.31	0.1	1375.9	11.5	0.00	0.00	3563.8	26.7	177.5	17.9
81	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.31	2.9	1375.2	13.8	0.00	0.00	3565.8	26.7	177.5	17.9
80	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.31	0.1	1459.3	12.2	0.00	0.00	3567.6	26.5	176.3	17.0
79	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.31	0.1	1458.7	12.2	0.00	0.00	3567.7	26.5	176.3	17.0
78	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.31	0.1	1458.0	12.2	0.00	0.00	3567.8	26.5	176.2	17.0
77	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.31	2.9	1457.4	14.6	0.00	0.00	3569.8	26.4	176.2	17.0
76	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.31	0.1	1541.9	12.8	0.00	0.00	3571.7	26.3	175.0	16.2
75	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.31	0.1	1541.2	12.8	0.00	0.00	3571.8	26.3	175.0	16.2
74	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.31	0.1	1540.5	12.8	0.00	0.00	3571.9	26.3	175.0	16.2
73	103	5/16" NILSPIN	501.7	-106.5	4.765	1.10	0.31	22.4	1539.9	33.1	1.65	0.33	3572.4	26.3	175.0	18.3
72	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1438.5	12.0	0.00	0.00	4051.0	3.7	26.4	18.3
71	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.30	0.1	1437.9	12.0	0.00	0.00	4051.1	3.7	26.4	18.3
70	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1437.2	12.0	0.00	0.00	4051.2	3.7	26.3	18.3
69	103	5/16" NILSPIN	20.1	-4.3	0.191	1.10	0.30	0.9	1436.5	30.9	0.06	0.32	4051.7	3.7	26.3	18.4
68	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1432.5	11.9	0.00	0.00	4070.3	2.7	20.0	18.4
67	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.30	0.1	1431.9	11.9	0.00	0.00	4070.4	2.7	20.0	18.4
66	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1431.2	11.9	0.00	0.00	4070.5	2.7	19.9	18.5



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #003 – Simulation Result, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	[%]	Stretch [m]	[%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
65	181	1/2" MR	2.5	-7.6	0.050	1.60	0.30	0.4	1430.6	14.3	0.00	0.00	4070.9	2.7	19.9	18.5
64	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1423.4	11.9	0.00	0.00	4072.9	2.5	19.1	18.6
63	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.30	0.1	1422.7	11.9	0.00	0.00	4073.0	2.5	19.1	18.6
62	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1422.1	11.9	0.00	0.00	4073.1	2.5	19.1	18.6
61	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.30	2.8	1421.4	14.2	0.00	0.00	4075.1	2.5	19.0	18.6
60	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1505.2	12.5	0.00	0.00	4076.9	2.3	17.8	17.7
59	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.30	0.1	1504.6	12.5	0.00	0.00	4077.0	2.3	17.7	17.7
58	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1503.9	12.5	0.00	0.00	4077.1	2.3	17.7	17.7
57	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.30	2.8	1503.3	15.0	0.00	0.00	4079.1	2.3	17.7	17.7
56	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1587.5	13.2	0.00	0.00	4081.0	2.1	16.5	16.8
55	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.30	0.1	1586.8	13.2	0.00	0.00	4081.1	2.1	16.4	16.8
54	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1586.1	13.2	0.00	0.00	4081.1	2.1	16.4	16.8
53	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.30	2.9	1585.5	15.9	0.00	0.00	4083.2	2.1	16.4	16.9
52	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1670.0	13.9	0.00	0.00	4085.0	1.9	15.2	16.1
51	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.30	0.1	1669.4	13.9	0.00	0.00	4085.1	1.9	15.2	16.1
50	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1668.7	13.9	0.00	0.00	4085.2	1.9	15.2	16.1
49	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.30	2.9	1668.1	16.7	0.00	0.00	4087.2	1.9	15.2	16.1
48	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1752.9	14.6	0.00	0.00	4089.1	1.8	14.1	15.4
47	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.30	0.1	1752.3	14.6	0.00	0.00	4089.2	1.8	14.0	15.4
46	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1751.6	14.6	0.00	0.00	4089.3	1.8	14.0	15.4
45	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.30	2.9	1750.9	17.5	0.00	0.00	4091.3	1.8	14.0	15.4
44	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1836.0	15.3	0.00	0.00	4093.2	1.6	12.9	14.8
43	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.30	0.1	1835.4	15.3	0.00	0.00	4093.3	1.6	12.9	14.8
42	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1834.7	15.3	0.00	0.00	4093.4	1.6	12.9	14.8
41	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.30	2.9	1834.0	18.3	0.00	0.00	4095.4	1.6	12.9	14.8
40	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1919.3	16.0	0.00	0.00	4097.3	1.5	11.8	14.2
39	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.30	0.1	1918.7	16.0	0.00	0.00	4097.4	1.5	11.8	14.2
38	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1918.0	16.0	0.00	0.00	4097.5	1.5	11.8	14.2
37	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.30	2.9	1917.3	19.2	0.00	0.00	4099.5	1.5	11.8	14.2



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #003 – Simulation Result, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	[%]	Stretch [m]	[%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
36	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	2002.8	16.7	0.00	0.00	4101.4	1.4	10.8	13.7
35	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.30	0.1	2002.2	16.7	0.00	0.00	4101.5	1.4	10.8	13.7
34	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	2001.5	16.7	0.00	0.00	4101.6	1.3	10.8	13.7
33	274	HR17-4 serial	4.0	88.0	1.000	0.60	0.30	2.9	2000.8	20.0	0.00	0.00	4103.6	1.3	10.7	13.7
32	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	2086.5	17.4	0.00	0.00	4105.5	1.2	9.8	13.2
31	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.30	0.1	2085.9	17.4	0.00	0.00	4105.6	1.2	9.8	13.2
30	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	2085.1	17.4	0.00	0.00	4105.7	1.2	9.8	13.3
29	181	1/2" MR	5.0	-15.2	0.100	1.60	0.30	0.7	2084.5	20.8	0.00	0.00	4106.2	1.2	9.7	13.4
28	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	2069.7	17.2	0.00	0.00	4110.6	1.1	8.6	13.4
27	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.30	0.1	2069.1	17.2	0.00	0.00	4110.7	1.1	8.6	13.4
26	33	AS 5t 3/4"	0.1	-1.1	0.010	1.50	0.30	0.1	2068.3	11.5	0.00	0.00	4110.8	1.1	8.5	13.4
25	94	Swivel 5t	0.2	-5.3	0.025	1.20	0.30	0.1	2067.3	20.7	0.00	0.00	4111.0	1.1	8.5	13.4
24	33	AS 5t 3/4"	0.1	-1.1	0.010	1.50	0.30	0.1	2062.1	11.5	0.00	0.00	4111.1	1.1	8.5	13.4
23	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.30	0.1	2061.1	17.2	0.00	0.00	4111.2	1.1	8.5	13.4
22	33	AS 5t 3/4"	0.1	-1.1	0.010	1.50	0.30	0.1	2060.4	11.4	0.00	0.00	4111.3	1.1	8.4	13.4
21	478	Dual Release	1.0	-61.0	0.288	1.20	0.30	1.7	2059.3	20.6	0.00	0.00	4111.9	1.1	8.4	13.5
20	480	1/2" dropchain	0.6	-6.8	0.024	1.60	0.30	0.2	2000.1	12.5	0.00	0.00	4112.7	1.0	8.2	13.9
19	76	ML 17t 1-1/4"	0.2	-4.8	0.026	1.50	0.30	0.2	1993.5	4.5	0.00	0.00	4113.1	1.0	8.0	14.0
18	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.30	0.1	1988.8	8.3	0.00	0.00	4113.2	1.0	8.0	14.0
17	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.30	0.1	1987.3	16.6	0.00	0.00	4113.3	1.0	7.9	14.0
16	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.30	0.1	1986.6	8.3	0.00	0.00	4113.4	1.0	7.9	14.0
15	183	3/4" MR	5.0	-33.1	0.150	1.60	0.30	1.1	1985.1	8.3	0.00	0.00	4114.0	1.0	7.9	14.3
14	32	AS 3t 5/8"	0.1	-0.7	0.006	1.50	0.30	0.0	1953.1	16.3	0.00	0.00	4118.3	0.9	6.7	14.3
13	64	EL 6t 7/8"	0.1	-1.0	0.012	1.50	0.30	0.1	1952.4	8.1	0.00	0.00	4118.4	0.9	6.7	14.3
12	491	Parachute	0.0	0.0	1.500	0.50	0.30	3.7	1951.4	19.5	0.00	0.00	4118.5	0.9	6.6	14.3
11	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.30	0.1	1952.3	8.1	0.00	0.00	4118.5	0.9	6.6	14.4
10	113	Nystron-1"	20.7	-2.0	0.520	1.30	0.30	3.1	1950.8	11.6	0.70	3.48	4119.1	0.8	6.6	14.5
9	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.30	0.1	1949.0	8.1	0.00	0.00	4138.7	0.2	1.4	14.6
8	64	EL 6t 7/8"	0.1	-1.0	0.012	1.50	0.30	0.1	1947.5	8.1	0.00	0.00	4138.8	0.2	1.4	14.6



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #003 – Simulation Result, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Mooring Element	Length [m]	Buoy [kg]	Area [m^2]	Cd	Current [m/s]	Drag [kg]	Tension [kg]	Tension [%]	Stretch [m]	Stretch [%]	Depth [m]	dZ [m]	dXY [m]	Tilt [deg]
7	491	Parachute	0.0	0.0	1.500	0.50	0.30	3.7	1946.5	19.5	0.00	0.00	4138.8	0.2	1.4	14.6
6	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.30	0.1	1947.4	8.1	0.00	0.00	4138.9	0.2	1.4	14.7
5	183	3/4" MR	5.0	-33.1	0.150	1.60	0.30	1.1	1945.9	8.1	0.00	0.00	4139.4	0.2	1.3	14.9
4	33	AS 5t 3/4"	0.1	-1.1	0.010	1.50	0.30	0.1	1914.0	10.6	0.00	0.00	4143.8	0.0	0.1	15.0
3	53	PL 3t 3/4"	0.1	-0.7	0.010	1.50	0.30	0.1	1912.9	15.9	0.00	0.00	4143.9	0.0	0.1	15.0
2	34	AS 6t 7/8"	0.1	-1.6	0.012	1.50	0.30	0.1	1912.2	8.0	0.00	0.00	4144.0	0.0	0.0	15.0
1	522	double MACE Anch	1.0	-2742.1	1.200	1.20	0.30	7.1	1910.7	31.8	0.00	0.00	4145.0	0.0	0.0	0.0

Max. 37.5% Static Tension at:

123	103	5/16" NILSPIN	245.9	-52.2	2.335	1.10	0.50	32.8	1746.4	37.5	0.93	0.38	608.3	103.0	833.5	7.6
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Vert/Horiz Anchor Load : 1845 kg / 495 kg  
 Wet MACE Anchor Weight : 2742 kg  
 Safe MACE Anchor Weight : 2440 kg



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #003 – Simulation Parameter**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m^2	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
156	306	64" Sphere	2.087	2.087	2.087	0.50	0.50	0.50	0.70	26.9	0.0	0.0	0.0	1180.0	0.0	0.0	0.0	1.3
155	17	U-Joint	0.090	0.090	0.002	1.50	1.50	1.50	0.70	3.5	0.0	0.0	-0.1	-16.3	26.9	0.0	1180.0	1.3
154	141	1/2" EM chai	0.999	1.000	0.038	1.30	1.30	1.00	0.70	33.2	0.0	0.0	-1.3	-35.0	43.7	0.0	1149.2	2.9
153	13	ind. term	0.005	0.005	0.000	1.50	1.50	1.50	0.70	0.2	0.0	0.0	-0.0	-2.4	63.6	0.0	1127.4	3.2
152	103	5/16" NILSPI	0.029	0.029	0.002	1.10	1.10	0.00	0.70	0.8	0.0	0.0	-0.0	-0.6	64.1	0.0	1124.7	3.3
151	374	CTDMO-G P100	0.042	0.042	0.002	1.40	1.40	1.00	0.70	1.5	0.0	0.0	-0.1	-2.8	64.6	0.0	1124.3	3.3
150	103	5/16" NILSPI	0.190	0.191	0.012	1.10	1.10	0.00	0.69	5.2	0.0	0.0	-0.3	-4.3	68.6	0.0	1119.2	3.6
149	374	CTDMO-G P100	0.042	0.042	0.003	1.40	1.40	1.00	0.69	1.5	0.0	0.0	-0.1	-2.8	71.3	0.0	1116.8	3.7
148	103	5/16" NILSPI	0.285	0.286	0.020	1.09	1.10	0.00	0.68	7.6	0.0	0.0	-0.5	-6.4	76.5	0.0	1110.6	4.1
147	374	CTDMO-G P100	0.042	0.042	0.003	1.40	1.40	1.00	0.67	1.4	0.0	0.0	-0.1	-2.8	80.3	0.0	1107.0	4.2
146	103	5/16" NILSPI	0.380	0.381	0.030	1.09	1.10	0.00	0.66	9.6	0.0	0.0	-0.7	-8.5	86.5	0.0	1099.6	4.8
145	374	CTDMO-G P100	0.042	0.042	0.004	1.40	1.40	1.00	0.65	1.3	0.0	0.0	-0.1	-2.8	91.3	0.0	1094.8	4.8
144	103	5/16" NILSPI	0.475	0.476	0.043	1.09	1.10	0.00	0.64	11.2	0.0	0.0	-1.0	-10.7	98.2	0.0	1086.2	5.5
143	374	CTDMO-G P100	0.042	0.042	0.004	1.39	1.40	1.00	0.63	1.2	0.0	0.0	-0.1	-2.8	103.8	0.0	1080.3	5.5
142	103	5/16" NILSPI	0.663	0.667	0.070	1.09	1.10	0.00	0.62	14.6	0.0	0.0	-1.5	-14.9	112.4	0.0	1069.3	6.4
141	374	CTDMO-G P100	0.042	0.042	0.005	1.39	1.40	0.99	0.61	1.1	0.0	0.0	-0.1	-2.8	119.7	0.0	1060.9	6.4
140	103	5/16" NILSPI	0.946	0.953	0.118	1.08	1.10	0.00	0.59	18.8	0.0	0.0	-2.3	-21.3	130.4	0.0	1046.3	7.7
139	374	CTDMO-G P100	0.042	0.042	0.006	1.39	1.40	0.99	0.57	1.0	0.0	0.0	-0.1	-2.8	139.7	0.0	1034.4	7.7
138	103	5/16" NILSPI	1.197	1.210	0.178	1.07	1.10	0.00	0.55	20.7	0.0	0.0	-3.0	-27.1	151.2	0.0	1016.5	9.1
137	13	ind. term	0.005	0.005	0.001	1.48	1.50	1.48	0.54	0.1	0.0	0.0	-0.0	-2.4	161.4	0.0	1001.3	9.2
136	15	coupler ec	0.020	0.020	0.003	1.48	1.50	1.48	0.54	0.5	0.0	0.0	-0.1	-6.0	161.5	0.0	998.9	9.2
134	479	Release Floa	0.584	0.592	0.095	1.18	1.20	0.89	0.54	10.8	0.0	0.0	-1.6	0.0	162.0	0.0	992.8	9.3
132	15	coupler ec	0.020	0.020	0.003	1.48	1.50	1.48	0.54	0.5	0.0	0.0	-0.1	-6.0	172.7	0.0	991.2	9.9
131	13	ind. term	0.005	0.005	0.001	1.48	1.50	1.48	0.54	0.1	0.0	0.0	-0.0	-2.4	173.2	0.0	985.1	10.0
130	256	CF14-1000	0.222	0.225	0.039	0.49	0.50	0.39	0.54	1.7	0.0	0.0	-0.3	13.0	173.3	0.0	982.7	10.0
128	103	5/16" NILSPI	0.094	0.095	0.017	1.06	1.10	0.00	0.54	1.5	0.0	0.0	-0.3	-2.1	175.7	0.0	994.4	10.1
127	103	5/16" NILSPI	0.094	0.095	0.017	1.06	1.10	0.00	0.53	1.5	0.0	0.0	-0.3	-2.1	177.2	0.0	992.0	10.2
126	13	ind. term	0.005	0.005	0.001	1.48	1.50	1.48	0.53	0.1	0.0	0.0	-0.0	-2.4	178.1	0.0	990.7	10.2
125	326	FL62" 1500m	1.887	1.887	1.887	0.50	0.50	0.50	0.53	14.0	0.0	0.0	0.0	750.0	178.2	0.0	988.2	10.2





**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #003 – Simulation Parameter, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m <sup>2</sup>	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
124	13	ind. term	0.005	0.005	0.001	1.49	1.50	1.49	0.53	0.1	0.0	0.0	-0.0	-2.4	192.1	0.0	1738.2	6.3
123	103	5/16" NILSPI	2.317	2.335	0.284	1.08	1.10	0.00	0.50	32.8	0.0	0.0	-4.0	-52.2	209.2	0.0	1707.8	7.6
122	375	CTDMO-H P350	0.042	0.042	0.006	1.39	1.40	0.99	0.47	0.7	0.0	0.0	-0.1	-2.8	225.1	0.0	1679.7	7.6
121	103	5/16" NILSPI	2.358	2.382	0.343	1.07	1.10	0.00	0.45	26.8	0.0	0.0	-3.9	-53.3	239.6	0.0	1648.3	8.9
120	375	CTDMO-H P350	0.042	0.042	0.007	1.38	1.40	0.99	0.43	0.6	0.0	0.0	-0.1	-2.8	252.6	0.0	1619.7	8.9
119	103	5/16" NILSPI	2.350	2.382	0.392	1.07	1.10	0.00	0.41	22.3	0.0	0.0	-3.7	-53.3	264.6	0.0	1588.4	10.0
118	103	5/16" NILSPI	2.342	2.382	0.436	1.06	1.10	0.00	0.38	19.2	0.0	0.0	-3.5	-53.3	285.2	0.0	1531.6	11.1
117	375	CTDMO-H P350	0.041	0.042	0.008	1.37	1.40	0.98	0.37	0.4	0.0	0.0	-0.1	-2.8	294.6	0.0	1503.1	11.1
116	103	5/16" NILSPI	0.047	0.048	0.009	1.05	1.10	0.00	0.37	0.4	0.0	0.0	-0.1	-1.1	295.1	0.0	1499.8	11.1
115	13	ind. term	0.005	0.005	0.001	1.47	1.50	1.47	0.37	0.1	0.0	0.0	-0.0	-2.4	295.4	0.0	1499.1	11.1
114	300	Load Cage	0.294	0.300	0.058	1.28	1.30	0.88	0.37	2.8	0.0	0.0	-0.5	-60.0	295.4	0.0	1496.7	11.2
113	32	AS 3t 5/8"	0.006	0.006	0.001	1.47	1.50	1.47	0.37	0.1	0.0	0.0	-0.0	-0.7	298.3	0.0	1436.2	11.7
112	53	PL 3t 3/4"	0.009	0.010	0.002	1.47	1.50	1.47	0.37	0.1	0.0	0.0	-0.0	-0.7	298.3	0.0	1435.5	11.7
111	32	AS 3t 5/8"	0.006	0.006	0.001	1.47	1.50	1.47	0.37	0.1	0.0	0.0	-0.0	-0.7	298.4	0.0	1434.8	11.8
110	181	1/2" MR	0.049	0.050	0.010	1.57	1.60	0.98	0.37	0.6	0.0	0.0	-0.1	-7.6	298.7	0.0	1431.5	11.8
109	32	AS 3t 5/8"	0.006	0.006	0.001	1.47	1.50	1.47	0.37	0.1	0.0	0.0	-0.0	-0.7	299.1	0.0	1426.4	11.8
108	53	PL 3t 3/4"	0.009	0.010	0.002	1.47	1.50	1.47	0.37	0.1	0.0	0.0	-0.0	-0.7	299.1	0.0	1425.7	11.8
107	32	AS 3t 5/8"	0.006	0.006	0.001	1.47	1.50	1.47	0.37	0.1	0.0	0.0	-0.0	-0.7	299.3	0.0	1425.0	11.9
106	274	HR17-4 seria	0.979	1.000	0.206	0.59	0.60	1.04	0.37	4.3	0.0	0.0	-0.8	88.0	299.3	0.0	1424.3	11.9
105	32	AS 3t 5/8"	0.006	0.006	0.001	1.47	1.50	1.47	0.37	0.1	0.0	0.0	-0.0	-0.7	303.7	0.0	1511.5	11.4
104	53	PL 3t 3/4"	0.009	0.010	0.002	1.47	1.50	1.47	0.37	0.1	0.0	0.0	-0.0	-0.7	303.7	0.0	1510.8	11.4
103	32	AS 3t 5/8"	0.006	0.006	0.001	1.47	1.50	1.47	0.37	0.1	0.0	0.0	-0.0	-0.7	303.8	0.0	1510.1	11.4
102	274	HR17-4 seria	0.980	1.000	0.197	0.59	0.60	1.04	0.37	4.3	0.0	0.0	-0.8	88.0	303.9	0.0	1509.4	11.4
101	32	AS 3t 5/8"	0.006	0.006	0.001	1.47	1.50	1.47	0.37	0.1	0.0	0.0	-0.0	-0.7	308.2	0.0	1596.6	10.9
100	53	PL 3t 3/4"	0.009	0.010	0.002	1.47	1.50	1.47	0.37	0.1	0.0	0.0	-0.0	-0.7	308.3	0.0	1595.9	10.9
99	32	AS 3t 5/8"	0.006	0.006	0.001	1.47	1.50	1.47	0.37	0.1	0.0	0.0	-0.0	-0.7	308.4	0.0	1595.2	10.9
97	103	5/16" NILSPI	9.285	9.530	2.137	1.04	1.10	0.00	0.34	59.5	0.0	0.0	-13.2	-213.0	339.8	0.0	1481.5	15.0
96	32	AS 3t 5/8"	0.006	0.006	0.002	1.45	1.50	1.45	0.32	0.1	0.0	0.0	-0.0	-0.7	367.9	0.0	1368.3	15.1
95	53	PL 3t 3/4"	0.009	0.010	0.002	1.45	1.50	1.45	0.32	0.1	0.0	0.0	-0.0	-0.7	368.0	0.0	1367.6	15.1



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
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<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #003 – Simulation Parameter, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m <sup>2</sup>	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
94	32	AS 3t 5/8"	0.006	0.006	0.002	1.45	1.50	1.45	0.32	0.1	0.0	0.0	-0.0	-0.7	368.1	0.0	1366.9	15.1
93	274	HR17-4 seria	0.966	1.000	0.260	0.58	0.60	1.02	0.32	3.2	0.0	0.0	-0.7	88.0	368.1	0.0	1366.2	15.1
92	32	AS 3t 5/8"	0.006	0.006	0.002	1.45	1.50	1.45	0.32	0.1	0.0	0.0	-0.0	-0.7	371.4	0.0	1453.5	14.3
91	53	PL 3t 3/4"	0.009	0.010	0.002	1.45	1.50	1.45	0.32	0.1	0.0	0.0	-0.0	-0.7	371.4	0.0	1452.8	14.3
90	32	AS 3t 5/8"	0.006	0.006	0.002	1.45	1.50	1.45	0.32	0.1	0.0	0.0	-0.0	-0.7	371.5	0.0	1452.0	14.4
89	274	HR17-4 seria	0.969	1.000	0.248	0.58	0.60	1.03	0.32	3.2	0.0	0.0	-0.7	88.0	371.6	0.0	1451.4	14.4
88	32	AS 3t 5/8"	0.006	0.006	0.002	1.46	1.50	1.46	0.32	0.1	0.0	0.0	-0.0	-0.7	374.8	0.0	1538.7	13.7
87	53	PL 3t 3/4"	0.009	0.010	0.002	1.46	1.50	1.46	0.32	0.1	0.0	0.0	-0.0	-0.7	374.9	0.0	1538.0	13.7
86	32	AS 3t 5/8"	0.006	0.006	0.002	1.46	1.50	1.46	0.32	0.1	0.0	0.0	-0.0	-0.7	374.9	0.0	1537.2	13.7
85	103	5/16" NILSPI	9.171	9.530	2.583	1.01	1.10	0.00	0.31	48.2	0.0	0.0	-13.0	-213.0	399.7	0.0	1423.8	17.9
84	32	AS 3t 5/8"	0.006	0.006	0.002	1.43	1.50	1.43	0.31	0.1	0.0	0.0	-0.0	-0.7	423.2	0.0	1310.6	17.9
83	53	PL 3t 3/4"	0.009	0.010	0.003	1.43	1.50	1.43	0.31	0.1	0.0	0.0	-0.0	-0.7	423.2	0.0	1309.9	17.9
82	32	AS 3t 5/8"	0.006	0.006	0.002	1.43	1.50	1.43	0.31	0.1	0.0	0.0	-0.0	-0.7	423.3	0.0	1309.1	17.9
81	274	HR17-4 seria	0.951	1.000	0.308	0.57	0.60	1.01	0.31	2.9	0.0	0.0	-0.7	88.0	423.3	0.0	1308.5	17.9
80	32	AS 3t 5/8"	0.006	0.006	0.002	1.43	1.50	1.43	0.31	0.1	0.0	0.0	-0.0	-0.7	426.2	0.0	1395.7	17.0
79	53	PL 3t 3/4"	0.009	0.010	0.003	1.43	1.50	1.43	0.31	0.1	0.0	0.0	-0.0	-0.7	426.3	0.0	1395.0	17.0
78	32	AS 3t 5/8"	0.006	0.006	0.002	1.43	1.50	1.43	0.31	0.1	0.0	0.0	-0.0	-0.7	426.4	0.0	1394.3	17.0
77	274	HR17-4 seria	0.956	1.000	0.293	0.57	0.60	1.01	0.31	2.9	0.0	0.0	-0.7	88.0	426.4	0.0	1393.6	17.0
76	32	AS 3t 5/8"	0.006	0.006	0.002	1.44	1.50	1.44	0.31	0.1	0.0	0.0	-0.0	-0.7	429.3	0.0	1480.9	16.2
75	53	PL 3t 3/4"	0.009	0.010	0.003	1.44	1.50	1.44	0.31	0.1	0.0	0.0	-0.0	-0.7	429.4	0.0	1480.2	16.2
74	32	AS 3t 5/8"	0.006	0.006	0.002	1.44	1.50	1.44	0.31	0.1	0.0	0.0	-0.0	-0.7	429.4	0.0	1479.5	16.2
73	103	5/16" NILSPI	4.551	4.765	1.411	0.99	1.10	0.00	0.31	22.4	0.0	0.0	-6.6	-106.5	440.8	0.0	1422.4	18.3
72	32	AS 3t 5/8"	0.006	0.006	0.002	1.42	1.50	1.42	0.30	0.0	0.0	0.0	-0.0	-0.7	451.9	0.0	1365.7	18.3
71	53	PL 3t 3/4"	0.009	0.010	0.003	1.42	1.50	1.42	0.30	0.1	0.0	0.0	-0.0	-0.7	452.0	0.0	1365.0	18.3
70	32	AS 3t 5/8"	0.006	0.006	0.002	1.42	1.50	1.42	0.30	0.0	0.0	0.0	-0.0	-0.7	452.0	0.0	1364.2	18.3
69	103	5/16" NILSPI	0.181	0.191	0.060	0.98	1.10	0.00	0.30	0.9	0.0	0.0	-0.3	-4.3	452.5	0.0	1361.4	18.4
68	32	AS 3t 5/8"	0.006	0.006	0.002	1.42	1.50	1.42	0.30	0.0	0.0	0.0	-0.0	-0.7	453.0	0.0	1359.0	18.4
67	53	PL 3t 3/4"	0.009	0.010	0.003	1.42	1.50	1.42	0.30	0.1	0.0	0.0	-0.0	-0.7	453.0	0.0	1358.3	18.4
66	32	AS 3t 5/8"	0.006	0.006	0.002	1.42	1.50	1.42	0.30	0.0	0.0	0.0	-0.0	-0.7	453.1	0.0	1357.6	18.5



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
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<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #003 – Simulation Parameter, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m <sup>2</sup>	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
65	181	1/2" MR	0.047	0.050	0.016	1.52	1.60	0.95	0.30	0.4	0.0	0.0	-0.1	-7.6	453.2	0.0	1354.3	18.5
64	32	AS 3t 5/8"	0.006	0.006	0.002	1.42	1.50	1.42	0.30	0.0	0.0	0.0	-0.0	-0.7	453.5	0.0	1349.2	18.6
63	53	PL 3t 3/4"	0.009	0.010	0.003	1.42	1.50	1.42	0.30	0.1	0.0	0.0	-0.0	-0.7	453.5	0.0	1348.5	18.6
62	32	AS 3t 5/8"	0.006	0.006	0.002	1.42	1.50	1.42	0.30	0.0	0.0	0.0	-0.0	-0.7	453.6	0.0	1347.8	18.6
61	274	HR17-4 seria	0.948	1.000	0.319	0.57	0.60	1.00	0.30	2.8	0.0	0.0	-0.7	88.0	453.6	0.0	1347.1	18.6
60	32	AS 3t 5/8"	0.006	0.006	0.002	1.43	1.50	1.43	0.30	0.0	0.0	0.0	-0.0	-0.7	456.5	0.0	1434.4	17.7
59	53	PL 3t 3/4"	0.009	0.010	0.003	1.43	1.50	1.43	0.30	0.1	0.0	0.0	-0.0	-0.7	456.5	0.0	1433.7	17.7
58	32	AS 3t 5/8"	0.006	0.006	0.002	1.43	1.50	1.43	0.30	0.0	0.0	0.0	-0.0	-0.7	456.6	0.0	1432.9	17.7
57	274	HR17-4 seria	0.953	1.000	0.304	0.57	0.60	1.01	0.30	2.8	0.0	0.0	-0.7	88.0	456.6	0.0	1432.2	17.7
56	32	AS 3t 5/8"	0.006	0.006	0.002	1.44	1.50	1.44	0.30	0.0	0.0	0.0	-0.0	-0.7	459.5	0.0	1519.5	16.8
55	53	PL 3t 3/4"	0.009	0.010	0.003	1.44	1.50	1.44	0.30	0.1	0.0	0.0	-0.0	-0.7	459.5	0.0	1518.9	16.8
54	32	AS 3t 5/8"	0.006	0.006	0.002	1.44	1.50	1.44	0.30	0.0	0.0	0.0	-0.0	-0.7	459.6	0.0	1518.1	16.8
53	274	HR17-4 seria	0.957	1.000	0.290	0.57	0.60	1.01	0.30	2.9	0.0	0.0	-0.7	88.0	459.6	0.0	1517.4	16.9
52	32	AS 3t 5/8"	0.006	0.006	0.002	1.44	1.50	1.44	0.30	0.0	0.0	0.0	-0.0	-0.7	462.5	0.0	1604.7	16.1
51	53	PL 3t 3/4"	0.009	0.010	0.003	1.44	1.50	1.44	0.30	0.1	0.0	0.0	-0.0	-0.7	462.6	0.0	1604.1	16.1
50	32	AS 3t 5/8"	0.006	0.006	0.002	1.44	1.50	1.44	0.30	0.0	0.0	0.0	-0.0	-0.7	462.6	0.0	1603.3	16.1
49	274	HR17-4 seria	0.961	1.000	0.277	0.58	0.60	1.02	0.30	2.9	0.0	0.0	-0.7	88.0	462.7	0.0	1602.6	16.1
48	32	AS 3t 5/8"	0.006	0.006	0.002	1.45	1.50	1.45	0.30	0.0	0.0	0.0	-0.0	-0.7	465.5	0.0	1690.0	15.4
47	53	PL 3t 3/4"	0.009	0.010	0.003	1.45	1.50	1.45	0.30	0.1	0.0	0.0	-0.0	-0.7	465.6	0.0	1689.3	15.4
46	32	AS 3t 5/8"	0.006	0.006	0.002	1.45	1.50	1.45	0.30	0.0	0.0	0.0	-0.0	-0.7	465.7	0.0	1688.5	15.4
45	274	HR17-4 seria	0.964	1.000	0.266	0.58	0.60	1.02	0.30	2.9	0.0	0.0	-0.7	88.0	465.7	0.0	1687.9	15.4
44	32	AS 3t 5/8"	0.006	0.006	0.002	1.45	1.50	1.45	0.30	0.0	0.0	0.0	-0.0	-0.7	468.6	0.0	1775.2	14.8
43	53	PL 3t 3/4"	0.009	0.010	0.002	1.45	1.50	1.45	0.30	0.1	0.0	0.0	-0.0	-0.7	468.6	0.0	1774.5	14.8
42	32	AS 3t 5/8"	0.006	0.006	0.002	1.45	1.50	1.45	0.30	0.0	0.0	0.0	-0.0	-0.7	468.7	0.0	1773.8	14.8
41	274	HR17-4 seria	0.967	1.000	0.256	0.58	0.60	1.02	0.30	2.9	0.0	0.0	-0.6	88.0	468.8	0.0	1773.1	14.8
40	32	AS 3t 5/8"	0.006	0.006	0.002	1.45	1.50	1.45	0.30	0.0	0.0	0.0	-0.0	-0.7	471.7	0.0	1860.5	14.2
39	53	PL 3t 3/4"	0.009	0.010	0.002	1.45	1.50	1.45	0.30	0.1	0.0	0.0	-0.0	-0.7	471.7	0.0	1859.8	14.2
38	32	AS 3t 5/8"	0.006	0.006	0.002	1.45	1.50	1.45	0.30	0.0	0.0	0.0	-0.0	-0.7	471.8	0.0	1859.0	14.2
37	274	HR17-4 seria	0.969	1.000	0.246	0.58	0.60	1.03	0.30	2.9	0.0	0.0	-0.6	88.0	471.8	0.0	1858.4	14.2



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\\Paul's m-files\OOI\PA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #003 – Simulation Parameter, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m <sup>2</sup>	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
36	32	AS 3t 5/8"	0.006	0.006	0.002	1.46	1.50	1.46	0.30	0.0	0.0	0.0	-0.0	-0.7	474.7	0.0	1945.7	13.7
35	53	PL 3t 3/4"	0.009	0.010	0.002	1.46	1.50	1.46	0.30	0.1	0.0	0.0	-0.0	-0.7	474.8	0.0	1945.1	13.7
34	32	AS 3t 5/8"	0.006	0.006	0.002	1.46	1.50	1.46	0.30	0.0	0.0	0.0	-0.0	-0.7	474.9	0.0	1944.3	13.7
33	274	HR17-4 seria	0.971	1.000	0.237	0.58	0.60	1.03	0.30	2.9	0.0	0.0	-0.6	88.0	474.9	0.0	1943.6	13.7
32	32	AS 3t 5/8"	0.006	0.006	0.001	1.46	1.50	1.46	0.30	0.0	0.0	0.0	-0.0	-0.7	477.8	0.0	2031.0	13.2
31	53	PL 3t 3/4"	0.009	0.010	0.002	1.46	1.50	1.46	0.30	0.1	0.0	0.0	-0.0	-0.7	477.9	0.0	2030.4	13.2
30	32	AS 3t 5/8"	0.006	0.006	0.001	1.46	1.50	1.46	0.30	0.0	0.0	0.0	-0.0	-0.7	477.9	0.0	2029.6	13.3
29	181	1/2" MR	0.097	0.100	0.023	1.56	1.60	0.97	0.30	0.7	0.0	0.0	-0.2	-15.2	478.3	0.0	2022.8	13.4
28	32	AS 3t 5/8"	0.006	0.006	0.001	1.46	1.50	1.46	0.30	0.0	0.0	0.0	-0.0	-0.7	478.7	0.0	2013.6	13.4
27	53	PL 3t 3/4"	0.009	0.010	0.002	1.46	1.50	1.46	0.30	0.1	0.0	0.0	-0.0	-0.7	478.8	0.0	2012.9	13.4
26	33	AS 5t 3/4"	0.009	0.010	0.002	1.46	1.50	1.46	0.30	0.1	0.0	0.0	-0.0	-1.1	478.9	0.0	2012.2	13.4
25	94	Swivel 5t	0.024	0.025	0.006	1.17	1.20	1.17	0.30	0.1	0.0	0.0	-0.0	-5.3	478.9	0.0	2011.1	13.4
24	33	AS 5t 3/4"	0.009	0.010	0.002	1.46	1.50	1.46	0.30	0.1	0.0	0.0	-0.0	-1.1	479.1	0.0	2005.7	13.4
23	53	PL 3t 3/4"	0.009	0.010	0.002	1.46	1.50	1.46	0.30	0.1	0.0	0.0	-0.0	-0.7	479.2	0.0	2004.6	13.4
22	33	AS 5t 3/4"	0.009	0.010	0.002	1.46	1.50	1.46	0.30	0.1	0.0	0.0	-0.0	-1.1	479.2	0.0	2003.9	13.4
21	478	Dual Release	0.280	0.288	0.067	1.17	1.20	0.88	0.30	1.7	0.0	0.0	-0.4	-61.0	479.3	0.0	2002.8	13.5
20	480	1/2" dropcha	0.023	0.024	0.006	1.55	1.60	0.97	0.30	0.2	0.0	0.0	-0.0	-6.8	481.0	0.0	1941.4	13.9
19	76	ML 17t 1-1/4	0.025	0.026	0.006	1.46	1.50	1.46	0.30	0.2	0.0	0.0	-0.0	-4.8	481.2	0.0	1934.6	14.0
18	34	AS 6t 7/8"	0.012	0.012	0.003	1.46	1.50	1.46	0.30	0.1	0.0	0.0	-0.0	-1.6	481.4	0.0	1929.7	14.0
17	53	PL 3t 3/4"	0.009	0.010	0.002	1.46	1.50	1.46	0.30	0.1	0.0	0.0	-0.0	-0.7	481.5	0.0	1928.1	14.0
16	34	AS 6t 7/8"	0.012	0.012	0.003	1.46	1.50	1.46	0.30	0.1	0.0	0.0	-0.0	-1.6	481.5	0.0	1927.4	14.0
15	183	3/4" MR	0.145	0.150	0.037	1.55	1.60	0.97	0.30	1.1	0.0	0.0	-0.3	-33.0	482.1	0.0	1912.5	14.3
14	32	AS 3t 5/8"	0.006	0.006	0.002	1.45	1.50	1.45	0.30	0.0	0.0	0.0	-0.0	-0.7	482.7	0.0	1892.5	14.3
13	64	EL 6t 7/8"	0.012	0.012	0.003	1.45	1.50	1.45	0.30	0.1	0.0	0.0	-0.0	-1.0	482.8	0.0	1891.8	14.3
12	491	Parachute	1.500	1.500	1.500	0.50	0.50	1.33	0.30	3.7	0.0	0.0	0.0	0.0	482.9	0.0	1890.7	14.3
11	34	AS 6t 7/8"	0.012	0.012	0.003	1.45	1.50	1.45	0.30	0.1	0.0	0.0	-0.0	-1.6	486.6	0.0	1890.7	14.4
10	113	Nystron-1"	0.503	0.520	0.130	1.26	1.30	0.02	0.30	3.1	0.0	0.0	-0.8	-2.0	488.1	0.0	1887.9	14.5
9	34	AS 6t 7/8"	0.012	0.012	0.003	1.45	1.50	1.45	0.30	0.1	0.0	0.0	-0.0	-1.6	489.8	0.0	1886.4	14.6
8	64	EL 6t 7/8"	0.011	0.012	0.003	1.45	1.50	1.45	0.30	0.1	0.0	0.0	-0.0	-1.0	489.8	0.0	1884.9	14.6



**Global PAPA MFM-B 2014 Mooring Model Analysis**  
designed for 4145m Depth



<b>By: P. Chua</b>	<b>13-Aug-2014</b>	<b>DCN: 3203-00012</b>	<b>REV: A</b>	<b>REF.DES. GP02FLMB</b>
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Source: 13-Aug-2014 10:55:11, ...\Paul's m-files\OOI\PAPA2014Deploy\gp2014FLMBdeployed.cfg

Author: 13-Aug-2014 10:55:17, pchua@(PCWIN64)

**Event #003 – Simulation Parameter, cont.**

Current Profile Reference: 3203-00007\_CGSN\_Site\_Characterization\_Station\_Papa.pdf

#	ID	Element	Ax [	Ay m <sup>2</sup>	Az ]	Cx	Cy	Cz	Current [m/s]	Fx [	Fy	Fz kg	Fc	Fb ]	Tx [	Ty kg	Tz ]	Tilt [deg]
7	491	Parachute	1.500	1.500	1.500	0.50	0.50	1.33	0.30	3.7	0.0	0.0	0.0	0.0	489.9	0.0	1883.8	14.6
6	34	AS 6t 7/8"	0.012	0.012	0.003	1.45	1.50	1.45	0.30	0.1	0.0	0.0	-0.0	-1.6	493.6	0.0	1883.8	14.7
5	183	3/4" MR	0.145	0.150	0.038	1.55	1.60	0.97	0.30	1.1	0.0	0.0	-0.3	-33.0	494.1	0.0	1868.9	14.9
4	33	AS 5t 3/4"	0.009	0.010	0.002	1.45	1.50	1.45	0.30	0.1	0.0	0.0	-0.0	-1.1	494.8	0.0	1848.9	15.0
3	53	PL 3t 3/4"	0.009	0.010	0.002	1.45	1.50	1.45	0.30	0.1	0.0	0.0	-0.0	-0.7	494.9	0.0	1847.8	15.0
2	34	AS 6t 7/8"	0.012	0.012	0.003	1.45	1.50	1.45	0.30	0.1	0.0	0.0	-0.0	-1.6	495.0	0.0	1847.1	15.0
1	522	double MACE	1.200	1.200	0.000	1.20	1.20	1.20	0.30	7.1	0.0	0.0	0.0	-2742.1	495.0	0.0	1845.5	0.0