	$M_L = 0.5 M_w = 0.7$ $f_c = 36.2 \text{ Hz}$		$M_{L}=0.3 M_{W}=0.6$ $f_{c}=39.6 Hz$	M_{L} =0.6 M_{W} =0.9 f_{c} =29.1 Hz	$M_L = 0.7 M_w = 0.8$ $f_c = 35.3 \text{ Hz}$	$M_L = 0.6 M_w = 0.7$ $f_c = 35.2 \text{ Hz}$	$M_{L}=1.1 M_{W}=1.0$ $f_{c}=32.6 Hz$	$M_{L}=0.4 M_{w}=0.7$ $f_{c}=30.0 Hz$
10 ¹¹ -	-							
	2018156105500	2018156132827	2018157010141	2018157013858	2018157121700	2018158072013	2018158204112	2018159000959
10 ¹¹ -	M_{L} =0.3 M_{w} =0.5 f_{c} =39.0 Hz	$M_{L}=0.8 M_{W}=0.9$ $f_{c}=39.3 Hz$	$M_{L}=0.8 M_{W}=1.0$ $f_{c}=30.4 \text{ Hz}$	M_{L} =0.5 M_{w} =0.7 f_{c} =37.7 Hz	M_{L} =0.6 M_{W} =0.7 f_{c} =43.0 Hz	$M_L=0.5 M_w=0.7$ $f_c=37.5 Hz$	M _L =1.0 M _w =1.4 <u>f_c=27.3 Hz</u>	$M_L=0.9 M_w=1.1$ $f_c=28.3 Hz$
10 ⁹ -			-	-		-	_	-
[2018159011231 M _L =0.7 M _w =0.9	2018159035257 	2018159044000 M _L =0.3 M _w =0.5	2018159120046 	2018159152310 M _L =0.6 M _w =0.7	2018160051518 M _L =0.8 M _w =0.9	2018160054115 	2018160102510
10 ¹¹ -	f _c =35.7 Hz	f _c =46.0 Hz	f _c =36.7 Hz	f _c =30.2 Hz	f _c =42.2 Hz	f _c =38.7 Hz	f _c =53.3 Hz	
10 ⁹ -	2018160135358	2018160181943	2018160211026	2018161004449	2018161102425	2018161172544	2018162012825	2018162052548
- all	M_{L} =0.6 M_{w} =0.6 f_{c} =45.0 Hz	$M_{L}=0.6 M_{W}=0.7$ $f_{c}=36.3 Hz$	M_{L} =0.7 M_{w} =0.8 f_{c} =40.2 Hz		$M_{L}=0.9 M_{W}=1.1$ $f_{c}=29.8 Hz$	$M_{L}=0.7 M_{W}=0.8$ $f_{c}=37.9 Hz$	$M_{L}=0.9 M_{W}=1.1$ $f_{c}=30.0 \text{ Hz}$	$M_{L}=0.7 M_{w}=0.8$ $f_{c}=34.0 Hz$
10 ¹¹ -							-00000	
10° -	2018162102701	2018162103517	2018162124708	2018162134139	2018162195803	2018162224749	2018163001121	2018163031320
10 ¹¹ -		$M_{L}=0.5 M_{W}=0.7$ $f_{c}=30.0 \text{ Hz}$	$M_L=1.1 M_W=1.3$ $f_c=25.8 \text{ Hz}$	M_{L} =1.0 M_{W} =1.3 f_{c} =24.6 Hz	M_{L} =0.7 M_{W} =0.8 f_{c} =39.9 Hz	M_{L} =0.5 M_{W} =0.6 f_{c} =33.9 Hz	$M_{L}=0.2 M_{W}=0.4$ $f_{c}=40.9 Hz$	$M_L=0.4 M_w=0.6$ $f_c=43.5 Hz$
10 ⁹ -	2010163115030	2010163123124	2010164021000	2010157002042	2010157152257	2010155200500	-	-
[2018163115829 M _L =1.0 M _w =1.1	2018163132124 	2018164031000 M _L =0.6 M _w =0.7	2018165002042 	2018165152357 	2018165200500 M _L =0.4 M _w =0.4	2018166021841 M _L =0.4 M _w =0.5	2018166111647
10 ¹¹ -	f _c =35.3 Hz	$\frac{M_{\rm L} = 0.4 \ M_{\rm w} = 1.7}{f_{\rm c} = 5.0 \ \rm Hz}$	f _c =28.3 Hz	f _c =42.1 Hz	f _c =36.9 Hz	f _c =40.2 Hz	f _c =37.8 Hz	f _c =26.9 Hz
10 ⁹ -	2018168094946	2018168112428	2018169024000	2018169033430	2018169042045	2018169213726	2018169230658	2018170012100
1011 -	M_{L} =0.6 M_{W} =0.7 f_{c} =39.0 Hz	$M_{L}=0.4 M_{W}=0.7$ $f_{c}=26.0 \text{ Hz}$			M_{L} =0.8 M_{w} =0.9 f_{c} =35.1 Hz	M_{L} =0.7 M_{w} =0.8 f_{c} =28.5 Hz	$M_{L}=0.7 M_{W}=0.7$ $f_{c}=29.9 Hz$	$M_{L}=0.5 M_{W}=0.6$ $f_{c}=32.8 \text{ Hz}$
10°° -								
	2018170013500	2018170022530	2018170070706	2018170141444	2018170145100	2018170191546	2018170200105	2018170210141
10 ¹¹ -	M _L =1.3 M _w =1.6	M_{L} =0.8 M_{W} =0.9 f_{c} =27.0 Hz	$M_{L}=0.8 M_{W}=0.9$ $f_{c}=26.4 \text{ Hz}$	-	M_L =0.7 M_w =0.8 f_c =35.5 Hz	$M_L = 0.8 M_w = 0.9$ $f_c = 30.5 \text{ Hz}$	M_{L} =0.6 M_{w} =0.7 f_{c} =34.2 Hz	$M_L=0.6 M_w=0.6$ $f_c=40.1 Hz$
10 ⁹ -	2018171001230	2018171003700	2018171005900	2018171034700	2018171100309	2018171100500	2018171101020	2018171113245
[$M_{L}=0.8 M_{W}=0.9$	M _L =1.1 M _w =1.3	0000016-M _W =1.8 -	$M_{\rm L} = 0.4 \ M_{\rm w} = 0.6$	$M_{\rm L} = 0.8 \ M_{\rm W} = 1.0$	$M_{L}=0.5 M_{W}=0.6$	
10 ¹¹ -		f _c =34.5 Hz	f _c =25.0 Hz	7,2 20.3 Hz	f _c =37.2 Hz	f _c =24.5 Hz	f _c =33.8 Hz	-
10 ⁹ -	2018171120032	2018171170704	2018171173814	2018171232614	2018171233929	2018172001100	2018172010600	2018172041700
10 ¹¹ -	M_{L} =0.6 M_{w} =0.6 f_{c} =37.3 Hz	$M_L=0.8 M_W=0.9$ $f_c=37.3 \text{ Hz}$	M _L =1.2 M _w =1.5	M_{L} =0.8 M_{w} =1.0 f_{c} =27.1 Hz	$M_L = 0.8 M_w = 0.9$ $f_c = 31.9 \text{ Hz}$	$M_L=0.7 M_w=0.8$ $f_c=36.0 \text{ Hz}$	$M_{L}=0.4 M_{W}=0.5$ $f_{c}=42.3 \text{ Hz}$	$M_L=1.0 M_w=1.3$ $f_c=20.8 Hz$
10° -				and the same of th		-		
	2018172070230	2018172090030	2018172175518	2018172180735	2018172183326	2018172230708	2018172234909	2018173042858
10 ¹¹ -	M_{L} =0.9 M_{W} =1.0 f_{c} =29.8 Hz	M_{L} =0.7 M_{w} =0.9 f_{c} =29.8 Hz	M_{L} =0.9 M_{w} =1.0 f_{c} =35.2 Hz	M_{L} =0.5 M_{w} =0.6 f_{c} =30.8 Hz	$M_{L}=1.0 M_{W}=1.2$ $f_{c}=27.3 \text{ Hz}$	$M_L = 1.1 M_w = 1.3$ $f_C = 23.4 \text{ Hz}$	M_{L} =0.0 M_{w} =0.7 f_{c} =31.4 Hz	M_L =0.6 M_w =0.7 f_c =32.9 Hz
10 ⁹ -	2018173043508	2018173072237	2018173130130	2018173142304	2018173151655	2018173181236	2018173191258	2018173214953
[$M_{\rm L} = 0.8 \ M_{\rm W} = 1.0$	$M_{\rm L} = 0.7 \ M_{\rm W} = 0.8$	$M_{L}=0.9 M_{W}=1.0$	$M_{L}=1.0 \ M_{W}=1.2$	$M_{\rm L} = 0.7 \ M_{\rm W} = 0.8$	$M_{\rm L}=1.1~M_{\rm W}=1.3$	$M_{L}=0.6 \ M_{W}=0.6$	$M_{\rm L} = 0.5 \ M_{\rm W} = 0.6$
10 ¹¹ -	f _c =27.0 Hz	f _c =34.1 Hz	f _c =24.2 Hz	f _c =29.1 Hz	f _c =40.4 Hz	f _c =29.4 Hz	f _c =40.0 Hz	f _c =38.9 Hz
10 ⁹ -	2018173220003	2018174040400	2018174043300	2018174062000	2018174064100	2018174085934	2018174131934	2018174154112
10 ¹¹ -	$M_{L}=1.1 M_{W}=1.2$ $f_{c}=24.5 Hz$		$M_{L}=0.4 M_{W}=0.6$ $f_{c}=34.9 \text{ Hz}$	M_{L} =0.8 M_{W} =1.0 f_{c} =24.0 Hz	M_{L} =0.5 M_{w} =0.6 f_{c} =33.1 Hz	$M_L = 0.8 M_w = 0.9$ $f_c = 34.3 \text{ Hz}$	M_{L} =0.5 M_{W} =0.7 f_{c} =40.1 Hz	$M_{L}=0.7 M_{W}=0.8$ $f_{c}=29.3 Hz$
(E N) 10 ⁹ -	and a second	-	-					-
ctrum ω M (Nm)	2018175062422	2018175071713	2018175132759	2018176001813	2018176155852	2018176170554	2018176210520	2018177104730
8 10 ¹¹ -	M_{L} =0.5 M_{w} =0.7 f_{c} =31.2 Hz	$M_L=0.9 M_W=1.2$ $f_c=29.6 Hz$	M_{L} =0.8 M_{w} =1.0 f_{c} =30.4 Hz	M _L =1.2 M _w =1.4 f _s =26.8 Hz	M_{L} =0.9 M_{w} =1.0 f_{c} =26.8 Hz	77-77	M _L =1.5 M _w =1.6 -22.3 Hz	$f_{c}=24.4 \text{ Hz}$
acemen	2018178152609	2018178222942	2018179053245	2018179233042	2018180013150	2018180040100	2018180094138	2018181040940
source displacement 1011	M ₁ = 1.4 M _w = 1.6	$M_{L}=0.8 M_{W}=1.1$ $f_{c}=26.8 \text{ Hz}$	$M_{L}=0.8 M_{W}=1.0$ $f_{c}=32.6 \text{ Hz}$	$M_{L}=1.0 \ M_{W}=1.2 \ f_{c}=27.5 \ Hz$	$M_{L}=1.1 M_{W}=1.3$ $f_{c}=23.9 Hz$	$M_L = 0.8 M_w = 1.0$ $f_c = 26.6 \text{ Hz}$	$M_{L}=0.9 M_{W}=1.0$ $f_{c}=32.6 \text{ Hz}$	$M_{L}=0.7 M_{W}=0.9$ $f_{c}=27.8 \text{ Hz}$
					10000			
10 ⁹ -	2018181065239	2018181192300	2018182124340	2018182203248	2018182212250	2018182233301	2018183155952	2018183202531
10 ¹¹ -	$M_L=1.0 M_W=1.2$ $f_c=23.3 Hz$	$M_{L}=0.6 M_{W}=0.7$ $f_{c}=35.5 Hz$	$M_{L}=1.1 M_{W}=1.2$ $f_{c}=27.1 Hz$	M _L =1.2 M _w =1.4 f _c =22.6 Hz	M_{L} =0.9 M_{W} =1.1 f_{c} =27.7 Hz	$M_L=1.1 M_W=1.2$ $f_c=26.5 Hz$	$M_{L}=1.1 M_{W}=1.0$ $f_{c}=30.5 Hz$	$M_{L}=0.7 M_{W}=0.9$ $f_{c}=31.1 Hz$
10 ⁹ -			-		-	-	-	-
[2018183215029 	2018184003003 	2018184201046 	2018184202906	2018185001326 	2018185014623 M _L =0.9 M _w =1.0	2018185034551 	2018185120950
10 ¹¹ -	f _c =31.1 Hz	f _c =31.4 Hz		-	f _c =32.6 Hz	f _c =28.5 Hz	f _c =34.5 Hz	f _c =31.1 Hz
10 ⁹ -	2018185145450	2018185155423	2018186070100	2018186092109	2018186115357	2018186131522	2018186202646	2018186215007
1011 -	$M_L = 0.6 M_W = 0.8$ $f_c = 30.6 Hz$	$M_{L}=0.6 M_{W}=0.6$ $f_{c}=36.5 Hz$	M _L =1.3 M _w =1.6	$M_{L}=0.8 M_{W}=1.0$ $f_{c}=25.2 \text{ Hz}$	M_{L} =0.6 M_{W} =0.7 f_{c} =29.8 Hz	M _L =1.4 M _w =1.6	$M_{L}=1.0 \ M_{W}=1.2 \ f_{c}=28.3 \ Hz$	$M_L = 0.7 M_W = 0.8$ $f_c = 35.2 \text{ Hz}$
10° -								
	2018187034808	2018187062657	2018187084836	2018188142051	2018188161324	2018188173124	2018188175428	2018188193122
10 ¹¹ -	$M_L = 0.7 M_w = 0.8$ $f_c = 31.0 Hz$	$M_{L}=0.8 M_{W}=1.0$ $f_{c}=25.9 \text{ Hz}$	$M_L=0.7 M_w=0.9$ $f_c=25.5 Hz$	M_{L} =0.6 M_{w} =0.8 f_{c} =38.6 Hz	$M_L=0.7 M_W=0.7$ $f_c=36.0 Hz$	M_{L} =0.6 M_{W} =0.7 f_{c} =33.5 Hz	$M_L = 0.4 M_w = 0.6$ $f_c = 36.3 \text{ Hz}$	$M_L=0.5 M_w=1.0$ $f_c=28.9 Hz$
10 ⁹ -	2018188202905	2018188214438	2018188214700	2018188214802	2018189060720	2018189070845	2018189095118	2018189132738
ا آ	$M_{\rm L} = 0.8 \ M_{\rm W} = 1.0$	$M_{L}=0.8 M_{W}=0.9$	$M_{L}=0.6 M_{W}=0.8$	$M_{L}=0.8 M_{W}=1.1$	$M_{\rm L} = 0.6 \ M_{\rm W} = 0.8$	// _w =2.0	$M_{L}=0.5 \ M_{W}=0.5$	$M_{L}=0.6 M_{W}=0.7$
10 ¹¹ -	f _c =28.5 Hz	f _c =29.9 Hz	f _c =27.2 Hz	f _c =27.5 Hz	f _c =35.5 Hz	- f _c ≥43.4 Hz	f _c =35.7 Hz	f _c =34.0 Hz
10 ⁹ -	2018189132728	2018189142028	2018189152317	2018189160854	2018189163251	2018189173537	2018189195043	2018190005253
10 ¹¹ -	$M_L=1.1 M_w=1.3$ $f_c=30.2 Hz$	$M_L=0.3 M_w=0.5$ $f_c=34.2 \text{ Hz}$	M_{L} =0.8 M_{W} =0.9 f_{c} =31.2 Hz	$M_{\rm L} = 1.3 M_{\rm W} = 1.6$	M_L =0.5 M_w =0.5 f_c =39.9 Hz	$M_L=0.6 M_w=0.8$ $f_c=27.3 \text{ Hz}$	M _L =1.3 M _w =1.6 =19.6 Hz −	$M_L = 0.8 M_w = 0.9$ $f_c = 30.4 \text{ Hz}$
10 ⁹ -	-	-				-	-	
[2018190020811 	2018190025747 M _L =0.9 M _w =1.2	2018190155046 	2018193142500 M _L =0.6 M _w =0.7	2018193204529 M _L =0.8 M _w =0.9	2018194085018 M _L =0.8 M _w =1.0	2018194133411	2018195011432
10 ¹¹ -	$M_{L}=0.6 M_{W}=0.6$ $f_{c}=36.6 \text{ Hz}$	$M_L = 0.9 M_W = 1.2$ $f_c = 22.4 \text{ Hz}$	$M_L = 0.5 M_W = 0.5$ $f_c = 42.2 \text{ Hz}$	M_{L} =0.6 M_{W} =0.7 f_{c} =30.2 Hz	$M_L = 0.8 M_W = 0.9$ $f_c = 28.2 \text{ Hz}$	$M_L = 0.8 M_W = 1.0$ $f_c = 26.6 \text{ Hz}$	•	$M_{L}=0.7 M_{W}=0.9$ $f_{c}=34.3 Hz$
10 ⁹ -	2018195074501	2018195123640	2018195172331	2018195195343	2018196003937	2018196010738	2018196071020	2018196133941
10 ¹¹ -	M_{L} =0.7 M_{W} =0.7 f_{c} =40.4 Hz	$M_{L}=0.7 M_{W}=0.9$ $f_{c}=32.6 Hz$	$M_{\rm L}$ =0.6 $M_{\rm W}$ =1.1 $f_{\rm c}$ =15.7 Hz	M_{L} =0.6 M_{W} =0.9 f_{c} =25.6 Hz	f _c =0.7 Hz	$M_L = 0.9 M_w = 1.1$ $f_c = 29.8 \text{ Hz}$	M_{L} =0.6 M_{w} =0.7 f_{c} =37.0 Hz	M ₁ =1.3 M _w =1.6
10 ¹¹ -	-	- Contract of the contract of						
	2018196200450	2018197015541	2018197070436	2018197091659	2018197172535	2018197183626	2018199080816	2018199104200
10 ¹¹ -	$M_{\rm L}$ =0.9 $M_{\rm w}$ =1.2 $f_{\rm c}$ =25.4 Hz	$M_{L}=0.7 M_{W}=1.1$ $f_{c}=25.2 Hz$	$M_L = 0.5 M_w = 0.6$ $f_c = 35.5 \text{ Hz}$	$M_L = 0.5 M_w = 0.5$ $f_c = 43.0 \text{ Hz}$	M _L =1.2 M _W =1.5	M_{L} =0.5 M_{W} =0.7 f_{c} =37.7 Hz	$M_L = 0.5 M_w = 0.6$ $f_c = 42.6 \text{ Hz}$	$M_L=1.0 M_W=1.2$ $f_c=27.5 Hz$
10 ⁹ -	2018199170820	2018199170914	2018199194117	2018199204703	2018199224500	2018200015608	2018200040208	2018200082657
[$M_{\rm L}=1.1~M_{\rm W}=1.2$		$M_{L}=0.9 M_{W}=1.1$	$M_{L}=1.2 M_{W}=1.5$	$M_{L} = 1.5 M_{W} = 1.7$	$M_{\rm L} = 0.6 M_{\rm W} = 0.6$	$M_{L}=0.7 \ M_{W}=1.1$	$M_{L}=0.6 M_{W}=0.7$
10 ¹¹ -	f _c =25.4 Hz		f _c =28.8 Hz	5 = 25.3-Hz -	20.7 Hz	f _c =39.1 Hz	f _c =24.8 Hz	f _c =38.3 Hz
10 ⁹ -	2018200100833	2018200100919	2018200102006	2018200105407	2018200105452	2018200105703	2018200134612	2018200143037
10 ¹¹ -	$M_L = 0.4 M_w = 0.7$ $f_c = 30.2 \text{ Hz}$	$M_{L}=0.8 M_{W}=0.9$ $f_{c}=35.1 \text{ Hz}$		$M_L = 0.6 M_W = 0.7$ $f_c = 27.4 \text{ Hz}$	$M_L = 0.7 M_w = 0.8$ $f_c = 29.1 \text{ Hz}$	$M_L=1.2 M_w=1.2$ $f_c=32.1 Hz$	$M_{L}=0.5 M_{W}=0.6$ $f_{c}=34.8 \text{ Hz}$	$M_L=0.5 M_w=0.6$ $f_c=37.4 Hz$
10 ⁹ -		-	••					
	2018200170651	2018200191849	2018201073346	2018201152715	2018202112855	2018202134535	2018202144515	2018202222748
10 ¹¹ -	$M_{\rm L}$ =0.5 $M_{\rm w}$ =0.5 $f_{\rm c}$ =41.7 Hz	M_{L} =0.5 M_{w} =0.6 f_{c} =41.4 Hz]	M_{L} =0.6 M_{w} =0.6 f_{c} =37.4 Hz	$M_L=0.7 M_w=0.9$ $f_c=33.9 Hz$	$M_L=0.5 M_w=0.6$ $f_c=36.8 \text{ Hz}$	$M_{L}=0.7 \ M_{w}=0.7 \ f_{c}=39.8 \ Hz$	$M_L=1.0 M_w=1.2$ $f_c=30.9 Hz$
10 ⁹ -	2018202225701	2018202234429	2018203030928	2018203081713	2018203090059	2018203113243	2018203124722	2018203171420
[$M_{\rm L} = 0.5 M_{\rm W} = 0.6$	$M_{L}=1.1 M_{W}=1.2$	$M_{L}=0.7 M_{W}=0.8$	$M_{L}=0.5 M_{W}=0.6$	$M_{L}=1.4 M_{W}=1.5$	$M_{\rm L} = 0.9 \ M_{\rm W} = 1.3$	$M_{L}=0.5 \ M_{W}=0.6$	10 100 10 105
10 ¹¹ -	f _c =36.7 Hz	f _c =29.3 Hz	f _c =33.6 Hz	f _c =36.3 Hz		f _c =25.1 Hz	f _c =36.8 Hz	- 28 - 21 - 24 - 7
10 ⁹ -	2018203174444	2018203230921	2018203232316	2018204160756	2018204220258	2018204234743	2018205205035	- 14 i S - 7
	10 100	10 100	10 100	10 100 frequency (Hz)	10 100	10 100	10 100	