SUPPLEMENT - A

please provide word version.

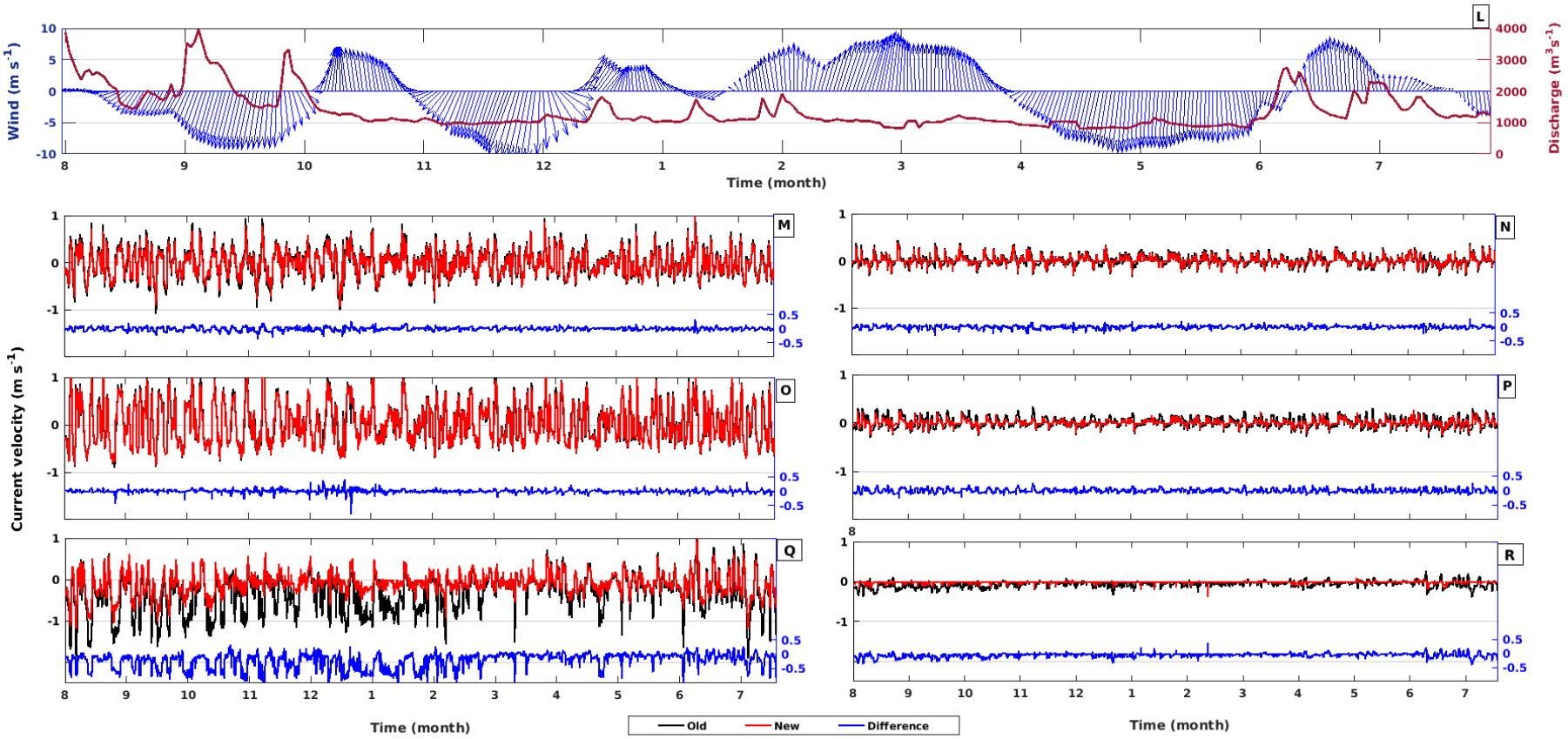

Figure 1: Time series of river discharge and wind for the period between 8/2011 and 7/2012. South (North) winds are positive (negative) (L). Current velocity time series at surface (left) and bottom (right) at points P6 (M and N), P7 (O and P), P8 (Q and R) for old (black line) and new (red line) jetties configuration during 8/2011 and 7/2012. Positive (negative) values denote flood (outflow). The blue line in all plots shows the difference between the old and new jetties configuration.

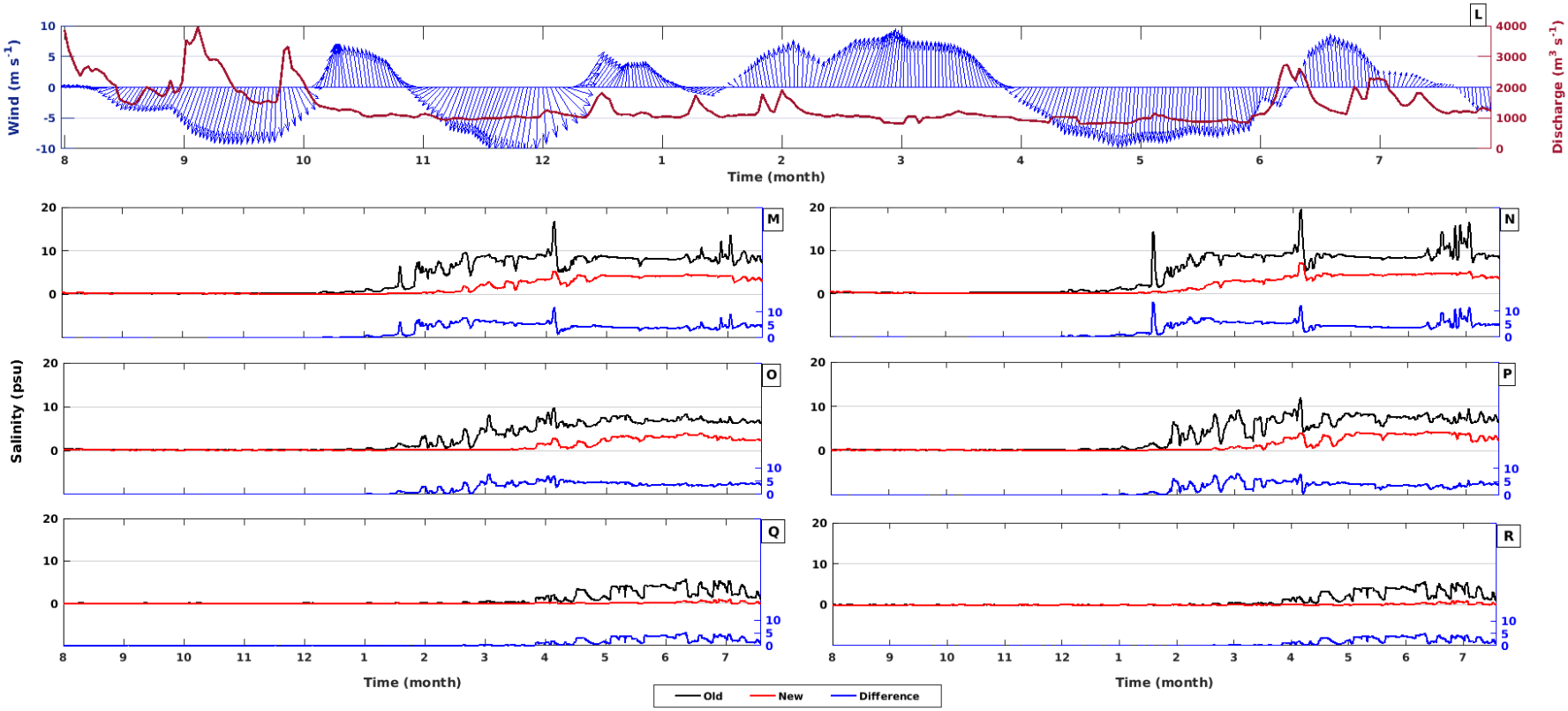

Figure 2: Time series (top) of river discharge and wind for the period between 8/2011 and 7/2012. South (North) winds are positive (negative) (L). Salinity time series at surface (left) and bottom (right) at points P6 (M and N), P7 (O and P), P8 (Q and R), of old (black) and new (red) jetties configuration during 2011-2012 (La Niña). The blue line in all plots shows the difference between the old and new jetties configuration.

SUPPLEMENT - B

Table 1: Parameters used in the model set-up

Configuration	Horizontal Turbulent model		Vertical turbulent model		Law of Bottom Frinction		Wind Influence Coeficient	Coriolis Coeffficient
Test 1 (Old)	Smagorinsky	10^{-6}	Mixing length (Prandtl)	10^{-6}	Manning	0.03	$1x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 2	Smagorinsky	10^{-6}	Mixing length (Prandtl)	10^{-6}	Manning	0.03	$2x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 3 (New)	Smagorinsky	10^{-6}	Mixing length (Prandtl)	10^{-6}	Manning	0.03	$5x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 4	Smagorinsky	10^{-6}	Mixing length (Prandtl)	10^{-6}	Manning	0.04	$1x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 5	Smagorinsky	10^{-6}	Mixing length (Prandtl)	10^{-6}	Manning	0.04	$2x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 6	Smagorinsky	10^{-6}	Mixing length (Prandtl)	10^{-6}	Manning	0.04	$5x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 7	Smagorinsky	10^{-6}	Mixing length (Prandtl)	10^{-6}	Manning	0.02	$1x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 8	Smagorinsky	10^{-6}	Mixing length (Prandtl)	10^{-6}	Manning	0.02	$2x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 9	Smagorinsky	10^{-6}	Mixing length (Prandtl)	10^{-6}	Manning	0.02	$5x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 10	Smagorinsky	10^{-2}	Mixing length (Prandtl)	10^{-6}	Manning	0.03	$1x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 11	Smagorinsky	10^{-2}	Mixing length (Prandtl)	10^{-6}	Manning	0.03	$2x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 12	Smagorinsky	10^{-2}	Mixing length (Prandtl)	10^{-6}	Manning	0.03	$5x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 13	Smagorinsky	10^{-2}	Mixing length (Prandtl)	10^{-6}	Manning	0.04	$1x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 14	Smagorinsky	10^{-2}	Mixing length (Prandtl)	10^{-6}	Manning	0.04	$2x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 15	Smagorinsky	10^{-2}	Mixing length (Prandtl)	10^{-6}	Manning	0.04	$5x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 16	Smagorinsky	10^{-1}	Mixing length (Prandtl)	10^{-6}	Manning	0.03	$1x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 17	Smagorinsky	10^{-1}	Mixing length (Prandtl)	10^{-6}	Manning	0.03	$2x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 18	Smagorinsky	10^{-1}	Mixing length (Prandtl)	10^{-6}	Manning	0.03	$5x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 19	Smagorinsky	10^{-1}	Mixing length (Prandtl)	10^{-6}	Manning	0.04	$1x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 20	Smagorinsky	10^{-1}	Mixing length (Prandtl)	10^{-6}	Manning	0.04	$2x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 21	Smagorinsky	10^{-1}	Mixing length (Prandtl)	10^{-6}	Manning	0.04	$5x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 22	Smagorinsky	10^{-1}	Mixing length (Prandtl)	5	Manning	0.02	$1x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 23	Smagorinsky	10^{-1}	Mixing length (Prandtl)	5	Manning	0.02	$2x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 24	Smagorinsky	10^{-1}	Mixing length (Prandtl)	5	Manning	0.02	$5x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 25	Smagorinsky	10^{-1}	Mixing length (Prandtl)	5	Manning	0.03	$1x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}

Test 26	Smagorinsky	10^{-1}	Mixing length (Prandtl)	5	Manning	0.03	$2x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 27	Smagorinsky	10^{-1}	Mixing length (Prandtl)	5	Manning	0.03	$5x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 28	Smagorinsky	10^{-1}	Mixing length (Prandtl)	5	Manning	0.04	$1x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 29	Smagorinsky	10^{-1}	Mixing length (Prandtl)	5	Manning	0.04	$2x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 30	Smagorinsky	10^{-1}	Mixing length (Prandtl)	5	Manning	0.04	$5x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 31	Smagorinsky	10^{0}	Mixing length (Prandtl)	5	Manning	0.03	$1x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 32	Smagorinsky	10^{0}	Mixing length (Prandtl)	5	Manning	0.03	$2x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 33	Smagorinsky	10^{0}	Mixing length (Prandtl)	5	Manning	0.03	$5x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 34	Smagorinsky	10^{0}	Mixing length (Prandtl)	5	Manning	0.04	$1x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 35	Smagorinsky	10^{0}	Mixing length (Prandtl)	5	Manning	0.04	$2x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}
Test 36	Smagorinsky	10^{0}	Mixing length (Prandtl)	5	Manning	0.04	$5x10^{-5}$ N m^{-1} S^{-1}	$-7,7x10^{5}$ N m^{-1} S^{-1}