Mass and Energy Balance Estimation of Yala Glacier (2011–2017), Langtang Valley, Nepal

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Table S1. Contribution of energy balance components to the surface melting at various stake locations on Yala Glacier, 5 June 2012–13 October 2012 (131 days), 8 May 2013–19 November 2013 (195 days) and 5 May 2014–15 November 2014 (196 days).

Stake	Q_R (%)	Q_H (%)	Q_L (%)	Q_G (%)	Q_M (W m^{-2})
1 (5178 m a.s.l.)					
2012	78	21.82	-	0.05	9626
2013	71	27.36	-	2.02	10144
2 (5260 m a.s.l)					
2014	65.65	34.25	-	0.10	11471
3 (5274 m a.s.l.)					
2012	80.21	19.67	-	0.11	8814
2013	73.48	23.90	-	2.63	9213
2014	64.48	34.96	-	0.56	10,666
4 (5315 m a.s.l)					
2012	70.81	28.09	-	1.10	5028
2013	65.86	29.67	-	4.47	6392
2014	62.90	36.29	-	0.80	9481
5 (5358 m a.s.l)					
2012	72.11	26.75	-	1.14	4998
2013	50.27	44.72	-	5.01	4533
2014	61.15	37.65	-	1.20	8415
7 (5450 m a.s.l.)					
2012	52.81	43.89	-	3.30	2672
2013	-	87.37	-	12.63	1797
2014	-	90.77	-	9.23	2519
8 (5482 m a.s.l.)					
2012	53.99	42.47	-	3.54	2622
2013	-	86.32	-	13.68	1731
2014	-	90.35	-	9.65	2488

Table S2. Mean meteorological variables at Yala BC station (5060 m a.s.l.) on Yala Glacier from June 2012–October 2012, May 2013–November 2013 and May 2014–November 2014.

Variable	2012	2013	2014
T_a (ºC)	2.39	0.34	0.77
RH (%)	88.6	85.7	77.6
u (m s^{-1})	2.0	2.0	2.4
S_{in} (W m^{-2})	206.0	204.9	224.9
L_{in} (W m^{-2})	276.5	250.3	249.2
α	0.70	0.68	0.65

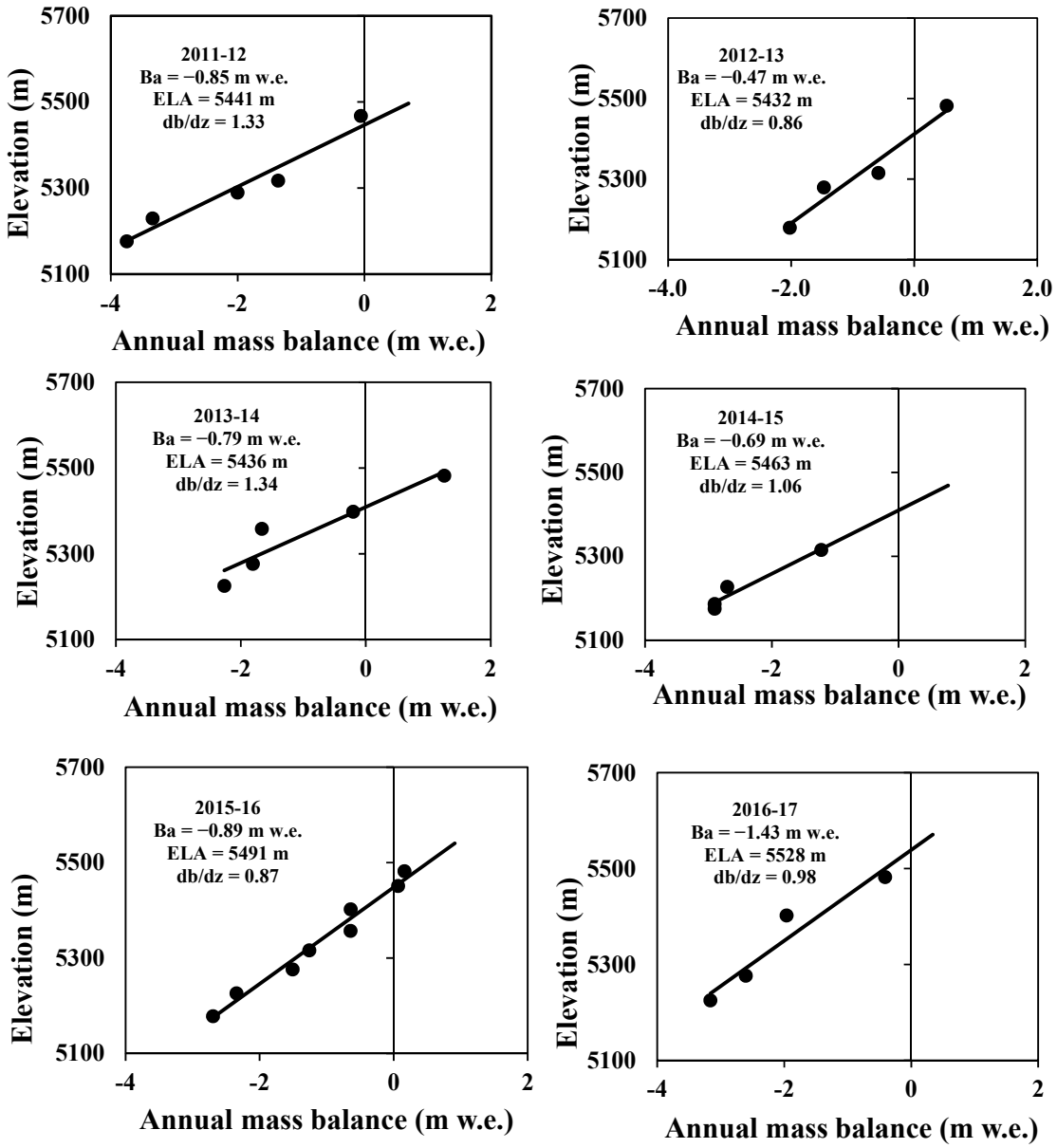

Figure S1. Annual mass balance (dots) of Yala Glacier from 2011 to 2017 as a function of altitude derived from the field measurements.