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Characterizing basin-scale precipitation gradients in the Third Pole region using a high-resolution atmospheric simulation-based dataset

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$$APG_p = \frac{P2 - P1}{E2 - E1} = \frac{(O2 + Abias) - (O1 + Abias)}{E2 - E1} = \frac{O2 - O1}{E2 - E1}$$

$$APG_o = \frac{O2 - O1}{E2 - E1}$$

$$RPG_p = \frac{P2 - P1}{(E2 - E1) \times \overline{P}} = \frac{O2 \times (1 + Rbias) - O1 \times (1 + Rbias)}{(E2 - E1) \times \overline{O} \times (1 + Rbias)} = \frac{O2 - O1}{(E2 - E1) \times \overline{O}}$$

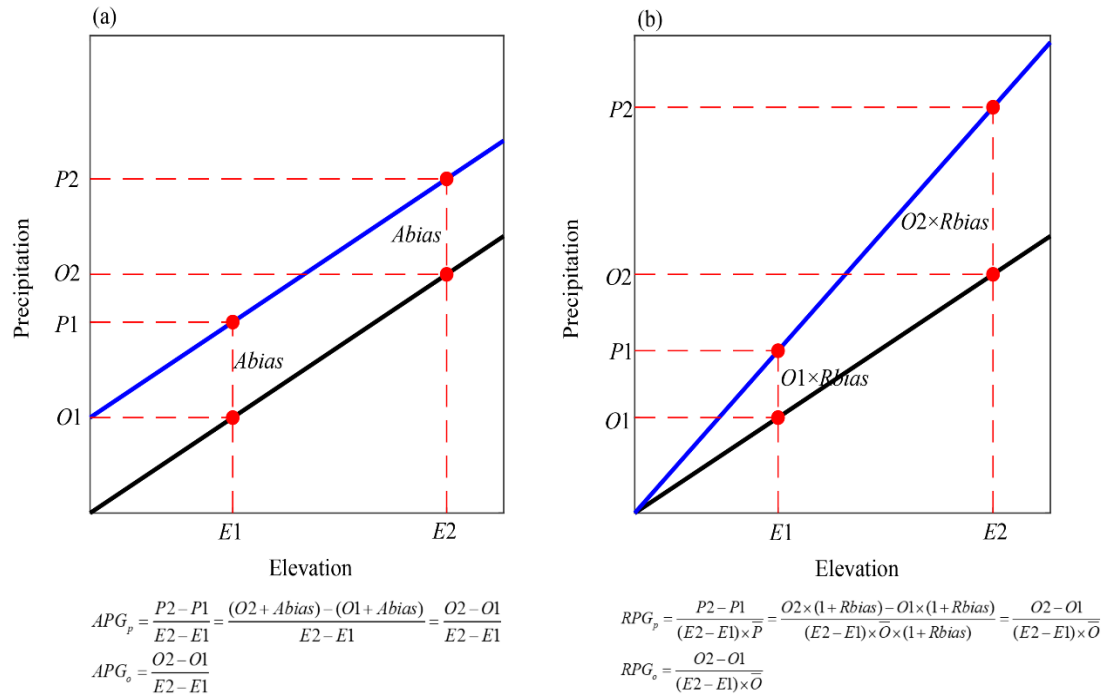$$RPG_o = \frac{O2 - O1}{(E2 - E1) \times \overline{O}}$$

Figure S1 Schematic of the impact of bias in precipitation product on the calculation of APG and RPG. (a) Precipitation product with spatially homogeneous Abias. (b) Precipitation product with spatially homogeneous Rbias. O and P represent precipitation from rain gauge data and biased product, respectively. E is the elevation. $\overline{O}$ represents the basin-average precipitation amount of rain gauge data. The black and blue lines are the fitted regress lines between elevation and precipitation from rain gauge data and precipitation product, respectively.

Table S1 Annual and seasonal APG (absolute precipitation gradient) and RPG (relative precipitation gradient, APG divided by basin mean precipitation) for the 388 sub-basins of the TP. NaN denotes there is no data value of APG or RPG for this sub-basin. The Basin ID is corresponding to that in the HydroATLAS database, which can be downloaded from https://www.hydrosheds.org/page/hydroatlas.

Bains ID	RPG (%. 100 m^{-1})					APG (mm.day^{-1}. 100 m^{-1})				
	Annual	Winter	Spring	Summer	Autumn	Annual	Winter	Spring	Summer	Autumn
4060050270	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060050280	10.10	NaN	9.42	10.79	9.76	0.041	0.004	0.033	0.106	0.020
4060050420	6.12	NaN	5.09	6.26	6.89	0.049	0.005	0.031	0.122	0.037
4060050460	2.33	6.21	4.70	2.72	-1.19	0.040	0.007	0.050	0.120	-0.016
4060050470	5.60	NaN	14.94	3.59	6.49	0.086	0.019	0.099	0.153	0.074
4060050500	6.32	NaN	6.12	6.18	7.04	0.044	0.005	0.038	0.107	0.025
4060050510	6.20	NaN	3.34	6.37	8.18	0.055	0.010	0.023	0.141	0.044
4060050550	0.96	1.52	0.69	1.32	NaN	0.025	0.004	0.013	0.079	NaN
4060050600	9.20	9.38	9.02	9.02	10.32	0.057	0.011	0.047	0.137	0.033
4060050610	5.69	NaN	11.47	5.33	4.80	0.066	0.010	0.023	0.205	0.026
4060050670	6.62	NaN	11.01	5.89	7.44	0.060	0.016	0.020	0.171	0.030
4060050700	5.71	4.90	4.27	6.07	6.32	0.057	0.007	0.033	0.151	0.036
4060050710	6.82	NaN	10.57	6.31	6.95	0.091	0.006	0.045	0.252	0.058
4060050720	6.79	6.39	6.93	6.73	7.00	0.051	0.007	0.040	0.126	0.029
4060050760	15.57	NaN	15.87	14.83	16.78	0.052	0.015	0.045	0.117	0.030
4060050770	4.14	NaN	2.15	4.19	5.27	0.039	0.009	0.014	0.105	0.029
4060050780	6.25	NaN	9.88	6.06	5.58	0.073	0.004	0.029	0.220	0.038
4060050810	5.47	14.78	9.01	4.74	6.02	0.046	0.018	0.018	0.128	0.022
4060050850	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060050910	2.85	NaN	4.98	3.53	-0.75	0.050	0.003	0.034	0.172	-0.010
4060050950	3.85	16.49	4.80	3.45	2.88	0.060	0.026	0.043	0.134	0.037
4060050980	12.16	NaN	8.15	12.99	12.58	0.114	0.016	0.055	0.306	0.076
4060051010	4.78	6.35	4.85	4.66	4.85	0.111	0.015	0.074	0.256	0.097
4060051040	4.48	NaN	6.85	4.32	4.07	0.061	0.005	0.020	0.189	0.030
4060051080	6.06	NaN	8.73	5.30	7.27	0.049	0.008	0.032	0.126	0.029
4060051120	9.06	NaN	9.41	8.09	10.68	0.039	0.013	0.026	0.096	0.023
4060051160	6.87	13.22	5.46	6.96	6.85	0.086	0.017	0.043	0.225	0.056
4060051220	6.93	NaN	10.43	6.60	6.93	0.087	0.005	0.032	0.261	0.049
4060051250	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060051270	7.18	NaN	9.42	6.58	6.90	0.078	0.014	0.053	0.196	0.047
4060051320	6.31	NaN	6.92	6.13	5.32	0.066	0.013	0.038	0.178	0.033
4060051340	6.09	15.17	6.39	5.81	5.32	0.082	0.024	0.054	0.198	0.052
4060051360	8.23	NaN	14.37	7.32	9.74	0.067	0.007	0.033	0.189	0.040
4060051460	6.25	NaN	5.89	6.31	5.84	0.071	0.010	0.045	0.176	0.050

4060051480	5.15	NaN	6.62	4.89	4.72	0.038	0.008	0.011	0.119	0.013
4060051510	11.65	NaN	15.26	11.54	10.35	0.097	0.005	0.030	0.307	0.042
4060051560	5.42	8.98	4.43	5.75	4.86	0.068	0.010	0.037	0.175	0.047
4060051630	6.08	NaN	5.62	5.95	5.94	0.054	0.011	0.031	0.143	0.031
4060051700	23.16	NaN	21.84	24.26	NaN	0.040	0.007	0.032	0.101	0.017
4060051710	5.14	NaN	5.19	5.14	5.00	0.024	0.004	0.023	0.059	0.010
4060051740	4.86	6.97	3.64	5.13	4.77	0.054	0.010	0.029	0.143	0.032
4060051760	7.95	NaN	8.68	7.35	8.81	0.069	0.012	0.043	0.175	0.045
4060051780	7.48	NaN	9.61	6.79	7.73	0.068	0.013	0.044	0.171	0.041
4060051790	5.78	13.73	5.57	5.34	6.40	0.060	0.015	0.039	0.140	0.043
4060051810	4.60	NaN	6.02	4.55	3.55	0.082	0.010	0.045	0.220	0.051
4060051820	4.77	7.49	5.39	4.66	4.04	0.060	0.009	0.050	0.147	0.032
4060051940	7.06	7.17	7.53	6.60	6.97	0.040	0.030	0.054	0.050	0.027
4060051950	8.64	NaN	16.82	7.31	10.36	0.053	0.008	0.034	0.140	0.028
4060051970	6.46	NaN	12.55	5.40	6.91	0.081	0.010	0.059	0.196	0.056
4060052000	5.46	NaN	12.75	4.34	6.52	0.036	0.008	0.026	0.090	0.018
4060052050	9.38	14.22	7.28	9.50	10.30	0.099	0.018	0.053	0.256	0.069
4060052120	3.45	10.88	3.88	2.95	3.61	0.035	0.013	0.027	0.075	0.023
4060052240	9.92	17.06	6.96	10.30	10.12	0.108	0.019	0.047	0.293	0.070
4060052250	7.25	16.96	4.91	7.48	6.98	0.088	0.021	0.035	0.241	0.052
4060052300	23.20	NaN	24.64	21.92	26.54	0.061	0.009	0.062	0.132	0.039
4060052330	5.32	NaN	9.56	4.39	5.16	0.076	0.013	0.066	0.171	0.054
4060052340	7.97	NaN	12.17	7.56	8.02	0.068	0.006	0.024	0.210	0.031
4060052350	3.52	17.23	3.03	3.60	1.91	0.049	0.021	0.024	0.132	0.019
4060052370	7.79	NaN	6.12	8.14	6.91	0.057	0.008	0.026	0.164	0.030
4060052400	6.29	7.67	7.25	6.11	6.25	0.107	0.008	0.057	0.270	0.090
4060052410	6.87	NaN	11.65	5.97	8.28	0.086	0.007	0.050	0.226	0.059
4060052440	7.39	13.48	7.27	7.08	7.56	0.075	0.017	0.052	0.180	0.048
4060052490	7.54	NaN	7.69	7.57	6.92	0.107	0.007	0.043	0.307	0.070
4060052510	2.97	15.26	5.46	2.50	2.08	0.057	0.021	0.046	0.124	0.035
4060052520	10.51	15.38	10.46	10.11	11.31	0.099	0.017	0.072	0.242	0.064
4060052590	7.29	NaN	10.35	6.12	8.25	0.090	0.018	0.066	0.207	0.069
4060052610	5.75	6.62	5.11	5.97	5.42	0.043	0.007	0.029	0.110	0.024
4060052640	8.51	NaN	13.90	7.74	8.36	0.065	0.009	0.036	0.181	0.033
4060052660	5.81	NaN	8.70	5.52	5.43	0.049	0.007	0.016	0.154	0.017
4060052680	6.32	NaN	11.88	5.43	6.72	0.048	0.008	0.033	0.127	0.025
4060052780	6.64	NaN	8.65	6.29	7.56	0.055	0.005	0.019	0.167	0.027
4060052900	13.93	NaN	15.63	12.70	NaN	0.017	0.005	0.019	0.035	0.008
4060052910	5.19	18.41	5.49	4.61	5.40	0.066	0.022	0.040	0.154	0.046
4060052960	10.47	NaN	14.94	9.89	10.64	0.093	0.007	0.042	0.267	0.055
4060052990	6.74	14.67	7.77	6.34	6.33	0.073	0.015	0.049	0.183	0.044
4060053050	10.32	NaN	10.75	10.07	10.20	0.106	0.014	0.051	0.288	0.068
4060053240	10.36	NaN	20.52	9.13	10.75	0.123	0.007	0.074	0.316	0.093
4060053250	8.27	NaN	15.06	7.87	8.10	0.088	0.005	0.029	0.279	0.036

4060053320	6.09	NaN	9.03	5.94	3.99	0.043	0.009	0.018	0.133	0.011
4060053370	10.33	10.44	13.57	9.51	11.23	0.064	0.040	0.035	0.141	0.040
4060053490	2.90	2.16	2.52	3.44	3.30	0.019	0.014	0.015	0.038	0.010
4060053530	8.51	NaN	7.88	8.77	7.53	0.112	0.010	0.047	0.322	0.067
4060053650	6.40	NaN	12.23	5.55	8.09	0.041	0.005	0.019	0.115	0.026
4060053670	11.53	19.93	11.21	10.97	12.66	0.118	0.023	0.082	0.285	0.081
4060053950	NaN	NaN	NaN	NaN	NaN	NaN	0.008	NaN	NaN	NaN
4060054060	6.04	13.36	6.26	5.52	6.52	0.065	0.018	0.040	0.157	0.045
4060054080	NaN	NaN	NaN	6.48	NaN	0.004	-0.001	0.003	0.014	NaN
4060054140	4.11	6.76	3.14	4.23	4.25	0.036	0.008	0.021	0.089	0.023
4060054250	8.17	NaN	11.38	7.74	7.35	0.072	0.010	0.038	0.201	0.038
4060054270	3.20	11.14	8.82	2.23	4.91	0.034	0.017	0.021	0.076	0.022
4060054310	5.80	NaN	5.88	5.20	7.05	0.021	0.007	0.018	0.045	0.012
4060054350	7.08	NaN	6.65	6.39	9.34	0.048	0.010	0.035	0.107	0.037
4060054460	6.45	NaN	8.92	5.50	7.50	0.073	0.013	0.055	0.168	0.053
4060054560	17.41	NaN	20.00	16.22	NaN	0.021	0.004	0.022	0.047	0.009
4060054570	6.23	NaN	11.13	5.02	7.57	0.059	0.011	0.044	0.139	0.042
4060054650	10.40	NaN	8.37	10.91	10.25	0.079	0.008	0.046	0.213	0.048
4060055030	11.19	NaN	15.85	9.50	13.96	0.165	0.021	0.089	0.392	0.156
4060055160	10.11	7.35	7.04	11.43	8.95	0.102	0.009	0.052	0.287	0.059
4060055590	9.38	NaN	10.83	8.40	10.42	0.089	0.018	0.065	0.209	0.064
4060055770	4.47	13.80	5.73	4.08	4.17	0.086	0.019	0.051	0.200	0.071
4060055910	2.19	17.18	3.05	NaN	5.68	0.015	0.020	0.017	NaN	0.023
4060056170	NaN	NaN	5.45	NaN	NaN	NaN	-0.004	0.007	NaN	NaN
4060056500	7.04	10.10	9.47	6.53	8.62	0.081	0.015	0.025	0.239	0.042
4060056520	4.41	4.10	4.03	4.76	4.30	0.023	0.018	0.018	0.044	0.010
4060056630	5.29	9.19	6.84	4.16	6.77	0.058	0.012	0.064	0.107	0.046
4060056650	5.58	NaN	5.95	4.78	6.50	0.040	0.014	0.034	0.084	0.029
4060057150	8.24	10.30	3.04	9.40	10.88	0.076	0.012	0.025	0.200	0.065
4060057790	6.91	NaN	7.46	5.43	9.61	0.020	0.009	0.022	0.038	0.013
4060057980	6.10	NaN	15.56	4.51	7.85	0.077	0.009	0.063	0.167	0.068
4060061060	9.40	19.71	11.12	7.78	12.52	0.096	0.021	0.080	0.204	0.078
4060061380	4.64	NaN	8.89	3.57	4.52	0.084	0.024	0.071	0.172	0.068
4060061740	5.77	9.29	11.06	4.03	8.20	0.028	0.024	0.015	0.052	0.020
4060062620	19.99	NaN	19.62	19.48	22.89	0.097	0.012	0.100	0.212	0.060
4060066240	5.19	NaN	7.12	3.97	6.89	0.087	0.018	0.063	0.173	0.092
4060435200	3.91	1.80	3.16	4.17	4.04	0.048	0.002	0.028	0.133	0.029
4060437450	6.19	3.82	5.29	6.61	6.54	0.045	0.006	0.033	0.119	0.024
4060442160	10.25	NaN	9.78	10.97	9.75	0.049	0.005	0.040	0.127	0.025
4060443530	1.34	3.47	1.09	1.22	1.88	0.014	0.004	0.010	0.031	0.011
4060444460	9.79	NaN	8.95	10.42	9.84	0.043	0.006	0.033	0.112	0.020
4060445400	2.28	1.72	1.64	2.72	1.24	0.034	0.002	0.017	0.103	0.011
4060445600	3.36	NaN	2.30	4.14	2.33	0.059	NaN	0.029	0.172	0.032
4060449810	6.08	5.11	5.87	6.24	6.38	0.020	0.005	0.019	0.047	0.010

4060449990	5.56	3.12	5.45	5.85	5.43	0.034	0.004	0.032	0.084	0.014
4060465510	1.83	4.08	NaN	2.68	0.79	0.016	0.011	NaN	0.046	0.005
4060468730	-1.40	1.67	-2.42	-1.64	NaN	-0.013	0.003	-0.021	-0.034	NaN
4060469570	1.60	NaN	NaN	2.00	NaN	0.020	0.002	NaN	0.063	NaN
4060469680	NaN	NaN	-1.07	NaN	-1.13	NaN	0.002	-0.009	NaN	-0.008
4060474830	9.22	8.38	8.97	9.26	10.06	0.072	0.012	0.074	0.171	0.030
4060476110	5.75	3.83	5.24	6.13	5.70	0.045	0.006	0.039	0.112	0.020
4060480310	3.82	2.34	3.27	4.94	4.01	0.044	0.018	0.048	0.079	0.030
4060480370	0.94	1.42	0.72	NaN	1.24	0.015	0.022	0.016	NaN	0.015
4060484110	0.74	2.99	NaN	0.51	2.09	0.007	0.005	NaN	0.012	0.010
4060486210	4.06	4.22	3.87	4.21	3.77	0.087	0.011	0.061	0.206	0.070
4060486310	2.11	1.08	1.59	2.55	1.28	0.045	0.002	0.023	0.133	0.021
4060487390	8.40	NaN	7.59	10.45	6.15	0.086	NaN	0.077	0.197	0.063
4060487510	5.75	NaN	4.31	7.50	3.68	0.095	NaN	0.066	0.257	0.053
4060487520	2.61	2.04	1.71	3.50	0.82	0.037	0.005	0.018	0.114	0.008
4060487530	9.96	NaN	9.57	11.81	7.53	0.102	NaN	0.098	0.238	0.070
4060491870	3.88	3.13	3.58	4.82	4.68	0.112	0.101	0.151	0.107	0.091
4060492070	-0.87	-1.31	-1.57	0.63	-0.56	-0.028	-0.046	-0.069	0.016	-0.013
4060492110	3.74	4.62	2.94	4.28	3.07	0.052	0.006	0.040	0.130	0.032
4060492120	-1.51	NaN	-2.47	-0.94	-2.61	-0.020	NaN	-0.024	-0.029	-0.025
4060492490	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060501850	2.00	4.22	1.63	1.85	2.90	0.024	0.009	0.021	0.052	0.015
4060502020	3.96	4.72	3.27	4.01	4.86	0.041	0.010	0.034	0.095	0.025
4060505610	NaN	0.98	-1.38	NaN	1.34	NaN	0.001	-0.008	NaN	0.006
4060505620	3.93	8.15	3.43	3.67	5.28	0.046	0.012	0.042	0.102	0.027
4060508720	3.68	3.25	3.53	4.48	4.00	0.043	0.049	0.057	0.035	0.033
4060508830	5.11	8.47	6.30	2.25	6.14	0.039	0.046	0.054	0.026	0.031
4060508980	3.50	5.88	3.38	3.41	3.65	0.039	0.006	0.036	0.086	0.029
4060510850	4.11	NaN	3.60	3.94	5.11	0.042	0.007	0.040	0.089	0.033
4060514390	2.25	8.07	4.15	2.09	NaN	0.050	0.015	0.059	0.118	NaN
4060514580	4.45	8.50	4.25	4.56	3.80	0.099	0.014	0.060	0.261	0.061
4060515470	-2.05	NaN	-2.55	-2.12	-2.46	-0.012	0.003	-0.011	-0.031	-0.007
4060515600	0.29	NaN	-0.69	0.57	NaN	0.003	0.003	-0.005	0.012	NaN
4060516010	7.19	11.30	7.74	6.86	7.38	0.155	0.019	0.110	0.372	0.116
4060516300	5.99	10.60	6.40	5.94	5.38	0.136	0.017	0.091	0.348	0.085
4060520570	1.25	1.63	1.13	NaN	1.45	0.033	0.051	0.040	NaN	0.028
4060520710	3.77	3.81	3.44	4.25	3.88	0.088	0.109	0.113	0.070	0.060
4060523580	2.70	7.89	3.03	1.97	2.53	0.022	0.018	0.022	0.036	0.014
4060523690	-1.20	7.09	1.52	-4.45	-2.05	-0.011	0.034	0.013	-0.078	-0.012
4060528370	2.77	2.57	2.04	2.82	3.86	0.025	0.004	0.015	0.064	0.017
4060528470	NaN	2.87	NaN	NaN	2.18	NaN	0.005	NaN	NaN	0.011
4060533250	3.85	3.72	3.39	5.14	3.81	0.095	0.107	0.125	0.085	0.064
4060533260	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060534300	1.36	0.90	0.76	3.32	1.51	0.016	0.013	0.013	0.026	0.013

4060534460	1.98	2.26	1.95	1.35	2.05	0.029	0.037	0.047	0.010	0.021
4060536470	3.83	7.40	4.01	3.47	4.33	0.048	0.008	0.048	0.099	0.035
4060536590	0.88	2.82	-0.69	1.25	1.13	0.009	0.003	-0.006	0.031	0.007
4060540620	1.60	1.44	1.02	3.97	1.74	0.067	0.074	0.071	0.074	0.049
4060540630	1.24	1.17	0.52	2.60	1.67	0.036	0.040	0.023	0.048	0.033
4060542530	2.98	9.84	1.79	2.56	5.18	0.030	0.010	0.013	0.067	0.030
4060542660	1.66	5.10	0.82	1.33	3.36	0.014	0.006	0.005	0.030	0.017
4060544080	-0.24	0.91	-1.30	0.40	NaN	-0.004	0.013	-0.032	0.004	NaN
4060548960	5.08	5.22	4.75	5.03	5.62	0.049	0.042	0.063	0.048	0.041
4060549210	4.19	4.97	3.91	3.79	4.37	0.049	0.049	0.067	0.038	0.040
4060549440	9.03	8.70	8.92	8.85	9.79	0.064	0.009	0.053	0.144	0.051
4060549450	15.63	NaN	16.90	14.31	19.07	0.051	0.008	0.045	0.113	0.038
4060549810	3.06	3.97	3.08	2.22	3.13	0.039	0.042	0.054	0.028	0.032
4060550020	2.77	4.62	3.39	NaN	2.30	0.031	0.042	0.052	NaN	0.020
4060554780	-0.33	0.44	-1.38	1.81	NaN	-0.005	0.006	-0.043	0.015	NaN
4060554970	6.04	4.38	5.71	9.45	6.99	0.119	0.060	0.267	0.077	0.071
4060559100	16.40	NaN	19.19	14.25	20.56	0.062	0.016	0.055	0.136	0.042
4060559110	10.25	10.26	10.45	9.84	11.29	0.073	0.014	0.058	0.161	0.060
4060559760	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060559970	7.42	7.92	7.74	7.09	7.97	0.062	0.010	0.051	0.134	0.051
4060563950	2.81	2.70	2.97	3.19	1.89	0.067	0.007	0.055	0.160	0.046
4060571560	1.46	1.32	0.38	2.53	-0.49	0.037	0.003	0.007	0.147	-0.011
4060571960	2.72	4.00	1.81	3.61	1.36	0.055	0.007	0.028	0.156	0.027
4060573250	6.26	6.08	5.58	6.07	7.63	0.070	0.018	0.049	0.148	0.063
4060573460	4.45	3.98	4.03	4.39	5.10	0.063	0.011	0.043	0.135	0.060
4060575240	1.85	2.02	1.85	0.89	1.96	0.024	0.035	0.041	0.004	0.018
4060575490	4.35	4.06	3.60	5.48	5.10	0.080	0.076	0.098	0.073	0.071
4060575620	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060578950	5.65	NaN	3.49	6.69	4.83	0.066	NaN	0.025	0.191	0.049
4060579340	8.05	NaN	8.47	8.19	7.44	0.099	0.007	0.068	0.231	0.087
4060585650	2.27	-0.71	1.79	3.14	1.45	0.054	-0.002	0.036	0.142	0.037
4060588530	3.73	5.00	3.79	4.17	2.60	0.057	0.006	0.043	0.139	0.039
4060588650	0.87	-0.63	NaN	2.35	-1.22	0.023	-0.002	NaN	0.123	-0.033
4060589340	3.52	3.49	3.74	3.70	3.02	0.063	0.006	0.053	0.133	0.058
4060589460	3.69	6.71	4.22	3.51	3.48	0.055	0.008	0.045	0.121	0.044
4060589470	2.64	7.38	3.78	2.40	1.97	0.044	0.009	0.045	0.093	0.030
4060589480	1.67	3.04	2.11	1.56	1.39	0.041	0.008	0.042	0.076	0.036
4060590330	0.31	0.92	NaN	NaN	0.30	0.007	0.022	NaN	NaN	0.005
4060590440	1.37	1.75	1.32	1.18	1.24	0.048	0.057	0.061	0.042	0.032
4060594480	2.49	2.56	1.88	4.44	3.30	0.034	0.035	0.053	0.023	0.025
4060594670	3.62	3.90	2.89	5.64	4.30	0.036	0.040	0.058	0.024	0.021
4060595920	NaN	NaN	NaN	1.13	NaN	NaN	NaN	NaN	0.049	NaN
4060596060	1.59	1.02	0.93	2.83	1.84	0.070	0.046	0.053	0.130	0.049
4060598330	2.35	5.23	1.63	2.57	1.92	0.049	0.012	0.023	0.128	0.032

4060598730	4.94	7.78	4.75	5.02	4.59	0.070	0.008	0.046	0.172	0.051
4060603550	1.89	4.77	0.56	2.18	1.67	0.038	0.015	0.008	0.098	0.031
4060603560	2.97	6.93	2.04	3.18	2.75	0.066	0.017	0.033	0.154	0.059
4060603660	NaN	0.50	NaN	-1.32	-0.45	NaN	0.017	NaN	-0.027	-0.009
4060603790	NaN	1.58	1.25	NaN	NaN	NaN	0.043	0.049	NaN	NaN
4060606400	6.33	6.31	6.09	7.18	6.41	0.046	0.044	0.090	0.027	0.023
4060607260	1.97	2.78	2.23	1.03	1.95	0.059	0.077	0.082	0.035	0.043
4060607420	0.61	1.05	0.87	NaN	NaN	0.023	0.032	0.043	NaN	NaN
4060609110	1.52	2.29	1.79	NaN	1.56	0.034	0.059	0.057	NaN	0.025
4060609270	0.69	1.63	1.05	NaN	NaN	0.013	0.026	0.025	NaN	NaN
4060614190	4.90	7.64	5.33	4.64	4.72	0.082	0.020	0.066	0.175	0.064
4060614330	8.44	5.60	6.30	9.90	6.76	0.156	0.015	0.079	0.419	0.109
4060619030	NaN	1.34	0.82	NaN	2.07	NaN	0.032	0.025	NaN	0.024
4060619040	0.55	0.43	NaN	0.70	1.33	0.015	0.014	NaN	0.010	0.026
4060620840	4.91	3.33	5.87	7.00	NaN	0.075	0.009	0.065	0.228	NaN
4060621070	5.71	4.02	3.05	7.05	4.61	0.113	0.011	0.040	0.313	0.085
4060623190	2.70	3.39	2.72	2.38	2.30	0.031	0.033	0.042	0.032	0.016
4060623270	1.91	2.81	2.09	0.73	1.48	0.049	0.082	0.074	0.016	0.022
4060625430	2.66	-0.99	-0.86	4.13	1.90	0.039	-0.002	-0.009	0.145	0.021
4060625490	3.08	5.11	2.99	3.32	2.37	0.072	0.022	0.061	0.145	0.060
4060625570	6.45	12.05	5.30	6.09	7.78	0.121	0.026	0.072	0.268	0.116
4060628060	7.42	5.28	5.91	9.11	5.07	0.122	0.015	0.068	0.322	0.080
4060628270	1.46	2.19	1.42	NaN	1.25	0.023	0.042	0.032	NaN	0.014
4060628280	5.75	2.59	1.45	7.12	5.82	0.115	0.007	0.018	0.320	0.112
4060628370	1.44	1.90	1.32	1.18	1.61	0.014	0.016	0.016	0.015	0.011
4060632940	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060633040	NaN	0.51	NaN	-1.85	0.55	NaN	0.011	NaN	-0.015	0.005
4060639900	4.73	5.57	5.27	4.25	4.72	0.024	0.019	0.021	0.045	0.011
4060639910	4.92	5.67	5.02	3.94	5.49	0.031	0.037	0.037	0.031	0.020
4060640110	2.44	2.98	2.21	2.11	2.16	0.031	0.051	0.037	0.023	0.013
4060640120	2.08	3.01	NaN	2.72	0.88	0.013	0.012	NaN	0.037	0.002
4060641250	2.54	1.73	1.77	4.03	3.26	0.103	0.073	0.098	0.160	0.082
4060641530	2.33	1.71	2.24	NaN	3.24	0.135	0.114	0.183	NaN	0.088
4060641800	NaN	NaN	NaN	-1.20	NaN	NaN	NaN	NaN	-0.047	NaN
4060642530	3.21	9.32	2.18	3.18	3.29	0.054	0.017	0.023	0.135	0.041
4060642770	1.79	8.30	1.25	1.84	1.14	0.035	0.018	0.016	0.090	0.017
4060646320	3.47	4.88	5.40	3.62	1.55	0.083	0.013	0.114	0.162	0.042
4060646500	10.96	11.40	10.30	12.10	9.44	0.278	0.034	0.211	0.591	0.271
4060656710	4.84	9.45	8.31	4.04	5.12	0.026	0.010	0.017	0.064	0.012
4060656800	7.40	10.50	10.91	6.92	6.18	0.045	0.015	0.023	0.128	0.014
4060660740	-1.81	2.50	-4.77	-0.69	-2.75	-0.044	0.008	-0.077	-0.036	-0.069
4060660750	2.64	5.68	2.97	3.00	1.41	0.071	0.018	0.067	0.156	0.042
4060680220	1.83	1.86	1.99	1.74	1.84	0.046	0.007	0.047	0.077	0.051
4060680470	0.90	1.82	1.74	0.28	1.11	0.027	0.008	0.049	0.015	0.034

4060689270	6.27	3.20	6.45	6.57	5.61	0.034	0.004	0.012	0.108	0.011
4060689380	4.89	4.83	5.62	4.75	5.09	0.036	0.014	0.017	0.094	0.016
4060690000	6.32	15.07	9.53	5.10	8.72	0.043	0.024	0.019	0.108	0.022
4060690120	4.10	9.82	7.44	3.37	4.39	0.023	0.012	0.012	0.060	0.009
4060693040	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060705050	1.89	5.82	1.68	1.76	1.89	0.044	0.015	0.022	0.096	0.042
4060705180	1.84	9.07	3.58	1.21	1.45	0.043	0.026	0.047	0.068	0.032
4060709860	0.85	2.41	-0.81	1.50	0.65	0.025	0.008	-0.019	0.092	0.020
4060709980	NaN	NaN	NaN	1.56	NaN	NaN	NaN	NaN	0.022	NaN
4060709990	5.94	6.00	6.67	5.80	4.45	0.054	0.070	0.066	0.061	0.020
4060710060	0.58	3.33	-1.06	1.06	0.44	0.019	0.010	-0.025	0.076	0.015
4060714700	4.48	2.81	2.81	6.26	2.75	0.031	0.018	0.014	0.085	0.008
4060714850	6.45	6.83	7.12	6.84	3.93	0.044	0.050	0.036	0.072	0.016
4060716340	6.21	1.55	4.92	8.30	3.37	0.032	0.005	0.014	0.098	0.008
4060716480	3.74	6.05	6.02	2.60	2.64	0.030	0.037	0.027	0.044	0.012
4060718180	NaN	3.06	1.44	NaN	-1.58	NaN	0.013	0.022	NaN	-0.041
4060718400	3.51	7.35	3.08	3.67	2.85	0.092	0.023	0.045	0.233	0.067
4060729320	2.34	1.49	1.95	2.82	3.97	0.126	0.085	0.133	0.170	0.114
4060729330	-1.62	-1.01	-1.25	-3.08	-1.27	-0.065	-0.052	-0.065	-0.119	-0.024
4060729700	-0.57	1.24	1.36	-2.24	NaN	-0.030	0.053	0.059	-0.228	NaN
4060729890	-0.66	0.56	0.51	-2.31	NaN	-0.021	0.018	0.016	-0.116	NaN
4060730280	0.73	8.07	0.97	0.29	1.01	0.017	0.018	0.011	0.016	0.022
4060730290	3.09	6.61	3.25	2.98	3.02	0.074	0.012	0.042	0.176	0.065
4060730580	3.64	2.20	3.03	4.28	2.19	0.036	0.009	0.011	0.109	0.012
4060730760	11.35	17.52	18.96	5.87	10.36	0.089	0.131	0.095	0.085	0.045
4060738860	1.01	0.85	NaN	1.89	0.42	0.038	0.004	NaN	0.136	0.016
4060738870	2.53	5.63	1.70	2.95	2.12	0.068	0.016	0.044	0.157	0.052
4060742930	4.84	4.08	6.22	5.17	2.92	0.045	0.015	0.017	0.133	0.015
4060743070	2.50	4.38	4.61	2.59	-0.80	0.021	0.021	0.014	0.053	-0.004
4060745580	3.66	5.84	3.13	3.86	3.29	0.070	0.010	0.037	0.173	0.059
4060745590	5.82	9.46	5.69	5.77	5.77	0.131	0.014	0.066	0.335	0.109
4060746370	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060746500	2.15	4.24	0.74	2.35	2.18	0.051	0.008	0.008	0.140	0.048
4060746720	2.04	2.11	2.54	1.46	2.54	0.123	0.125	0.167	0.129	0.071
4060750870	3.35	5.63	3.98	3.21	3.11	0.088	0.018	0.047	0.219	0.068
4060751020	2.45	5.27	1.22	2.33	3.15	0.055	0.012	0.012	0.141	0.056
4060751770	4.13	9.73	6.64	3.34	4.64	0.090	0.024	0.066	0.195	0.075
4060751920	3.32	8.20	3.74	3.13	3.03	0.065	0.017	0.036	0.160	0.045
4060758850	0.58	4.29	-1.19	1.03	0.44	0.018	0.012	-0.025	0.073	0.014
4060758990	-0.52	4.73	-1.47	-0.59	-0.37	-0.014	0.014	-0.023	-0.037	-0.010
4060759490	2.15	1.93	0.82	2.59	1.63	0.042	0.003	0.008	0.129	0.025
4060759500	3.64	6.55	3.29	3.58	3.68	0.072	0.015	0.039	0.171	0.060
4060760950	-1.64	0.58	NaN	-3.60	-1.47	-0.049	0.015	NaN	-0.189	-0.021
4060760960	-2.22	NaN	-0.82	-3.71	-2.02	-0.071	NaN	-0.020	-0.223	-0.033

4060765990	NaN	-0.80	1.10	NaN	NaN	NaN	-0.006	0.043	NaN	NaN
4060767740	4.65	1.86	6.43	4.70	4.98	0.047	0.005	0.017	0.143	0.022
4060767880	7.31	4.94	8.25	7.61	8.19	0.074	0.032	0.033	0.189	0.038
4060769230	-0.97	-4.95	-2.24	0.67	-1.04	-0.029	-0.058	-0.066	0.035	-0.029
4060769470	1.27	NaN	NaN	2.05	NaN	0.090	NaN	NaN	0.218	NaN
4060769810	NaN	5.83	13.14	NaN	NaN	NaN	0.010	0.018	NaN	NaN
4060770100	5.19	9.71	13.18	3.24	7.38	0.057	0.052	0.039	0.098	0.040
4060778530	2.70	4.67	8.04	2.18	3.06	0.037	0.013	0.022	0.093	0.021
4060778570	1.67	NaN	3.11	1.50	1.23	0.035	0.006	0.027	0.088	0.018
4060778660	0.65	11.19	12.68	-0.84	1.94	0.010	0.039	0.026	-0.040	0.014
4060778700	2.32	7.24	3.18	2.09	2.12	0.052	0.010	0.036	0.123	0.039
4060779790	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060780100	-0.77	-1.94	-0.75	-0.43	-1.24	-0.039	-0.016	-0.036	-0.042	-0.063
4060780120	-0.42	-3.63	NaN	-0.37	-0.57	-0.015	-0.017	NaN	-0.025	-0.019
4060783910	1.59	-0.85	-0.70	2.43	0.96	0.048	-0.003	-0.011	0.176	0.027
4060784050	3.21	5.54	2.96	3.23	3.21	0.114	0.013	0.080	0.259	0.100
4060784170	1.82	-1.56	NaN	2.57	1.38	0.037	-0.004	NaN	0.126	0.022
4060784200	4.09	8.42	4.90	3.69	3.86	0.127	0.024	0.128	0.250	0.102
4060784890	2.55	NaN	5.63	2.26	2.47	0.041	0.006	0.020	0.116	0.021
4060785160	2.74	NaN	6.44	2.42	3.01	0.030	0.007	0.010	0.088	0.016
4060786460	4.94	NaN	7.26	4.45	5.26	0.084	0.008	0.043	0.211	0.073
4060786650	3.01	NaN	5.37	2.46	3.50	0.053	0.008	0.037	0.121	0.044
4060786990	2.75	NaN	5.04	2.49	2.04	0.046	0.007	0.035	0.115	0.026
4060787180	3.36	NaN	8.43	2.77	4.92	0.053	0.004	0.022	0.141	0.045
4060787190	5.05	NaN	6.95	4.73	5.84	0.068	0.002	0.020	0.197	0.052
4060787380	4.13	2.07	5.75	4.12	4.19	0.063	0.005	0.018	0.198	0.029
4060787490	4.61	10.50	13.14	2.90	6.66	0.044	0.033	0.030	0.081	0.032
4060787520	-1.61	NaN	2.54	-1.90	-1.83	-0.023	0.003	0.007	-0.087	-0.015
4060787530	4.34	NaN	7.76	3.75	5.60	0.084	0.004	0.036	0.221	0.074
4060787650	1.10	13.57	5.52	NaN	1.73	0.009	0.014	0.017	NaN	0.009
4060788280	4.84	NaN	7.79	4.10	5.74	0.070	0.009	0.041	0.168	0.061
4060788290	0.93	NaN	3.44	NaN	0.80	0.008	0.006	0.009	NaN	0.004
4060799160	0.73	1.88	2.84	NaN	0.92	0.030	0.032	0.049	NaN	0.020
4060799260	-2.31	-1.07	-2.62	-2.55	-2.23	-0.066	-0.017	-0.046	-0.163	-0.036
4060801370	2.86	2.80	3.66	2.63	2.65	0.175	0.026	0.187	0.331	0.152
4060806680	0.85	2.06	2.40	NaN	0.94	0.034	0.062	0.072	NaN	0.017
4060806930	-0.79	1.27	NaN	-1.35	-0.54	-0.031	0.018	NaN	-0.133	-0.013
4060811130	2.40	4.05	2.09	2.27	2.67	0.055	0.014	0.031	0.115	0.057
4060811140	0.75	-6.75	-2.98	2.48	1.05	0.017	-0.030	-0.050	0.129	0.019
4060815410	NaN	NaN	-0.77	0.65	NaN	NaN	NaN	-0.038	0.036	NaN
4060815490	1.51	2.22	1.13	1.50	1.92	0.084	0.059	0.101	0.103	0.072
4060816630	4.21	8.46	7.17	3.48	4.75	0.038	0.021	0.015	0.092	0.022
4060816640	2.33	18.95	13.34	NaN	2.90	0.021	0.042	0.032	NaN	0.016
4060818150	NaN	NaN	-3.14	-2.05	NaN	NaN	NaN	-0.029	-0.066	NaN

4060818360	1.83	NaN	NaN	1.89	2.36	0.093	NaN	NaN	0.197	0.108
4060818780	0.31	0.92	NaN	0.28	0.43	0.008	0.003	NaN	0.018	0.011
4060818790	3.26	-1.78	2.54	3.70	3.42	0.096	-0.008	0.044	0.268	0.079
4060820560	2.46	NaN	NaN	3.04	NaN	0.022	NaN	NaN	0.072	NaN
4060820850	10.90	16.84	13.09	9.25	11.98	0.187	0.081	0.132	0.365	0.168
4060826770	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060826780	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060827540	1.41	3.07	1.76	NaN	1.98	0.131	0.111	0.238	NaN	0.113
4060827660	0.82	1.70	1.31	NaN	1.55	0.055	0.036	0.104	NaN	0.068
4060828450	2.44	2.76	3.49	1.95	2.53	0.091	0.011	0.116	0.154	0.083
4060828460	-0.27	-2.52	NaN	NaN	-0.99	-0.011	-0.010	NaN	NaN	-0.036
4060835610	-0.61	NaN	-0.81	-0.79	NaN	-0.069	NaN	-0.125	-0.131	NaN
4060836060	2.12	2.96	4.00	0.78	2.57	0.269	0.097	0.581	0.194	0.202
4060836200	NaN	1.28	NaN	-0.48	NaN	NaN	0.038	NaN	-0.085	NaN
4060836210	NaN	1.29	NaN	-0.52	NaN	NaN	0.018	NaN	-0.063	NaN
4060836400	2.10	4.07	2.81	1.30	2.56	0.229	0.102	0.343	0.274	0.193
4060837170	2.17	3.09	2.84	2.17	1.37	0.072	0.028	0.062	0.156	0.040
4060837180	0.58	-2.44	0.74	0.92	NaN	0.024	-0.010	0.019	0.091	NaN
4060838850	0.48	2.27	0.50	NaN	0.71	0.046	0.090	0.053	NaN	0.054
4060839030	3.20	7.70	2.85	2.45	3.67	0.625	0.480	0.782	0.781	0.451
4060840120	-0.72	1.12	0.95	-1.99	NaN	-0.024	0.029	0.021	-0.138	NaN
4060859640	-2.85	-2.68	-3.84	-2.54	-2.68	-0.215	-0.068	-0.239	-0.407	-0.143
4060859650	-3.77	-2.12	-4.44	-3.94	-3.00	-0.120	-0.016	-0.105	-0.294	-0.062
4060863940	-1.74	0.86	-0.83	-2.11	-1.98	-0.072	0.010	-0.016	-0.228	-0.053
4060863950	-5.23	-4.76	-5.75	-5.21	-5.15	-0.191	-0.137	-0.181	-0.317	-0.126
4060866220	-2.85	-1.43	-3.20	-2.95	-2.52	-0.152	-0.013	-0.107	-0.394	-0.090
4060869520	-1.44	-2.97	NaN	-1.38	-2.36	-0.077	-0.024	NaN	-0.149	-0.127
4060869640	3.47	2.32	4.09	3.42	3.35	0.163	0.021	0.138	0.308	0.184
4060872230	NaN	NaN	NaN	-0.93	NaN	NaN	NaN	NaN	-0.184	NaN
4060872820	3.55	2.65	4.35	3.78	2.82	0.160	0.018	0.092	0.395	0.132
4060876090	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060876180	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060883570	NaN	4.16	NaN	NaN	NaN	NaN	0.040	NaN	NaN	NaN
4060886350	NaN	6.95	NaN	NaN	NaN	NaN	0.081	NaN	NaN	NaN
4060900670	-1.98	NaN	-1.08	-2.63	-1.44	-0.111	NaN	-0.037	-0.354	-0.056
4060900680	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060900840	-2.03	1.60	-1.42	-2.97	-1.69	-0.087	0.031	-0.037	-0.293	-0.046
4060902890	1.20	NaN	NaN	1.47	1.37	0.150	NaN	NaN	0.337	0.130
4060903190	-2.07	-0.90	-1.93	-2.50	-1.84	-0.195	-0.036	-0.181	-0.431	-0.127
4060905060	-1.40	0.74	-1.34	-1.80	-1.25	-0.050	0.010	-0.030	-0.152	-0.027
4060905860	NaN	-2.80	-1.19	0.82	-0.33	NaN	-0.030	-0.030	0.050	-0.008
4060905950	2.82	3.44	2.58	2.85	2.79	0.092	0.023	0.051	0.210	0.083
4060933190	1.42	3.84	2.52	1.25	NaN	0.056	0.021	0.050	0.113	NaN
4060956230	-2.70	-1.00	-2.21	-3.75	-2.48	-0.201	-0.058	-0.129	-0.490	-0.122

4060956240	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN	NaN
4060972010	0.60	1.53	0.48	NaN	0.88	0.041	0.048	0.035	NaN	0.042