Disentangling controls of multi-scale variability in Precipitation Stable Isotopes at Yadong and Ali on the Tibetan Plateau

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Table S1 Daily minimum, maximum, and weighted average values of $\delta^{18}O$, δD, and d-excess at Yadong and Ali in different seasons

		Yadong				Ali			
		Samples (n)	min	max	weighted average	Samples (n)	min	max	weighted average
Year	$\delta^{18}O$ (‰)	359	-25.7	7.2	-9.5	80	-35.0	7.3	-15.0
	δD (‰)		-190.4	58.1	-64.6		-264.7	68.0	-104.6
	d-excess (‰)		-28.4	29.5	11.4		-18.2	32.6	15.6
Pre-monsoon	$\delta^{18}O$ (‰)	106	-12.9	7.2	-2.7	5	-21.5	-6.2	-8.4
	δD (‰)		-92.4	58.1	-6.6		-162.1	-24.5	-46.0
	d-excess (‰)		-1.2	25.7	15.3		5.2	25.0	20.9
Monsoon	$\delta^{18}O$ (‰)	215	-22.4	6.2	-10.7	66	-25.7	7.3	-13.3
	δD (‰)		-170.3	39.3	-78.6		-194.4	68.0	-92.4
	d-excess (‰)		-28.4	17.5	6.7		-18.2	32.6	14.0
Late monsoon	$\delta^{18}O$ (‰)	20	-25.7	-6.6	-22.9	3	-34.6	-19.6	-26.7
	δD (‰)		-190.4	-55.0	-170.1		-257.3	-126.7	-188.5
	d-excess (‰)		-19.7	15.6	13.1		13.6	30.2	24.7
Westerlies	$\delta^{18}O$ (‰)	18	-17.2	1.7	-9.6	6	-35.0	-13.7	-21.8
	δD (‰)		-121.6	34.2	-57.1		-264.7	-123.3	-175.9
	d-excess (‰)		14.7	29.5	19.9		-13.5	15.4	-1.5

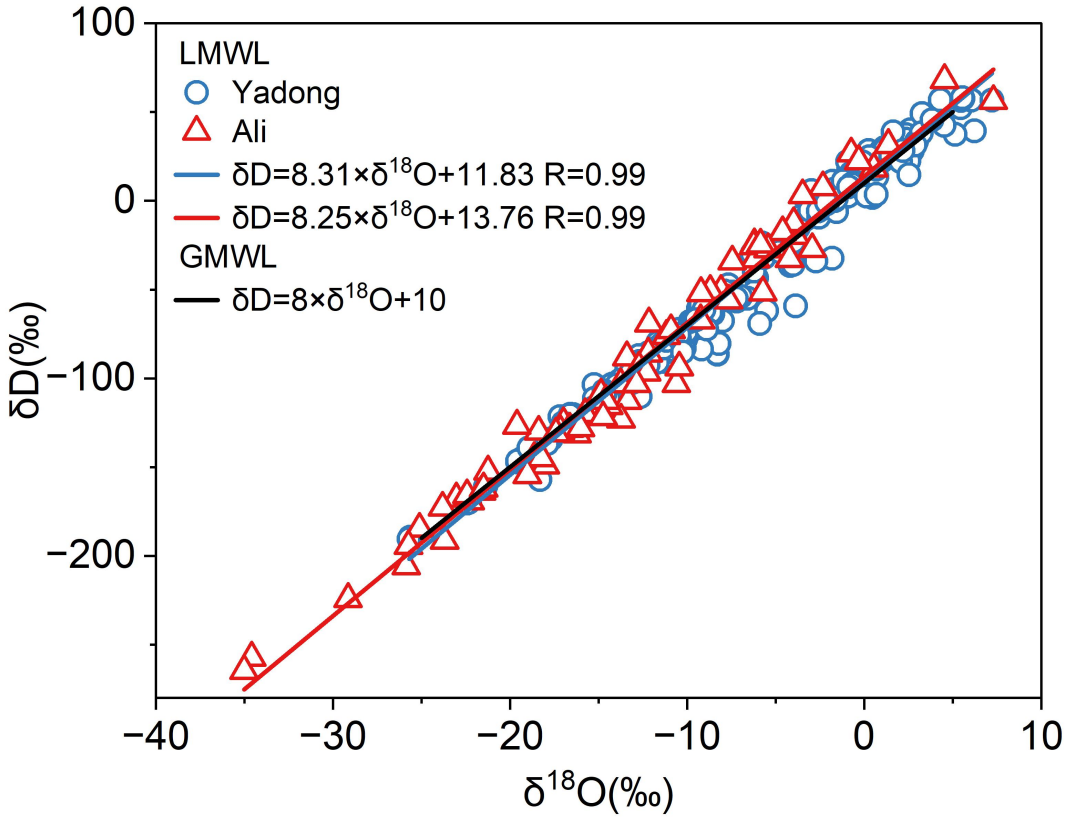

Figure S1 Local Meteoric Water Line for Yadong and Ali and Global Meteoric Water Line throughout the year.

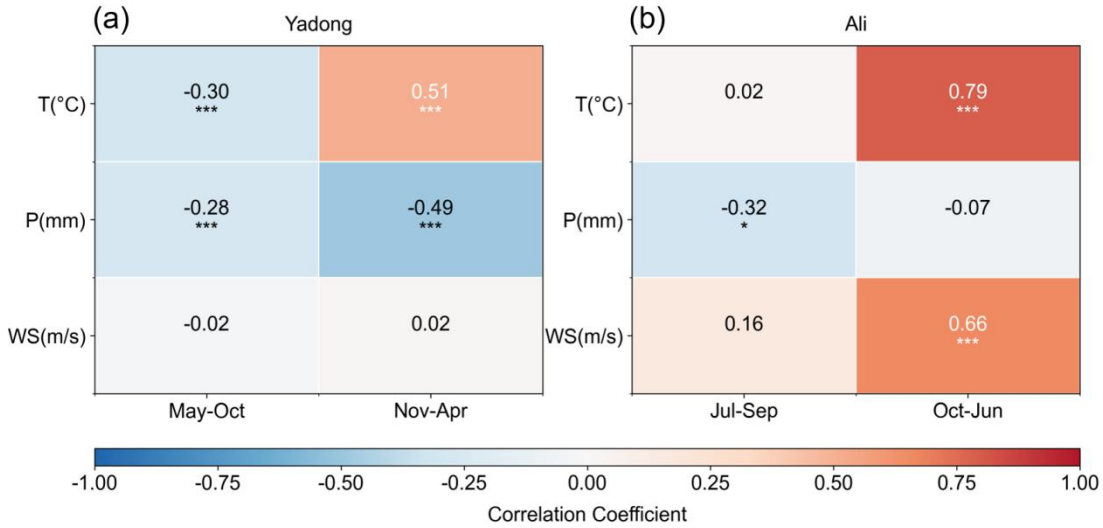

Figure S2 A heat map of the relationship between (a) Yadong $\delta^{18}O$ and temperature (T), precipitation (P), and wind speed (WS) in different seasons. (b) same as (a), but for Ali. * and * indicate significant correlation at levels 0.001 and 0.05, respectively.**

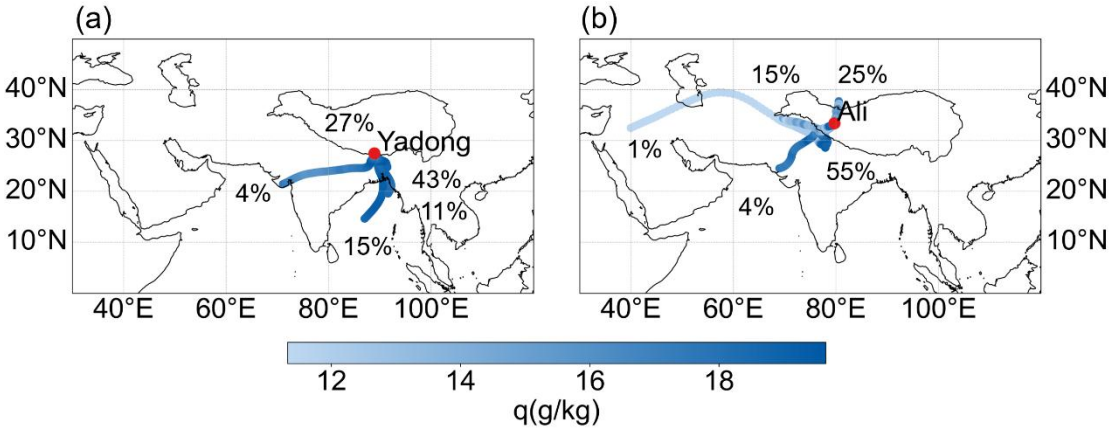

Figure S3 Backward trajectories on simultaneous rainy days at Yadong (a) and Ali (b) during the monsoon season.