Response variable	Multiple linear regression (MLR) models	R^2	R^2 adjusted	p value	n	Period
$\delta^{18}O$	$\delta^{18}O =$ $(-0.116) \cdot P\_hysplit + (-0.033) \cdot P\_AL +$ $(0.118) \cdot H\_hysplit + (1.043) \cdot T\_AL +$ $(0.078) \cdot D\_hysplit - 40.64$	0.80	0.79	1.9×10^{-22}	74	full year
	$\delta^{18}O =$ $(-0.101) \cdot P\_hysplit + (-0.041) \cdot P\_AL +$ $(0.311) \cdot T\_hysplit + (1.128) \cdot T\_AL +$ $(0.104) \cdot D\_hysplit - 41.42$	0.75	0.72	4.3×10^{-10}	42	early monsoon (Jun–Sep)
	$\delta^{18}O =$ $(-0.113) \cdot P\_hysplit + (-0.018) \cdot P\_AL +$ $(0.461) \cdot H\_AL + (-0.404) \cdot T\_hysplit +$ $(1.603) \cdot T\_AL - 77.59$	0.96	0.94	7.1×10^{-8}	18	late monsoon (Oct–Nov)
	$\delta^{18}O =$ $(-0.369) \cdot T\_hysplit + (2.493) \cdot T\_AL - 68.43$	0.65	0.58	3.3×10^{-3}	14	dry season (Dec–May)
$\delta^{2}H$	$\delta^{2}H =$ $(-0.894) \cdot P\_hysplit + (-0.224) \cdot P\_AL +$ $(0.826) \cdot H\_hysplit + (7.744) \cdot T\_AL +$ $(0.513) \cdot D\_hysplit - 289.23$	0.79	0.78	5.9×10^{-22}	74	full year
	$\delta^{2}H =$ $(-0.792) \cdot P\_hysplit + (-0.313) \cdot P\_AL +$ $(2.220) \cdot T\_hysplit + (8.390) \cdot T\_AL +$ $(0.679) \cdot D\_hysplit - 295.19$	0.74	0.71	9.4×10^{-10}	42	early monsoon (Jun–Sep)
	$\delta^{2}H =$ $(-0.914) \cdot P\_hysplit + (-0.094) \cdot P\_AL +$ $(3.045) \cdot H\_AL + (-2.615) \cdot T\_hysplit +$ $(12.044) \cdot T\_AL - 547.97$	0.97	0.95	1.7×10^{-8}	18	late monsoon (Oct–Nov)
	$\delta^{2}H =$ $(-3.446) \cdot T\_hysplit + (19.923) \cdot T\_AL - 529.90$	0.67	0.61	2.2×10^{-3}	14	dry season (Dec–May)
d-excess	d-excess = $(0.034) \cdot P\_hysplit + (0.029) \cdot P\_AL +$ $(0.206) \cdot H\_AL + (-0.421) \cdot T\_hysplit +$ $(-0.148) \cdot D\_hysplit + 3.05$	0.33	0.28	4.2×10^{-5}	74	full year
	d-excess = $(0.346) \cdot H\_AL + (-0.311) \cdot T\_hysplit +$ $(-0.162) \cdot D\_hysplit - 8.00$	0.38	0.33	3.7×10^{-4}	42	early monsoon (Jun–Sep)
	d-excess = $(0.049) \cdot P\_AL + (-0.532) \cdot H\_AL +$ $(-1.989) \cdot T\_AL + (-0.228) \cdot D\_hysplit + 113.98$	0.65	0.54	6.0×10^{-3}	18	late monsoon (Oct–Nov)
	d-excess = $(0.105) \cdot P\_AL + (-0.300) \cdot H\_hysplit +$ $(1.013) \cdot T\_AL + (0.202) \cdot D\_hysplit - 6.41$	0.66	0.51	3.1×10^{-2}	14	dry season (Dec–May)