

# Some clues on the impact of the Westerlies on the air in a valley over the Tibetan Plateau

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### Outline

#### Background

#### Observation and Method

#### Results

#### Conclusions

# What is the impact of Westerlies on a valley air?



## Wind observation in the valley







#### Surface heat flux comparison between SW and NW

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	Cases	Time	CBL	Hs	LE	G	<b>u</b> *	$T_s - T_a$	
	number	(BST)	depth (km)	(w/m <sup>2</sup> )	(W/m <sup>2</sup> )	(W/m <sup>2</sup> )	(m/s)	(°C)	r <sub>a</sub>
<b>Condition 1</b> (U>0&V>0)	2	14:00	3.82	87.69	6.07	-10.34	0.50	5.94	78.12
<b>Condition 2</b> (U>0&V<0)	5	14:00	1.60	49.14	5.98	-8.56	0.23	6.58	115.37





#### Result



The interaction between sensible heat flux, near-surface wind speed and CBL growth

Southwesterlies promotes a stronger near-surface wind, smaller aerodynamic resistance, and larger sensible heat flux, higher PBL than other periods.

The PBL top in November was the highest of three intensive observation periods (*i.e.*, June, August and November), which is associated with the Westerlies.

# THANK YOU

