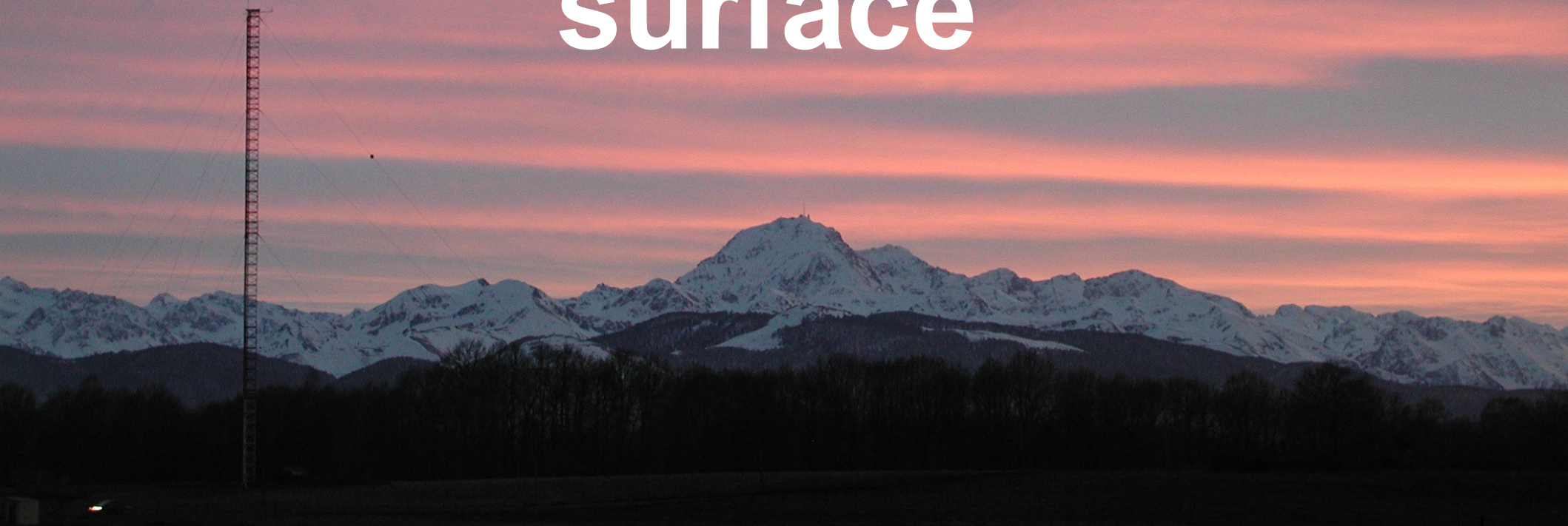
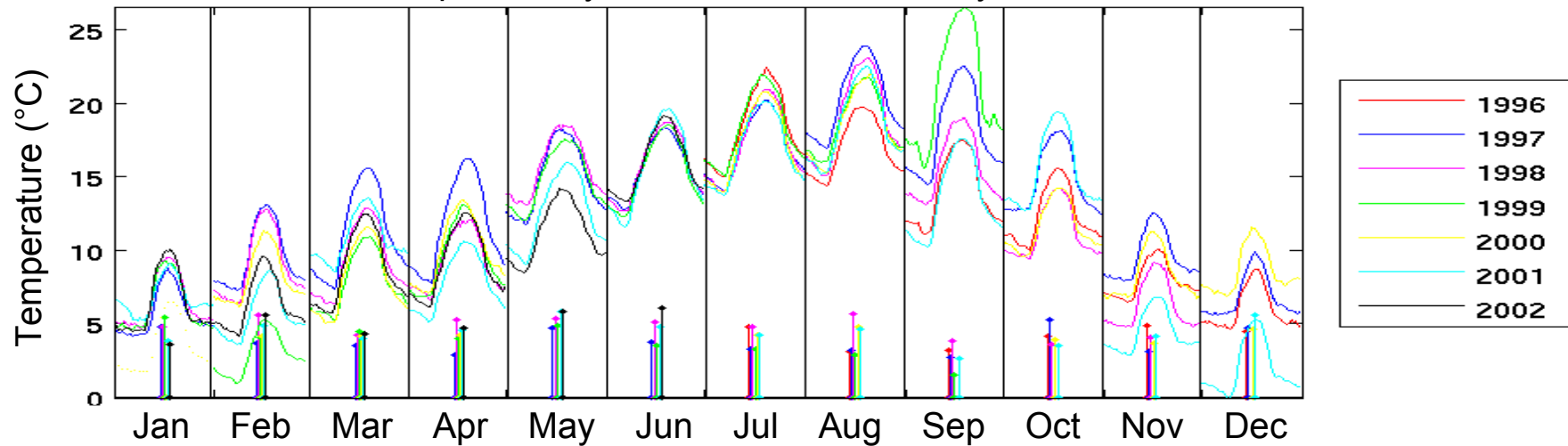


Climatology close to surface



2 m Température

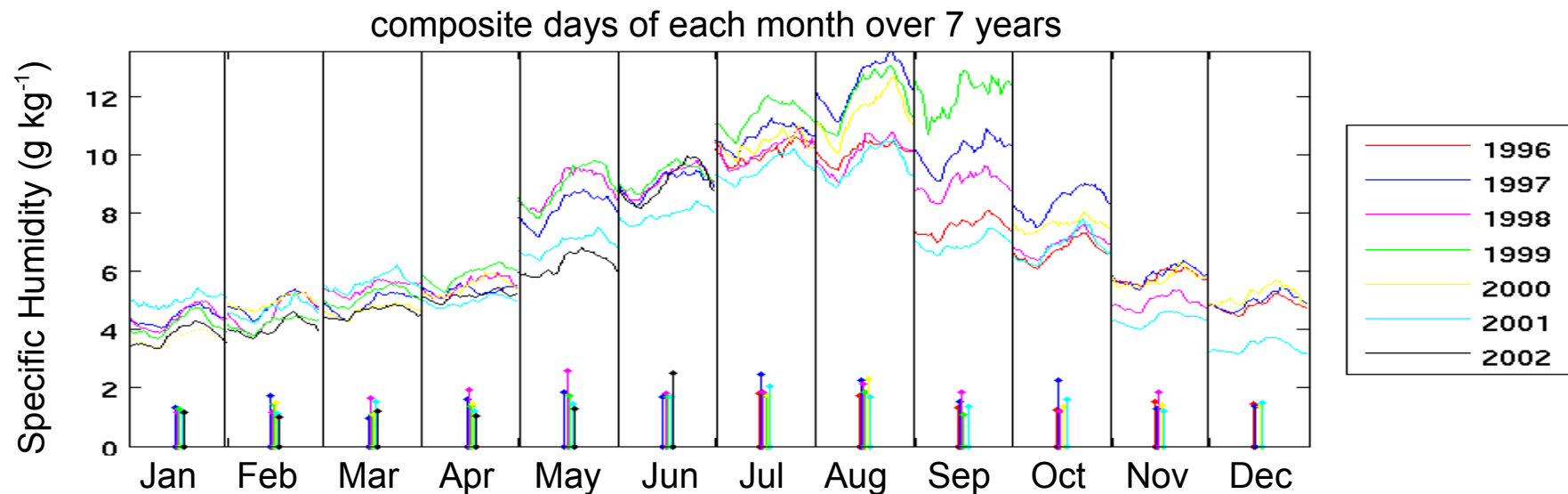
composite days of each month over 7 years



Diurnal cycle of temperature :

Inter-annual variability of the monthly composites

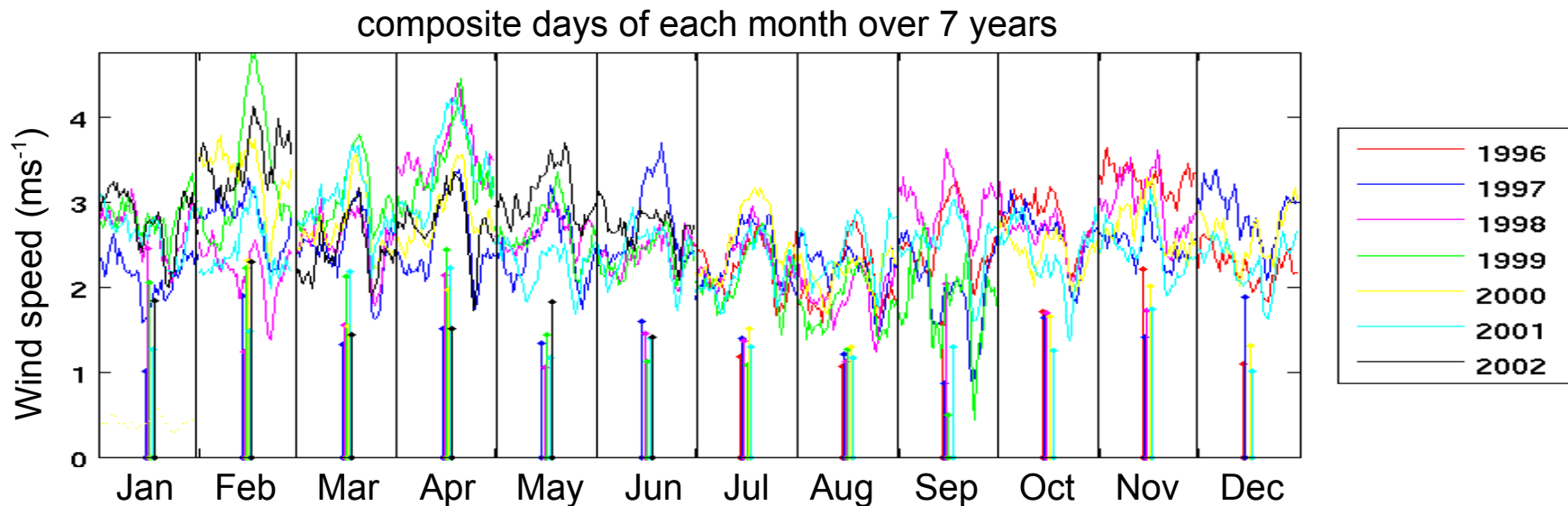
2 m Specific humidity



Diurnal cycle of air humidity:

Inter-annual variability of the monthly composites

10 m wind speed

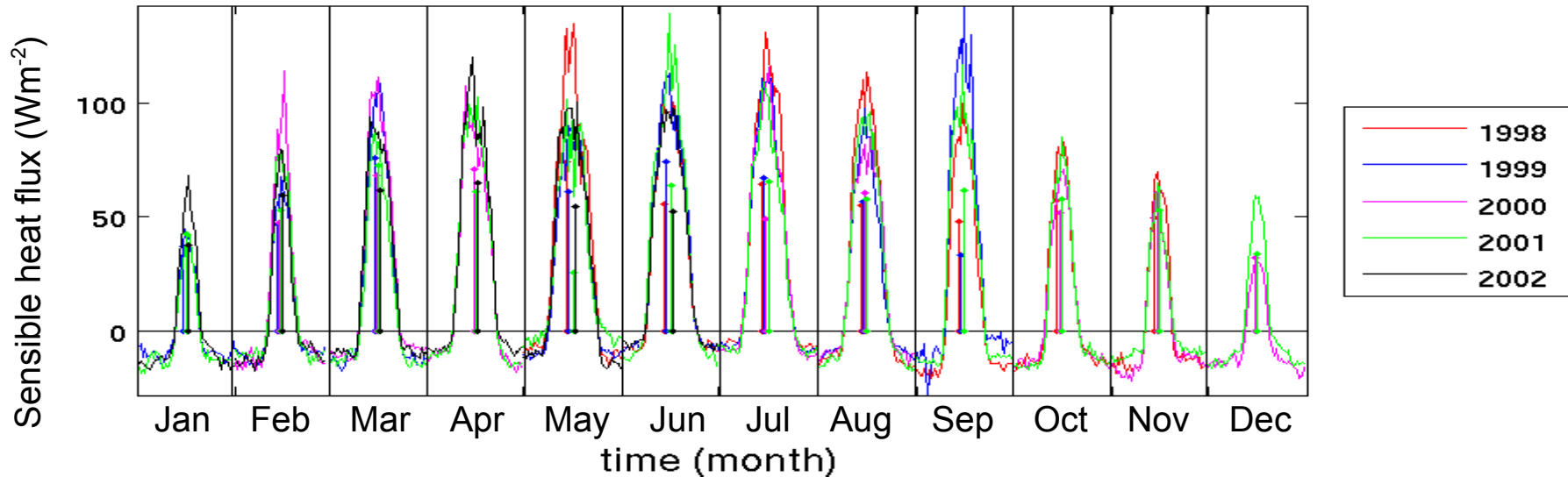


Diurnal cycle of surface wind speed:

Inter-annual variability of the monthly composites

Surface sensible heat flux

composite days of each month over 5 years



Diurnal cycle of surface sensible heat flux:

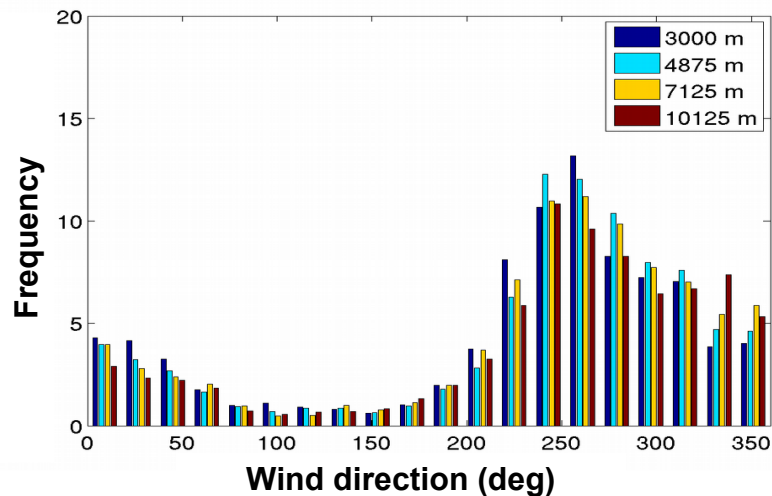
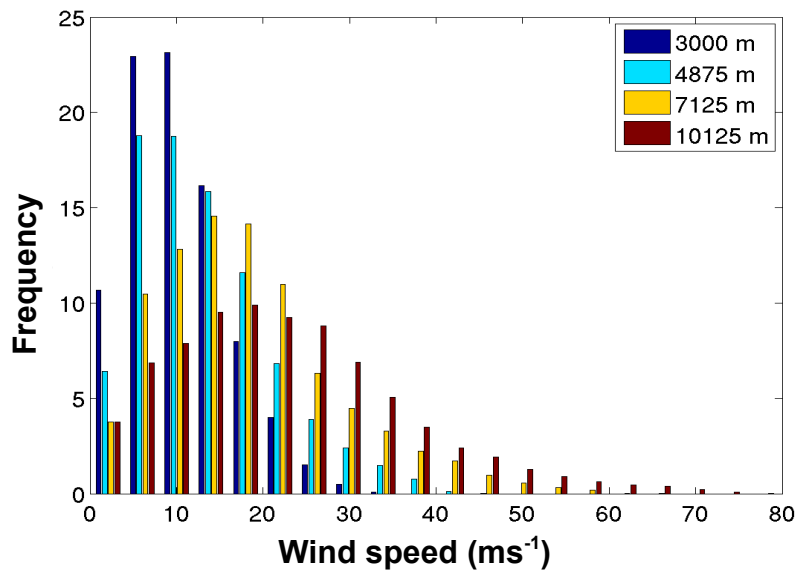
Inter-annual variability of the monthly composites



Climatology Of the mid-troposphere dynamics

Wind distribution

Statistics 2001-2009



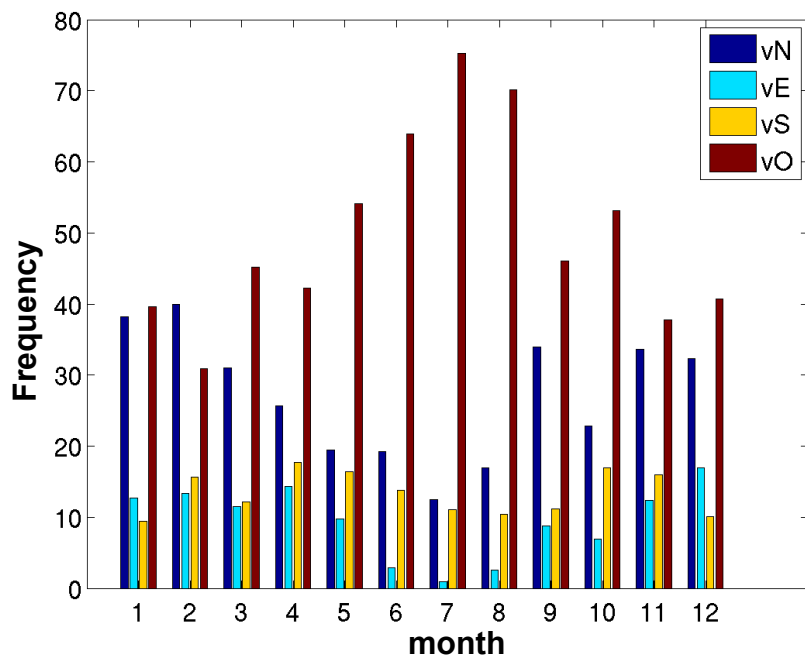
- Small inter-annual variability

- Westerlies largely predominant

- Easterlies and South-easterlies least predominant

Wind sector occurrence throughout the year

Statistics 2001-2009



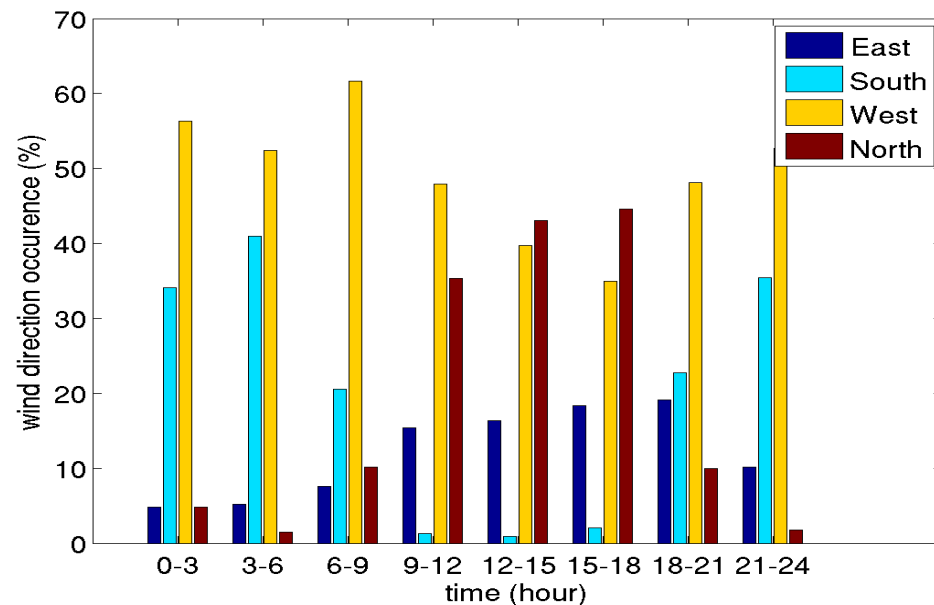
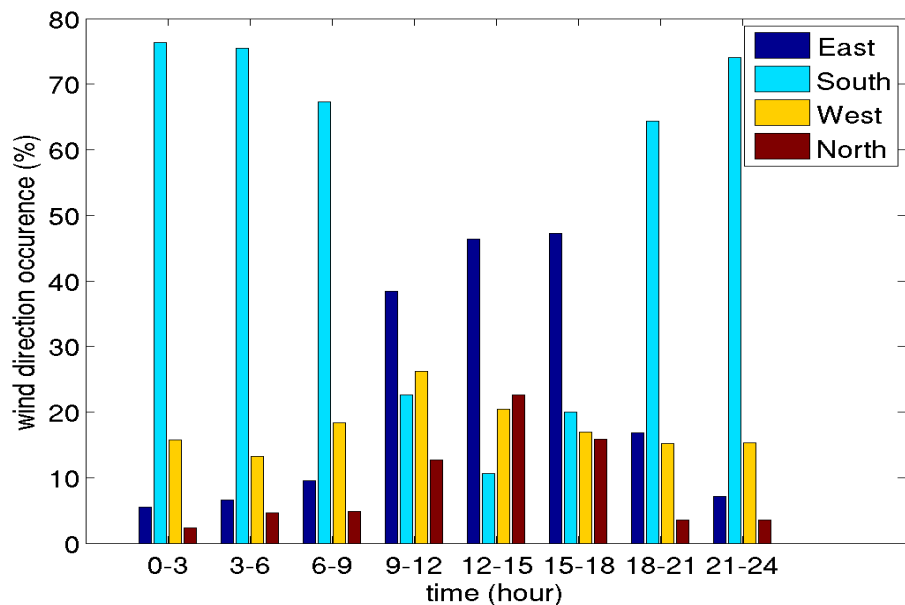
- Westerlies predominant, especially in summer
- Northerlies more frequent in winter
- Southerlies slightly more frequent in transitional seasons

Mountain specific phenomenology



Diurnal cycle of wind direction

Signature of plain-mountain circulation



October 2001

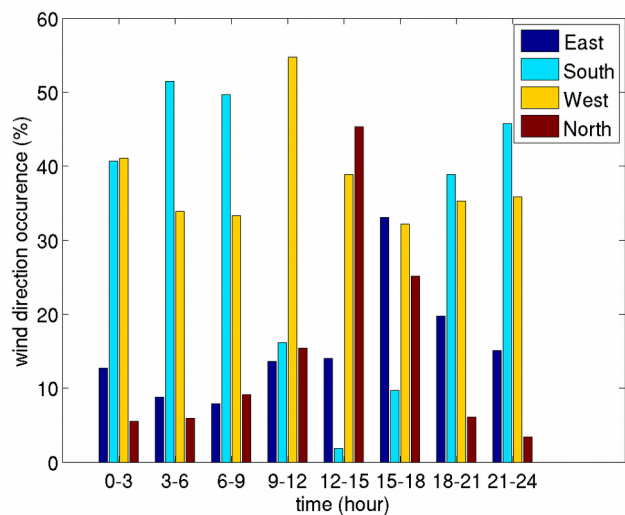
April 2002

- Consistent signature of plain-mountain circulation throughout the year
 - Daytime : NorthEasterly wind, plain to Mountain (upvalley)
 - Night-time : Southerly Mountain to plain (downvalley)
- Relative Westerlies predominance is variable along the year

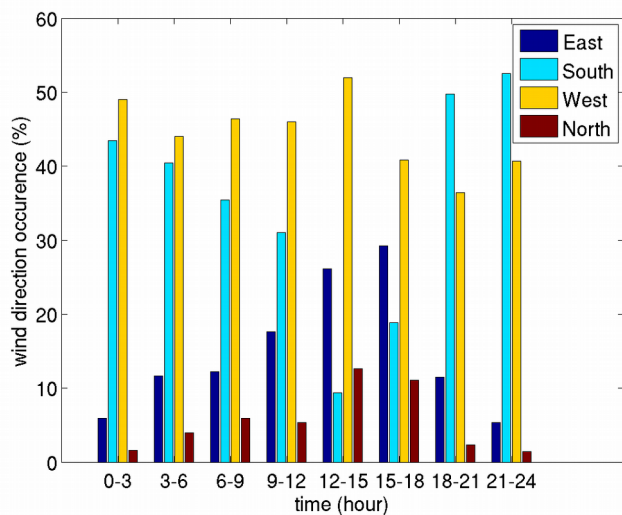
Diurnal cycle of wind direction

Signature of plain-mountain circulation

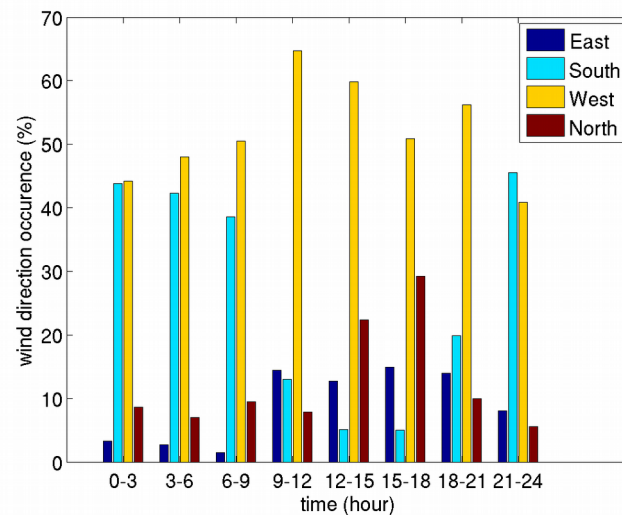
Winter



Dec 2001



Jan 2001



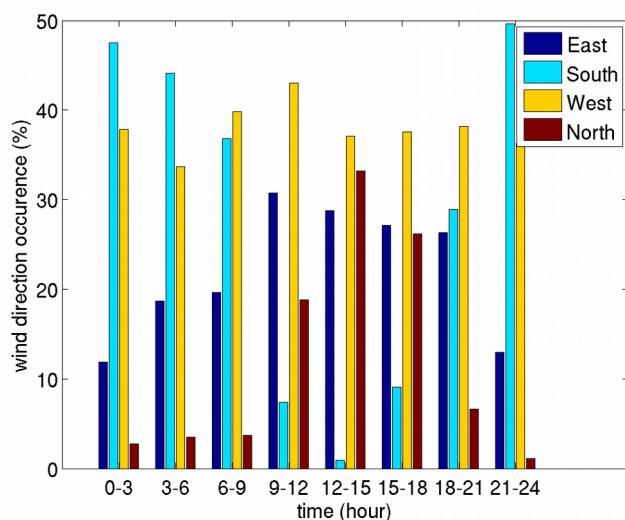
Feb 2001

- Consistent signature of plain-mountain circulation throughout the year
 - Daytime : NorthEasterly wind, plain to Mountain (upvalley)
 - Night-time : Southerly Mountain to plain (downvalley)
- Relative Westerlies predominance is variable along the year

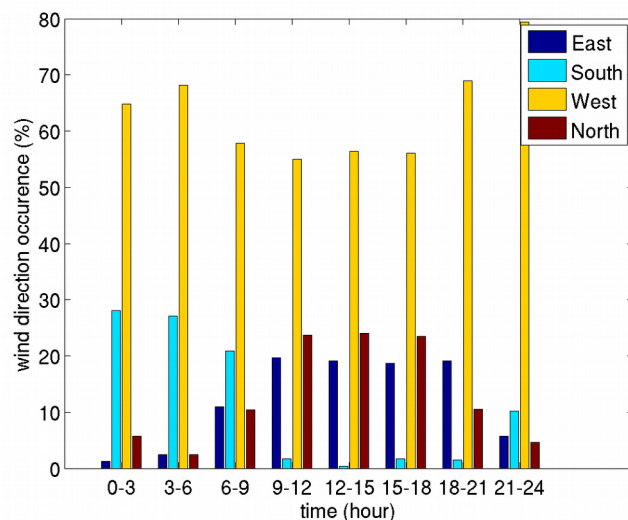
Diurnal cycle of wind direction

Signature of plain-mountain circulation

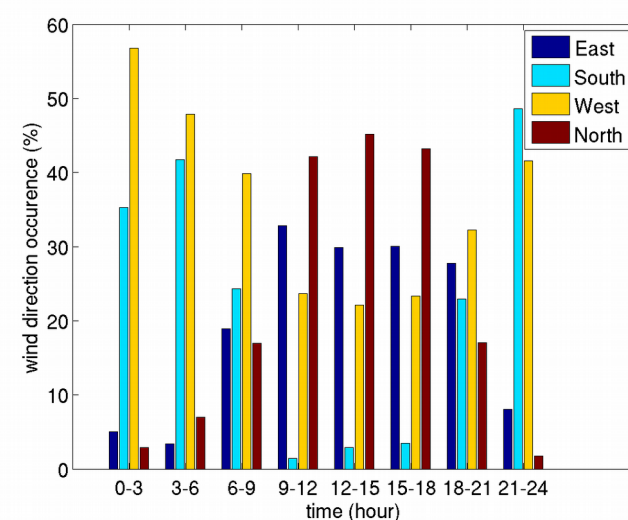
Spring



Mar 2001



Apr 2001



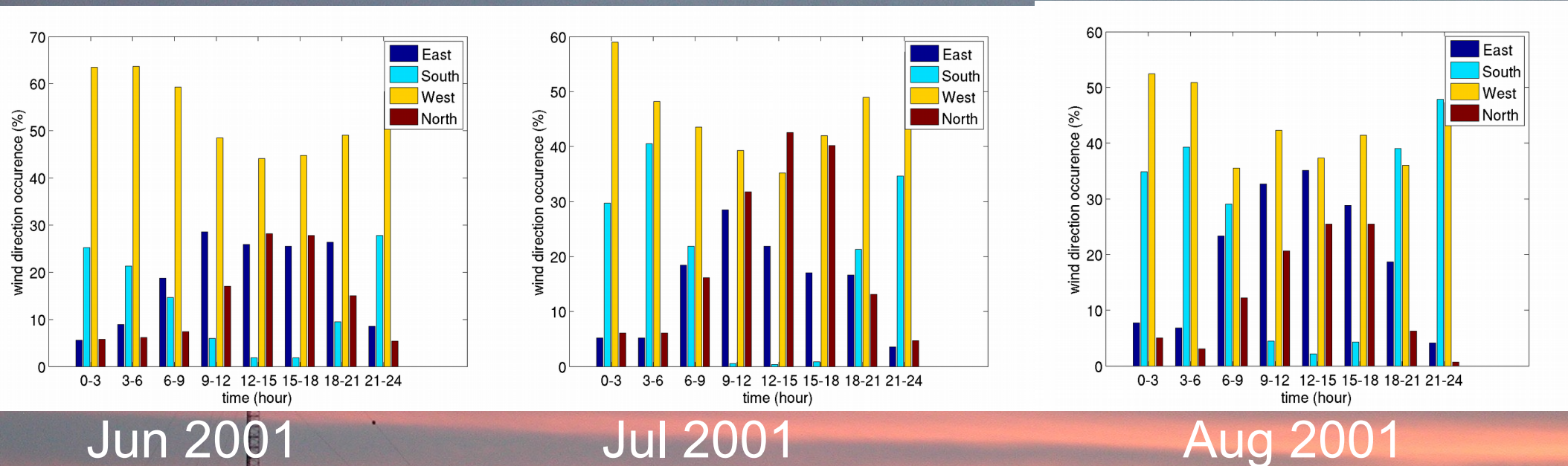
May 2001

- Consistent signature of plain-mountain circulation throughout the year
 - Daytime : NorthEasterly wind, plain to Mountain (upvalley)
 - Night-time : Southerly Mountain to plain (downvalley)
- Relative Westerlies predominance is variable along the year

Diurnal cycle of wind direction

Signature of plain-mountain circulation

Summer



Jun 2001

Jul 2001

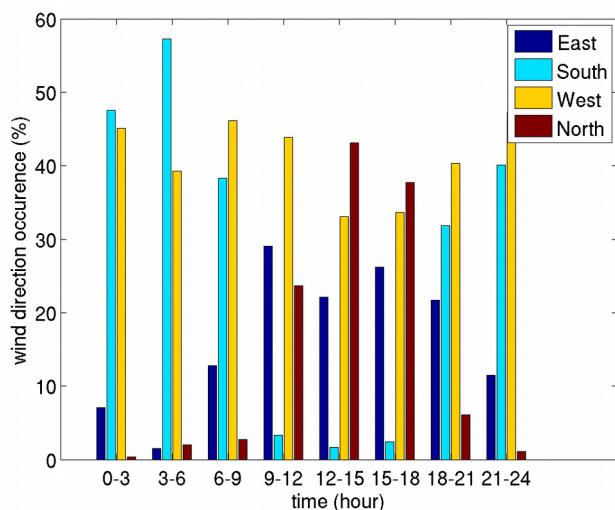
Aug 2001

- Consistent signature of plain-mountain circulation throughout the year
 - Daytime : NorthEasterly wind, plain to Mountain (upvalley)
 - Night-time : Southerly Mountain to plain (downvalley)
- Relative Westerlies predominance is variable along the year

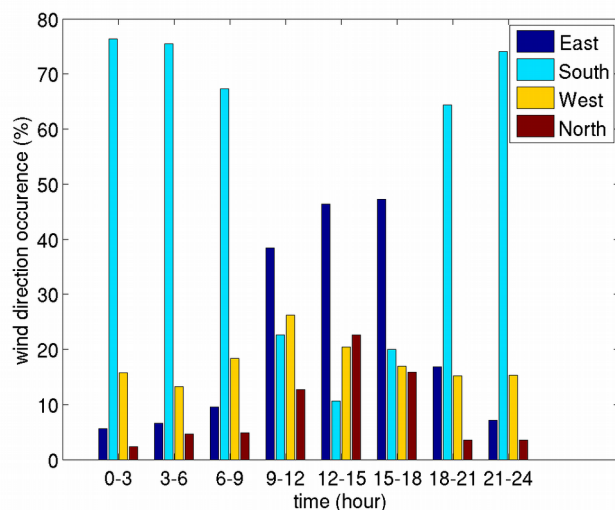
Diurnal cycle of wind direction

Signature of plain-mountain circulation

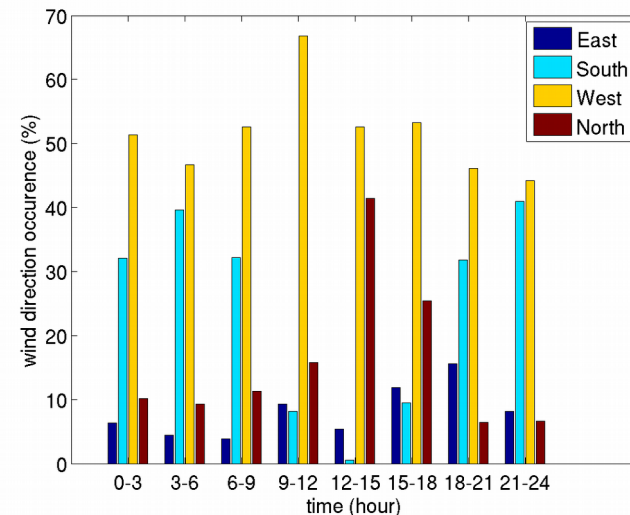
Fall



Sep 2001



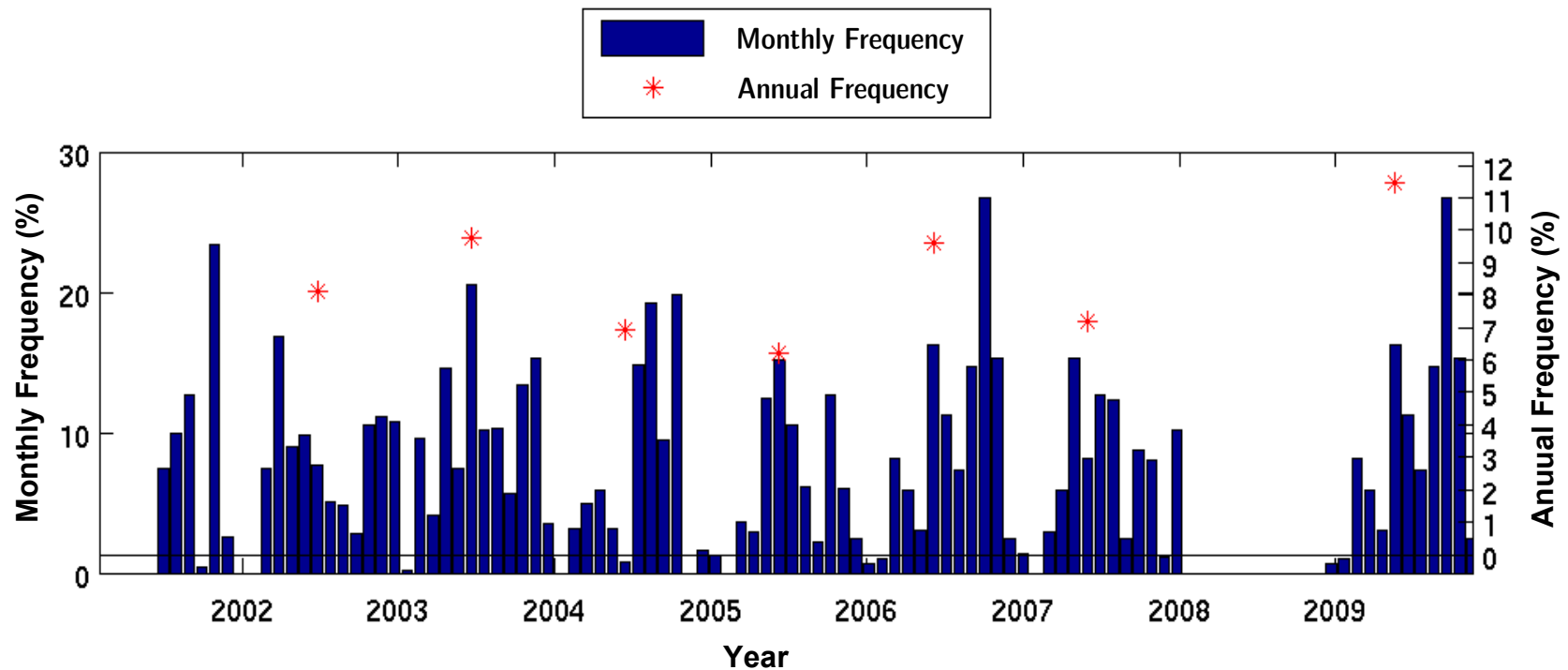
Oct 2001



Nov 2001

- Consistent signature of plain-mountain circulation throughout the year
 - Daytime : NorthEasterly wind, plain to Mountain (upvalley)
 - Night-time : Southerly Mountain to plain (downvalley)
- Relative Westerlies predominance is variable along the year

Occurrence of mountain-wave-like situations (significant foehn)



Criteria for occurrence calculation :

- southerly wind at 4 km height
- Large 6h-vertical-wind variance
- Significant occurrence
- Bimodal distribution over the year

Links to real time observations :

VHF wind profiler (mid and upper troposphere)

UHF wind profiler (low and mid troposphere)

Sky imager