

Backcountry Wx Concerns

- Good weather going in – bad weather coming out
- Ceilings
- Wind
- Thunderstorms

Agenda

- Low Pressure Systems
- Ceilings and Vis
- Winds
- Thunderstorms

Good Weather Going In...



Bad Weather Going Out !



Valley vs Mountain (low altitude vs high)



http://www.cityofboise.org/Departments/Public_Works/Services/AirQuality/page10796.aspx



<http://www.idahohotspots.com/infocenter/webcams.htm>

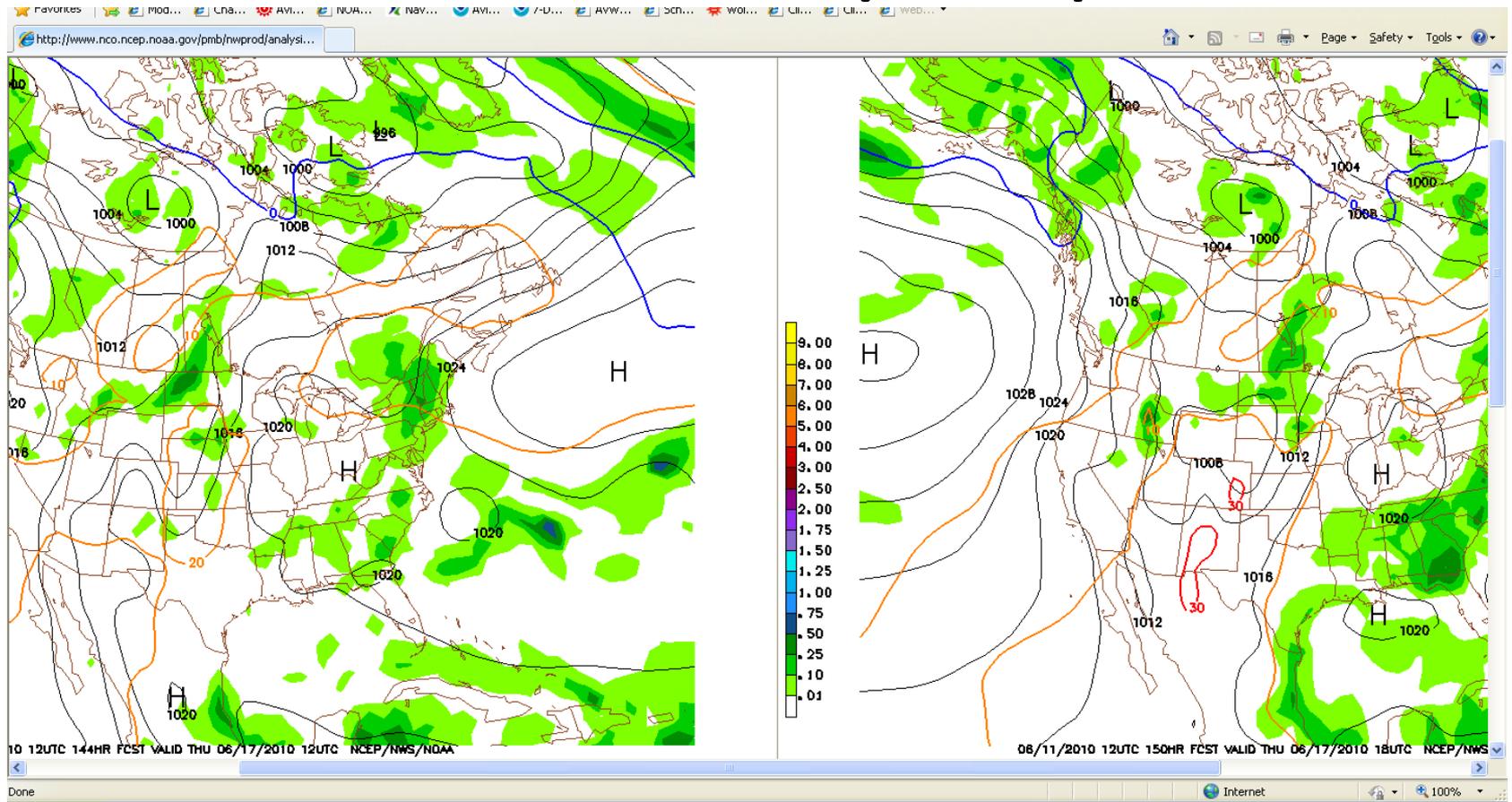


<http://www.flyingresort ranches.com/>



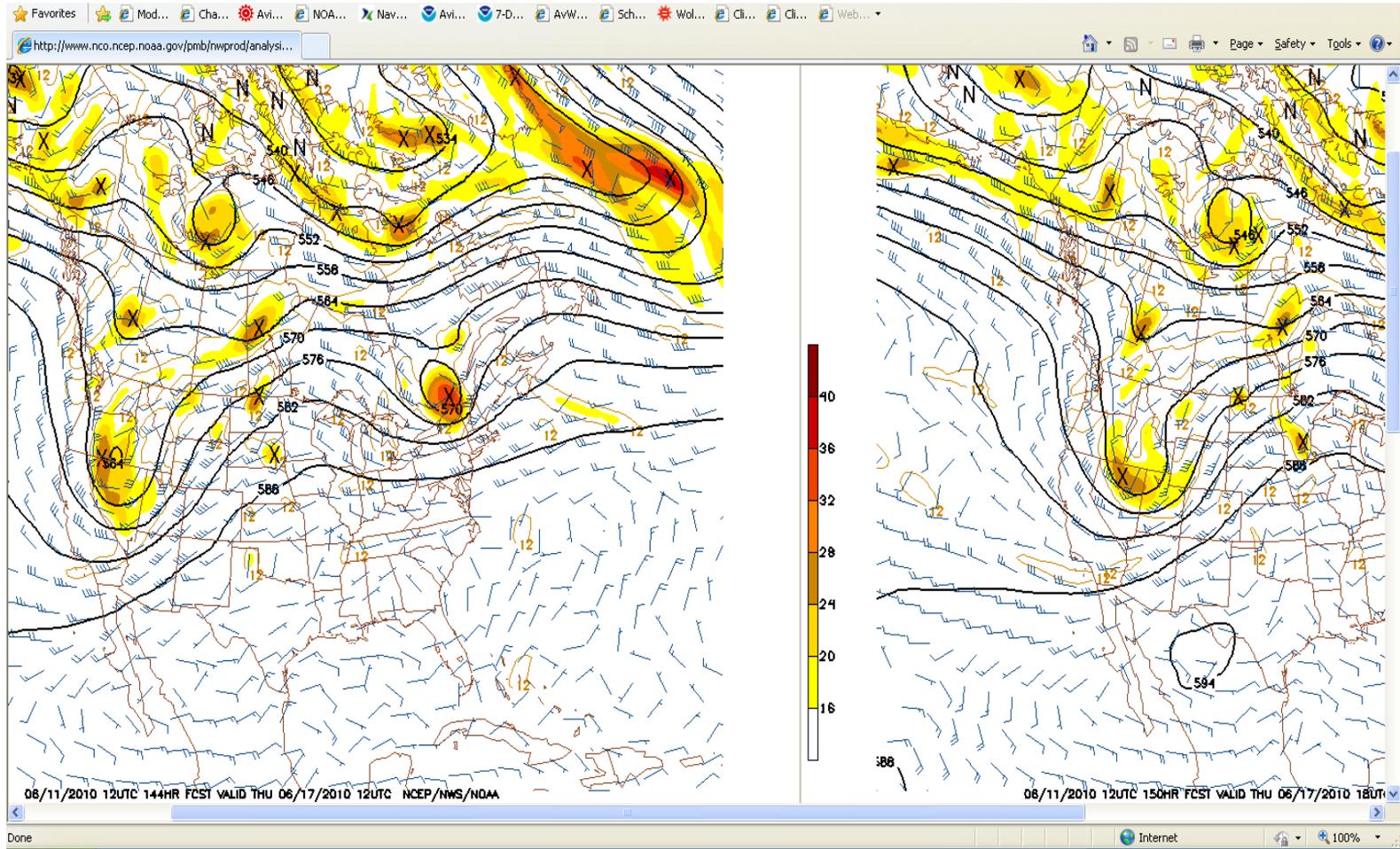
<http://www.pilotcams.org/northwest-us-webcams/48-smiley-creek-id-u87>

GFS Computer Modeling of Surface Wx that includes precipitation



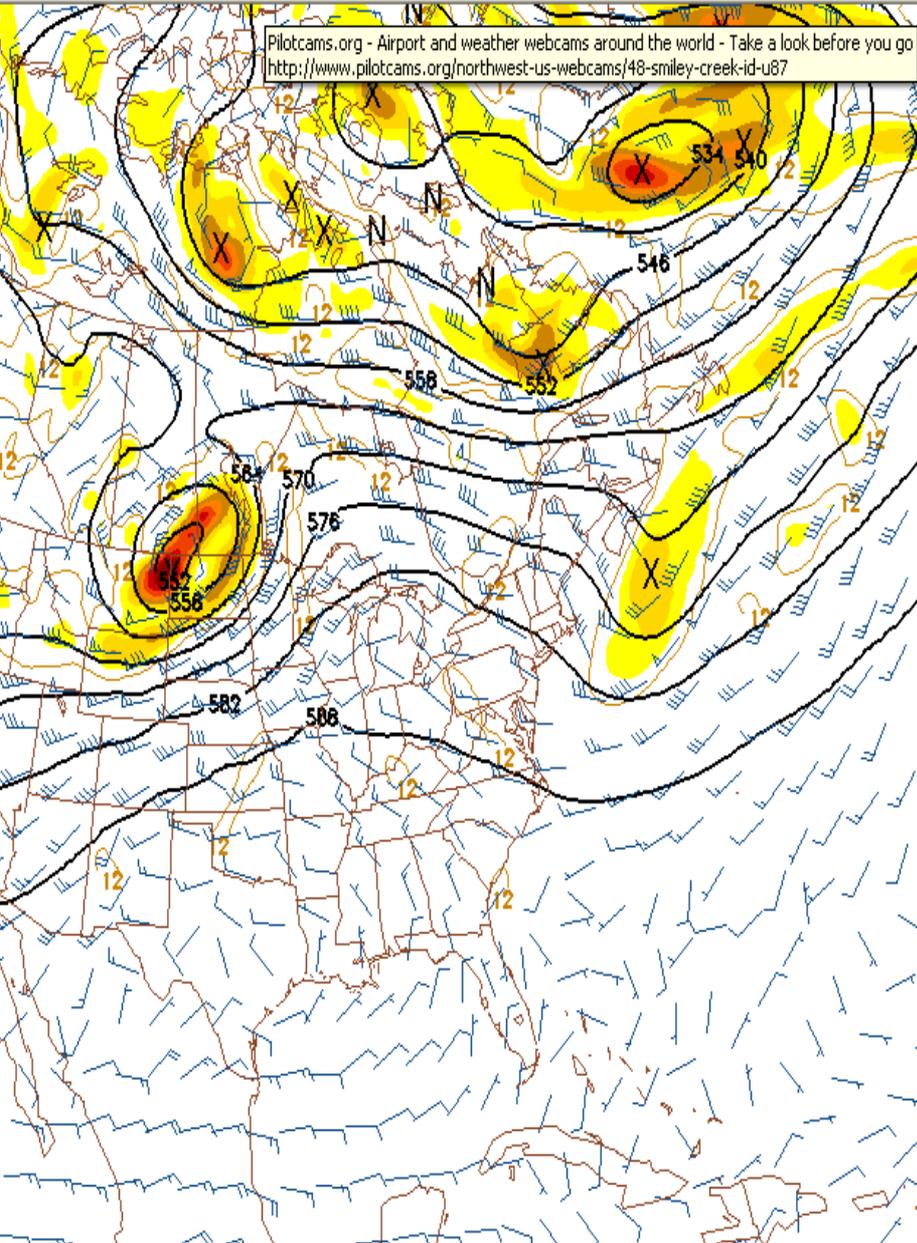
<http://mag.ncep.noaa.gov/model-guidance-model-area.php?group=Model%20Guidance&model=gfs&area=namer&ps=model>

NAM 500mb weather

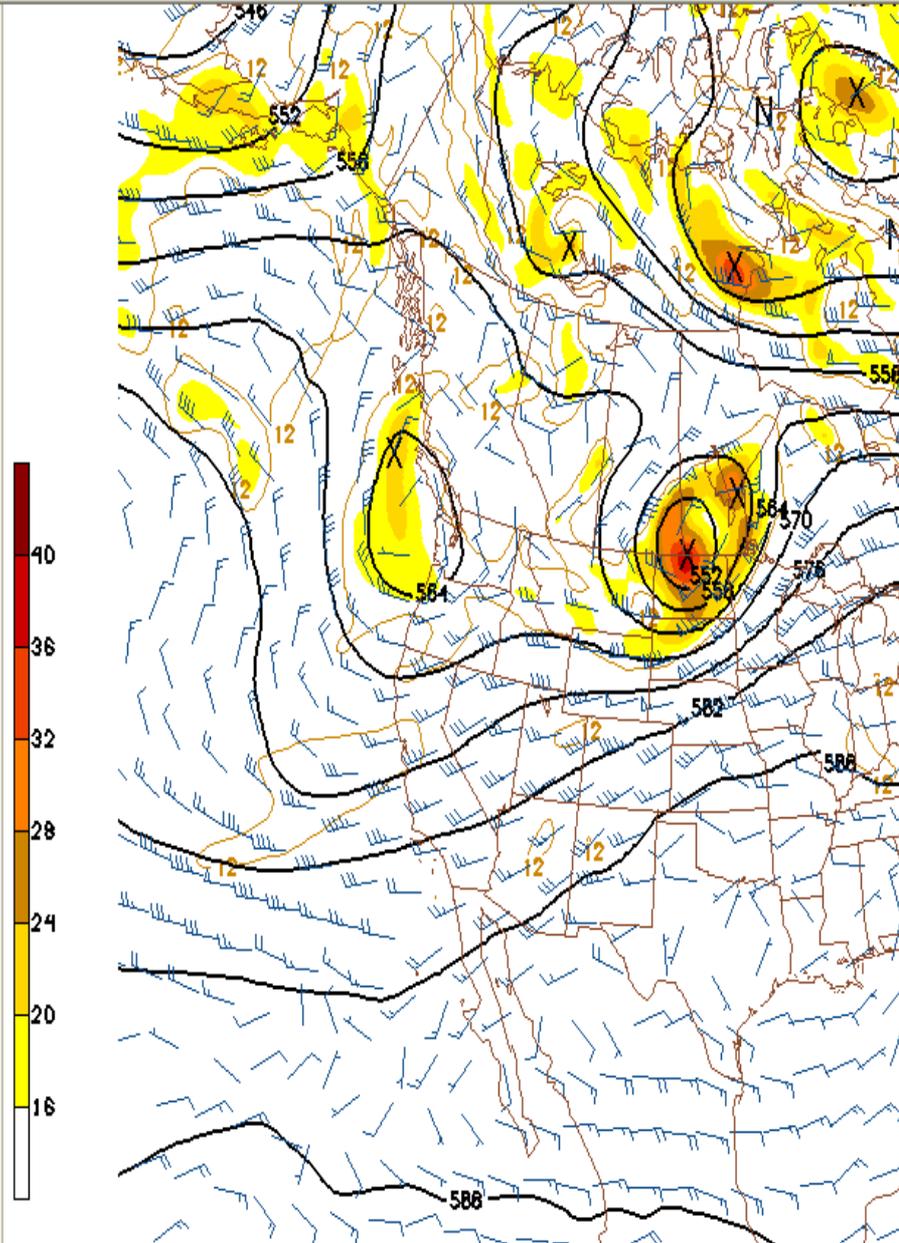


<http://mag.ncep.noaa.gov/model-guidance-model-area.php?group=Model%20Guidance&model=gfs&area=namer&ps=model>

Pilotcams.org - Airport and weather webcams around the world - Take a look before you go
<http://www.pilotcams.org/northwest-us-webcams/48-smiley-creek-id-u87>

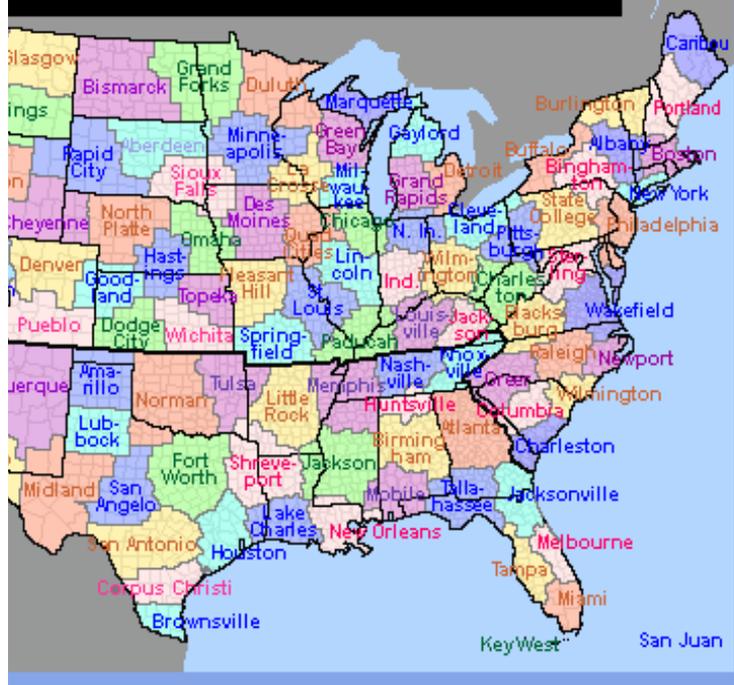


UTC 036HR FCST VALID FRI 06/18/2010 06UTC NCEP/NWS/NOAA



06/16/2010 18UTC 042HR FCST VALID FRI 06/18/2010 12UTC

Click NWS Forecast Office for current
Area Forecast Discussion (AFD) with Aviation portion



FXUS65 KBOI 162054

AFDBOI

AREA FORECAST DISCUSSION
NATIONAL WEATHER SERVICE BOISE ID
253 PM MDT WED JUN 16 2010

.SHORT TERM...TONIGHT THROUGH FRIDAY...A VIGOROUS UPPER LEVEL LOW IS POSITIONED OVER SOUTHEAST OREGON. THIS FEATURE HAS A VERY COLD CORE WHICH IS HELPING TO GENERATE SMALLER INSTABILITY SHOWERS NOW THAT THE AIR MASS IN EASTERN OREGON HAS DESTABILIZED. THE MAIN PRECIP EVENT WITH THIS DISTURBANCE HOWEVER HAS MISSED OUR AREA WITH A HEAVY BAND OF SHOWERS AND THUNDERSTORMS CURRENTLY LOCATED OVER THE POCATELLO FORECAST AREA AND EXTENDING OVER WESTERN WYOMING. LATEST MODELS TAKE THE UPPER LOW EAST TONIGHT PRODUCING WRAP AROUND MOISTURE ACROSS OUR NORTHERN ZONES WHILE DRYING THINGS OUT SOUTH OF THE SYSTEM. THUS...WE HAVE ADJUSTED POPS TONIGHT ACCORDINGLY WITH THE HIGHEST QPF IN THE MOUNTAINS AND ONLY LIGHT AMOUNTS SOUTH OF THE SNAKE RIVER. THE LOW FINALLY PULLS EAST INTO MONTANA THURSDAY WITH A DRIER WESTERLY FLOW SPREADING OVER THE AREA. WITH THE EXCEPTION OF LINGERING MOUNTAIN SHOWERS THURSDAY...THE NEXT TWO DAYS WILL BE WARMER AND DRIER WITH FRIDAY TEMPERATURES APPROACHING NORMAL VALUES UNDER MOSTLY SUNNY SKIES. GUSTY WINDS THIS EVENING WILL BE FOLLOWED BY LIGHTER WINDS BOTH THURSDAY AND FRIDAY.

.LONG TERM...FRIDAY NIGHT THROUGH WEDNESDAY...THE EXTENDED PERIOD WILL CONTINUE TO BE COOLER THAN NORMAL AND PUNCTUATED BY A SERIES OF PRECIPITATION EVENTS AS A LONG WAVE TROUGH DOMINATES THE WEATHER PATTERN. A SHORT WAVE TROUGH WILL AMPLIFY AND CLOSE OFF OVER WESTERN OREGON LATE FRIDAY AND SATURDAY FOR WARMER CONDITIONS OVER IDAHO BUT A RETURN TO MOIST AND CONVECTIVE WEATHER IN SOUTHEAST OREGON. THIS UPPER LOW WILL BE PRECEDED BY A COLD FRONT WITH INCREASING NORTHWEST WINDS AND PRECIPITATION SUNDAY AND MONDAY. BOTH THE GFS AND THE ECMWF MODELS DEPICT THIS SHORTWAVE PIVOTING INTO WESTERN MONTANA

Incoming Low Pressure System



10am



6pm
(light rain 2 hours later)

Northeast US Webcams

Alaska and Yukon Webcams

Everywhere Else

Weather Images



- [South Bend Regional, IN \(KSBN\)](#)
- [Los Angeles Intl, CA \(KLAX\)](#)
- [Seldovia, AK \(PASO\)](#)
- [Sunriver, OR \(S21\)](#)
- [Redmond, OR \(KRDM\)](#)
- [Mt. McKinley Webcam](#)
- [Twin Oaks Airpark, OR \(7S3\)](#)

POPULAR

- [Smiley Creek, ID \(U87\)](#)
- [Johnson Creek \(3U2\)](#)
- [Sedona, AZ \(KSEZ\)](#)
- [Flying B Ranch, ID \(12ID\)](#)
- [McCall, ID \(KMYL\)](#)
- [Mt. McKinley Webcam](#)
- [Jackson Hole, WY \(KJAC\)](#)
- [Ramona CA \(KRNM\)](#)
- [Lake Hood, AK \(PALH\)](#)
- [Portland International Airport, OR \(KPDX\)](#)

WHO'S ONLINE

We have 1 guest online

Humidity increases on backside of a low, reducing cloud heights and dew point depression

Rule of thumb ceiling calc = 250 x Temp-Dpt

Smiley Creek, ID (U87)



Monday, 01 October 2007 19:13

Last Updated (Tuesday, 10 June 2008 00:24)

Written by westernpilot

View: Down Runway 32



Flying B Ranch, ID (12ID)



Monday, 01 October 2007 20:07

Last Updated (Tuesday, 10 June 2008 00:24)

Written by westernpilot



When temp and dewpoint meet...



Fog and low clouds are worse in canyons with trees – due to high RH

Debris after the passing of a Low



Dry Slot

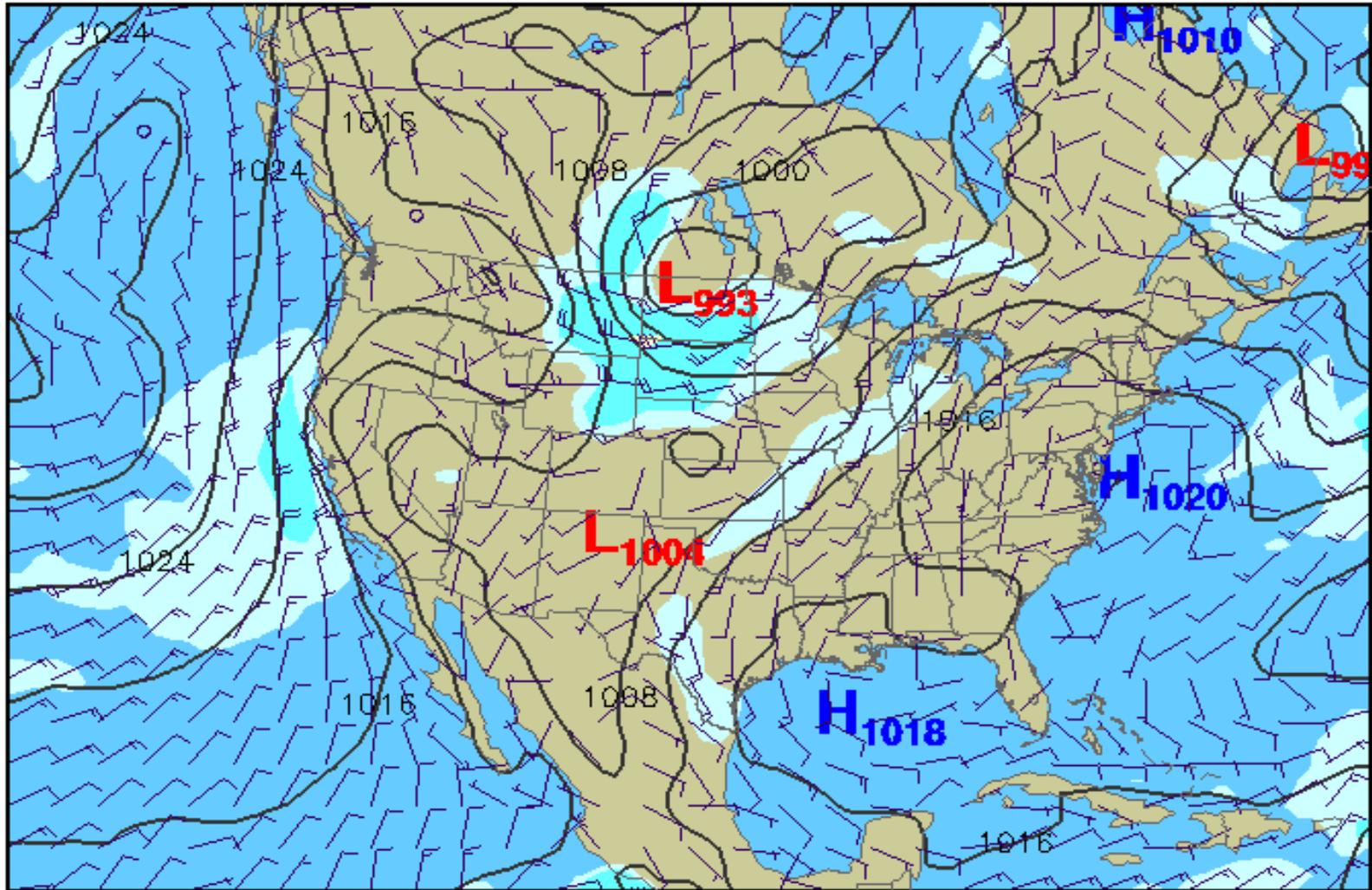


SFC 1800 UTC Fri 18 Jun 2010

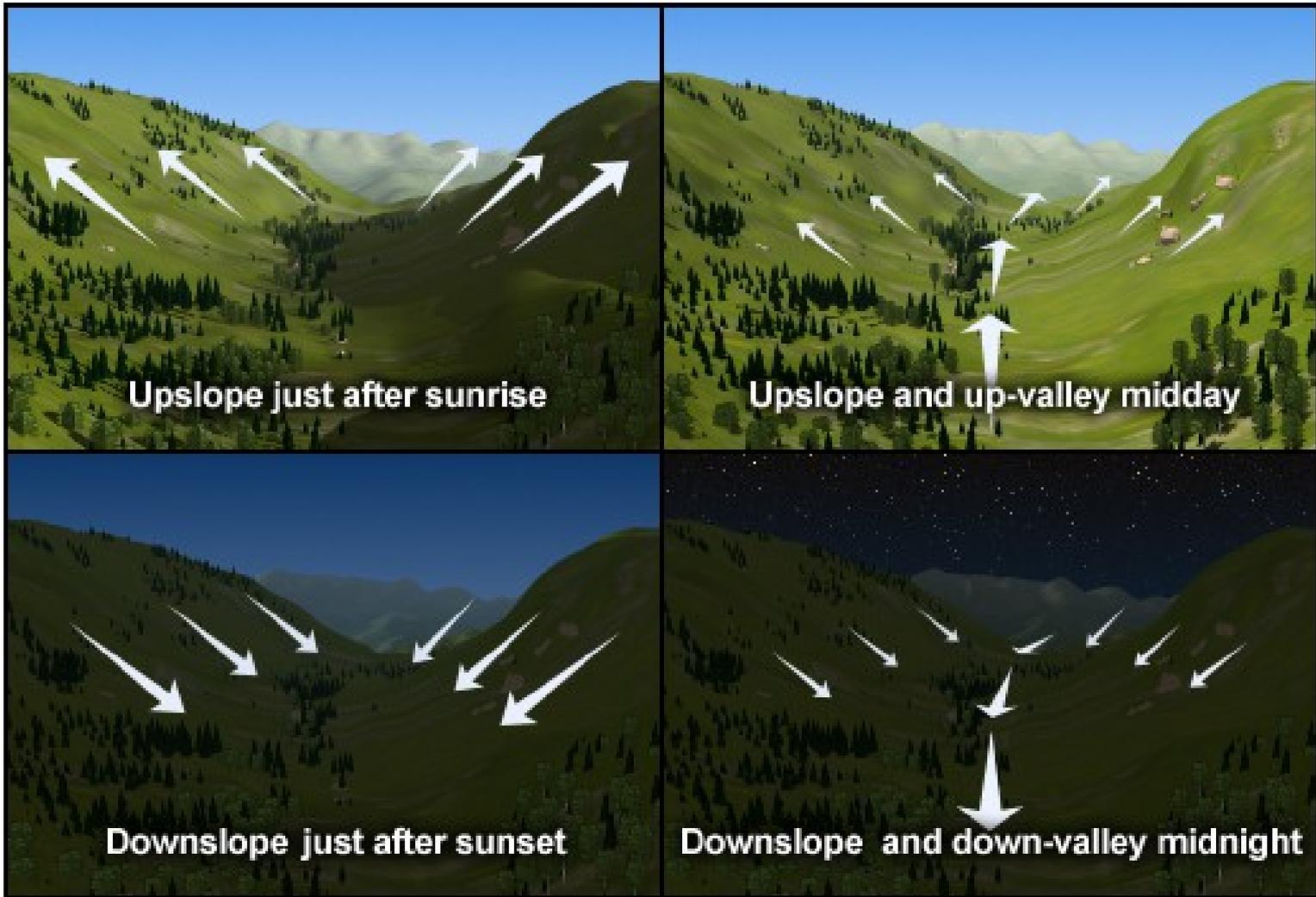
- Temperature
- Temperature difference
- Wind speed
- Wind streamlines

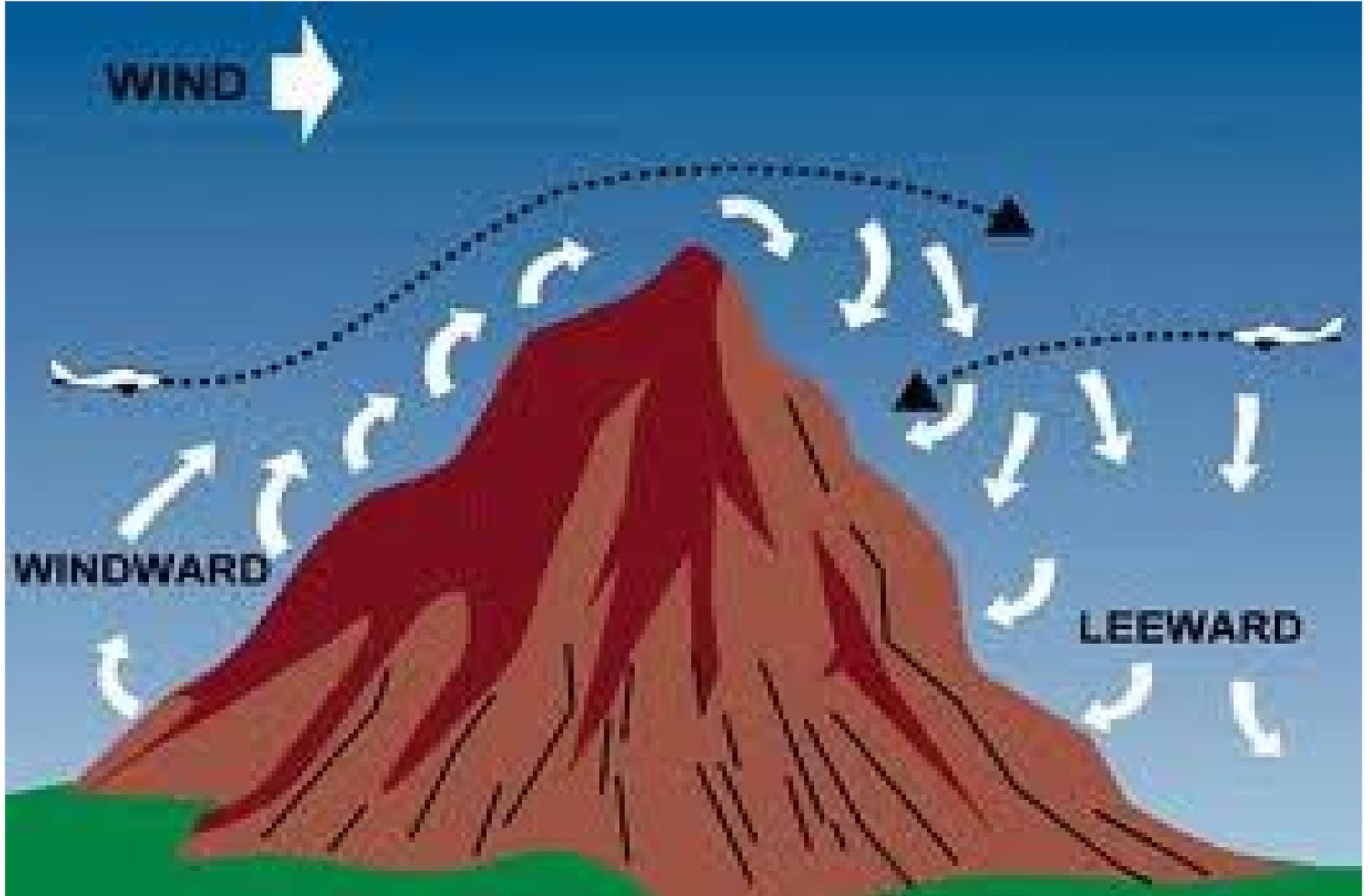
Sea-level pressure (mb) / surface wind speed (kts)

48-hour forecast valid 1800 UTC Fri 18 Jun 2010



Diurnal winds



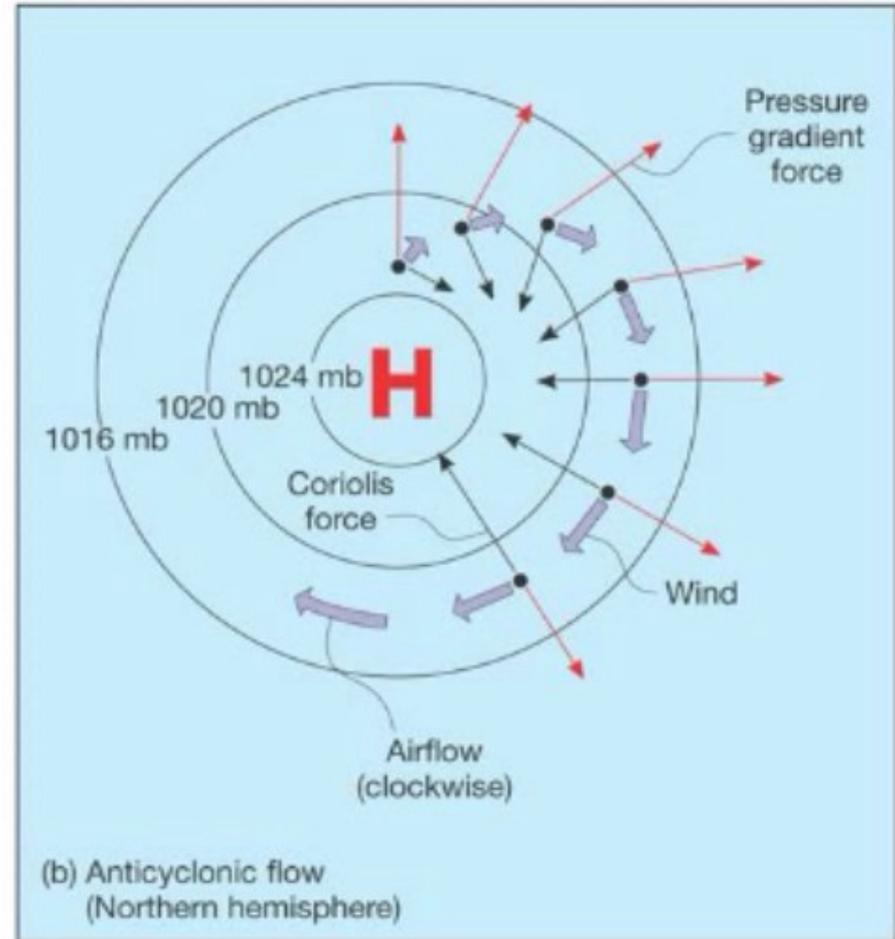
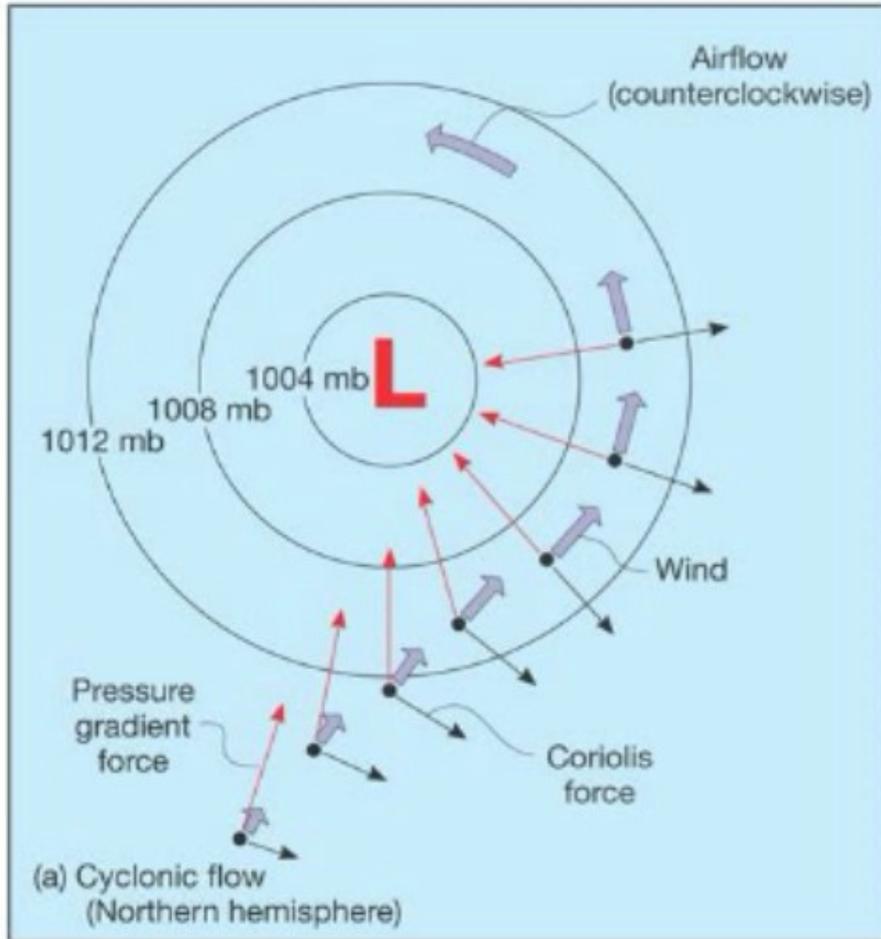


Wind over ridges

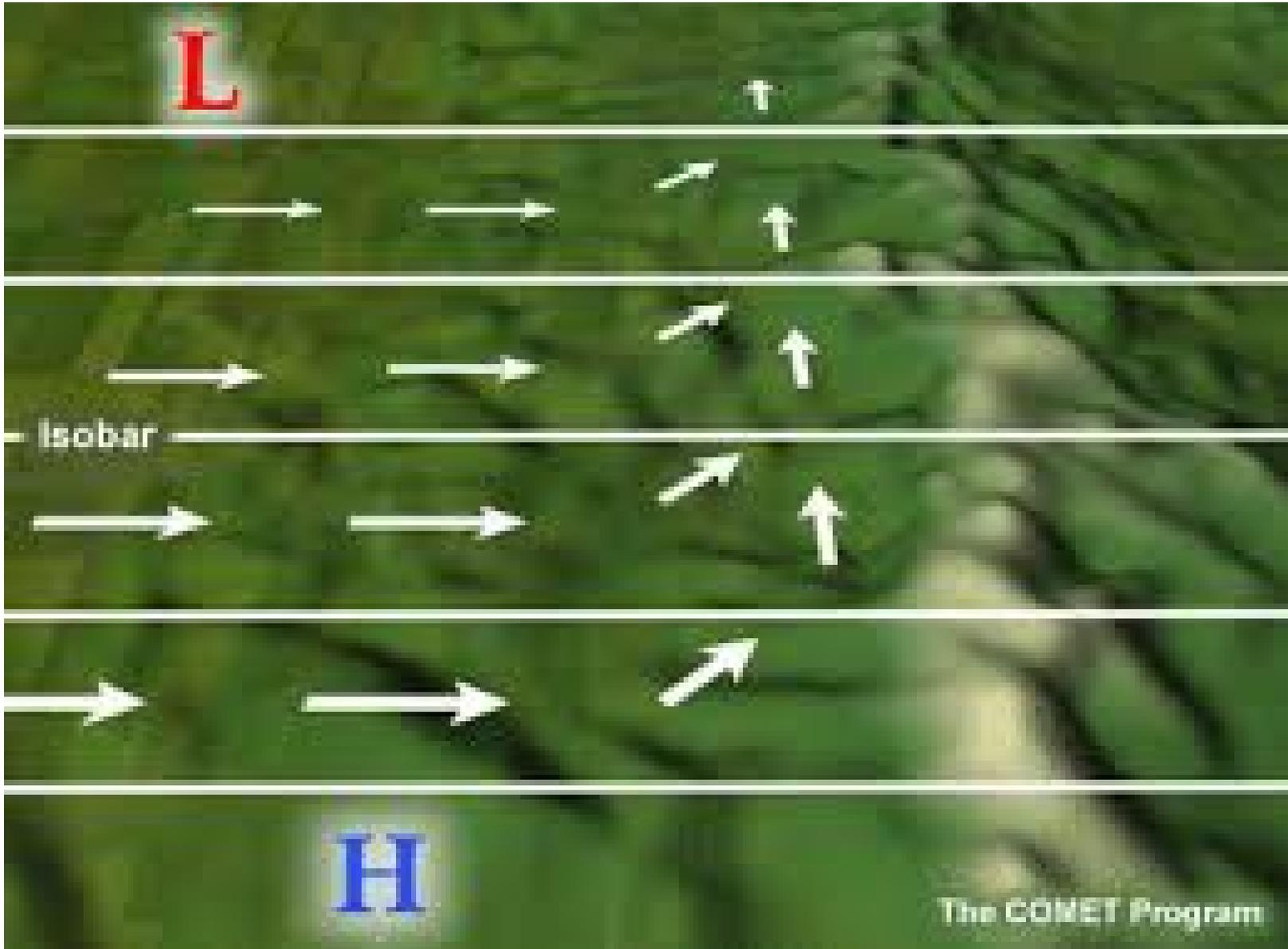




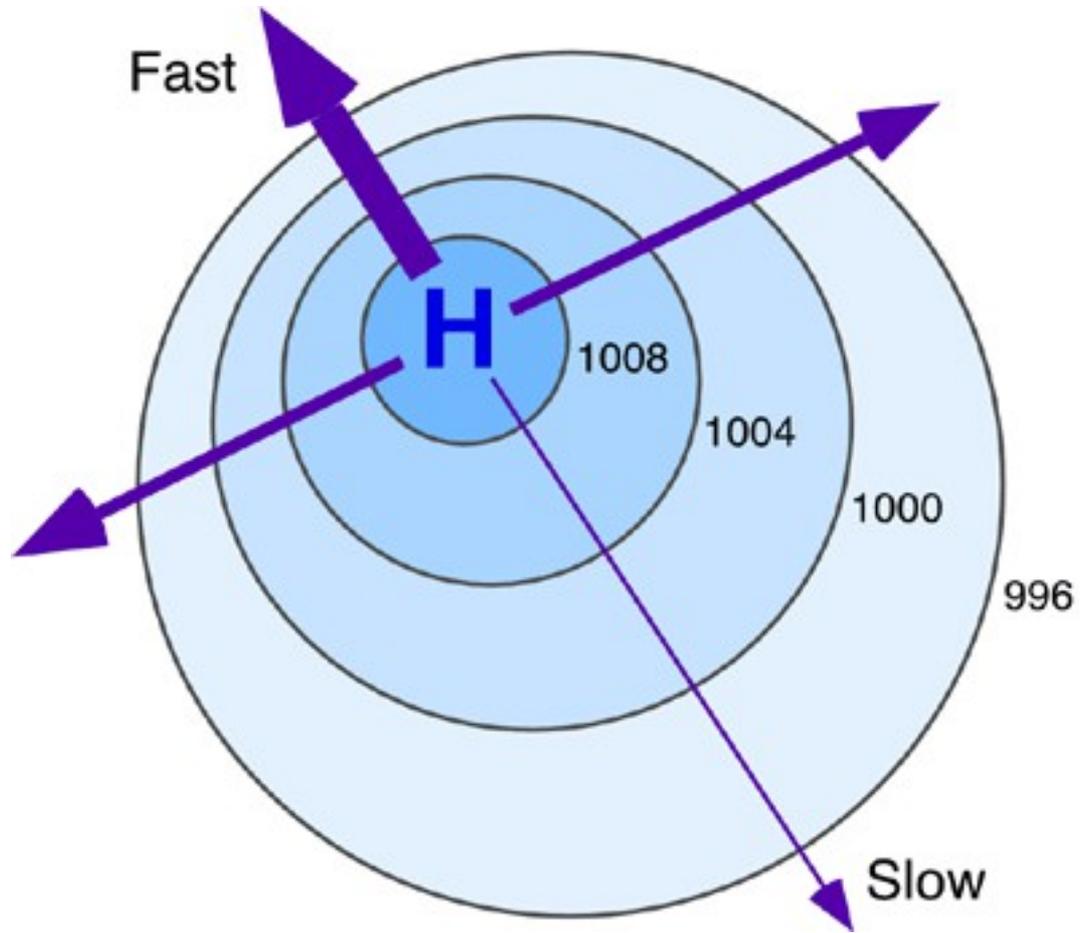
Cyclonic and Anticyclonic Flow



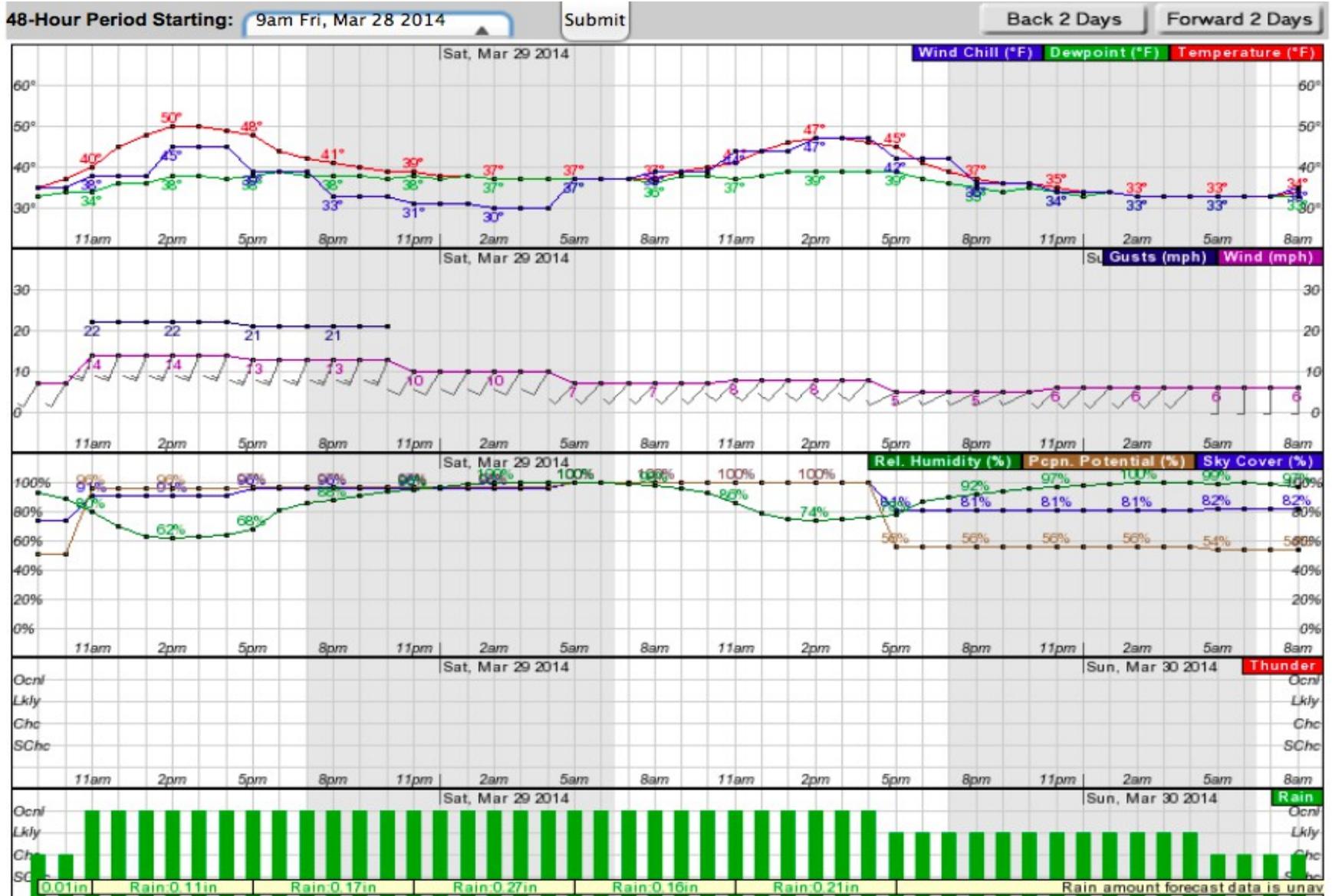
L



H



Grid forecasts for any lat/lon with 4.5 days outlook

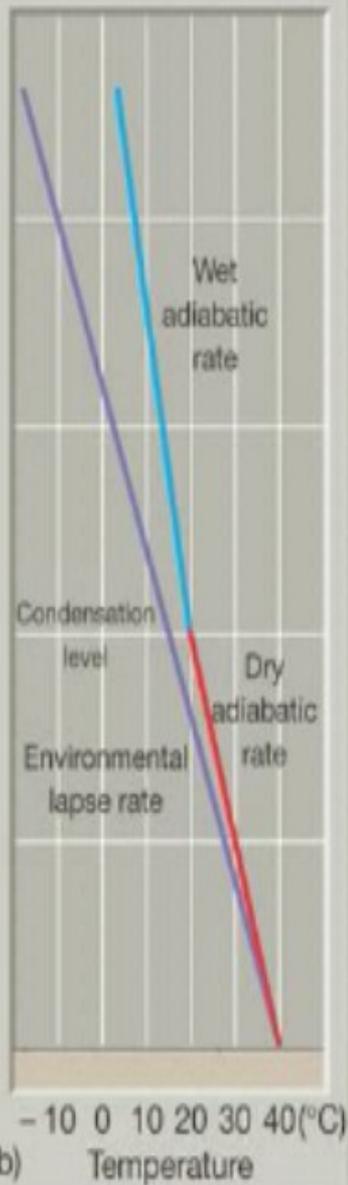
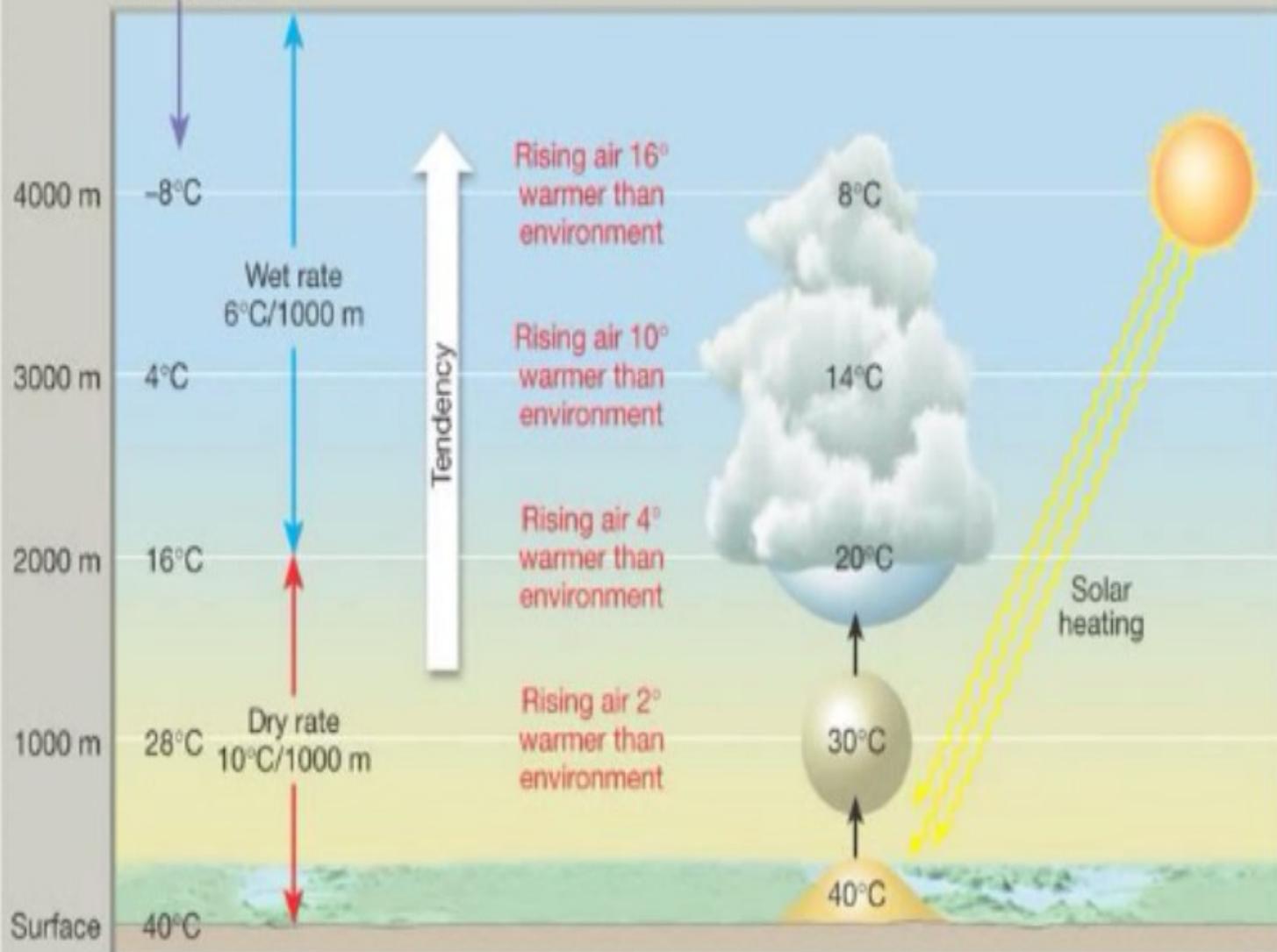


Stable vs Unstable Atmosphere

- Rate at which a parcel of air will continue to rise
- Stable – parcel rises slowly and stops
- Unstable – parcel rises fast, and continues
- Unstable air supports convergence and convection

Environmental lapse rate
 $12^{\circ}\text{C}/1000\text{ m}$

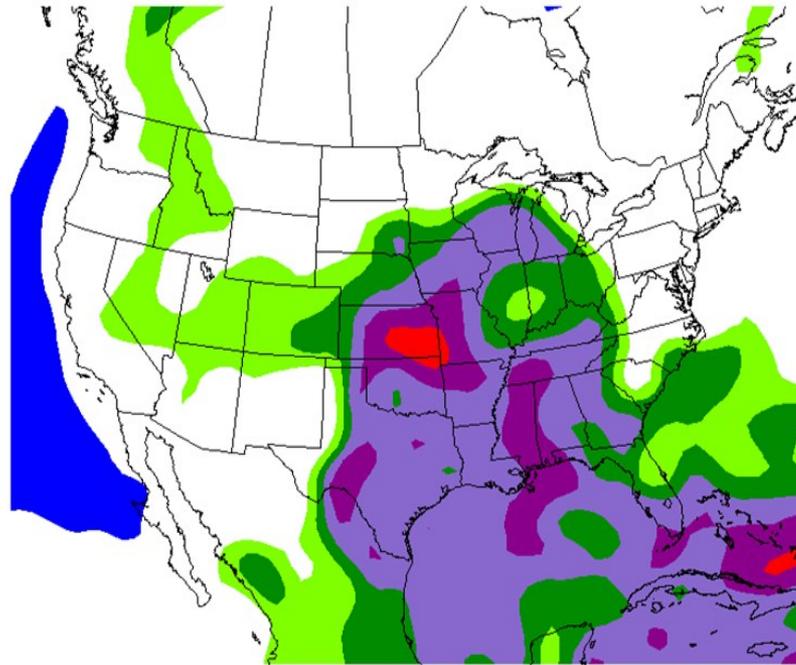
ABSOLUTE INSTABILITY



(a)

(b) Temperature

[f00](#) [f03](#) [f06](#) [f09](#) [f12](#) [f15](#) [f18](#) [f21](#) [f24](#) [f27](#) [f30](#) [f33](#) [f36](#) [f39](#) [f42](#) [f45](#) [f48](#) [f51](#) [f54](#) [f57](#) [f60](#) [f63](#) [f66](#) [f69](#) [f72](#) [f75](#) [f78](#) [f81](#) [f84](#)



100612/0000V012 180 : D PDLY MOST UNSTABLE LIFTED INDEX

Safe Flying