

A meteorological self-brief for my morning call to the FAA-FSS

Dr. Edward (Ward) Hindman

*Professor Emeritus of Meteorology and Oceanography
The City College of the City University of New York,
City of New York NY USA 10031*

hindman@sci.ccny.cuny.edu
www.sci.ccny.cuny.edu/~hindman

American Meteorological Society Certified Consulting Meteorologist
Federal Aviation Administration Certified Flight Instructor-Glider
Fédération Aéronautique Internationale Gold Badge (two Diamonds, missing altitude)

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and
Ridge Soaring Safety Seminar, 23 March 2013, Unionville PA USA

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Slide 01 I'm Ward Hindman and am pleased to present the meteorological information I collect to determine the expected weather for my glider flight later in the day and for my morning call to the Federal Aviation Administration-Flight Service Station. Shown here are my contacts and qualifications. I have posted the color slides of this presentation on my website.

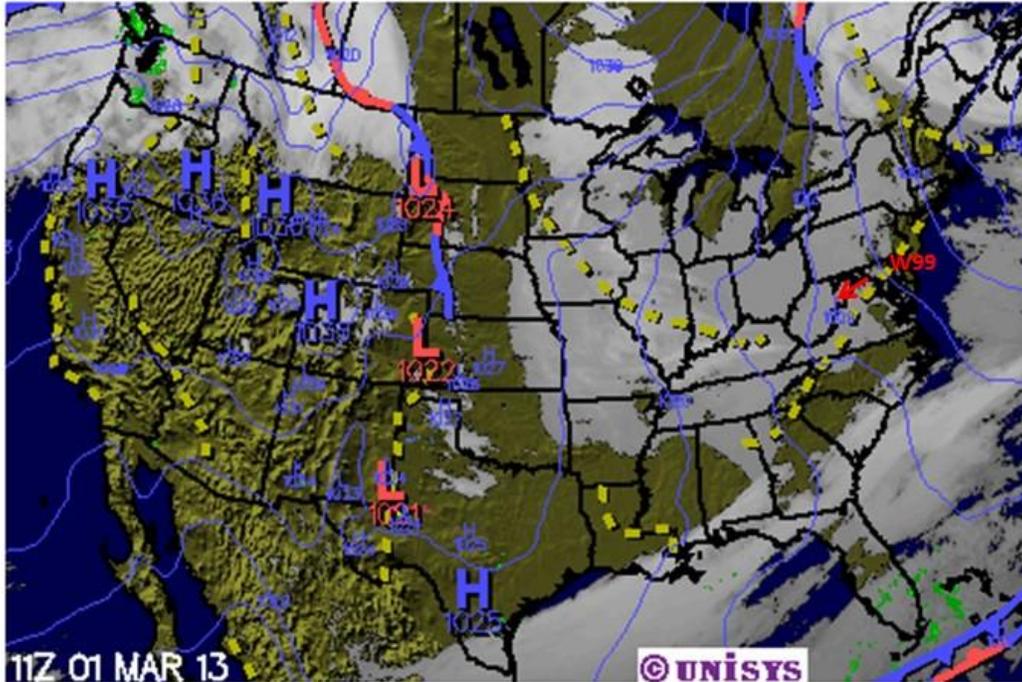
Pre-flight responsibilities of the Pilot-In-Command (PIC)

- Am I safe?
- Will the weather be suitable?
- Is the glider air worthy?

Slide 02 As pilot-in-command, you have three main questions to answer to determine if your flight will be possible: 1) am I safe?, 2) will the weather be suitable? and 3) is the glider airworthy?" I'm here to show you how I determine if the weather will be suitable.

I get the weather from the following free, on-line sites:

Weather 'big-picture'



11Z (06EST), 01Mar13
www.weather.unisys.com

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Slide 03 This unique presentation of the current weather is a superposition of fronts, precipitation, sea-level pressure pattern and clouds (www.weather.unisys.com). A loop illustrates the motion of the weather for the past 7-hours. Here's the weather at 06EST (11Z) on 01Mar13 for W99 (Grant County Airport, Petersburg WV, where I was flying my glider at a wave camp attempting to earn my altitude Diamond; I did not make the 5 km climb). It can be seen at W99, there are no fronts, no precipitation but clouds cover the site with a weak sea-level pressure gradient.

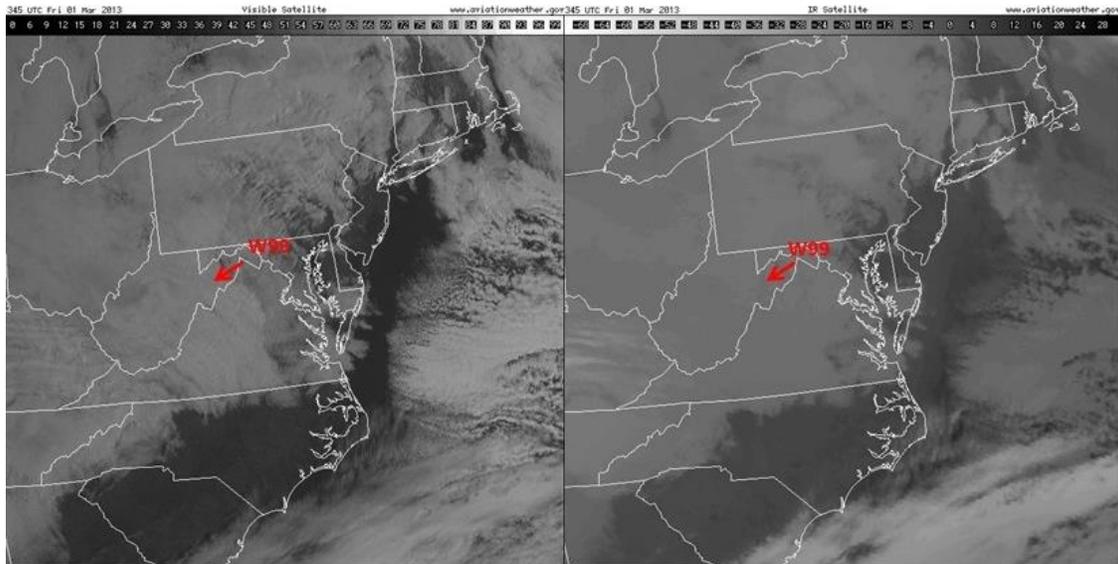
Weather 'small-picture'



1233Z (0733EST) 01Mar13
weather.rap.ucar.edu/surface/

Slide 04 The surface weather measurements at W99 (weather.rap.ucar.edu/surface/) reveal an overcast sky, cool temperature and light winds. MVFR conditions are to the west and VFR conditions east of W99.

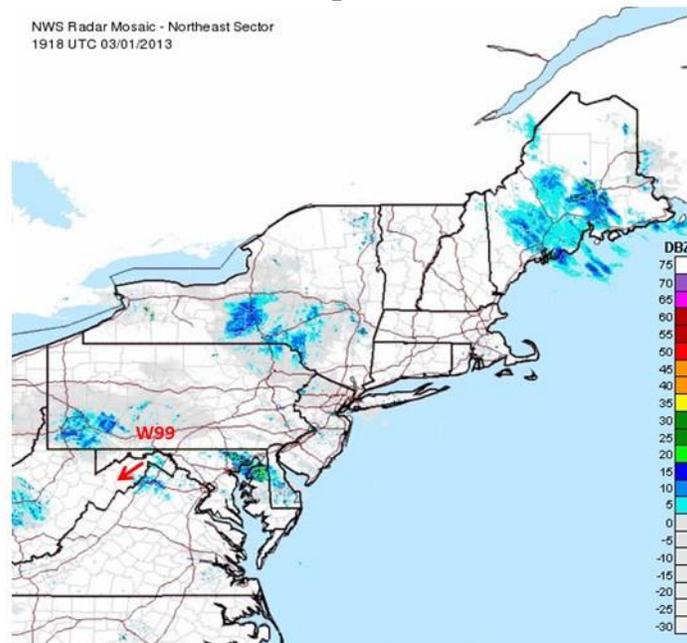
Clouds



1345Z (0845EST), 01Mar13
www.aviationweather.gov/adds/satellite/

Slide 05 The amount of clouds, their heights and motion is visualized from 2-hour animations of satellite images: visible [reflected sunlight] and infrared [warm, low clouds are darker shades-of-grey and cold, high clouds are lighter shades] (www.aviationweather.gov/adds/satellite/). It can be seen low clouds cover the region surrounding W99 and, from the animation, the clouds were moving from west-to-east.

Precipitation

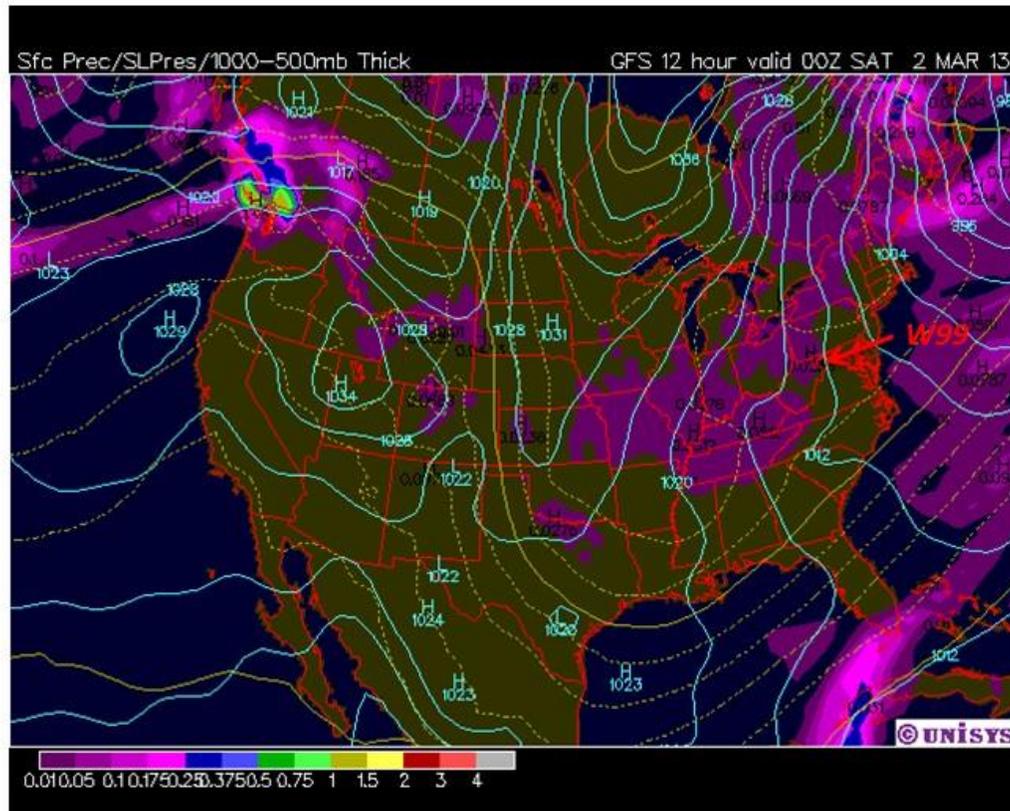


1918Z (1518EST) 01Mar13
radar.weather.gov/Conus/northeast_lite.php

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Slide 06 The regions, motions and amounts of precipitation are visualized from one-hour animations of weather radar images (radar.weather.gov/Conus/northeast_lite.php). It can be seen there is a region of light precipitation east of W99. From the animations, the region was observed to be moving east away from the field.

Expected weather 'big-picture'



12h forecast valid 19EST, 01Mar13

www.weather.unisys.com/gfs/index.php?r=us

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Slide 07 The expected regions and amounts of precipitation between 12Z (07EST) and 24Z (19EST) on 1 March 2013 are the colored regions in this numerical weather prediction (www.weather.unisys.com/gfs/index.php?r=us). Also shown is the sea-level pressure pattern and 1000-500mb thickness lines (approximate upper-level winds) expected at 24Z, 1 March 2013. It can be seen precipitation is expected for W99 with weak winds both at the surface and aloft.

After this study, I prepare the following form to display the weather conditions expected at W99. I print the form and used it to record information from the FSS.

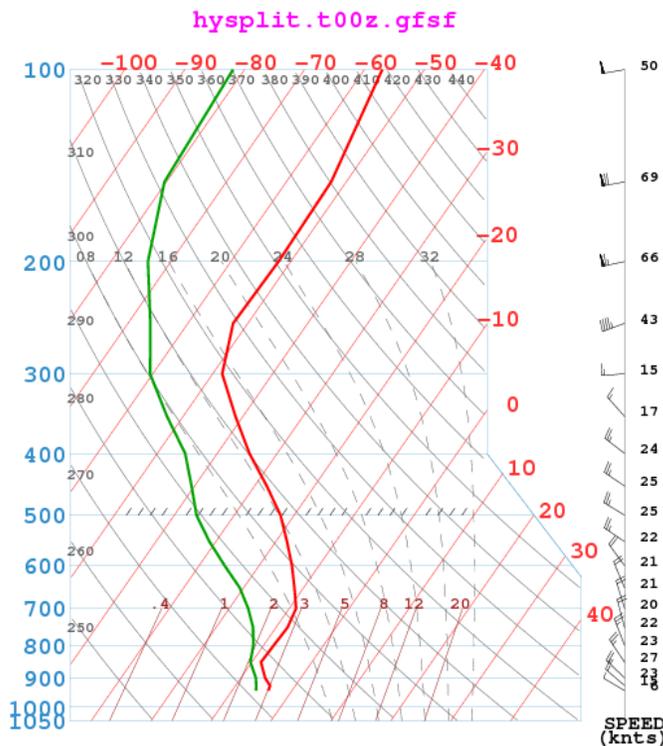
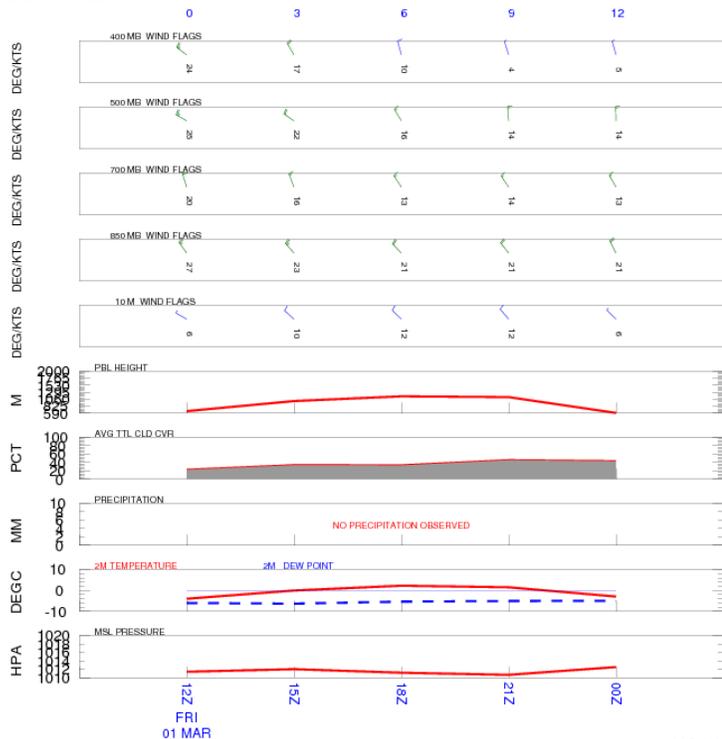
Expected weather at W99

GFS METEOROGRAM

Latitude: 38.98 Longitude: -79.13

DATA INITIAL TIME: 01 MAR 2013 00Z
 NOAA AIR RESOURCES LABORATORY
 READY Web Server

CALCULATION STARTED AT: 01 MAR 2013 12Z
 CALCULATION ENDED AT: 02 MAR 2013 00Z



NOAA (ARL) 38.98 -79.13 293M 03/01/2013 12Z + 12hr

Today A slight chance of snow showers after noon. Mostly cloudy with a high near 44. Northwest wind 7 to 14 mph. Chance of precipitation is 20%.

Tonight Mostly cloudy with a low around 30. Northwest wind 5 to 7 mph.

KEKN 010934Z 0110/0206 31007KT 6SM BR OVC015

FM011300 30005KT 6SM BR OVC012

FM011600 30007KT P6SM OVC020

FM012200 31007KT P6SM OVC025

FM020000 31006KT 6SM BR OVC008

1-800-992-7433 (FSS), Glider N22DJ, Local flying within 10nm of W99 (Grant County airport) between 12-22Z

TFR: None

NOTAM: None

SIGMETS: None

AIRMETS: moderate icing, mountains obscured west

Slide 08 The forecast meteorogram and atmospheric profile (sounding) for W99 were from the NOAA-Air Resources Lab website (ready.arl.noaa.gov/READYmet.php). The weather forecast for Petersburg WV was downloaded from the NOAA-National Weather Service website (www.weather.gov). The Elkins WV Terminal Aerodrome Forecast (TAF) was downloaded from www.aviationweather.gov/adds/tafs/. The remaining information was received from the FSS by phone.

It can be seen from the meteorogram and the profile, the weak winds at the surface and aloft, expected all day, indicated that no mountain wave would form. The weather forecast and TAF indicate that local flights will be possible as conditions will be above VFR minimums between 11EST (1600Z) and 17EST (2200Z); note, Elkins is about 1000 feet higher than W99 so the ceiling will be below minimums at Elkins. Also, no TFR or NOTAM was in effect and the SIGMET indicated icing and mountains obscured west.

Now you know how I prepare my morning weather briefing before my call to the FSS. Consequently, I tell the briefer I have completed a thorough weather self-brief and, thus, need from them the latest TFR, NOTAM, SIGMET and AIRMETS that are in effect for a 10 nm radius around W99. I record this information on the form. Then, I fold up the form, put it in my shirt pocket and take it to the airport for future reference.