

BLIP MAPS

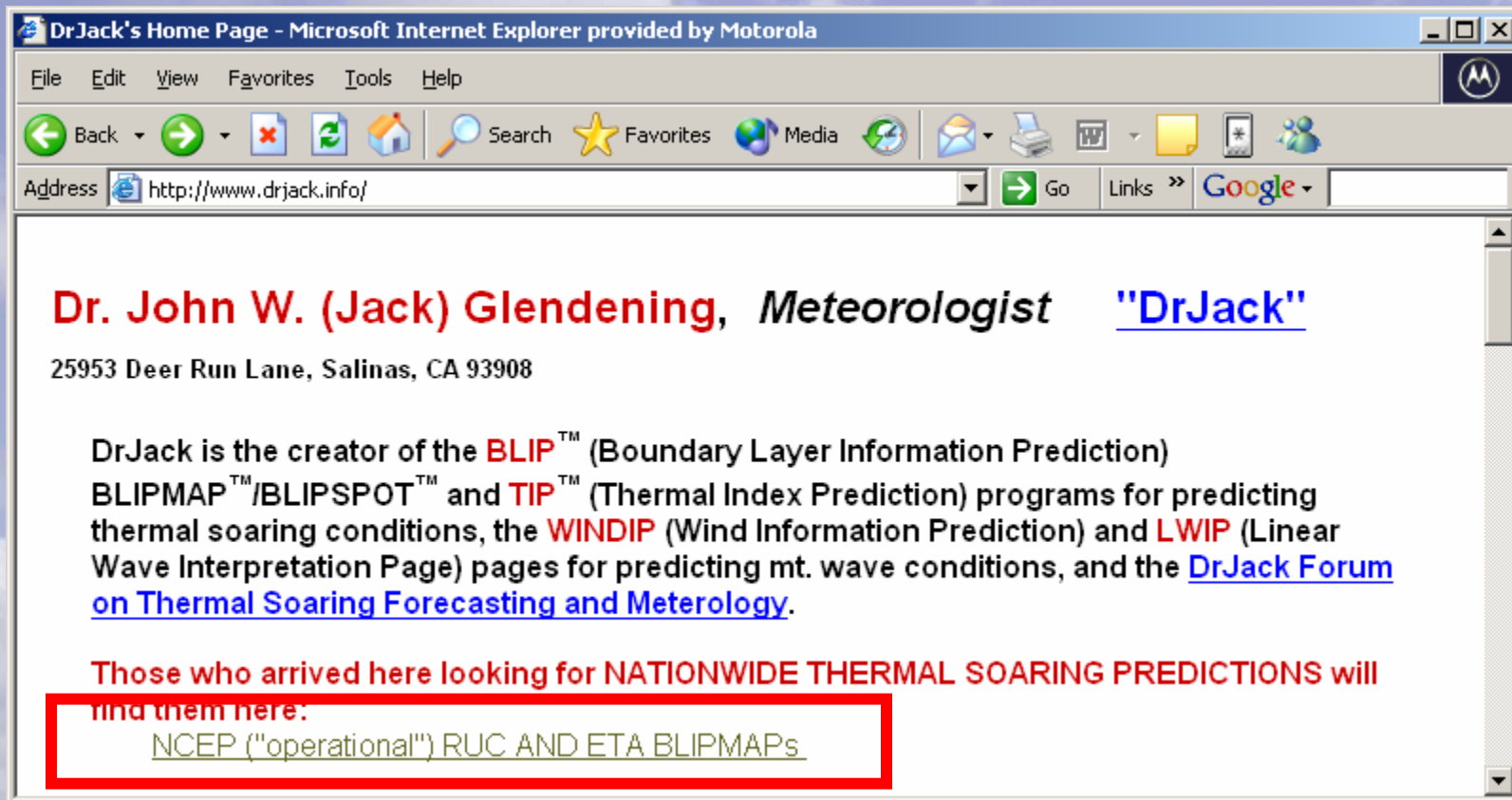


What They Are
What They Do

ChicagoLand Glider Council
October 12, 2004

How to Get There

- ✚ <http://drjack.net> or <http://drjack.info>
- ✚ (not dot-com)
- ✚ Click on “RUC AND ETA BLIPMAPs”



The screenshot shows a Microsoft Internet Explorer browser window titled "DrJack's Home Page - Microsoft Internet Explorer provided by Motorola". The address bar contains "http://www.drjack.info/". The page content includes:

Dr. John W. (Jack) Glendening, Meteorologist ["DrJack"](#)
25953 Deer Run Lane, Salinas, CA 93908

DrJack is the creator of the **BLIP™** (Boundary Layer Information Prediction) BLIPMAP™/BLIPSPOT™ and **TIP™** (Thermal Index Prediction) programs for predicting thermal soaring conditions, the **WINDIP** (Wind Information Prediction) and **LWIP** (Linear Wave Interpretation Page) pages for predicting mt. wave conditions, and the [DrJack Forum on Thermal Soaring Forecasting and Meteorology](#).

Those who arrived here looking for **NATIONWIDE THERMAL SOARING PREDICTIONS** will find them here:

[NCEP \("operational"\) RUC AND ETA BLIPMAPs](#)

How to Get There

- Click on type of blip map wanted
- RUA or ETA

**LINKS TO THE
BLIPMAP FORECAST MODELS**

BLIPMAP™ = Boundary Layer Information Prediction MAP
Created by Dr. John W. (Jack) Glendening, Meteorologist

BLIPMAPs give thermal soaring parameters over a geographic region.

Dr.Jack sez:
Welcome to the expanded BLIPMAP predictions, now providing two different model forecasts!
This page is primarily for new users, since regular users will create bookmarks to lead them directly to the forecast region and model of interest to them. Here you choose between the two model forecast types available, **ETA** or **RUC**, to find the regional coverage areas specific to each model. The principal differences between the models are given below, the most salient being that if you are looking for a forecast for other than the "current day" then you must choose the **ETA** model.

ETA Click here for ETA forecasts	RUC Click here for RUC forecasts
--	--

ETA Model Features

Forecasts out to 84 hours

Available only for two hours each day

Updated at 6 hr intervals

12 km grid resolution

RUC Model Features

Forecasts out to 12 hours

Available for five hours through day

Updated at 3 hr intervals

20 km grid resolution

Numerous model differences of detail, such as their parameterization of clouds, may lead to one model providing better forecasts of certain soaring parameters for your location, but that can only be determined through actual flight experience.

A more detailed description of differences between the two models is provided in the [ETA vs RUC Model Comparison webpage](#)

Q: "But I just want to know which model is best!"

A: Each model has different advantages and neither is always "best."

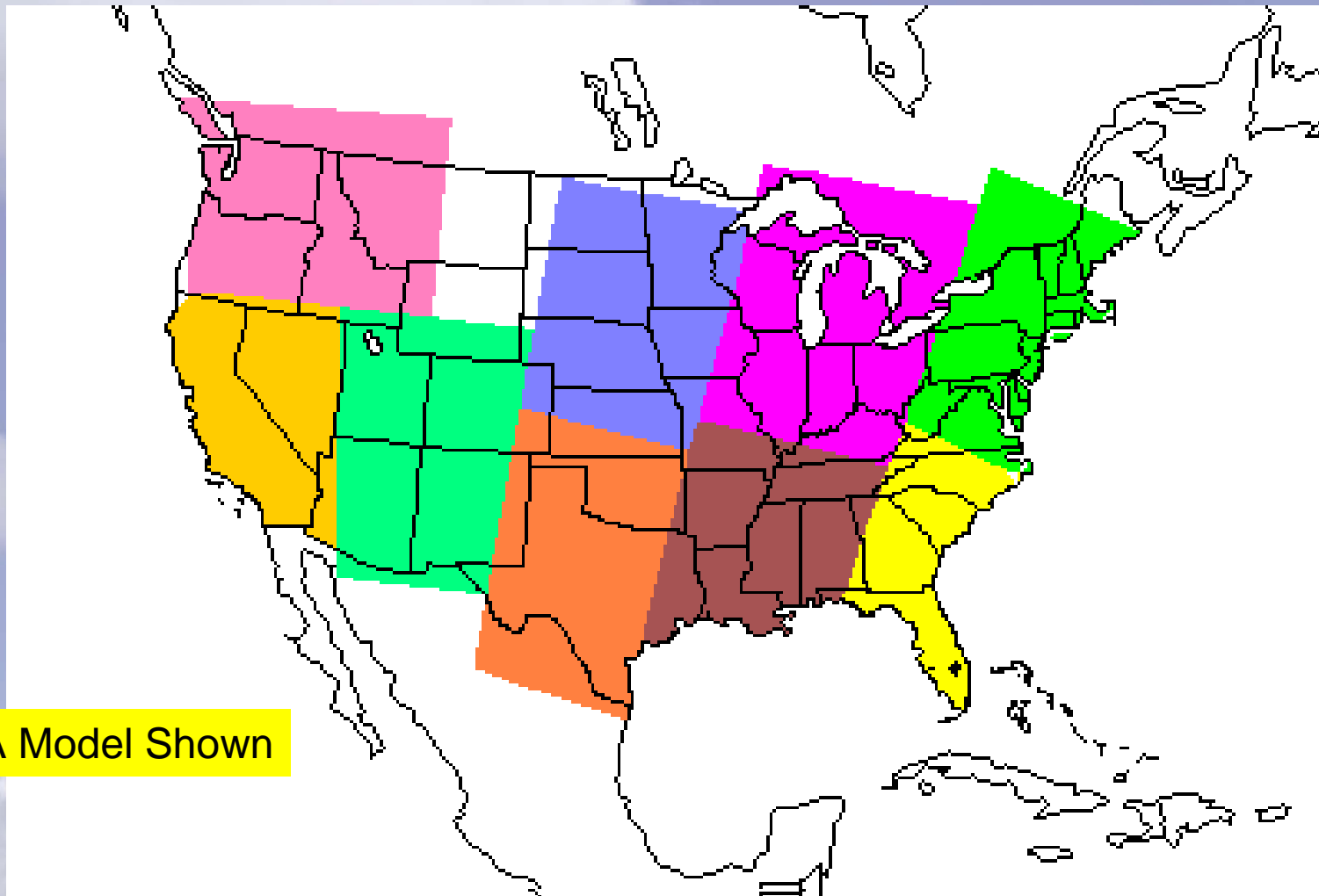
.
.
.

Some people will say "but I only want to look at a single forecast", so what they can do is look at the RUC since that has some known history.

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.
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Those who are more interested in weather forecasting or are looking for day-before forecasts will use the ETA.

Choose Your Region



ETA Model Shown

Top of Regional Screen

ETA BLIPMAP NC 18Z Forecasts - Microsoft Internet Explorer provided by Motorola

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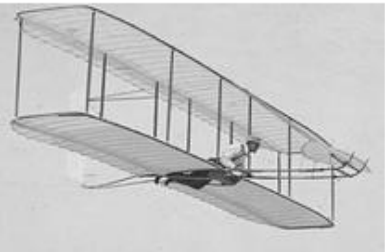
Back Forward Stop Home Search Favorites Media Go Links Google

Address <http://www.drjack.info/BLIP/ETA/NC/index.html>

ETA BLIPMAP FORECASTS

BLIPMAP™ = Boundary Layer Information Prediction MAP
[The Boundary Layer (BL) is the region mixed by thermal eddies]
Created by Dr. John W. (Jack) Glendening, Meteorologist

BLIPMAPs give thermal soaring parameters over a geographic region.



ETA Model Shown **18Z NorthCentral Forecasts**
12 km ETA RESULTS

Current time & day: 18Z TUE Oct 12
(18h) The "current day" changes shortly after 2Z
Time="---" if none yet available for current day

ETA BLIPMAPs can also be viewed using the [regional viewer](#) OR the [UniViewer](#)
OR in alternate display formats using [BLIP data display software](#)

For additional on-line information: [BLIPMAP HELP page](#)

NEWS

Scroll Down ↓

Blip Map Links

+ 25 forecasts in 4 categories

ETA Model Shown

FORECASTS

THERMAL PARAMETER FORECASTS:

Thermal Updraft Velocity (W^*) [FREE] [CurrentDay](#) [Current+1](#) [Current+2](#) [PreviousDay](#)
Average dry thermal updraft strength near mid-BL height. Subtract glider descent rate to get average vario reading for *cloudless* thermals. Thermal strengths will be stronger if convective clouds are present. W^* depends upon both the BL depth and the surface heating. [MoreInfo](#)

Height of Boundary Layer Top (TI=0 height) [CurrentDay](#) [Current+1](#) [Current+2](#) [PreviousDay](#)
Height of the average dry thermal tops, or Thermal Index TI=0 height. *Over flat terrain* maximum thermalling heights will be lower due to the glider descent rate and other factors. However, thermal tops will be higher over small-scale topography not resolved by the model and some pilots have reported that in elevated terrain the heights they can reach over local terrain features correspond better with the TI=0 height than with Hcrit. In the presence of clouds the thermal top will increase, but the maximum thermalling height will then be limited by the cloud base (see the "Cloud prediction parameters" section below). [This parameter is truncated at 22,000 for plotting.] [MoreInfo](#)

Height of Critical Updraft Strength (Hcrit) [CurrentDay](#) [Current+1](#) [Current+2](#) [PreviousDay](#)
This parameter estimates the height at which the average dry updraft strength drops below 225 fpm and *over flat terrain* is expected to give better quantitative numbers for the maximum *cloudless* thermalling height than is the traditional TI=0 height given above, although the qualitative patterns should be similar for both parameters. (Note: the present assumptions tend to *under*predict the max. thermalling height.) In the presence of clouds the maximum thermalling height may instead be limited by the cloud base (see the "Cloud prediction parameters" section below). [This parameter is truncated at 22,000 for plotting.] [MoreInfo](#)

Thermal Height Variability [CurrentDay](#) [Current+1](#) [Current+2](#) [PreviousDay](#)
This parameter estimates the variability (uncertainty) of the BL top (TI=0) height prediction which can result from meteorological variations. Larger values indicate greater variability and thus better thermalling over local "hot spots" or small-scale topography not resolved by the model. But larger values *also* indicate greater sensitivity to error in the predicted surface temperature, so actual conditions have a greater likelihood of differing from those predicted. [MoreInfo](#)

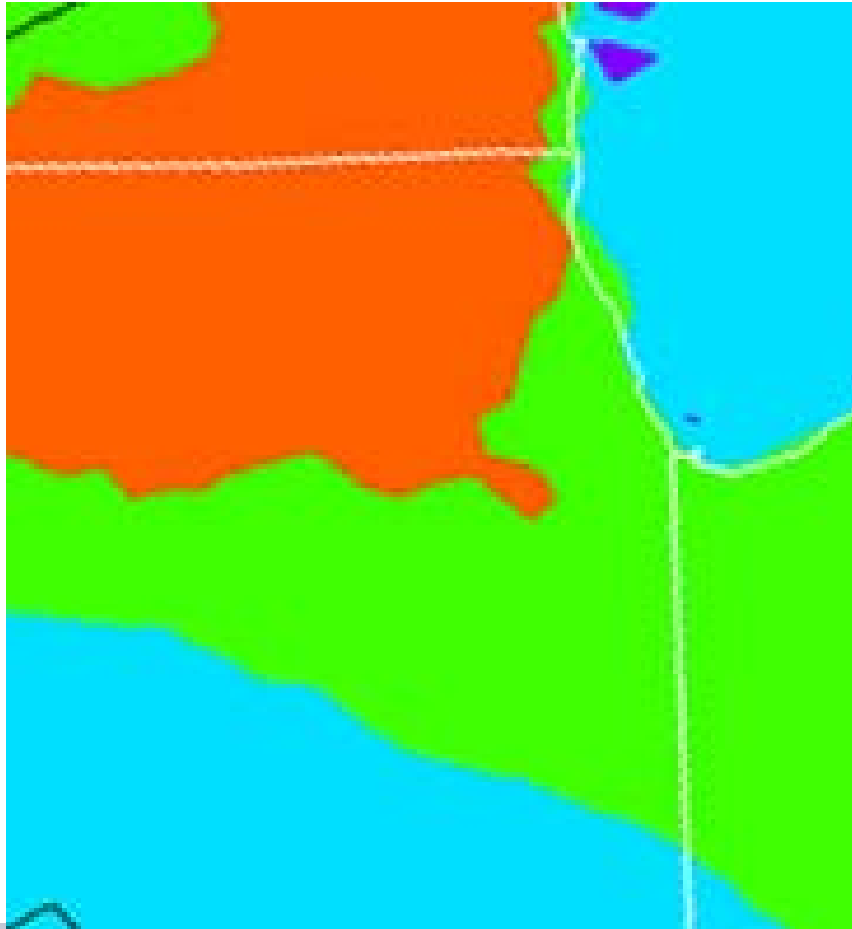
Buoyancy/Shear Ratio (B/S) [CurrentDay](#) [Current+1](#) [Current+2](#) [PreviousDay](#)
Dry thermals may be broken up by wind shear and unworkable if B/S ratio is 5 or less. If convective clouds are present, the actual B/S ratio will be larger than calculated here. [This parameter is truncated at 20 for plotting.] [MoreInfo](#)

WIND PARAMETER FORECASTS:

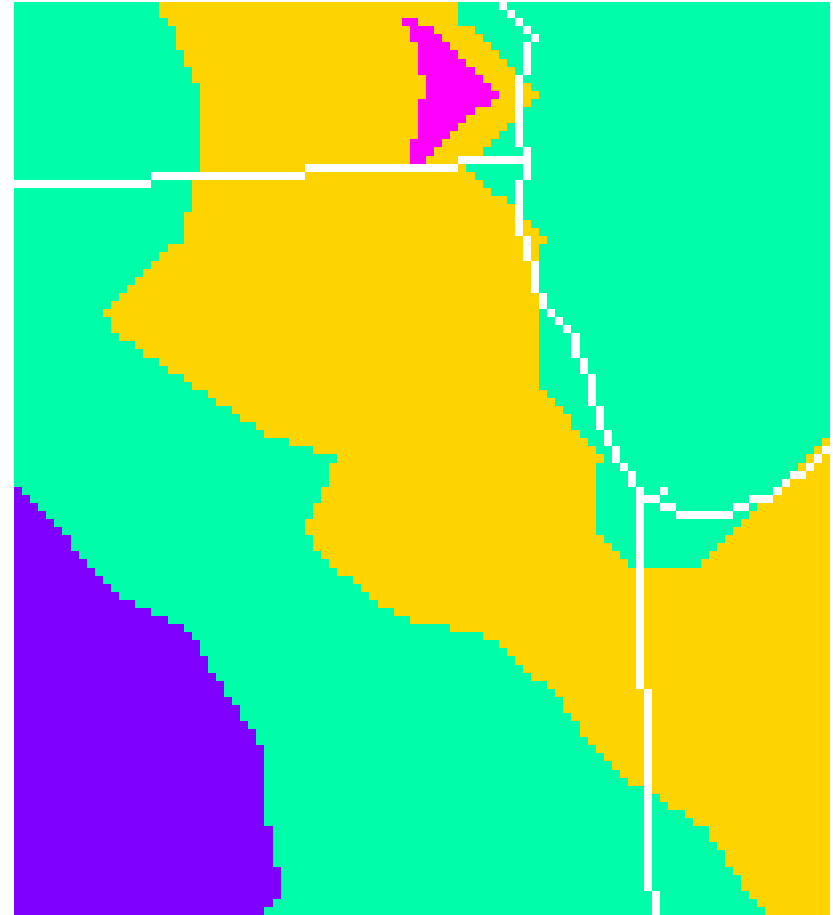
ETA Model

RUC Model

Thermal Updraft Velocity W* [fpm] TUE 10/12 18Z(13cdt) 18hrFest ETA



Thermal Updraft Velocity W* [fpm] TUE 10/12 18Z(13cdt) 12hrFest RUC



Blip Spots

- ✚ Available for 64 US sites including;
 - ✚ Beloit
 - ✚ Freeport
 - ✚ Hampshire
 - ✚ Hinkley
 - ✚ Minooka
- ✚ Text based - Not as easy to visualize as Blip Maps
- ✚ RUC model only
- ✚ Specific to nearest city
- ✚ <http://www.drjack.info/BLIP/RUC/SPOT/>
 - ✚ Link at bottom of RUC regional map page

http://www.drjack.info/BLIP/RUC/SPOT/FCST/hampshire_il.txt - Microsoft Internet Explorer provided by Motorola

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Address http://www.drjack.info/BLIP/RUC/SPOT/FCST/hampshire_il.txt Go Links » Google "blipspot" dr jack »

DrJack's BLIPSPOT for: TUE 10/12 Hampshire_IL 889ft pt37818@42.147,-88.420,844ft

BLIPSPOT sfc.temp. adjusted by +0.1 degF
 SPONSORED BY: ChicagoLand Glider Council

RUC - Last Analysis, Validation Time = 09Z 15Z

	VALIDATION TIME													
	12Z	13Z	14Z	15Z	16Z	17Z	18Z	19Z	20Z	21Z	22Z	23Z	0Z	
FCST PERIOD	6 hr	-	-	6 hr	-	-	6 hr	-	-	6 hr	-	-	9 hr	FCST PERIOD
Temp@2m	44.7	-	-	48.3	-	-	61.2	-	-	57.3	-	-	53.1	Temp@2m
Sfc.Heating	-7	-	-	26	-	-	214	-	-	28	-	-	-16	Sfc.Heating
BL Depth	16	-	-	174	-	-	2515	-	-	1600	-	-	16	BL Depth
Hcrit	241	-	-	889	-	-	2302	-	-	889	-	-	241	Hcrit
BL Top	257	-	-	1063	-	-	3404	-	-	2489	-	-	257	BL Top
Hgt.Variab.	920	-	-	1237	-	-	658	-	-	997	-	-	2451	Hgt.Variab.
W*	0	-	-	67	-	-	329	-	-	143	-	-	0	W*
B/S	0	-	-	1	-	-	4	-	-	2	-	-	0	B/S
BL Wind	6	-	-	9	-	-	14	-	-	13	-	-	7	BL Wind
Direction	048	-	-	067	-	-	103	-	-	100	-	-	074	Direction
Wind Shear	0	-	-	3	-	-	5	-	-	5	-	-	0	Wind Shear
Max.Converg	0	-	-	0	-	-	2	-	-	-5	-	-	2	Max.Converg
CLOUDpotent	-605	-	-	-383	-	-	-1765	-	-	-807	-	-	-1729	CLOUDpotent1
sfcLCL	862	-	-	1446	-	-	5169	-	-	3296	-	-	1986	sfcLCL
ODpotential	-12446	-	-	-11054	-	-	-10039	-	-	-8841	-	-	-9644	ODpotential
blCL	12703	-	-	12117	-	-	13443	-	-	11330	-	-	9901	blCL

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PARAMETER KEY:
(the parameters are described more fully at <http://www.drjack.info/BLIPMAP/parameters.html>)

FCST PERIOD = Hours from model initialization time

Temp@2m = Temperature at 2m AGL [F]

Temp@Bot = Temperature at 5m AGL (bottom grid point) [F]

Sfc.Heating = Surface Heating of atmosphere [W/m²]

BL Depth = Depth of the Boundary (Mixing) Layer [ft]

Hcrit = Height of Critical Updraft Strength [ftMSL]

BL Top = Height of Boundary Layer Top (TI=0 height) [ftMSL]

Hgt.Variab = Thermal Height Variability (difference between TI=+4 & TI=0 Heights) [ft]

W* = Thermal Updraft Velocity (subtract glider sink rate to get vario) [fpm]

B/S = Buoyancy/Shear Ratio (thermals may be unworkable if 5 or less)

BL Wind = Wind Speed averaged through BL [kt]

Direction = Wind Direction averaged through BL [degTrue]

Max.Converg = Max. Vertical Velocity created by BL Convergence [x10⁻² kt]
(warning: this is better evaluated using BLIPMAPs since convergence lines are not tied to any particular loca

CLOUDpotent = Expect clouds at or above sfcLCL if positive (difference between H(TI=0) & sfcLCL) [ft]

sfcLCL = Base of Lowest Clouds, if CLOUDpotent>0 (LCL = Lifting Condensation Level based upon sfc. humidity) [ftMSL]

ODpotential = Expect extensive clouds at blCL if positive (difference between H(TI=0) & blCL) [ft]

blCL = Base of Extensive Clouds, if ODpotential>0 (bl CL = Condensation Level based upon BL humidity) [ftMSL]

maxRH = Maximum Relative Humidity in BL [%]

CWbase = Base of Explicitly-predicted Clouds [ftMSL] (intended for DrJack's use)

CWtotal = Total Explicitly-predicted Cloud Water in column [gm] (intended for DrJack's use)

Temp@2m = Temperature at 2m AGL [F]

DewPt@2m = Dew Point Temp. at 2m AGL [F]

Temp@Bot = Temperature at 16ft AGL (bottom grid point) [F] (intended for DrJack's use)

DewPt@Bot = Dew Point Temp. at 16ft AGL (bottom grid point) [F] (intended for DrJack's use)

Sfc.Heating = Surface Heating of atmosphere [W/m²]

BL Depth = Depth of the Boundary (Mixing) Layer [ft]

EXPERIMENT = Mystery variable for test purposes (intended for DrJack's use)

* = Indicates BL Top (TI=0 Height) on profiles

Note: printed heights are for 18Z - heights for other times differ slightly

Results neglect thermals created by small-scale features not resolved by the smoothed model topography

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DrJack's BLIPSPOT for: TUE 10/12 Hampshire_IL 889ft pt37818@42.147,-88.420,844ft

BLIPSPOT sfc.temp. adjusted by +0.1 degF
SPONSORED BY: ChicagoLand Glider Council

RUC - Last Analysis, Validation Time = 09Z 15Z

A Poor Day

	VALIDATION TIME													
	12Z	13Z	14Z	15Z	16Z	17Z	18Z	19Z	20Z	21Z	22Z	23Z	0Z	
FCST PERIOD	6 hr	-	-	6 hr	-	-	6 hr	-	-	6 hr	-	-	9 hr	FCST PERIOD
Temp@2m	44.7	-	-	48.3	-	-	61.2	-	-	57.3	-	-	53.1	Temp@2m
Sfc.Heating	-	-	-	-	-	-	-	-	-	28	-	-	-16	Sfc.Heating
BL Depth	16	-	-	174	-	-	2515	-	-	1600	-	-	16	BL Depth
Hcrit	241	-	-	889	-	-	2302	-	-	2489	-	-	241	Hcrit
BL Top	257	-	-	1063	-	-	3404	-	-	2489	-	-	257	BL Top
Hgt.Variab.	920	-	-	1237	-	-	638	-	-	997	-	-	2451	Hgt.Variab.
W*	0	-	-	67	-	-	329	-	-	143	-	-	0	W*
B/S	0	-	-	1	-	-	4	-	-	2	-	-	0	B/S
BL Wind	6	-	-	9	-	-	14	-	-	13	-	-	7	BL Wind
Direction	048	-	-	067	-	-	103	-	-	100	-	-	074	Direction
Wind Shear	0	-	-	0	-	-	5	-	-	5	-	-	0	Wind Shear
Max.Converg	0	-	-	0	-	-	2	-	-	-5	-	-	2	Max.Converg
CLOUDpotent1	-605	-	-	-383	-	-	-1765	-	-	-807	-	-	-1729	CLOUDpotent1
sfcLCL	862	-	-	1446	-	-	5169	-	-	3296	-	-	1986	sfcLCL
ODpotential	-12446	-	-	-11054	-	-	-10039	-	-	-8841	-	-	-9644	ODpotential
blCL	12703	-	-	12117	-	-	13443	-	-	11330	-	-	9901	blCL

Height of Critical Updraft Strength
Height of Boundary Layer Top

Thermal Updraft Velocity

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DrJack's BLIPSPOT for: SUN 05/18 Hinckley_IL 760ft pt37215041.807,-88.677,765ft

BLIPSPOT sfc.temp. adjusted by -0.0 degF
 SPONSORED BY: ChicagoLand Glider Council

RUC - Last Analysis, Validation Time = 18Z 0Z

A Pretty Good Day

	VALIDATION TIME													
	12Z	13Z	14Z	15Z	16Z	17Z	18Z	19Z	20Z	21Z	22Z	23Z	0Z	
Update Time	0701z	-	-	1005z	-	-	1337z	-	-	1605z	-	-	1904z	Update Time
FCST PERIOD	6 hr	-	-	6 hr	-	-	6 hr	-	-	6 hr	-	-	6 hr	FCST PERIOD
Temp@2m	46.5	-	-	51.5	-	-	56.7	-	-	59.3	-	-	56.4	Temp@2m
Sfc.Heating	12	-	-	193	-	-	424	-	-	269	-	-	3	Sfc.Heating
BL Depth	338	-	-	2810	-	-	5630	-	-	6209	-	-	5110	BL Depth
Hcrit	783	-	-	2366	-	-	4840	-	-		-	-	783	Hcrit
BL Top	1098	-	-	3570	-	-	6390	-	-		-	-	5870	BL Top
Hgt.variab.	1034	-	-	3338	-	-	1414	-	-	1807	-	-	1923	Hgt.Variab.
W*	68	-	-	336	-	-	548	-	-	490	-	-	148	W*
B/S	1	-	-	2	-	-	6	-	-	5	-	-	2	B/S
BL Wind	16	-	-	25	-	-	17	-	-	19	-	-	17	BL Wind
Direction	309	-	-	346	-	-	340	-	-	328	-	-	316	Direction
Wind Shear	6	-	-	13	-	-	16	-	-	10	-	-	11	Wind Shear
Max.Converg	-3	-	-	-3	-	-	-12	-	-	-3	-	-	-5	Max.Converg
CLOUDpotent	-245	-	-	992	-	-	1895	-	-	1869	-	-	1315	CLOUDpotent1
sfcLCL	1343	-	-	2578	-	-	4496	-	-	5100	-	-	4555	sfcLCL
ODpotential	-2229	-	-	749	-	-	1391	-	-	1243	-	-	7	ODpotential
blCL	3327	-	-	2821	-	-	4999	-	-	5726	-	-	5863	blCL

Height of Critical Updraft Strength
 Height of Boundary Layer Top

Thermal Updraft Velocity

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PROFILES OF WIND SPEED [kt] AND DIRECTION [degTrue]

Height [ft]	VALIDATION TIME												[ft]	
	12Z	13Z	14Z	15Z	16Z	17Z	18Z	19Z	20Z	21Z	22Z	23Z		0Z
70296	3 321			5 335			2 311			4 255			6 285	70296
61063	17 254			17 249			15 281			13 304			13 283	61063
55847	28 300			4 274			8 255			13 264			16 257	55847
52206	30 281			23 260			31 269			31 285			17 287	52206
49056	29 276			25 256			29 266			32 272			27 291	49056
46531	24 280			29 263			23 276			15 282			16 262	46531
45044	16 290			20 261			29 246			22 269			17 284	45044
43415	21 297			17 260			26 249			23 266			15 283	43415
42335	21 289			20 267			20 255			24 268			15 289	42335
41773	21 280			22 264			18 265			23 268			13 290	41773
41280	21 270			24 257			17 268			20 269			8 283	41280
40805	21 263			25 247			17 241			18 264			5 280	40805
40269	21 259			24 238			17 214			14 237			10 237	40269
39730	19 253			21 238			14 201			11 201			14 181	39730
38565	16 235			20 233			12 199			10 157			18 148	38565
37042	19 234			20 221			12 210			13 146			21 138	37042
33618	15 231			18 223			14 200			17 173			19 158	33618
27608	11 209			15 207			10 195			17 187			14 168	27608
25169	16 200			15 192			11 198			16 185			10 170	25169
22663	16 193			14 186			11 184			13 162			11 179	22663
20787	14 155			15 172			14 171			13 158			11 178	20787
18882	14 133			15 171			17 164			15 156			12 169	18882
17166	12 130			15 176			18 167			17 146			17 154	17166
15869	9 158			12 182			14 154			16 135			20 141	15869
13572	10 172			7 149			15 148			16 143			22 145	13572
11324	11 161			8 109			16 142			18 166			22 159	11324
10717	10 157			8 104			17 142			17 166			17 168	10717
10154	10 156			8 105			17 144			17 166			16 170	10154
9600	9 160			8 109			16 146			17 164			15 173	9600
9056	9 163			8 116			14 145			17 161			15 175	9056

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PROFILES OF RELATIVE HUMIDITY [%]

Height [ft]	VALIDATION TIME												[ft]	
	12Z	13Z	14Z	15Z	16Z	17Z	18Z	19Z	20Z	21Z	22Z	23Z		0Z
70296	4			5			5			4			4	70296
61063	6			4			5			6			5	61063
55847	5			4			5			5			4	55847
52206	4			4			4			4			5	52206
49056	2			2			3			2			3	49056
46531	2			3			3			3			2	46531
45044	2			3			3			3			2	45044
43415	2			3			3			4			3	43415
42335	3			4			3			4			3	42335
41773	4			5			4			5			4	41773
41280	5			7			6			6			5	41280
40805	12			11			9			7			7	40805
40269	36			18			19			10			15	40269
39730	55			32			34			19			22	39730
38565	60			46			41			34			35	38565
37042	59			53			59			60			61	37042
33618	65			58			65			66			57	33618
27608	77			70			68			72			66	27608
25169	81			78			79			77			77	25169
22663	82			84			78			77			80	22663
20787	81			87			75			78			85	20787
18882	81			88			68			79			88	18882
17166	81			85			57			81			86	17166
15869	63			80			38			83			80	15869
13572	14			38			9			57			65	13572
11324	7			16			5			13			34	11324
10717	6			10			4			10			33	10717
10154	6			8			4			9			35	10154
9600	6			7			4			7			33	9600
9056	7			7			4			6			29	9056

Done Internet