B.L.M. - Alaska Fire Service

AFS Fire Weather Database - Weather for FAIRBANKS

DAY	HR	AT	RH	WS	PR	WSP	WD	WDP	FT	BV	SR	FMP
4/29	00	41	46	3	.00	8	313	4	33	12.9	.0	7
4/29	01	39	46	4	.00	8	305	300	34	12.9	.0	10
4/29	02	35	54	5	.00	9	334	330	27	12.9	.0	10
4/29	03	33	64	3	.00	6	341	12	23	12.9	.0	11
4/29	04	26	79	1	.00	1	339	346	20	12.8	.0	13
4/29	05	25	82	1	.00	3	350	332	20	12.8	.0	14
4/29	06	25	83	1	.00	2	155	200	20	12.8	6.0	15
4/29	07	26	83	1	.00	2	27	37	23	12.8	30.0	16
4/29	08	32	72	1	.00	2	94	143	31	13.2	76.0	17
4/29	09	46	43	0	.00	3	160	209	48	13.5	70.0	16
4/29	10	47	36	2	.00	5	168	177	57	13.5	343.0	15
4/29	11	50	32	3	.00	7	143	171	60	13.4	580.0	13
4/29	12	52	30	3	.00	9	229	233	60	13.4	669.0	12
4/29	13	54	29	4	.00	10	175	168	67	13.3	793.0	12
4/29	14	54	28	4	.00	10	186	206	68	13.3	840.0	12
4/29	15	57	27	4	.00	9	153	116	70	13.3	831.0	10
4/29	16	57	27	3	.00	9	136	104	66	13.3	687.0	9
4/29	17	57	25	1	.00	8	237	254	66	13.3	501.0	9
4/29	18	56	22	4	.00	10	208	198	68	13.3	411.0	7
4/29	19	59	22	3	.00	5	179	201	67	13.4	371.0	7
4/29	20	55	25	4	.00	7	272	249	61	13.4	171.0	4
4/29	21	49	29	4	.00	9	276	279	49	13.2	79.0	2
4/29	22	45	34	4	.00	8	285	300	39	13.0	21.0	3
4/29	23	41	37	4	.00	8	300	302	36	13.0	2.0	4

page format last updated: Friday, April 28, 2000 05:56 PM

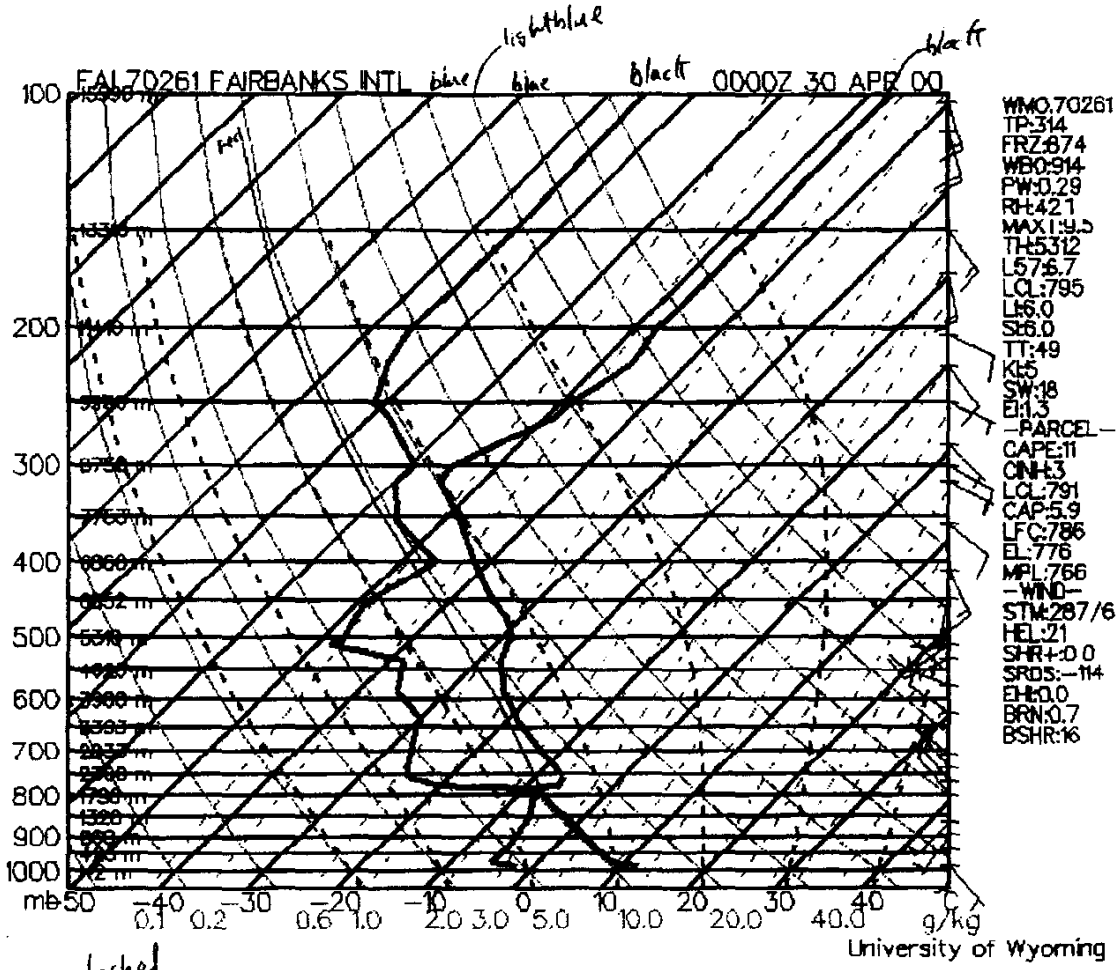
AFS Fire Weather Database - Station Description for FAIRBANKS

SYSTEMID: 001092	SHORTNAME: FBK	FULLNAME: FAIRBANKS	TYPE: RAWS
WIMS_ID:	LAT: 64:51:00	LON: 147:36:36	ACTIVE: A
LASTOBS: 5/1/00 9:00:00 PM	ELEV: 454 ft.	LEGALDESCRIPT:	
SITEDESCRIPT: none			
TIMEZONE:	CLIMATE:	COVERCLASS:	ZONE: NRS

SLOPE: 0	ASPECT: 0	NESSID: 32433452
TXTIME: 00:29	TXFREQ: every 3 hrs	OBS/TX: 3
AGENCY: BLM	SUBAGENCY: ALASKA FIRE SERVICE	CONTACTPERSON: JIM SCHAFF
CONTACTPHONE: 9073565281	MODEL: H555	MAINTBY: BLM
CHANNEL:		

SENSOR NAME	DESCRIPTION	UNITS	DISPLAY FORMAT	SUMMARY
AT	Air Temperature	Degrees Fahrenheit	999	Min / Max
BV	Battery Voltage	Volts	999.9	Min / Max
FMP	Fuel Moisture	Percentage	999	Min / Max
FT	Fuel Temperature	Degrees Fahrenheit	999	Min / Max
RH	Relative Humidity	Percent	999	Min / Max
RG	Rain Accumulation	Inches	999.99	Totals
SR	Solar Radiation	Watts	999.9	Min / Max
WD	Wind Direction	Degrees	999	N / A
WDP	Wind Direction, Peak	Degrees	999	N / A
WS	Windspeed	Miles per Hour	999	Min / Max
WSP	Windspeed, Peak	Miles per Hour	999	Min / Max

page format last updated: Friday, April 28, 2000 05:56 PM



dashed lines - green

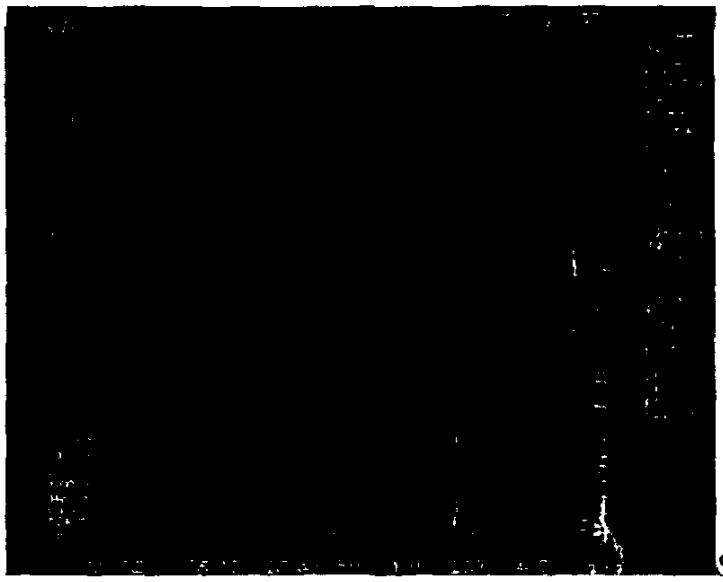
30°F at 3450' ASL

Larry Holt National Weather Service
NIFC

Upper Air Sounding Details

Upper air soundings are plotted data from balloons. The balloon records temperature, humidity and winds and these are plotted versus pressure/height to give details on the vertical structure of the atmosphere. The type of plot is called a SkewT and a set of SkewTs are available for most US stations. These are updated once every 12 hours at roughly 10:00 EST.

SkewT Plots



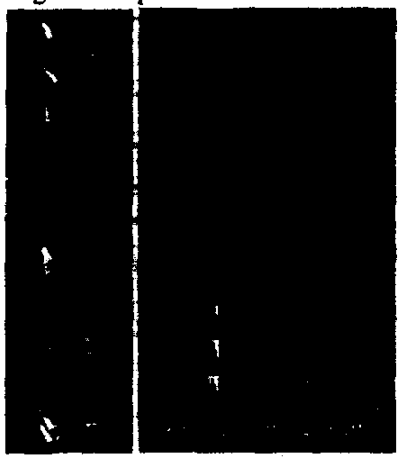
Sample SkewT plot

A Skew T plot is a standard plot used by meteorologists to analyze data from a balloon sounding. This is a plot of temperature with height as denoted by pressure.

The pressure lines are plotted horizontally in blue and are also on an inverse log scale. The concept of Skew T means that the temperature is not plotted vertically but angles off to the right at a 45 degree angle. The temperature lines of the Skew T are in blue. The green lines are called dry adiabats. The light blue dashed lines are saturation adiabats. The yellow dashed lines are lines of constant mixing ratio.

The sounding is plotted as two white lines. The right line is the temperature profile. The left line is the dewpoint profile.

The winds are plotted as wind barbs with height (see below) on the right edge of the plot.



The sounding also has height information plotted at the left, next to the pressure:

Specific sounding related parameters are plotted in the upper right. These values are:

- **TP:** Tropopause level (mb)
- **MW:** Max wind level (mb)
- **FRZ:** Lowest freezing level (mb) or BG for below ground
- **WB0:** Wet bulb zero (mb) or BG
- **PW:** Precipitable water (in)
- **RH:** Mean RH surface to 500 mb (%)
- **MAXT:** Estimated max temperature (C) using a 150mb layer
- **TH:** 1000-500mb thickness (m)
- **L57:** 700-500mb lapse rate (C/km)
- **LCL:** Lift condensation level (mb) from surface data
- **LI:** Lifted index (C) using 100 mean layer above surface
- **SI:** Showalter index (C)
- **TT:** Total totals index
- **KI:** K index
- **SW:** Swcat index
- **EI:** Energy index

-PARCEL-

This is a parcel trajectory (the yellow line on the sounding) based on 100 mb mean layer.

- **CAPE:** Convective available potential energy
- **CINH:** Convective inhibition (open ended)
- **LCL:** Lift condensation level (mb)
- **CAP:** Cap strength (C)
- **LFC:** Level free convection (mb)
- **EL:** Equilibrium level (mb)
- **MPL:** Maximum parcel level (mb)

-WIND-

Wind parameters

- **STM:** Estimated storm motion (knts) from 0-6000m AG mean layer, spd 75% of mean, dir 30 deg veer from mean.
- **HEL:** Storm relative helicity 0-3000m AG (total value)
- **SHR+:** Positive shear magnitude 0-3000m AG (sum of veering shear values)
- **SRDS:** Storm relative directional shear 0-3000m AG (directional difference of storm relative winds)
- **EHI:** Energy helicity index (prop to positive helicity * CAPE)
- **BRN:** Bulk Richardson number 500-6000m AG (prop to CAPE/bulk shear)
- **BSHR:** Bulk shear value (magnitude of shear over layer)

Current Skew T Plots

UNOFFICIAL DATA FROM FAIRBANKS SOUNDING SAT APR 29 4PM LOCAL.

********** TTAA FOR PAFA APR 30/00Z **********

LEVEL	H	T	TD	DIR	SPD	DH	DT
0	-2						
5	639	4.6	-5.4	185	7		
850	1320	-2.1	-6.3	240	3		
700	2833	-12.1	-27.1	310	5		
500	5310	-28.7	-47.7	235	12		
400	6860	-41.7	-46.1	150	12		
300	8750	-55.3	-59.5	120	9		
250	19930	-49.1	-71.1	115	6		
200	11410	-47.5	-75.5	120	13		
150	13310	-47.1	-75.1	145	13		
100	15990	-47.7	-75.7	165	15		
TROP	(314)	-54.9	-59.9	120	7		

3PM data

STATION = 70261 FAIRBANKS INTERNATIONAL
LAT/LON = 64.82/147.85 | SFC ELEVATION = 434 FEET
CYCLE = 4/30/2000 AT 0Z | PROJECTION = 0 HOURS
FREEZING LEVEL = 965M | MISSING DATA VALUE = -32767.000000

	P	H	T	TD		P	H	DIR	SPD
0:	984.0	0.0	12.1	-2.0	0:	984.0	0.0	140	7.0
1:	975.0	76.5	8.9	-5.1	1:	947.0	304.8	155	8.0
2:	784.0	1823.5	-8.4	-8.6	2:	912.0	609.6	185	7.0
3:	782.0	1843.3	-8.3	-8.3	3:	878.0	914.5	215	6.0
4:	778.0	1883.1	-8.6	-15.6	4:	845.0	1219.2	225	4.0
5:	773.0	1933.3	-6.5	-20.4	5:	783.0	1828.9	320	8.0
6:	754.0	2127.5	-6.9	-24.8	6:	753.0	2133.7	320	8.0
7:	636.0	3424.5	-18.8	-29.8	7:	723.0	2438.4	320	5.0
8:	585.0	4040.9	-23.7	-35.7	8:	695.0	2743.2	310	4.0
	534.0	4702.3	-27.2	-38.2	9:	616.0	3657.7	305	8.0
:	510.1	5032.5	-28.4	-48.5	10:	567.0	4267.3	290	4.0
11:	473.1	5568.6	-31.4	-48.5	11:	521.0	4876.8	245	10.0
12:	448.1	5949.9	-35.0	-49.0	12:	499.1	5181.7	235	12.0
13:	400.1	6728.7	-41.7	-46.0	13:	438.1	6096.1	195	10.0
14:	353.1	7563.9	-48.0	-55.0	14:	401.1	6705.7	155	13.0
15:	300.1	8618.6	-55.2	-59.5	15:	349.1	7620.1	130	9.0
16:	260.1	9544.6	-48.9	-67.9	16:	276.1	9144.0	135	5.0
17:	221.1	10617.6	-46.2	-74.3	17:	219.1	10668.0	145	9.0
18:	100.0	15867.4	-47.7	-75.6	18:	200.1	11277.6	115	12.0
19:	-32767.0	-32767.0	-32767.0	-32767.0	19:	166.1	12496.8	170	14.0
20:	-32767.0	-32767.0	-32767.0	-32767.0	20:	144.1	13411.3	145	15.0
21:	-32767.0	-32767.0	-32767.0	-32767.0	21:	109.0	15240.0	165	18.0
22:	-32767.0	-32767.0	-32767.0	-32767.0	22:	100.0	15849.6	165	16.0
23:	-32767.0	-32767.0	-32767.0	-32767.0	23:	98.0	16154.5	165	15.0
24:	-32767.0	-32767.0	-32767.0	-32767.0	24:	10.1	18288.0	150	15.0
25:	-32767.0	-32767.0	-32767.0	-32767.0	25:	10.1	20116.9	165	11.0
26:	-32767.0	-32767.0	-32767.0	-32767.0	26:	10.1	21031.2	145	12.0
27:	-32767.0	-32767.0	-32767.0	-32767.0	27:	10.1	21336.0	150	12.0
28:	-32767.0	-32767.0	-32767.0	-32767.0	28:	10.1	24079.2	140	11.0
29:	-32767.0	-32767.0	-32767.0	-32767.0	29:	10.1	25603.2	100	11.0
30:	-32767.0	-32767.0	-32767.0	-32767.0	30:	10.1	26517.6	115	13.0
31:	-32767.0	-32767.0	-32767.0	-32767.0	31:	10.1	27432.0	140	12.0

temperature in C°

wind Knots

Altimeter Reading = 29.54

OBSERVATIONS ARE NOT OFFICIAL.....
...ALL OBSERVATIONS ARE DECODED AND IN THE ZULU DATE TIME...

Fairbanks

PAFA YTIME	SKY CONDITIONS	VSBY	WX	SLP	TT	DP	WIND	ALT	APP	PK
92053	SCT080 BKN180	10		008	48	26	1504	954	8-05	
AA292153	FEW050 SCT080 BKN180	10		004	49	27	0005	953	-07	
AA292253	SCT060 BKN180	10		002	50	28	0006	952	-09	
AA292353	SCT060 SCT180	10		000	51	27	0005	951	6-08	
AA300053	SCT060 BKN180	10		997	51	26	2403	950	-07	
AA300153	SCT070 BKN180	10		993	52	26	0000	949	-09	
AA300253	SCT075 BKN180	10		990	52	24	3307	948	6-10	

Fort Wright

PAFB	SKY CONDITIONS	VSBY	WX	SLP	TT	DP	WIND	ALT	APP	PKW
MA292055	FEW050 SCT200	85		999	48	27	2608	953		
MA292155	FEW050 SCT200	85		998	50	27	1709	952		
MA292255	FEW050 SCT200	85		996	52	27	2510	952		
MA292355	FEW055 SCT200	60		993	52	27	1908	951	8-06	

Eielson AFB

PAEI	SKY CONDITIONS	VSBY	WX	SLP	TT	DP	WIND	ALT	APP	PKW
MA292055	SCT050 BKN180	70		000	48	30	2705	952	8-04	
MA292155	SCT047 BKN180	70		000	48	27	2708	952	-04	
MA292255	SCT047 BKN180	50		997	50	27	3204	951	-07	
MA292355	SCT045 BKN180	70		995	52	28	0204	951	7-05	
MA300055	SCT050 BKN180	70		995	52	27	3106	949	-05	
MA300155	FEW050 BKN180	70		986	54	28	3106	948	-11	
MA300255	FEW050 BKN180	70		981	54	25	0205	946	7-14	

SCT - Scattered Clouds 050 = 5000 feet

FEW - Few Clouds

BKN - Broken Clouds

VSBY - visibility - 10 unrestricted PAFA
85 miles visibility
70 " "

SLP - Sea Level Pressure
TT - Temperature at 2 meters
DP - Dew Point
Wind - 1st 2 digits = 10s of degrees 2nd 2 = wind speed Knots