



## **TAF INFORMATIONS AUTOMATED, MANUAL AND PLAIN LANGUAGE**

The abbreviation TAF stands for **T**erminal **A**erodrome **F**orecasts and has to do with the prospects of the weather for the next few hours, but also contains up to date information which is of importance.

METAR relates to the current weather.

The TAF data can be found after the RMK (Remarks). It may seem very complicated at times, but in reality it is not that difficult. We are going to try by means of this document to correctly understand TAF so you can read an entire METAR.

### **AUTO**

**AUTO METAR** and **AUTO SPECI** are all automatically generated forecasts with our without landing expectations.

METAR indicates that this is a routine report , while SPECI has to do with extra issued forecasts.

The word AUTO means that the report has been completely generated **auto**matically.

It could happen that you see the letters COR in front of an ICAO code (example COR EHAM)

This means that a correction was made to the prior issued weather report. This is usually due to an error. This also goes for the letters AMD (Ammended).

It may also happen that you see the word NIL (example AUTO METAR EHAM NIL) Here we are dealing with the fact that there is no weather report available through the automatic METAR generating system.



## RVR

Reading RVR data can sometimes be quite tricky. Especially if there is more mentioned than just the runway to which it pertains.

Thus it may be accompanied by letters such as D, U, N and V (**D**own, **U**p, **N**o-change, **V**ariable).

Every weather situation can change in a single moment. That's why they use letters in METAR reports, to quickly and correctly clarify this.

Imagine we read the following in a METAR report:

**RVR04R500VP1500**

We see here that Runway 04R has a visual range between 500 meters and greater than 1500 meters

De **P** stands for "greater than". De **V** follows the 500 meters and from this we can conclude that the variable relates to the 500 meters RVR.

But imagine that the RVR for Runway 04R is less than 50 meters, how would this be coded?

**RVR04RM0050**

To denote "smaller than" we use the letter "**M**".

***Just to clarify, all values are in meters unless otherwise stated.***

## RMK AO2

After the RMK you will often see the station type AO1 or AO2.

AO2 means automated station with a precipitation discriminator, while AO1 means automated station without a precipitation discriminator.

## PK WND (dddf(F)/(hh)mm)

Behind the AO1 or AO2 is the expected peak wind situation (PK WND) with a listing in hours.

Imagine you see: **PK WND 29027/2250**

We see here that this is a Peak Wind with a heading of 290 degrees with a strength of 27 knots. This Peak Wind will take place at 22.50z

It may also happen that the Peak Wind reads as follows:

**PK WIND 29027/18**

From the "/18" we can conclude that there will be a Peak Wind in 18 minutes into the hour after the report was issued. So if the report was issued at 23:55 then the PK WIND is expected at 00:18Z



### WSHFT (hh)mm)

WSHFT stands for WIND SHIFT. Again behind this you will see figures that relate to Zulu time

WSHFT 1715 means that a Wind Shift will occur at 17:15Z

Behind that you can sometimes expect to see FROPA which stands for Cold Front Passage

### WS

WS stands for Wind Shear. A very dangerous type of wind. The WS contains information such as altitude, heading and strength.

WS010/30020KT

Wind Shear at 1000 feet, heading 300 at 20 knots.

### TWR VIS

### SFC VIS

### VIS

After the wind situations we get statements relating to the visibility conditions.

TWR VIS means that the staff of the airport traffic control tower (ATCT) has a visibility of a certain amount of Statute Miles.

TWR VIS 8 means the tower has a visibility of 8 Statute Miles.

SFC is in essence the same as TWR, except this relates to *Surface Visibility*.

You could also see something like this:

TWR VIS 8V7

This means that the ATCT has visibility between 8 and 7 statute miles and so is Variable.

If you see VIS 1/2V2 then we are talking about *Variable Prevailing Visibility* between a half and two statute miles.

Also wind direction and runway information can be given:

VIS SW-NW 1 1/2

The explanation here is that the *Variable Prevailing Visibility* is between Southwest en Northwest with a visibility of 1½ Statute Miles.

Is there VIS 3/4 RWY18L then we must read it as:

The *Variable Prevailing Visibility* relates to runway 18L and is ¾ Statute Mile.

### FRQ LTG

FRQ LTG means Frequent Lightning.

This kind of information can be automatically generated as well as none automatically.



Non-Auto generated information can be identified as:

OCNL LTGICCG OHD

FRQ LTG VC

LTG DSNT W

Automatically generated information looks like:

**TS** if the Airport Location Point (ALP) is within 5 Statute Miles

**VCTS** if the ALP is between the 5 and 10 Statute Miles

**LTG DSNT** if the ALP is more than 10 Statute Miles but not further than 30 Statute Miles

*In the following table we can see the different types of lightning*

Type and Frequency of Lightning		
Type of Lightning		
Type	Contraction	Definition
Cloud-ground	CG	Lightning occurring between cloud and ground.
In-cloud	IC	Lightning which takes place within the cloud.
Cloud-cloud	CC	Streaks of lightning reaching from one cloud to another.
Cloud-air	CA	Streaks of lightning which pass from a cloud to the air, but do not strike the ground.
Frequency of Lightning		
Frequency	Contraction	Definition
Occasional	OCNL	Less than 1 flash per minute.
Frequent	FRQ	About 1 to 6 flashes per minute.
Continuous	CONS	More than 6 flashes per minute.

With the above information we can now decode the following data:

**OCNL LTGICCG OHD**

(Occasionally) Now and then lightning flashes that occur in the clouds, and between the clouds and the ground.

**FRQ LTG VC**

A number of lightning flashes in the vicinity (VC)

**LTG DSNT W**

Lightning between 10SM and 30SM from the West

**RAB**

Rain began: indicates the time when it started to rain.



You could also come across an "E" (ending) . A two number notation indicates that it relates to the minutes in the hour of when the report was issued, and a four number notation indicates the time in Zulu format.

RAB12E14 Indicates that the rain started 12 minutes into the hour of the report, and will end 14 minutes after the hour of the report. If you were given a total time then two numbers would be added for example RAB1012E1214 means that it started raining at 10:12z and ends at 12:14z

### TSB

The same applies to TS (thunderstorm)

TSB13 means that the thunderstorm ended 13 minutes after this hour.

It is also possible to see TSB and RAB in combination with each other.

### TSB09RAB09E56

The meaning of this is that Thunderstorms started at 9 minutes after this hour and rain also began at 9 minutes past this hour and is expected to end at 56 minutes after this hour.

### CIG

Variable Ceiling.

CIG013V017 means that there is a Variable Ceiling between 1300 feet and 1700 feet.

It also happens that a runway is mentioned like CIG017RWY06

We see here that the Ceiling height of 1700 feet relates to runway 06.

### PRESFR or PRESRR

PRESFR (PRESSURE FALLING RAPIDLY)

PRESRR (PRESSURE RISING RAPIDLY)

I don't think this needs any further explanation.

### SLP

Sea Level Pressure is given in tenths of a Hectopascal.

SPL117 = Sea Level Pressure of 1011,7 Hpa

SPL982 = Sea Level Pressure of 998,2 Hpa

### ACFT MSHP

Aircraft Mishap, means that the weather forecast has not been transmitted and thus the information it contains is not official. This data will be found in brackets.

### NOSPECI

No Special Report Taken, means that no special weather report will be issued until the release of the latest METAR.



## SNINCR

Snow increasing rapidly.

For example **SNINCR 2/10**

Means that 2 inches of snow has fallen in the last hour (will always be calculated in the last hour) which equates to a total of 10 inches on the ground on the moment when this report was made.

We are almost ready to enter the final stages in regards to METAR and TAF information. We have learned what a METAR report involves and how to decode it, ( Part 1 of this lesson)We have also learned to analyse and understand the RMK section in relation to TAF.

And now we come to the final section, which is basically nothing but numbers, a whole lot of numbers to be precise! but once you get to grips with this you will have a wealth of information in regards to weather.

## TAF INFORMATIONS /ADDITIVE DATA

We have now reached PRECIPITATION (rainfall / snowfall) and therefore only contain measurements. These measurements provide the overall picture of what you can expect in the previous TAF information we have previously discussed in this lesson.

If your data looks like this:

```
SLP110 60003 70015 8/801 T02720241 10290 20256 50002=  
SLP172 70009 8/671 9/521 5////=
```

Then, it is important that you know where everything is in order to decipher the Additive Data to usable data

## WATER EQUIVALENT

Precipitation is a word used for "downfall". Regarding this the precipitation here relates to downfall that is water equivalent ( rain, hail snow etc..)

### Precipitation:

RA Rain

DZ Drizzle

SN Snow

SG Snow Grains

IC Ice Crystals

PL Ice Pellets (Sleet)

GR Hail

GS Small Hail/Snow Grains

UP Unknown Precipitation



First, we see two blocks of 5 digits beginning with a 6 and 7. The first block that starts with a 6 refers to the 3 - 6 - hours quantities that have fallen. The 7 refers to the 24 - hour situation that also contains quantities.

#### **P** Hourly Precipitation Amount

Example

P0009

This means that in the last hour 9 / 100 (nine hundredth) Precipitation (amount of water equivalent = downfall) has been dropped.

#### **6** 3- and 6-hour Precipitation Imagine

600217

This means that in the last 3 to 6 hours 2.17 Inches Precipitation (amount of water equivalent = downfall) has been dropped.

#### **7** 24-Hour Precipitation Amount

Imagine

70125

Then we read that in the last 24 hours a water equivalent of 1.25 inches has fallen.

#### **4** Snow Depth on Ground

It may also happen that we see a 4

4/021

This means that snow has fallen in the last 6 hours, to a depth of 21 inches

#### **933** Water Equivalent of Snow on Ground

This is the code used for "Water Equivalent of Snow on Ground"

This may also be hail, ice, freezing rain etc..

933036 Means that 3.6 Inches of water equivalent of snow has fallen on the ground in the time since the report was released around 18:00 Z

#### **8** Cloud Types

This code is used to indicate what type of clouds we are dealing with

8/C<sub>L</sub>C<sub>M</sub>C<sub>H</sub>

A "0" will be shown when it concerns low clouds

The letter L (see example above) means LOW, M=MIDDLE en H=HIGH

These all indicate the type of cloud.

If there is no specific type of cloud then you will see "/" in front of it.

Example

8/9//

You can see that for code 8 / (Cloud Types) only a 9 is present followed by 2 (/)



So we have in front of the L (Low clouds type) a 9 which indicates that this is a significant amount. In front of the M and H, we have a dash, and that means that there is no Medium and High clouds present

Example

8/903

This would mean that the Low type are cumulonimbus clouds, while there are no Middle type clouds, but dense and High cirrus clouds.

- 8/LMH Cloud types (low, middle, high clouds)

8/6// Lower level clouds are stratus in sheets/layers; the / in the mid and high level cloud positions tells us that the low clouds are overcast preventing the observer from identifying any mid and high level cloud types.

8/004 No clouds in low and middle levels; Cirrus hooks and filaments noted as high cloud type.

8/100 Fair weather cumulus clouds in low clouds, no clouds above

-9/LMH Cloud cumulative coverage (low, middle, high clouds) –  
Military stations ONLY

9/700 Low clouds cover 7/8ths of the sky, no mid and high level clouds

9/8// Low clouds cover 8/8ths of the sky; an overcast (not able to determine mid/high clouds

9/138 Low clouds cover 1/8ths of the sky, when added to the middle clouds then 3/8ths of the sky is covered and, finally, when added to the high clouds then 8/8ths of the sky is covered (an overcast).

Here is simple table of cloud types (code numbers are sometimes used in remarks section):

Code	Low Cloud Type	Middle Cloud Type	High Cloud Type
0	No Clouds Present	No Clouds Present	No Clouds Present
1	Cu (Fair Weather)	As (Thin,Sun vsbl)	Ci (Filaments,strands)
2	Cu (Towering/TCU)	As (Thick,no Sun)	Ci (Dense)
3	Cb (No Anvil vsbl)	Ac (Thin;semitransparent)	Ci (often left over from Cb)
4	Sc (from Cu)	Ac (Patchy)	Ci (Hooks/Filaments thickening)
5	Sc (not from Cu)	Ac (Thickening)	Ci/Cs (low on horizon;<45deg)
6	St (in sheet/layer)	Ac (from Cu,Cb)	Ci/Cs (high in sky>45deg)
7	CuFr/StFr (Bad Wx)	Ac (Ac w/As,Ns)	Cs (covering entire sky)





Abbreviations used:	Ac - Altocumulus	As - Altostratus
	Cb - Cumulonimbus	Cc - Cirrocumulus
	Ci - Cirrus	Cs - Cirrostratus
	Cu - Cumulus	StFr - Stratus Fractus
	CuFr - Cumulus Fractus	Ns - Nimbostratus
	Sc - Stratocumulus	St - Stratus
	TCU - Towering Cumulus (Cumulus Congestus)	

## 98 Duration of Sunshine

98 is the code used to indicate the quantity there will be hours of sunshine during the day.

Example

98096 means that there will be 96 minutes of sun during the day of the report.

Example

98000 means that no sun will shine on the day of the report.

## T Hourly Temperature and Dew Point

The T is a letter we frequently see in TAF reports. Followed by the number 0 or 1.

T0 means that the values are above 0 degrees Celsius

T1 means that the values are below 0 degrees Celsius

It is also possible that there are values both above and below the 0 degrees.

These temperature and dew point values are indicated by a number after the comma like 21.6 degrees Celsius

In a METAR it would be rounded up to 22 degrees.

Example

T00391033

T0039 means T0=the value is above 0 degrees namely 3.9 degrees

T1033 means T1=the value is below 0 degrees namely -3,3degrees

The temperature is 3,9C the Dew point is -3,3C

Example

T01260096

We can see the temperature is 12,6C above 0, and the dew point is 9,6C above 0

You see, easy isn't it!



## 1 6-Hourly Maximum Temperature

Code 1 is used to specify the maximum temperature that last for 6 hours.  
Again here 0= above zero degrees and 1= below zero degrees

Example

11021

We read code 1 followed by again a 1 which means that the maximum temperature is below 0 degrees Celsius.

The last 3 digits indicate what the temperature is 021 = 2.1 C

So we can say that -2.1 C is the maximum temperature in a period of 6 hours

Example: 10142

The first 1 we know (6-Hourly Maximum Temperature), while the second digit is a 0

This means that the temperature is above 0 degrees Celsius

The last 3 deal with the temperature itself 142 = 14.2

So the Maximum temperature in a period of 6 hours is 14.2 C (above zero)

## 2 6-Hourly Minimum Temperature

This applies also for the minimum temperature of 6 hours

21142

This means that the minimum temperature of a 6 hour period is -14.2 (below zero).

20142

This means that the minimum temperature of a 6 hour period is 14.2 (above zero)

## 4 24-hour Maximum and Minimum Temperature

Code 4, which consists of a total of 9 digits, has to do with what the minimum and maximum temperature within a 24 hour period will be.

Again 0=above zero, 1=below zero

401001015

The 4 means (24-hour Maximum and Minimum Temperature)

The 0 means that the temperatures are above 0 degrees Celsius

The 3 digits that follow have to do with the maximum temperature 100 = 10.0

The 1 that follows has to do with minimum temperatures below zero degrees Celsius

The last 3 digits is the temperature itself.

So we have here a maximum temperature of 10C while the minimum temperature will be

-1.5 C for a period of 24 hours.

Example: 401120084

Temperature is 11,2C (maximum) and 8,4C (minimum) (all above zero)



## 5 3-Hourly Pressure Tendency

You will not often see this in the TAF data but to complete the picture for our course we will mention it. For this we need the following table:

When we see a code laying between 0 and 3, then we are talking about the pressure that is increasing in the last 3 hours.

Is this code between 5 and 8, then we are talking about pressure that is decreasing in the last 3 hours.

Characteristics of Barometer Tendency	
Code Figure	Description
0	increasing, then decreasing; atmospheric pressure same or higher than 3 hours ago
1	increasing, then steady; or increasing then increasing more slowly; atmospheric pressure now higher than 3 hours ago
2	increasing (steadily or unsteadily); atmospheric pressure now higher than 3 hours ago
3	decreasing or steady, then increasing; or increasing then increasing more rapidly; atmospheric pressure now higher than 3 hours ago
4	steady; atmospheric pressure same as 3 hours ago
5	decreasing, then increasing; atmospheric pressure the same or lower than 3 hours ago
6	decreasing, then steady; or decreasing then decreasing more slowly; atmospheric pressure now lower than 3 hours ago
7	decreasing (steadily or unsteadily); atmospheric pressure now lower than 3 hours ago
8	steady or increasing, then decreasing; or decreasing then decreasing more rapidly; atmospheric pressure now lower than 3 hours ago

Example:

52032

The code 5 has to do with the 3-Hourly Pressure Tendency

The second digit (2) can be checked at our table and we read than

“Increasing steadily or unsteadily”

The last 3 digits (032) is 3,2 hectopascals

So we are reading the pressure is Increasing with a value of 3,2 hecto pascal in de lasts 3 hours.



Finals some words concerning the RMK:

Sensor status indicators should be reported as indicated below:

If the Runway Visual Range should not be reported but is missing, **RVRNO** shall be coded.

When automated stations are equipped with a present weather identifier and that sensor is not operating, the remark **PWINO** shall be coded.

When automated stations are equipped with a tipping bucket rain gauge and that sensor is not operating, **PNO** shall be coded.

When automated stations are equipped when a freezing rain sensor and that sensor is not operating, the remark **FZRANO** shall be coded.

When automated stations are equipped with a lightning detection system and that sensor is not operating, the remark **TSNO** shall be coded.

When automated stations are equipped with a secondary visibility sensor that sensor is not operating, the remark **VISNO\_LOC** shall be coded.

When automated stations are equipped with a secondary ceiling height indicator and that sensor is not operating, the remark **CHINO\_LOC** shall be coded.

Maintenance Indicator. A maintenance indicator sign, **\$**, shall be coded when an automated system detects that maintenance is needed on the system.

Example:

**52032**

The code 5 relates to the 3-Hourly Pressure Tendency

The code 2 we look at our table and see it means " Increasing steadily or unsteadily"

Code 0 means "Increasing, then decreasing"

The last 2 digits (32) mean 3,2 hecto pascals

So we can see now that the air pressure has increased by a value of 3.2 hecto pascals in the last 3 hours.

Finally, a few words regularly be displayed in the RMK section

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Just to practise I have created two examples, first try to decipher this information yourself and then check to see if it coincides with what is shown below



### Exercise 1:

```
METAR KOKC 082152Z 15014KT 2SM R35R/6000VP6000FT TSGSRA BR SCT022 BKN029  
BKN045CB OVC190 26/23 A2957 RMK AO2 PK WND 15026/2056  
TSB30RAB31GSB52 SLP996 CONS LTGICCC S-W TS SW-W MOV NE P0009  
T02560228
```

The METAR relates to Will Rogers Airport :

8<sup>th</sup> of the month at 21:52Z, wind heading 150 at 14 knots, Visibility is 2 statute miles, the RVR for runway 35R is 6000 feet variable and greater than 6000 feet.

There is moderate

small hail/snow grains, thunderstorm, rain and fog.

The cloud cover is 1 to 2 octa at 2200 feet, 5 a 7 octa at 2900 feet, 5 a 7 octa at 4500 feet with Cumulus nimbus clouds and a complete cloud covering (8 octa) at 19000 feet.

Temperature is 26 degrees and dew point is 23 degrees Celsius.

De QNH is 29,57 Inches of Mercury.

The data was generated automatically without precipitation discriminator

The expectation for the next few hours is that there will be Peak Wind with a heading of 150 degrees with a strength of 26 knots. This will happen at 20:56 Z

Thunderstorm at 22:30, it began raining at 21:31. The wind gusts began at 21:52

The Sea Level Pressure is 999,6 Hpa. There is also a lightning storm of 6 flashes per minute and lightning takes place in the clouds, and between the clouds and the ground in the direction South and West.

The Thunderstorm now Southwest / West, is moving to the North-East.

In the last hour 9/100 Inches of Water Equivalent has fallen.

De temperature is 25,6C above zero while the dew point is 22,8C above zero.



## Exercise 2:

```
SPECI KOKC 082131Z 16018KT 5SM -TSRA HZ SCT037CB SCT140 OVC190 27/22  
A2957 RMK AO2 PK WND 15026/2056 TSB30RAB31 OCNL LTGIC SW-NW  
TS SW-NW MOV NE P0000
```

The METAR relates to Will Rogers Airport:

8<sup>th</sup> of the month at 21:31Z, wind heading 160 at 18 knots, Visibility is 5 Statute Miles.

There is a light thunderstorm, light rain and haze.

The cloud cover is 1 a 2 octa at 3700 feet with observations of Cumulus nimbus.

At

14000 feet the cloud cover is 5 a 7 octa and at 19000 feet it is fully overcast (8 octa)

Temperature is 27C and the dew point 22C (both above zero)

QNH is 29,57 Inches of Mercury.

Peak Wind expected heading 150 at 26 knots, this will take place at 20.56Z

Thunderstorm began at 21:30Z and it was raining at 21:31Z.

Occasional lightning of 1 flash per minute in the Southwest and Northwest.

Thunderstorm is moving from the South West/North West to the North East.

No water equivalent has fallen in the last hour(Inches).

We made it in terms of our comprehensive course in regards to METAR for the advanced and TAF information.

I hope that we in the FLIGHT-ACADEMY have given you many new insights in regards to these very important weather bulletins.

To get the most from this extensive information, routine and exercise are the key to success

Fortunately, we have the Internet full of METAR and TAF data.

Try to look at METAR data and see if you can decipher it.

Below I have done some more information that relates to METAR and TAF.

Good luck in your future studies.



# Key to METAR Surface Weather Observations

Unedited Surface Weather Observations  
(METAR/SPEC)

41 ◆ 59' Latitude  
 Longitude  
 -87 ◆ 55' Station  
 Elev. (ft) Time  
 658 Day  
 Conversion  
 02 Mon.  
 01 Year  
 1999 SID



ORD

WIND VISIBILITY

T  
Y  
P

E TIME

(LST) DIR

TRUE SPD

KTS GUST

KTS VARIABILITY TRUE SURFACE

STATUTE

MILES RUNWAY

VISUAL

RANGE (FT) PRESENT

WEATHER SKY CONDITIONS TEMP

◆C DEW

POINT

◆C ALTI-

METER

INS.

1	2	3	4	5	6	7	8	9
S	0049	100	21				3/4	
	R14R/4000VP6000FT					-SN BR		
	BKN005 OVC015					-08 -09		A3024



Station (Type, Name, State)

ASOS CHICAGO, IL

REMARKS AND SUPPLEMENTAL CODED DATA

14

PRESFR P0000 (CG)

Column Number			
1	TYPE	Type of Observation	<b>S</b> - routine (standard) hourly observation. Non-standard time observation will also show type <b>S</b> on these forms, although they are not.
2	TIME(LST)	Time of Observation	reported as "Local Standard Time"
3	DIR TRUE	Wind Direction	direction from which wind blows. Reported to nearest degree, 0 to 359, from true north. Based on a 2-minute average just prior to observation time.





4	SPD KTS	Wind Speed	reported in knots. Based on a 2-minute average just prior to observation time.
5	GUST KTS	Wind Gust	maximum 5-second peak wind speed measured in the last ten minutes.
6	VARIABILITY TRUE	Variable Wind Direction Indicator	determined if during the 2-minute evaluation period it varies by 60 degrees or more regardless of wind speed.
7	SURFACE STATUTE MILES	Prevailing Surface Visibility	reported in statute miles & fractions. Max reported visibilitiy is 10 statute miles. Derived by sensors. Reported as variable is prevailing visibility varies by 1/2 mile or more and the average visibility is less than 3 miles.
8	RUNWAY VISUAL RANGE (FT)	Secondary Visibility Measurements	reported when surface visibility 1 mile or less. Runway Visual Range: R; 2-digit runway designator <b>Left, Center, or Right</b> as needed; <b>"/index.html"</b> ; <b>Minus or Plus</b> , 4-digit value; 4-digit value <b>Varialbility</b> 4-digit value and tendency <b>Down, Up</b> or No change)
9	PRESENT WEATHER	See Table of Significant Weather and Obscurations Reported by ASOS (below)	
10	SKY CONDITION	Cloud amount, height and type	<b>SKy</b> Clear 0/8, <b>FEW</b> ">0/8-2/8, <b>SCaT</b> tered 3/8-4/8, <b>BroKeN</b> 5/8-7/8, <b>OVeR</b> Cast 8/8; 3-digit height in hundreds of ft; <b>Towering CU</b> mulus or <b>CumulonimBus</b> in <b>METAR</b> . <b>Vertical Visibility</b> for obscured sky and height "VV004". More than 1 layer may be reported. ASOS stations report only, <b>CLeaR</b> for "clear below 12,000 feet"
11	TEMP	Dry Bulb Temperature	reported in whole degrees Celsius
12	DEW POINT	Dew Point Temperature	reported in whole degrees Celsius
13	ALTIMETER (INS.)	Altimeter Setting in Inches of Mercury	reported to nearest hundredth of an inch. Altimeter setting is the computed pressure value to which an aircraft altimeter scale is set so that it will indicate the altitude above mean sea level of an aircraft on the ground at the location for which the value was determined.
14	REMARKS AND SUPPL CODED DATA	See table xxx below for details	





<b>CIG 017 RWY11</b>	CEILING HEIGHT AT SECOND LOCATION	CIG hhh[LOC]; Ceiling height reported if secondary ceilometer site ceiling value is different than the ceiling height in the body of the report.
<b>PRESFR</b>	PRESSURE RISING OR FALLING RAPIDLY	PRESRR or PRESFR; pressure rising or falling rapidly at time of observation.
<b>SLP125</b>	SEA LEVEL PRESSURE	SLPppp; sea level pressure reported for ppp in tens, units, and tenths of hPa.
<b>P0003</b>	HOURLY PRECIPITATION AMOUNT	Prrrr; in tens, units, tenths and hundredths of an inch since last regular hourly METAR. A trace is reported as P0000.
<b>60009</b>	3- AND 6-HOUR PRECIPITATION AMOUNT	6RRRR; precipitation amount, including water equivalent, to nearest 0.01 inches for past 6 hours reported in 00, 06, 12, and 18 UTC observations and for past 3 hours in 03, 09, 15, and 21 UTC observations. A trace is 60000.
<b>70015</b>	24-HOUR PRECIPITATION AMOUNT	7R <sub>24</sub> R <sub>24</sub> R <sub>24</sub> R <sub>24</sub> ; precipitation amount to nearest 0.01 inches for past 24 hours reported in 12 UTC observation; e.g., 70015 indicates 0.15 inches of precipitation for past 24 hours.
<b>T00640036</b>	HOURLY TEMPERATURE AND DEW POINT	T <sub>s</sub> nT <sub>a</sub> T <sub>a</sub> T <sub>a</sub> T <sub>s</sub> nT' <sub>a</sub> T' <sub>a</sub> T' <sub>a</sub> ; reported to nearest tenth of °C; s <sub>n</sub> : 1 if temperature or dew point below 0°C and 0 if temperature/dew point 0°C or higher.
<b>10066</b>	6-HOUR MAXIMUM TEMPERATURE	1s <sub>n</sub> T <sub>x</sub> T <sub>x</sub> T <sub>x</sub> ; maximum temperature for past 6 hours reported to nearest tenth of degree Celsius; reported on 00, 06, 12, 18 UTC reports; s <sub>n</sub> = 1 if temperature below 0°C and 0 if temperature 0°C or higher.
<b>21012</b>	6-HOUR MINIMUM TEMPERATURE	2s <sub>n</sub> T <sub>n</sub> T <sub>n</sub> T <sub>n</sub> ; minimum temperature for past 6 hours reported to nearest tenth of degree Celsius; reported on 00, 06, 12, 18 UTC reports; s <sub>n</sub> = 1 if temperature below 0°C and 0 if temperature 0°C or higher.
<b>400461006</b>	24-HOUR MAXIMUM AND MINIMUM TEMPERATURE	4s <sub>n</sub> T <sub>x</sub> T <sub>x</sub> T <sub>x</sub> s <sub>n</sub> T <sub>n</sub> T <sub>n</sub> T <sub>n</sub> ; maximum temperature for past 6 hours reported to nearest tenth of degree Celsius; reported on midnight local standard time reports; s <sub>n</sub> = 1 if temperature below 0°C and 0 if temperature 0°C or higher; e.g., 400461006 indicates a 24-hour maximum temperature of 4.6°C and a 24-hour minimum temperature of -0.6°C.
<b>58033</b>	PRESSURE TENDENCY	5appp; the character (a) and amount of change in pressure (ppp) in tenths of hPa for the past 3 hours. (See code details in table below)
<b>TSNO</b>	SENSOR STATUS INDICATORS	RVRNO: RVR missing; PWINO: precipitation identifier information not available; PNO: precipitation amount not available; FZRANO: freezing rain information not available; TSNO: thunderstorm information not available (may indicate augmenting weather observer not logged on); VISNO [LOC] visibility at second location not available, e.g. VISNO RWY06; CHINO [LOC]: (cloud-height- indicator) sky condition at secondary location not available, e.g., CHINO RWY06.
<b>\$</b>	MAINTENANCE CHECK INDICATOR	Maintenance is needed on the system.

Table of Remarks Referring to Type and Frequency of Lightning

Type of Lightning		
Type	Contraction	Definition
Cloud-ground	CG	Lightning occurring between cloud and ground.
In-cloud	IC	Lightning which takes place within the cloud.
Cloud-cloud	CC	Streaks of lightning reaching from one cloud to another.
Cloud-air	CA	Streaks of lightning which pass from a cloud to the air, but do not strike the ground.
Frequency of Lightning		
Frequency	Contraction	Definition
Occasional	OCNL	Less than 1 flash per minute.
Frequent	FRQ	About 1 to 6 flashes per minute.
Continuous	CONS	More than 6 flashes per minute.



Table of Remarks Referring to Characteristics of Pressure Tendency

Primary Requirement	Description	Code Figure
Atmospheric pressure now higher than 3 hours ago.	Increasing, then decreasing	0
	Increasing, then then steady, or increasing then increasing more slowly.	1
	Increasing steadily or unsteadily.	2
	Decreasing or steady, then increasing; or increasing, then increasing more rapidly.	3
Atmospheric pressure now same as 3 hours ago.	Increasing, then decreasing	0
	Steady	4
	Decreasing, then increasing.	5
Atmospheric pressure now lower than 3 hours ago.	Decreasing, then increasing.	5
	Decreasing then steady; or decreasing then decreasing more slowly.	6
	Decreasing steadily or unsteadily.	7
	Steady or increasing, then decreasing; or decreasing then decreasing more rapidly.	8

WORD	DESCRIPTION
<b>A</b>	Hail
<b>ABM</b>	Abeam
<b>ABV</b>	Above
<b>AC</b>	Alto cumulus
<b>ACCAS</b>	Alto cumulus castellanus
<b>ACCUM</b>	Alto cumulate
<b>ACLD</b>	Above clouds
<b>ACSL</b>	Standing lenticular alto cumulus
<b>ACTV</b>	Active
<b>ACYC</b>	Anticyclonic
<b>ADDN</b>	Addition
<b>ADRNDCK</b>	Adirondack
<b>ADVCTN</b>	Advection
<b>ADVY</b>	Advisory
<b>AFDK</b>	After Dark
<b>AFT</b>	After
<b>AFTN</b>	Afternoon
<b>AGL</b>	Above Ground Level
<b>AGN</b>	Again
<b>AHD</b>	Ahead
<b>AIREP</b>	Air Report
<b>AIRMET</b>	Airmen's Meteorological Info
<b>ALF</b>	Aloft
<b>ALG</b>	Along
<b>ALGHNY</b>	Allegheny
<b>ALQDS</b>	All quadrants



<b>ALSTG</b>	Altimeter setting
<b>ALTA</b>	Alberta
<b>ALUTN</b>	Alleutian
<b>AMD</b>	Amended forecast
<b>AMDT</b>	Amendment
<b>AMOS</b>	Automatic Meteorological observing system
<b>AMS</b>	Air mass
<b>ANLYS</b>	Analysis
<b>AO1</b>	Automated observation with no precip discriminator (rain/snow)
<b>AO2</b>	Automated observation with precip discriminator (rain/snow)
<b>AOA</b>	At or above
<b>AOB</b>	At or below
<b>AP</b>	Anomalous propagation
<b>APCH</b>	Approach
<b>APRNT</b>	Apparent
<b>AS</b>	Altostratus
<b>ASOS</b>	Automated surface observing system
<b>ATLC</b>	Atlantic
<b>ATTM</b>	At this time
<b>AURBO</b>	Aurora Borealis
<b>AUTOB</b>	Automatic weather reporting system
<b>AWOS</b>	Automatic weather observing system
<b>B</b>	Beginning of precipitation (time in minutes (wx reports only))
<b>BACLIN</b>	Baroclinic prognosis
<b>BATROP</b>	Barotropic or barotropic prognosis
<b>BC</b>	British Columbia
<b>BCFG</b>	Fog patches
<b>BCKG</b>	Backing
<b>BCM(G)</b>	Become (becoming)
<b>BD</b>	Blowing dust (wx reports only)
<b>BFDK</b>	Before dark
<b>BINOVC</b>	Breaks in overcast
<b>BKN</b>	Broken
<b>BLDUP</b>	Build up
<b>BLKHLS</b>	Black Hills
<b>BLO</b>	Below
<b>BN</b>	Blowing sand (wx reports only)
<b>BNDRY</b>	Boundary
<b>BOVC</b>	Base of overcast
<b>BRAF</b>	Braking action fair
<b>BRAG</b>	Braking action good
<b>BRAN</b>	Braking action nil



<b>BRAP</b>	Braking action poor
<b>BRF</b>	Brief
<b>BRKSHR</b>	Berkshire
<b>BS</b>	Blowing snow (wx reports only)
<b>BTWN</b>	Between
<b>BY</b>	Blowing spray (wx reports only)
<b>CA</b>	Clear above (PIREP only)
<b>CAN</b>	Canada
<b>CARIB</b>	Caribbean
<b>CAS</b>	Clear and smooth
<b>CASCDS</b>	Cascades
<b>CAVOK</b>	Ceiling and visibility OK
<b>CAVU</b>	Ceiling and visibility unlimited
<b>CB</b>	Cumulonimbus
<b>CBMAM</b>	Cumulonimbus mammatus
<b>CC</b>	Cirrocumulus
<b>CCSL</b>	Standing lenticular cirrocumulus
<b>CDFNT</b>	Cold Front
<b>CFP</b>	Cold front passage
<b>CHC</b>	Chance
<b>CHSPK</b>	Chesapeake
<b>CIG</b>	Ceiling
<b>CLD</b>	Cloud
<b>CLFMEX</b>	Gulf of Mexico
<b>CLR</b>	Clear
<b>CNDN</b>	Canadian
<b>CNL</b>	Cancel
<b>CNTRL</b>	Central
<b>CNVG</b>	Converge
<b>CNVTV</b>	Convective
<b>CONT-DVD</b>	Continental Divide
<b>CONTRAILS</b>	Condensation trails
<b>CS</b>	Cirrostratus
<b>CST</b>	Coast
<b>CTGY</b>	Category
<b>CTSKLS</b>	Catskills
<b>CU</b>	Cumulus
<b>CUF</b>	Cumuliform
<b>CUFRA</b>	Cumulus fractus
<b>CYC</b>	Cyclonic
<b>CYCLGN</b>	Cyclogenesis
<b>D</b>	Dust (wx reports only)



<b>DABRK</b>	Daybreak
<b>DALGT</b>	Daylight
<b>DCAVU</b>	Clear or scattered cloud and vis greater than 10, remainder or report missing (wx reports only)
<b>DCR</b>	Decreased
<b>DIAM</b>	Diameter
<b>DKTS</b>	Dakotas
<b>DMSH</b>	Diminish
<b>DNS</b>	Dense
<b>DNSLP</b>	Downslope
<b>DNSTRM</b>	Downstream
<b>DP</b>	Deep
<b>DPNG</b>	Deepening
<b>DPTH</b>	Depth
<b>DRFT</b>	Drift
<b>DRG</b>	During
<b>DRZL</b>	Drizzle
<b>DSIPT</b>	Dissipate
<b>DSNT</b>	Distant
<b>DTRT</b>	Deteriorate
<b>DWNDFTS</b>	Downdrafts
<b>DWPNT</b>	Dew point
<b>E</b>	Ending of precipitation (time in minutes)(wx reports only)
<b>E</b>	Equatorial (air mass)
<b>E</b>	Estimated (wx reports only)
<b>ELNGT</b>	Elongate
<b>EMBDD</b>	Embedded
<b>ENRT</b>	Enroute
<b>ENTR</b>	Entire
<b>ERY</b>	Early
<b>EVE</b>	Evening
<b>EXCP</b>	Except
<b>EXPC</b>	Expect
<b>EXTRM</b>	Extreme
<b>F</b>	Fog (wx reports only)
<b>FA</b>	Area Forecast
<b>FAH</b>	Fahrenheit
<b>FAX</b>	Facsimile
<b>FIBI</b>	Filed but impracticable to transmit
<b>FINO</b>	Wx report will not be filed for transmission
<b>FLG</b>	Falling
<b>FLRY</b>	Flurry



<b>FNT</b>	Front
<b>FNTGNS</b>	Frontogenesis
<b>FNTLYS</b>	Frontolysis
<b>FORNN</b>	Forenoon
<b>FRMG</b>	Forming
<b>FROPA</b>	Frontal passage
<b>FRST</b>	Frost
<b>FRZ</b>	Freeze
<b>FRZLVL</b>	Freezing level
<b>FRZN</b>	Frozen
<b>FT</b>	Terminal Forecast
<b>FZRANO</b>	Freezing rain sensor not operating
<b>G</b>	Gusts reaching (knots)(wx reports only)
<b>GF</b>	Ground fog (wx reports only)
<b>GFDEP</b>	Ground fog estimated (feet) deep
<b>GICG</b>	Glaze icing
<b>GLFALSK</b>	Gulf of Alaska
<b>GLFCAL</b>	Gulf of California
<b>GLFSTLAWR</b>	Gulf of St. Lawrence
<b>GNDFG</b>	Ground Fog
<b>GRAD</b>	Gradient
<b>GRTLKS</b>	Great Lakes
<b>GSTS</b>	Gusts
<b>GSTY</b>	Gusty
<b>H</b>	Haze (wx reports only)
<b>HCVIS</b>	High clouds visible
<b>HDEP</b>	Haze layer estimated (feet) deep
<b>HDSVLY</b>	Hudson Valley
<b>HI</b>	High
<b>HLSTO</b>	Hailstones
<b>HLYR</b>	Haze layer aloft
<b>HURCN</b>	Hurricane
<b>HVY</b>	Heavy
<b>IC</b>	Ice crystal
<b>ICG</b>	Icing
<b>ICGIC</b>	Icing in clouds
<b>ICGICIP</b>	Icing in clouds and precipitation
<b>ICGIP</b>	Icing in precipitation
<b>IF</b>	Ice fog
<b>IFR</b>	Instrument flight rules
<b>INCR</b>	Increase
<b>INDC</b>	Indicate





<b>INDEF</b>	Indefinite
<b>INLD</b>	Inland
<b>INSTBY</b>	Instability
<b>INTR</b>	Interior
<b>INTR-MTRGN</b>	Inter-mountain region
<b>INTS</b>	Intense
<b>INTST</b>	Intensity
<b>INVRN</b>	Inversion
<b>IOVC</b>	In overcast
<b>IP</b>	Ice pellets (wx reports only)
<b>IR</b>	Ice on runway
<b>JTSTR</b>	Jetstream
<b>K</b>	Smoke
<b>KDEP</b>	Smoke layer estimated (feet) deep
<b>KLYR</b>	Smoke layer aloft
<b>KOCTY</b>	Smoke over city
<b>L</b>	Drizzle (wx reports only)
<b>LABRDR</b>	Labrador
<b>LFT</b>	Lift
<b>LGT</b>	Light
<b>LIFR</b>	Low IFR (wx reports only)
<b>LK</b>	Lake
<b>LSR</b>	Loose snow on runway
<b>LST</b>	Local Standard Time
<b>LTGCA</b>	Lightning cloud to air
<b>LTGCC</b>	Lightning cloud to cloud
<b>LTGCCG</b>	Lightning cloud to cloud, cloud to ground
<b>LTGCG</b>	Lightning cloud to ground
<b>LTGCW</b>	Lightning cloud to water
<b>LTGIC</b>	Lightning in clouds
<b>LTLCG</b>	Little change
<b>LTNG</b>	Lightning
<b>LYR</b>	Layer or layered or layers
<b>M</b>	Measured ceiling (wx reports only)
<b>M</b>	Missing (wx reports only)
<b>MAN</b>	Manitoba
<b>MDT</b>	Moderate
<b>METAR</b>	Scheduled aviation observation
<b>MEX</b>	Mexico
<b>MHKVLY</b>	Mohawk Valley
<b>MIDN</b>	Midnight
<b>MIFG</b>	Patches of shallow fog not deeper than 2 meters



<b>MLTLVL</b>	Melting level
<b>MNLD</b>	Mainland
<b>MOGR</b>	Moderate or greater
<b>MOV</b>	Move
<b>MRGL</b>	Marginal
<b>MRNG</b>	Morning
<b>MRTM</b>	Maritime
<b>MSTLY</b>	Mostly
<b>MTN</b>	Mountain
<b>MVFR</b>	Marginal VFR
<b>NB</b>	New Brunswick
<b>NEW ENG</b>	New England
<b>NFLD</b>	Newfoundland
<b>NGT</b>	Night
<b>NOSPL</b>	No special observations taken (wx reports only)
<b>NS</b>	Nimbostratus
<b>NS</b>	Nova Scotia
<b>NVA</b>	Negative vorticity advection
<b>OBS</b>	Observation
<b>OBSC</b>	Obscure
<b>OCFNT</b>	Occluded front
<b>OCLD</b>	Occlude
<b>OCLN</b>	Occlusion
<b>OFP</b>	Occluded frontal passage
<b>OFFSHR</b>	Offshore
<b>OMTNS</b>	Over mountains
<b>ONSHR</b>	On shore
<b>ONT</b>	Ontario
<b>ORGPHC</b>	Orographic
<b>OTAS</b>	On top and smooth
<b>OTLK</b>	Outlook
<b>OVC</b>	Overcast
<b>OVR</b>	Over
<b>PAC</b>	Pacific
<b>PCPN</b>	Precipitation
<b>PDW</b>	Priority Delayed Weather
<b>PEN</b>	Peninsula
<b>PGTSND</b>	Puget Sound
<b>PIBAL</b>	Pilot balloon observation
<b>PK WND</b>	Peak wind (wx report only)
<b>PNHDL</b>	Panhandle
<b>PNO</b>	Rain gauge not operating



<b>PPINA</b>	Radar weather report not available or omitted
<b>PPINE</b>	Radar weather report no echoes observed
<b>PPINO</b>	Radar weather report equipment inoperative due to breakdown
<b>PPIOK</b>	Radar weather report equipment operation resumed
<b>PPIOM</b>	Radar weather report equipment inoperative due to maintenance
<b>PRBLTY</b>	Probability
<b>PRESFR</b>	Pressure falling rapidly
<b>PRESRR</b>	Pressure rising rapidly
<b>PRJMP</b>	Pressure jump (wx reports only)
<b>PROG</b>	Prognosis or prognostic
<b>PSR</b>	Packed snow on runway
<b>PTCHY</b>	Patchy
<b>PTLY</b>	Partly
<b>PVA</b>	Positive vorticity advection
<b>PWINO</b>	Precipitation identifier information not available (wx reports only)
<b>Q</b>	Squall (wx reports only)
<b>QSTNRY</b>	Quasistationary
<b>QUE</b>	Quebec
<b>R</b>	Rain (wx reports only)
<b>RADAT</b>	Radiosonde observation data
<b>RAOB</b>	Radiosonde observation
<b>RCKY</b>	Rocky Mountains
<b>RDG</b>	Ridge
<b>RGD</b>	Ragged
<b>RHINO</b>	Radar echo height information not available
<b>RHINO</b>	Radar range height indicator not operating on scan
<b>RIOGD</b>	Rio Grande
<b>RNFL</b>	Rainfall
<b>ROBEPS</b>	Radar operating below prescribed standard
<b>RPD</b>	Rapid
<b>RSG</b>	Rising
<b>RUF</b>	Rough
<b>RVRNO</b>	Runway visual range missing
<b>RW</b>	Rain shower (wx reports only)
<b>S</b>	Snow (wx reports only)
<b>SASK</b>	Saskatchewan
<b>SAWRN</b>	Supplementary Aviation Weather Reporting System
<b>SC</b>	Stratocumulus
<b>SCSL</b>	Stratocumulus standing lenticular
<b>SCT</b>	Scattered
<b>SELS</b>	Severe local storms
<b>SFERICS</b>	Atmospherics



<b>SG</b>	Snow grains (wx reports only)
<b>SHFT</b>	Shift (wx reports only)
<b>SHLW</b>	Shallow
<b>SHWR</b>	Shower
<b>SIERNEV</b>	Sierra Nevada
<b>SIR</b>	Snow and ice on runway
<b>SLF</b>	Sea level pressure
<b>SLPNO</b>	Sea level pressure not available
<b>SNINCR</b>	Snow increasing rapidly
<b>SPECI</b>	Unscheduled aviation observation
<b>TCU</b>	Towering cumulus
<b>TDA</b>	Today
<b>TDWR</b>	Terminal Doppler Weather Radar
<b>TEMP</b>	Temperature
<b>THDR</b>	Thunder
<b>THRU</b>	Through
<b>THRUT</b>	Throughout
<b>THSD</b>	Thousand
<b>TIL</b>	Until
<b>TMW</b>	Tomorrow
<b>TNGT</b>	Tonight
<b>TOP</b>	Cloud top
<b>TOVC</b>	Top of overcast
<b>TPG</b>	Topping
<b>TROF</b>	Trough
<b>TROP</b>	Tropopause
<b>TRPCL</b>	Tropical
<b>TRRN</b>	Terrain
<b>TSHWR</b>	Thundershower
<b>TSNO</b>	Lightning sensor not available
<b>TSTM</b>	Thunderstorm
<b>TURB</b>	Turbulence
<b>TURBC</b>	Turbulence
<b>TWD</b>	Toward
<b>TWR</b>	Tower
<b>TWRG</b>	Towering
<b>TYPH</b>	Typhoon
<b>U</b>	Intensity unknown (wx reports only)
<b>UA</b>	Routine PIREP
<b>UDDF</b>	Up and down drafts
<b>UNSTBL</b>	Unstable
<b>UNSTDY</b>	Unsteady



<b>UPR</b>	Upper
<b>UTC</b>	Universal coordinated time
<b>UUA</b>	Urgent PIREP
<b>V</b>	Variable (wx reports only)
<b>VCSH</b>	Showers in vicinity
<b>VCTY</b>	Vicinity
<b>VFR</b>	Visual flight rules
<b>VLV</b>	Valley
<b>VRBL</b>	Variable
<b>VSBY</b>	Visibility
<b>WDLY</b>	Widely
<b>WEA</b>	Weather
<b>WFP</b>	Warm front passage
<b>WK</b>	Weak
<b>WKN</b>	Weaken
<b>WL</b>	Will
<b>WND</b>	Wind
<b>WRM</b>	Warm
<b>WRMFNT</b>	Warm front
<b>WRNG</b>	Warning
<b>WSHFT</b>	Wind shift
<b>WW</b>	Severe weather forecast
<b>WX</b>	Weather
<b>X</b>	Obscured sky condition
<b>XCP</b>	Except
<b>YDA</b>	Yesterday
<b>Z</b>	UTC
<b>ZRNO</b>	Freezing rain information not available (wx reports only)

#### **A FEW OTHER WORDS WITH THE DESCRIPTIONS:**

00000	calm winds
VRB	means variable direction of winds 1920 from 1900Z to 2000Z
OCNL, OCNLY	Occasional, occasionally means greater than 50% chance for less than half of the forecast period.
OTLK	outlook covers six hours following forecast period.
CHC	chance means 30 to 50% probability during forecast period.
SLGT CHC	10 to 20% chance
ISOLD	isolated is lowest thunderstorm/precipitation alert level
WDLY SCT	widely scattered is less than 25% chance
SCT	scattered 25 to 54%



CHC	means that there is a 30 to 50% likelihood of an event. Chance tests your appraisal of what is believable compared to what you would rather believe. Any flight into a chance of icing or thunderstorms is considered by the NTSB as an FAR violation.
NMRS	numerous is more than 54% chance
VCNTY	vicinity between 5 and 25 miles
VC-SHRA	rain showers in vicinity
NSW	no significant weather
9999	visibility over 6 miles
BR	mist (baby rain)
T16/11	temperature 16&deg;C at 1100Z
6CU030	6/8th cumulus at 3000'
FEW	1/8 to 2/8 sky coverage
COR	correction
SPECI	special or Special Report)
KPIT U.S.	station identifiers begin with K followed by three letters.
201955Z	20th day 1955Z time of issue. It is always 6 digits and "Z"
COR	for correction to observation) ...follows the time field (when present)?
RMK SLP013	remarks, sea level pressure 1001,3 Hpa
FM1930	From and 2-digit hour and 2-digit minutes indicates significant change in weather. Each FM group has a separate line which is indented five spaces.
PROB40 2022	PROBability and 2-digit percent; probable condition during 2-digit beginning and 2-digit ending time period.
9M04///	means temperature -4 degC, dewpoint not available.
FM1930	From gives a two digit hour and two digit minute as time of significant change. Each FM begins a new line indented five spaces.
PROB	PROBability
PROB40 2022	Has a two digit percent during time between two digit beginning and end.
TEMPO	TEMPOrary
TEMPO0407	Changes less than an hour duration and less than half of time between two digit beginning and two digit end.
BECOMING	BECoMinG
BECMG 1315	Change expected from beginning two digit and ending two digit time period.
BINOVC	breaks in overcast
BRKS N	breaks in layer below 1000' covers 6/10+ of sky
ACCAS ALQDS	Alto cumulus castellanus all quadrants
CUFRA W	cumulus factus clouds west
IC4	ice crystals 4/10 of sky
PRESSRR	pressure rising rapidly
RADAT 87120 87	is relative humidity of freezing level, 120(00) is altitude
RADAT ZERO	freezing level at ground
F5	fog covering 5/10 of sky
RWU E	Rain showers of unknown intensity east
OCNL LTGIC	occasional lightning in clouds



OCNL LTGIC OHD	Occasional lightning in cloud overhead FQT and OVHD are replaced by the international contractions FRQ and OHD
FQT LTGCCCA	Frequent lightning cloud to cloud and cloud to atmosphere
SB50 PRESSFR	Snow began 50 minutes after the hour pressure falling rapidly
KOCTY	smoke over the city
CLDS APCHG STN	clouds approaching station
PRJMP 8/1012/18	pressure jump .8inch at 10:12 stopped at 18 after 10:00
TWRINUN	control tower in unknown
AB13E20 HLSTO1/2	Hail began 13 after and ended 20 after 1/2" hailstones
SU N	snow of unknown intensity north
SHLW GFDEP 4	Shallow ground fog 4 feet deep
SNOINCR 1/4/8	snow depth increase 1inch per hour/4 inches last six 8" deep
PCPN 103 1.03	precipitation in past hour
ACSL	altocumulus standing lenticular clouds
CCSL	Cirrocumulus standing lenticular
CBMAM	cumulonimbus mama
P	(Plus)as a letter imposed before visibility means 'greater than' ` otherwise means +. (Plus)
NSC	means no significant clouds apparently differs from SKC (sky clear).
NSW	means no significant weather
VC	means vicinity...at or within five miles
DSNT	means distant...at or beyond ten miles
SKC	means sky clear
FEW	means cloud coverage 1 to 2 eights sky coverage
TEMPO	(Means "conditions temporary about half of time) Weather and visibility from another time period carries forward through TEMPO unless mentioned.
PROB40	(40% chance of...),
BECMG	(becoming...) After qualifiers components omitted are expected to remain the same. Weather not expected to continue into BECMG or TEMPO time periods is written as NSW (no significant weather)
TX	Maximum temperature forecast
TN	Minimum temperature forecast

