TYPES OF WEATHER CHARTS

SURFACE WEATHER CHARTS

- includes: isobars (joins places of equal pressure), high and low pressure areas, air masses and fronts.
- shows **actual conditions** at a specific time
- the pressure pattern is representative of the atmosphere up to 3000 feet
- issued 4 times daily at 6 hour intervals

UPPER LEVEL CHARTS

shows **actual** wind flow patterns and temperatures aloft at various altitudes at a specific time

measured twice a day at 0000 Zulu and 1200 Zulu

PROGNOSTIC CHARTS
(Graphic Forecasts)

PROGNOSTIC SURFACE CHARTS (PROG)

- is a graphic **forecast**
- shows expected surface weather at a specific time in the future
- issued 48 hours before they are valid and a second revised chart is issued 12 hours later (36 hours before they are valid).

UPPER LEVEL PROGNOSTIC CHART (PROG)

- a graphic **forecast** of winds and temperatures aloft for a specific time
- prepared for specific high level altitudes
- issued 4 times daily 12 hours before valid

SIGNIFICANT WEATHER PROGNOSTIC CHART (PROG)

- shows **forecast** significant weather considered to be of concern to aircraft operations
- issued four time daily 12 hours before they are valid

METAR

Meteorological **A**viation Weather **R**eport

- taken and issued on the hour, every hour, at weather stations around the world
- an actual observation of current weather conditions taken by an accredited observer
- cloud heights are above ground

TAFS

Terminal **A**erodrome **f**orecast

- states in specific terms the expected weather conditions at a specific aerodrome
- covers a radius of five nautical miles around the aerodrome
- issued four times daily at six hour intervals
- valid for up to 24 hours
- cloud heights are above ground

FA

Area **F**orecast

- general forecast conditions over a particular area
- forecasts for various regions within the area
- cloud heights above sea level unless noted
- issued every six hours
- valid for 12 hours with a further 12 hour outlook

Aviation Routine Weather Report - METAR

METAR CYXE 292000Z CCA 30015G25KT 3/4SM R33/4000FT/D -SN BLSN BKN008 OVC040 M05/M08 A2992 REFZRA WS RWY33 RMK SF5 SC3 VIS 3/8 TO NW SLP134

METAR - Aviation Routine Weather Report
Type of report. A special is indicated by SPECI.

CYXE - Saskatoon, Saskatchewan
Station indicators will be 4-letter ICAO indicators.

292000Z - 29th day of the month, 2000 co-ordinated universal time (UTC)

CCA - Corrected Report
Report Modifier. AUTO is used when data for the primary report is gathered by an AWOS. If a human observer augments the AWOS, additional information will be coded into the remarks section.

30015G25KT - Wind is from 300° True at 15 knots gusting to 25 knots.

3/4SM - Prevailing visibility is 3/4 statute mile.
Statute Miles (SM) and fractions of SM with no maximum visibility value is reported. AWOS sites will report a "sensor equivalent visibility".

R33/4000FT/D - RVR for Runway 33 is 4 000 feet and has had a downward tendency.
The 10-minute mean RVR will be reported for the touchdown zone when the prevailing visibility is 1 mile or less and/or the RVR is 6 000 feet or less. For values higher than the RVR reporting range, a "P" will prefix the RVR value and "M" will indicate a value below the reporting range. When the RVR varies significantly prior to the reporting period, the 1-minute mean maximum or minimum value will be reported prefixed by a "V". The following suffixes will be used to indicate the RVR tendency: /U - to indicate an upward trend, /D - to indicate a downward trend, /N - to indicate no change.

-SN BLSN - Present weather is light snow and moderate blowing snow.
Present weather is comprised of weather phenomenon (precipitation, obscuration or others) preceded by one or two qualifiers (intensity or proximity to the station and descriptor). The dominant weather will be reported first.

Intensity

– Light **(no sign)** Moderate + Heavy **VC** Vicinity

Descriptor

SH Showers **FZ** Freezing **BL** Blowing **DR** Drifting **MI** Shallow **BC** Patches **TS** Thunderstorm **PR** Covering Part of Aerodrome

Precipitation

RA Rain **SN** Snow **DZ** Drizzle **GR** Hail **PE** Ice Pellets **IC** Ice Crystals **SG** Snow Grains **GS** Snow Pellets **UP** Unknown Precipitation (AWOS only)

Obscuring Phenomena

HZ Haze **FU** Smoke **SA** Sand **DU** Dust **FG** Fog (VSBY < 5/8 SM) **BR** Mist (VSBY ≥ 5/8 SM)

Other

SQ Squall **DS** Duststorm **SS** Sandstorm **PO** Dust / Sand Whirls **VA** Volcanic Ash **FC** Funnel Cloud **+FC** Tornado/Waterspout

BKN008 OVC040 - The cloud layer at 800 feet is broken, covering from 5/8 to 7/8 of the observed sky. The next layer at 4 000 feet is overcast covering, combined with the lower layer, 8/8 of the sky, as observed from the ground.
Layers are reported based on the summation of the layer amounts as observed from the surface up. The layer amounts are reported in eighths of sky coverage (oktas) as follows: FEW - >0 to 2, SCT - 3 to 4, BKN - 5 to 7, OVC - 8. Only CB and TCU will be reported as cloud types in this area of the report. Where observed, other cloud types and their layer opacity's are reported in the remarks. Obscured sky is indicated by vertical visibility (VV) and is reported in hundreds of feet. In AWOS reports; cloud types are not identified, cloud layers are limited to 4 layers, and clear (CLR) will be reported when no layers exist below 10 000 feet.

M05/M08 - Temperature is -5°C, dew point is -8°C.
Temperature and dew point are reported to the nearest whole °C. Negative values will be preceded by the letter "M".

A2992 - The altimeter setting is 29.92 inches of mercury.
The letter "A" prefixing the 4–digit number group indicates inches of mercury for station pressure.

REFZRA - Freezing rain has been observed during the hour since the last report, but not at the time of the report.
Recent weather since the last observation is reported, to include: freezing precipitation; moderate or heavy rain, snow, blowing snow, snow pellets, hail, or ice pellets; thunderstorm, sandstorm, or duststorm; volcanic ash; funnel cloud, tornado, and waterspout.

WS RWY33 - Recent wind shear existed in the takeoff or landing path of Runway 33 below 1 600 feet AGL.
Recent wind shear information below 1 600 feet AGL will be provided when reported by an aircraft on takeoff or landing.

RMK SF5 SC3 - The lowest reported cloud layer type is stratus fractus, opaque over 5/8 of its coverage. The next layer type is stratocumulus, opaque over 3/8 of its coverage.
Where observed, the cloud types and their opacities will be included in remarks. The remarks will include all elements augmented by human observers at AWOS sites. Funnel clouds, tornadoes, and waterspouts will be spelled out if "FC" or "+FC" is in the present weather section.

VIS 3/8 NW - Visibility is 3/8 statute mile to the northwest.
Other supplementary remarks of operational significance may be included using standard abbreviations.

SLP134 - The mean sea level pressure is 1013.4 hPa (mb).
The mean sea level pressure, indicated in hectopascals, will always be the last field of the METAR report, prefixed with "SLP".

Version 1/96