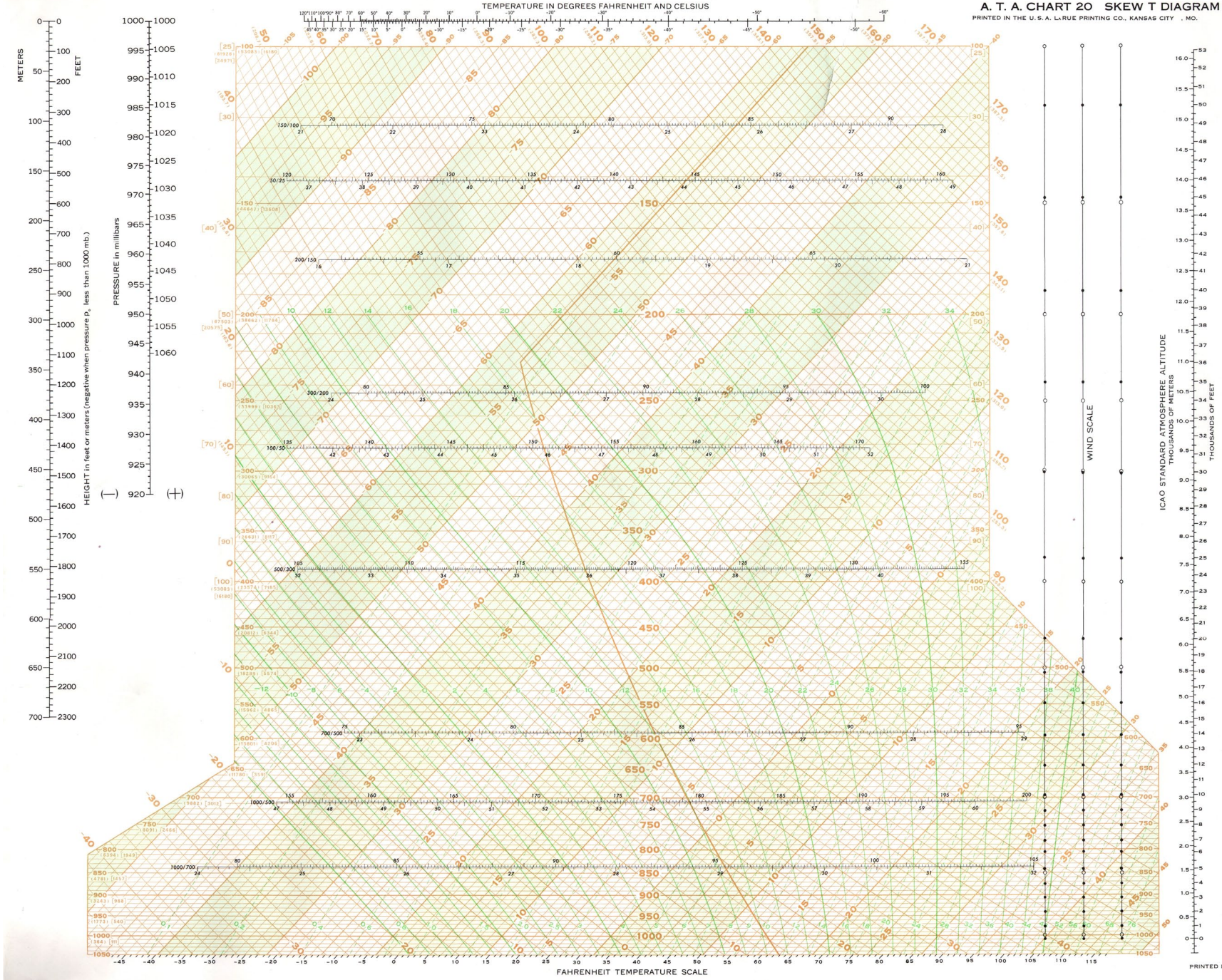

A. T. A. CHART 20 SKEW T DIAGRAM

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EXPLANATION

ISOBARS are straight, horizontal brown lines. The heights of the pressure surfaces in the ICAO Standard atmosphere, below the pressure values on the left, are in parentheses ( ) for values in feet and brackets [ ] for meter values.

ISOTHERMS (°C) are the straight, equidistant brown lines running diagonally upward from left to right.

DRY ADIABATS are the slightly curved brown lines that intersect the 1000 mb. isobar at intervals of 2°C, and run diagonally upward from right to left. The Dry Adiabats for the overlap portion of the pressure range are labeled with two(2) values. (See below.)

SATURATION ADIABATS are the curved green lines that intersect the 1000 mb. isobar at intervals of 2°C, diverging upward and tending to become parallel to the dry adiabats.

SATURATION MIXING RATIO (in gm. per kg.) is represented by dashed green lines. Their values appear between the 1000 and 950 mb. lines.

THICKNESS (in hundreds of geopotential feet and meters) of the layers 1000-700, 1000-500, 700-500, 500-300, 300-200, 200-150, 150-100, 100-50, and 50-25 mb. is represented by numbers and a graduation along the middle of each layer. The thicknesses are obtained from the virtual temperature curve by the equal-area method, using any straight line as a dividing line.

HEIGHT in geopotential feet or meters above mean sea level, or station level, of the 1000 mb. surface is obtained from the nomogram in the upper left-hand corner by drawing a straight line from the temperature scale (°F) or (°C) through the point p_s (mean sea level or station pressure) on the pressure scale, and reading height on the appropriate height scale.

ICAO STANDARD ATMOSPHERE SOUNDING is indicated by a thick brown line.

The saturated adiabats and isopleths of saturation mixing ratio are computed by use of vapor pressure over a plane water surface at all temperatures.

Extension of chart to 25 mb. has been accomplished by overlap with pressure indicated in brackets [100] at 400 mb., and [25] at 100 mb. Dry adiabats for the overlap are labeled in parentheses( ).

APPROXIMATE VIRTUAL TEMPERATURE may be obtained from the formula $T_v = T + \frac{w}{6}$ where T_v is virtual temperature in °C, T is free air temperature in °C, and w is mixing ratio in grams/kilogram. For purposes of thickness computation, use the mean temperature of the layer for T and use the mean mixing ratio of the layer for w.

Black dots ● along wind scale line indicate the levels for which wind data is reported and plotted. The open circles ○ indicate the mandatory pressure levels at which wind data is also entered.

ALL heights used in this diagram are in geopotential feet and meters.

SKEW T - LOG P ANALYSIS		
TIME	TIME	
AIRMASS ANALYSIS		
TYPE BOUNDARY ____ FT.	____	FT.
TYPE BOUNDARY ____ FT.	____	FT.
TYPE		
FREEZING LEVEL(S)		
INVERSIONS		
FRONTAL		
RADIATION		
SUBSIDENCE		
TROPOPAUSE		
L.C.L.		
C.C.L.		
L.F.C.		
SIGNIFICANT WIND		
MAX.		
MIN.		
LEVELS OF SHEAR		
STABILITY		
INDEX		INDEX
TO	TO	
TO	TO	
TO	TO	
CLOUDS		
TYPE		
AMOUNT		
BASES		
TOPS		
ICING		
TYPE		
SEVERITY		
BOUNDARIES		
CONTRAILS		
PERSISTENCE		
HEIGHT		
TURBULENCE		
DEGREE		
HEIGHT(S)		
MAX WIND GUSTS		
HAIL SIZE		
TEMPERATURES		
MAX.		
MIN.		
CUMULUS CLOUD FORMATION AT TEMP____ TIME____		
DISSIPATION OF LOW LEVEL INVERSION AT____ TIME____		
REMARKS		
FORECASTER	FORECASTER	

NUMBER	STATION
TIME (GCT)	DATE (GCT)

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