

ANTIC SURFACE  
ID: 00 UTC 0  
TR: CLARK  
1 TRACKS ARE FOR 12  
LABELS ARE FOR 12  
TRIP THROUGH 24 HOUR

ANTIC SURFACE  
ID: 00 UTC 0  
TR: CLARK  
1 TRACKS ARE FOR 12  
LABELS ARE FOR 12  
TRIP THROUGH 24 HOUR

# WEATHER MAP HANDBOOK

---

a guide to the Internet, modern forecasting,  
and weather technology

TIM VASQUEZ

# Contents

- 1 Basic Weather Concepts**
- 8 Observational Charts**
  - 10 SURFACE
  - 12 850 MB
  - 14 700 MB
  - 16 500 MB
  - 18 300/250/200 MB
  - 20 THICKNESS
  - 22 ISENTROPIC ANALYSIS
  - 24 VORTICITY ANALYSIS
  - 26 VERTICAL VELOCITY (OMEGA)
  - 28 Q-VECTOR ANALYSIS
  - 30 THERMODYNAMIC DIAGRAM
  - 32 WIND PROFILERS
- 35 Satellite Imagery**
  - 40 VISIBLE IMAGERY
  - 44 INFRARED IMAGERY
  - 48 WATER VAPOR IMAGERY
  - 50 GOES SOUNDINGS
- 53 Radar**
  - 56 WSR-88D SCAN STRATEGY
  - 58 REFLECTIVITY
  - 60 COMPOSITE REFLECTIVITY
  - 62 VELOCITY
  - 64 SPECTRUM WIDTH
  - 66 PRECIPITATION TOTAL
  - 68 VERTICALLY INTEGRATED LIQUID
  - 70 ECHO TOPS
  - 72 STORM TRACKING INFORMATION
  - 74 HAIL PRODUCTS
  - 76 MESOCYCLONE PRODUCTS
  - 78 TORNADO PRODUCTS
  - 80 VAD WIND PROFILE
  - 82 FREE TEXT MESSAGE
- 85 Human Forecasts**
  - 86 SPC CONVECTIVE OUTLOOK
  - 88 HPC SURFACE PROGNOSIS
  - 90 AREA FORECAST DISCUSSIONS
- 93 Numerical Weather Prediction**
  - 98 ENSEMBLE PREDICTIONS
  - 100 MODEL FORECAST SOUNDINGS
  - 102 ETA MODEL
  - 104 NGM MODEL
  - 106 RUC MODEL
  - 108 GFS MODEL
  - 110 MM5 MODEL
  - 112 NOGAPS MODEL
  - 114 WRF MODEL
  - 116 ECMWF MODEL
  - 118 UKMET MODEL
  - 120 GEM MODEL
  - 122 JMA MODEL
- 125 Text Data**
  - 126 SYNOP SURFACE OBSERVATIONS
  - 128 METAR SURFACE OBSERVATIONS
  - 130 TERMINAL AERODROME FORECAST
  - 132 RADIOSONDE OBSERVATIONS
- 135 Appendix**
  - 136 1A — SURFACE PLOT SCHEMATIC
  - 137 1B — UPPER AIR PLOT SCHEMATIC
  - 138 2A — ICAO REGIONS
  - 138 2B — WMO REGIONS
  - 139 3 — DESCRIPTORS
  - 140 4 — PRESENT WEATHER
  - 141 5 — CLOUD GROUPS
  - 142 6 — FORECASTING CONTRACTIONS
  - 143 7 — CHART ANALYSIS SYMBOLOGY
  - 146 8 — STABILITY INDICES
  - 150 9 — MILLER'S SEVERE PARAMETERS
- 151 Glossary**
- 160 Suggested Internet Weather Sites**
- 161 References and Further Reading**
- 164 Index**