

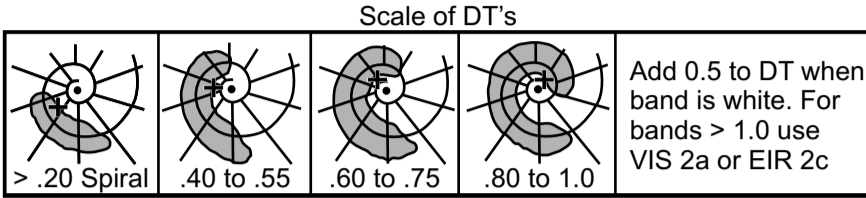
Dvorak Enhanced Infrared (EIR) Analysis Diagram

Abbreviation	Grey Shade BD Curve	Temperature Range (°C)	Temperature Range (°K)
WMG	Warm Medium Grey	> +9°C	> 282
OW	Off White	+9 to -30°C	243 - 282
DG	Dark Grey	-30 to -41°C	232 - 242
MG	Medium Grey	-42 to -53°C	220 - 231
LG	Light Grey	-54 to -63°C	210 - 219
B	Black	-64 to -69°C	204 - 209
W	White	-70 to -75°C	198 - 203
CMG	Cold Medium Grey	-76 to -80°C	193 - 197
CDG	Cold Dark Grey	≤ -81°C	≤ 192

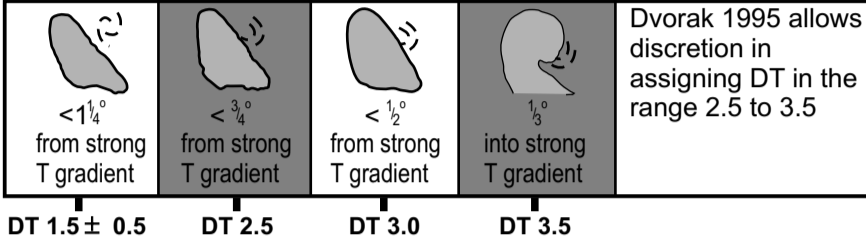
1. START
Locate cloud system center.
Locate the Cloud System Centre ("CSC") at the focal point of all the curved cloud lines or bands. For initial development (T1), see Step 1a

2. Analyze using pattern below when possible; then go to Step 3
When your storm pattern does not fit the description of any of Steps 2a thru d, do Steps 3, 4, 5, and 6; then return to Step 2 if indicated.

2a. "Curved Band" Pattern
(Use spiral arc distance along 10" long spiral)
Always use tightest inner curve
Add 0.5 to DT when band is white. For bands > 1.0 use VIS 2a or EIR 2c



2b. "Shear" Pattern
Use center definition and center's distance to dense overcast.
Dvorak 1995 allows discretion in assigning DT in the range 2.5 to 3.5



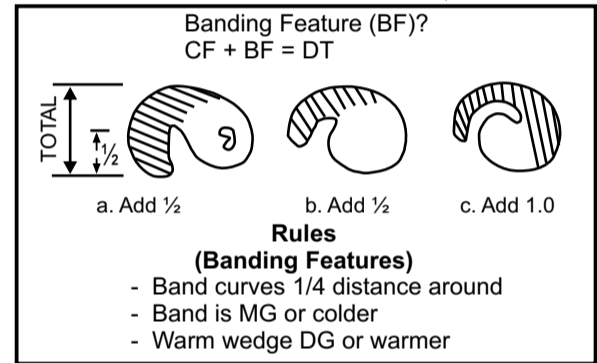
2c. "Eye" Pattern
Was 24-hr T-no ≥ T2.0?
YES: Narrowest Width (Nautical Miles) ≥ 0.5, 0.5, 0.5, 0.4, 0.4, 0.3, 0.3; Surrounding grey shade (EIR Colour) CMG, W, B, LG, MG, DG, OW; E6.5, E6.0, E5.5, E5.0, E4.5, E4.5, E4.0
NO: Step 2a or 4

2d. "Embedded Center" Pattern
(Center within cold by ≥ 0.4) Use technique with caution weight FT to MET for this pattern type
Was 12-hr old T-no ≥ T3.5?
YES: Embedded Distance (Nautical Miles) ≥ 0.6, ≥ 0.6, 0.5, ≥ 0.5, ≥ 0.4, ≥ 0.4; Surrounding grey shade White or colder, B, LG, MG, DG, OW; CF5.0, CF5.0, CF4.5, CF4.0, CF4.0, CF3.5
NO: Step 2a or 4

Eye Temperature		WMG	OW	DG	MG	LG	B	W
No Minimum width Surrounding Ring Temperature	OW	0	-0.5					
	DG	0	0	-0.5				
	MG	0	0	-0.5	-0.5			
	LG	+0.5	0	0	-0.5	-0.5		
	B	+1.0	+0.5	0	0	-0.5	-0.5	
	W	+1.0	+0.5	+0.5	0	0	-1.0	-1.0
CMG	+1.0	+0.5	+0.5	0	0	-0.5	-1.0	

Not for large (≥ 45 n ml) or elongated (short axis 2/3 long) eyes
Elongated eyes when E no. ≥ 4.5
subtract 0.5 if no previous subtraction made

Eye Adjustment?
E-No. + Eye Adj. = CF



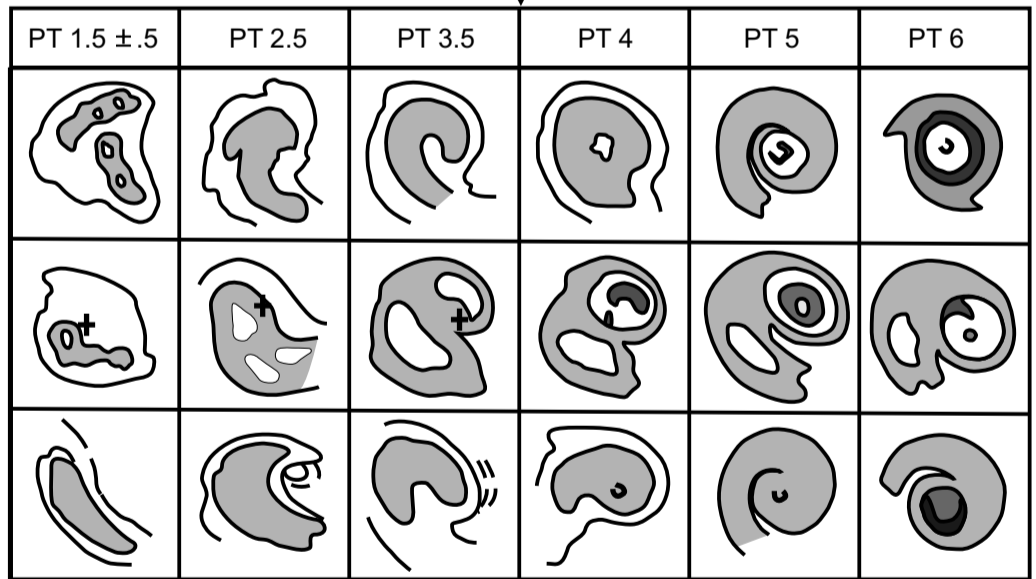
Note: Add BF to CF only when DT < MET.

3. "Central Cold Cover" Pattern
This pattern indicates arrested development
Rules: When past T-no. ≤ T3, maintain model trend for 12 hours; then hold same. When past T-no. ≥ T3.5 hold T-no. same. Use as final T-no.; then go to Step 9.

4. Determine past 24 hour trend. Is Development, Weakening, or Same indicated in a change of:
(a) centre or eye characteristics or
(b) centre's involvement with the cold overcast

5. Determine Model Expected T-no. (MET). 0.5, 1.0, 1.5 (as determined by step 4) to 24 hr old FT

6. Determine pattern T-no. Select pattern in diagram that best matches your storm picture within one column of the MET. Adjust MET ±.5 when indicated.



* When grey part of these patterns white or colder, consider adding 0.5 to pattern number

7. T-no Determination:
1. Use data T-no. from Step 2 when cloud features are clear-cut.
2. Use Pattern T-no. when DT is not clear and adjustment to MET is made.
3. For all other cases, use the MET.

8. Final T-no Constraints:
1. Initial classification must be T1.0 or T1.5.
2. During the first 48 hours of development, T-no. cannot be lowered at night.
3. 24 hrs after initial T1.0, storm's T-no, must be ≤ T2.5
4. Final T-no. limits:
- <T4.0: change of 0.5 over 6 hrs,
- >T4.0: - change of 1.0 over 6 hrs
- change of 1.5 over 12 hrs
- change of 2.0 over 18 hrs
- change of 2.5 over 24 hrs.
5. Final T-no. must = MET ± 1

9. Current Intensity (CI) Number Rules:
1. Use CI = Final T-no.(FT) except when Final T-no. shows change to weakening trend, or when redevelopment is indicated.
2. For initial weakening, hold CI same for 6* hours, then hold CI 0.5 or 1.0 higher than Final T-no, as storm weakens until the FT has plateaued for >6h.
* ref Brown and Franklin (2004) paper

10. 24 Hr Forecast
Extrapolate past trend unless one of the five rules in the instructions applies