

HiCu03 30811 (Monday) Drew-Vali-Gordon-Lukens

- 0730L Calling for 2 pm T/O in expectation of late development as on previous days. No significant change in weather.
- 1000L Cu developing over MB range, later over Laramie Range and gradually filling in over the basin.
- 1920 Pan photos from side of hangar. Cb with veil to Sw photo'd (/work2/pix/cloud_pix/cb-veil/*).
- 1940 Lightning to SW, virga toward Pole mtn.
- 1950 LAR: 280/07 28°C/06°C 30.36" lightning all quads.
Tape deck fail. Restart.
- 1957 roll; 1958 T/O head MBW
CB = 16.5 kft, 0°C
- 2010 top of BL seen on right; cleared to 20–24 block
- 2015 target; left 270 turn to line up
- 2016 **A1**, UD, -13.9°C 700 cm⁻³, 3 m s⁻¹ max
- 2019 **A2** after 90/270 reverse, cloud weakening
- 2021 90/270; switch to DD 500 ns; deviating toward stronger cell on left
- 2023 **Ab3** (new turret in same complex, hence the added **b** designation)
- 2026 **Ab4**
- 2027 90 / lazy270 turn to move to left side of target with SS; will be scanning very top >> **Ab5**
- 2029 circled around, aiming for other side, but ended up in the middle >> **Ab6**
- 2032 heading W, lookin gfor new target, descending
- 2035 **B** on right, still SS; similar to A in appearance.; might be good to look for circulation at edges
- 2036 continue descent; CB = 17.5–18 kft.
- 2037 at 16 kft, UD, will head to ward Laramie Peak, following line od cloud shadows, swith to CCN spectra
- 2040 below flat base, to the E there is a clear boundary with lower cloud bases beyond
- 2043 penetrating first cloud wit lower base – 900 cm⁻³
- 2047 turn right to target from down–wind side; can shear toward us (photos #388, 389); 17kft, -2.3°C,
B1 cluster, UD
- 2051 **B2** toward NE at 18 kft to get better radar data on lower part, -5°C, UD;
- 2053 90/270
- 2056 **B3** toward SW, then tall skinny tower on far side, most of the echo in B is still above us so will continue monitoring
- 2059 **B4** toward NE; now have small yellow patch on nose radar, but it is pointing up
- 2103 **B5** toward SW;
- 2106 after 180 to hit more to the right, **B6** toward E, and reset pointer
- 2109 **Bx7** toward W, after 180 turn so may have moved over some; echo is still mostly above; will climb in large turn
- 2111 photo #394 of Cb beyond target
- 2112 **Bx8** at 20.2 kft, -9.4°C, continue to climb after penetration

2116 **Bx9** at 22.4 kft -14.4C, echo extends another 500 m above.
2118 changing to new target now on our 2 o'clock >> **C**
2120 continue to another similar one, **D1** 6 m s⁻¹ UD
2122 **D2** with SS
2124 little over more than 90 turn to keep target on right >> **D3**
2128 **D4** cloud is fuzzy but has strong echo (promising sample)
2130 photo #403 of new target on the right, then turn to it, **DD**
2132 **E1** penetration; echo to < 1 km below, most likely high cloud base
2134 **E2** after cloverleaf turn and changed to *UD*
2136 **E3**; not much left, will descend to 20 kft
2138 **E4** still see well-defined base
2140 **E5**
2142 **E6**
2144 **E7**; seeing stronger echoes in cell to S of main target
2147 **E8** though targeting is getting uncertain and cloverleaves provide different sections; echo is clearly stronger
2149 changing to lower block of 18-22, descend to 19 kft, moving W
2152 starting long (2-min) pass through a cluster at -7.1°C
2154 small correction in heading, continue NW
2156 reverse heading back through same cluster; racetrack pattern, *UD*
2159 reverse once again toward the NW
2202 descend to 18 kft -5°C; have been seeing only 1-2 L⁻¹ on 2D
2205 right turn toward large patch of yellow on nose radar
2209 CCN at 15.5 kft, steering away from virga; under high bases, see lower bases to E
2217 red on the nose radar, going to side of it; +5°C, 14 kft
2224 radar maneuvers
2234 end of radar maneuvers
2242 L/D south winds cloud base to surface; line of Cb to N