



## EISCAT Space Debris 25-August-2007

Monitored altitude zones in IPYW are Zone 1: 149–489 km, Zone 2: 706–1047 km, Zone 3: 1264–1605 km, and Zone 4: 1823–2164 km.

### List of Figures

1	Overall event rate. . . . .	1
2	Altitude and Doppler-velocity. . . . .	2
3	Altitude, Doppler-velocity, and radar cross section v time in Zone 2. . . . .	3
4	Altitude, Doppler-velocity, and radar cross section v time in Zone 3. . . . .	4
5	Altitude v time. . . . .	5
6	Event rate v altitude. . . . .	5
7	Doppler-velocity v altitude. . . . .	5
8	Event rate v Doppler-velocity. . . . .	6
9	Event rate v RCS. . . . .	6

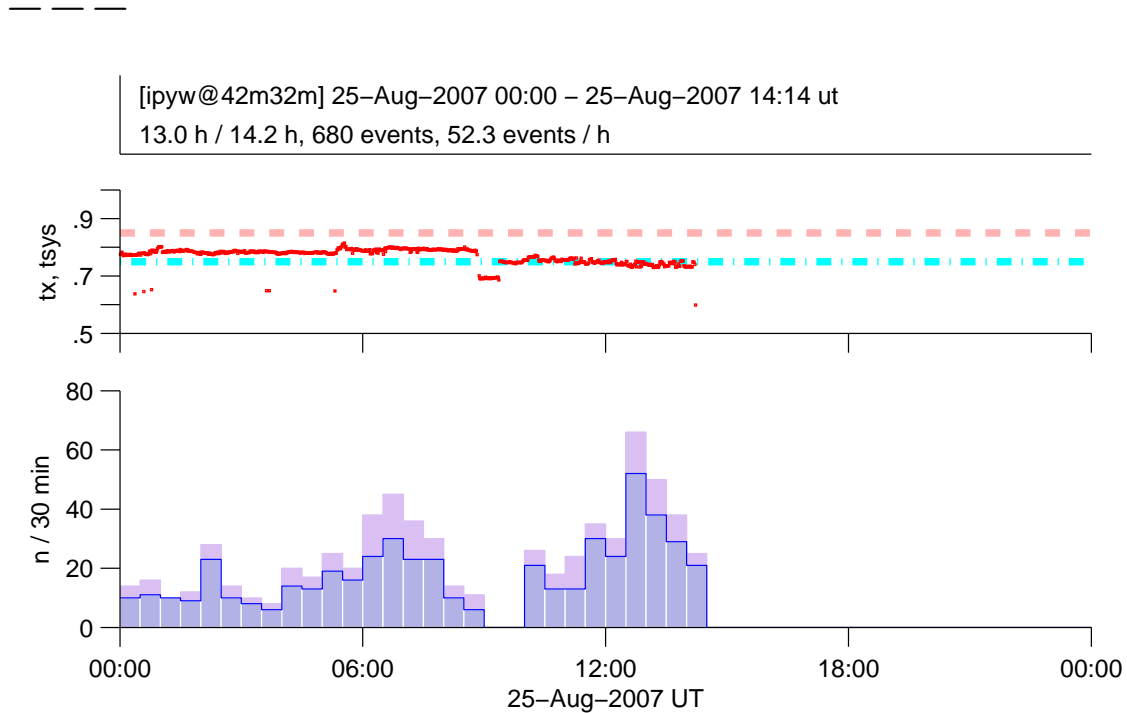
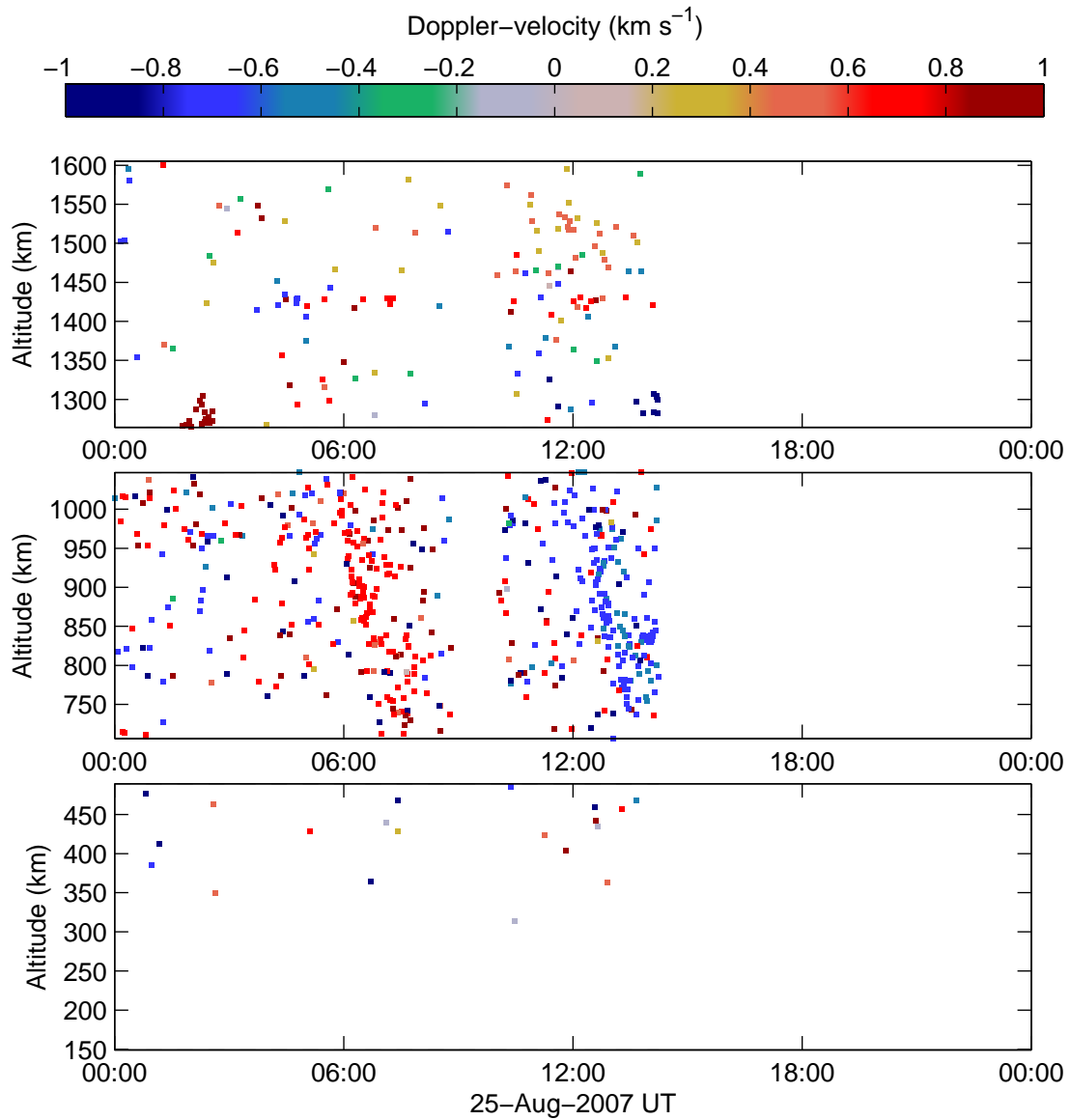


Figure 1: **Overall event rate.** Header panel, first line: first event – last event of the day. Second line: good measuring time; time interval between first and last event; total number of events; mean event count per good hour. Middle panel: peak transmitted power in MW (red); the constant transmitted power used in analysis (dashed red); the constant system temperature used in analysis in units of 100 K (dashed cyan). Bottom panel: number of events per 30 minute bin, with “strong” events ( $ENR > 400$ ) in blue and “weak” events ( $100 < ENR < 400$ ) in red.



(a) Altitude and velocity v time through Zone 1(bottom) to Zone 3(top).

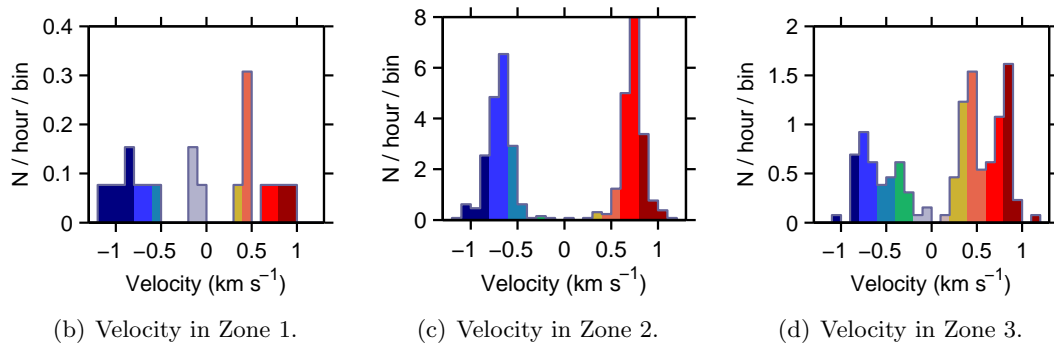
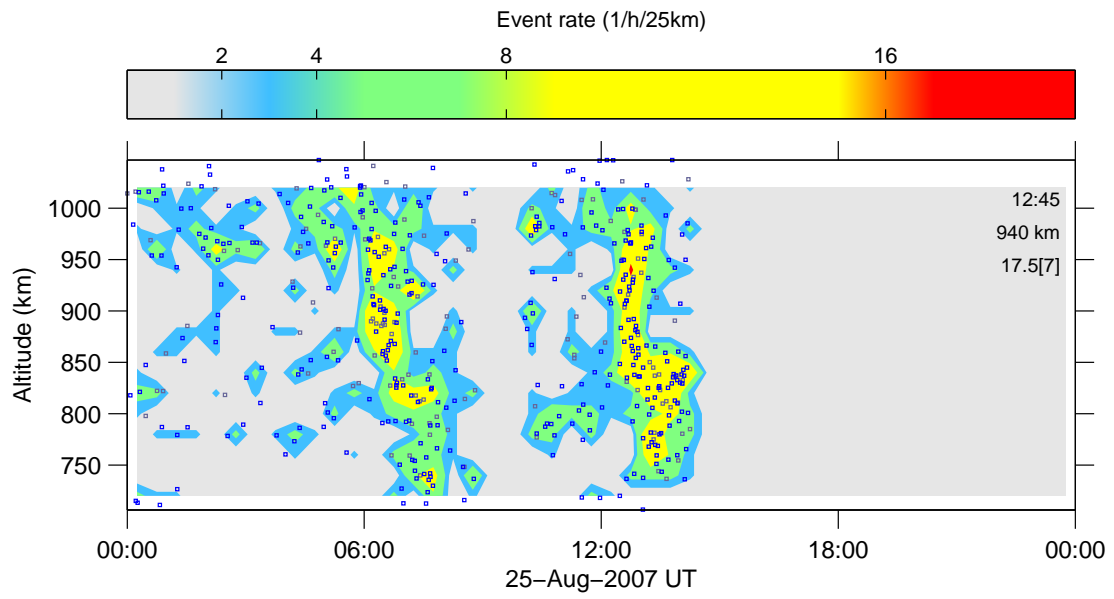
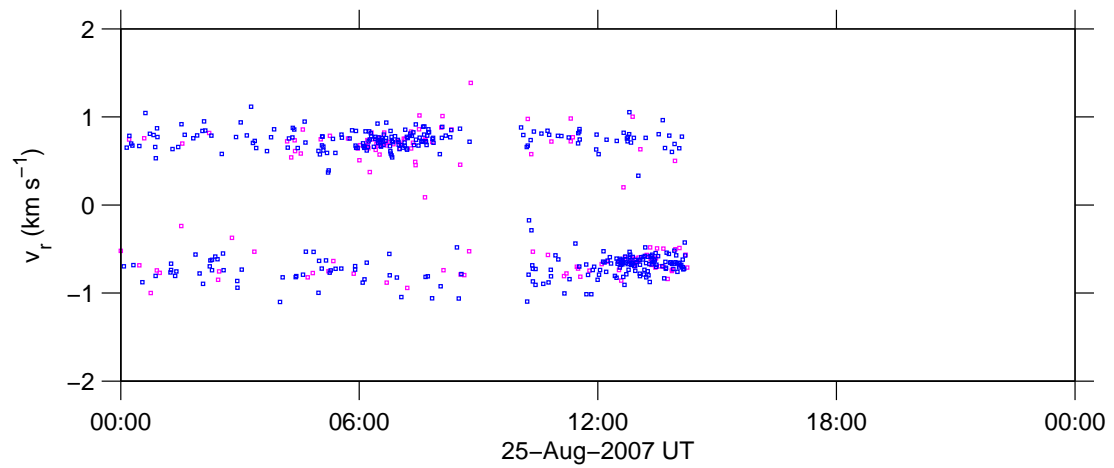


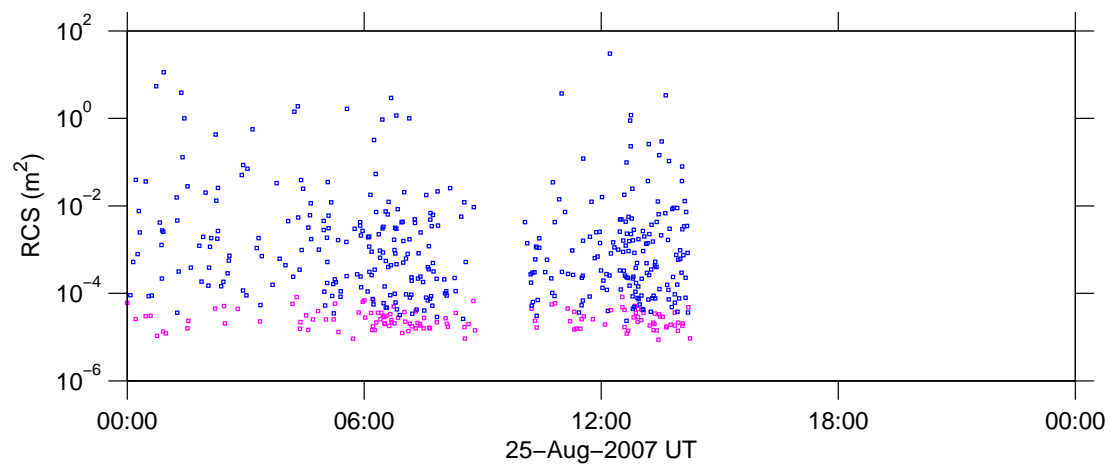
Figure 2: **Altitude and Doppler-velocity.**



(a) Altitude v time (dots), and events per hour per 25 km bin (contours).

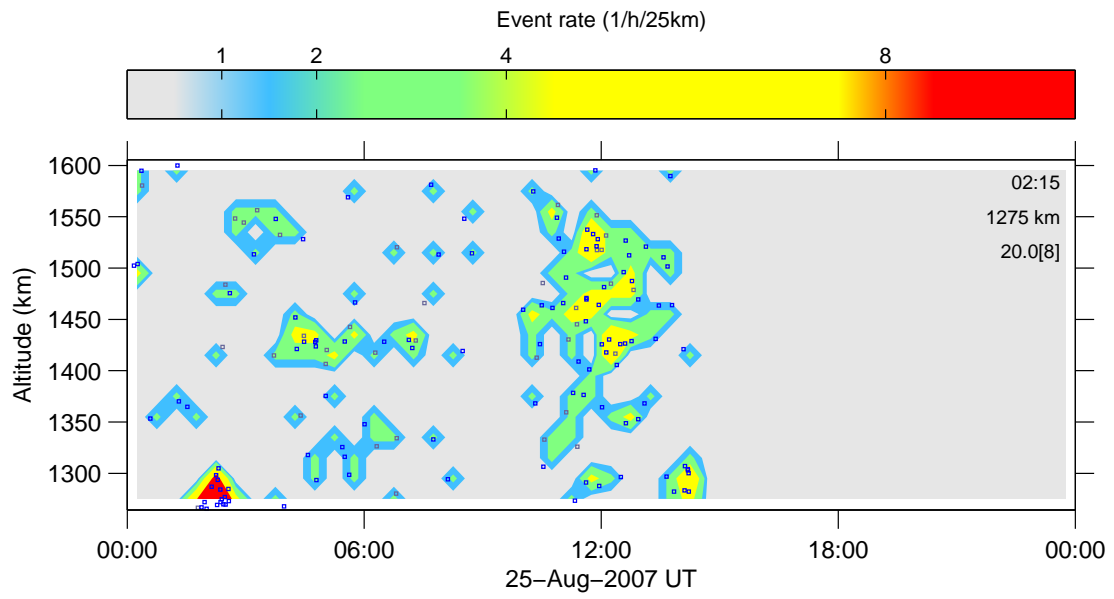


(b) Doppler-velocity v time.

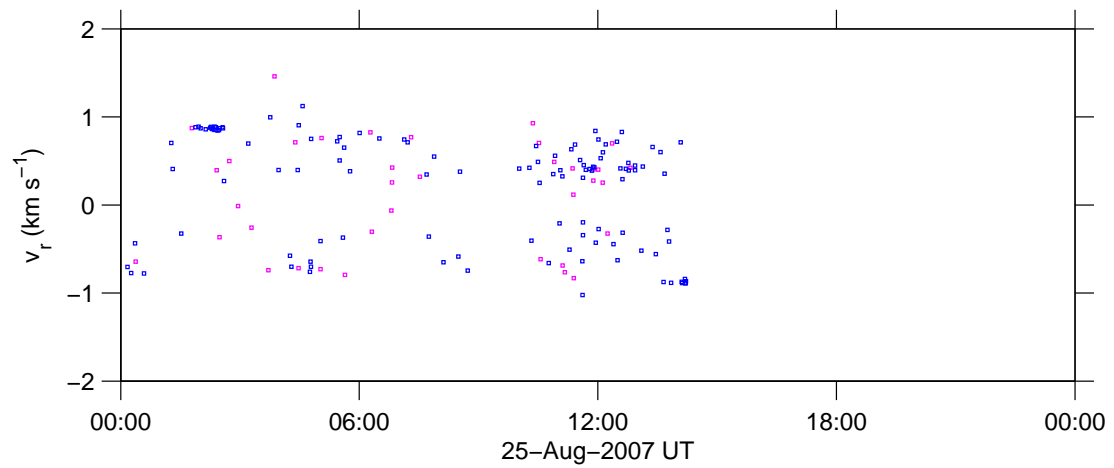


(c) Radar cross section v time.

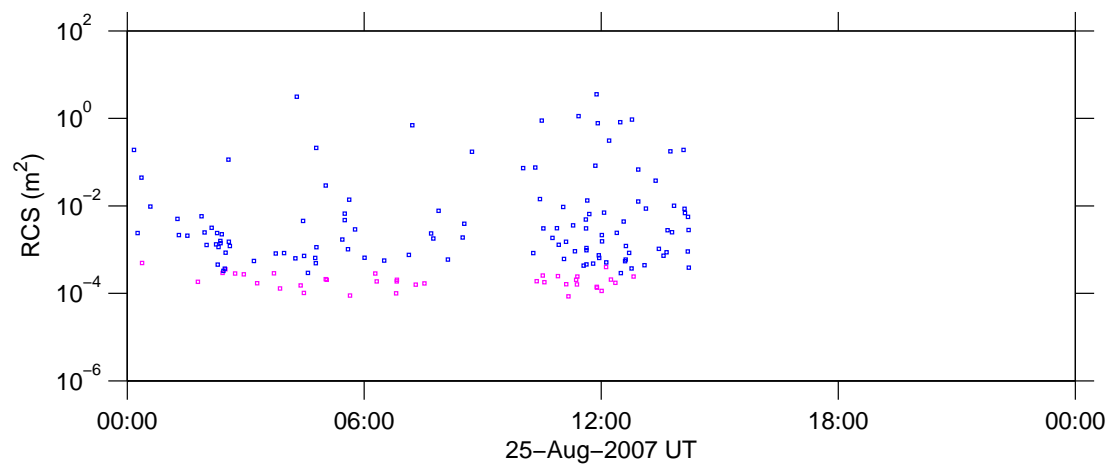
Figure 3: **Zone 2**. Altitude, Doppler-velocity, and radar cross section, v time.



(a) Altitude v time (dots), and corresponding hourly event rate per 25 km bin (contours).



(b) Doppler-velocity v time.



(c) Radar cross section v time.

Figure 4: **Zone 3**. Altitude, Doppler-velocity, and radar cross section v time.

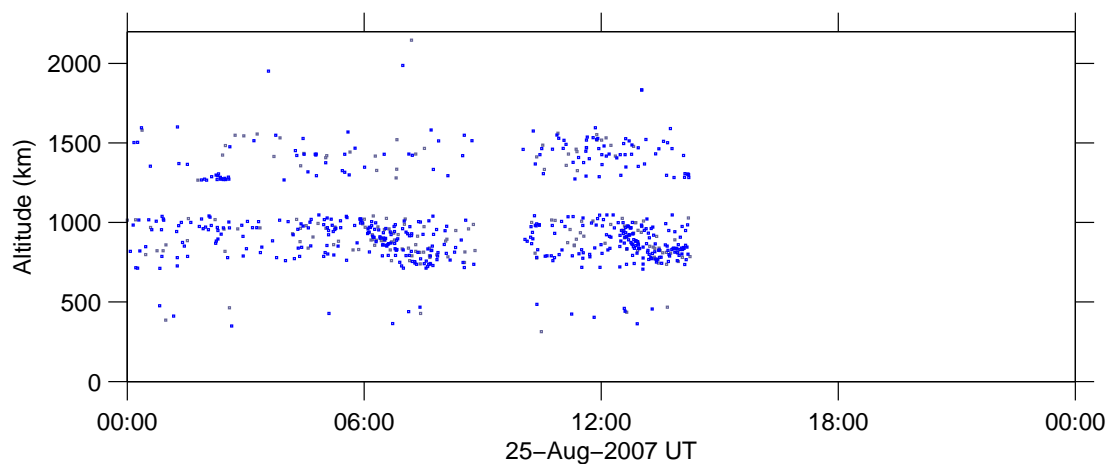


Figure 5: **Altitude v time.**

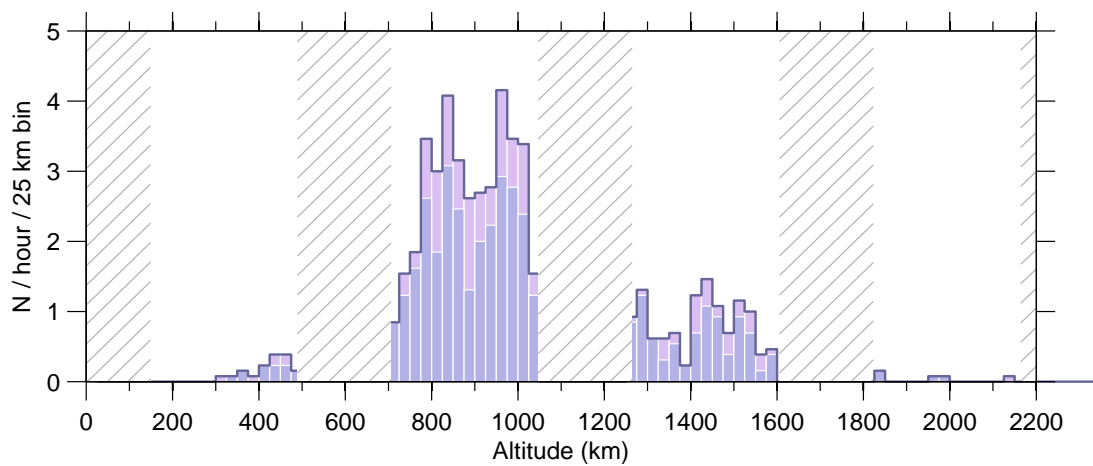


Figure 6: **Event rate v altitude.**

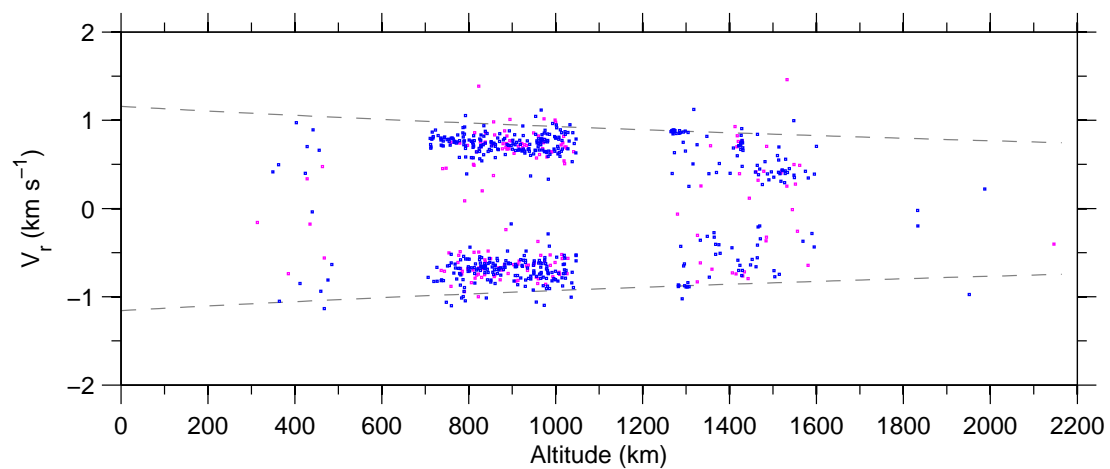


Figure 7: **Doppler-velocity v altitude** on 25-August-2007.

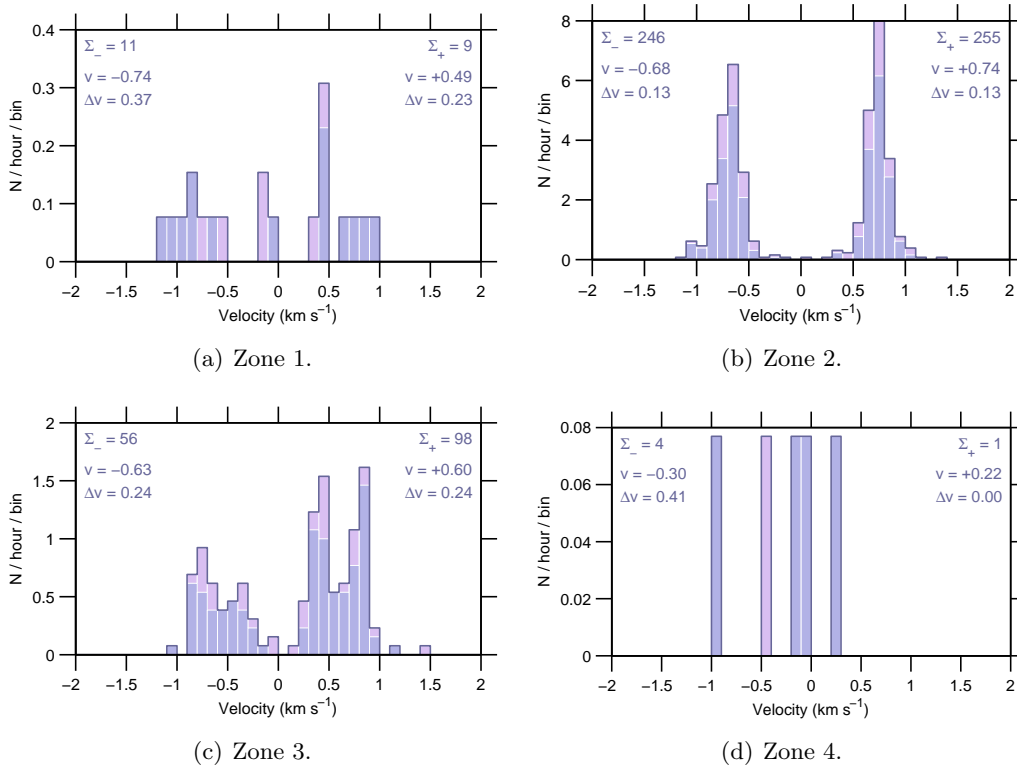


Figure 8: Event rate  $v$  Doppler-velocity.

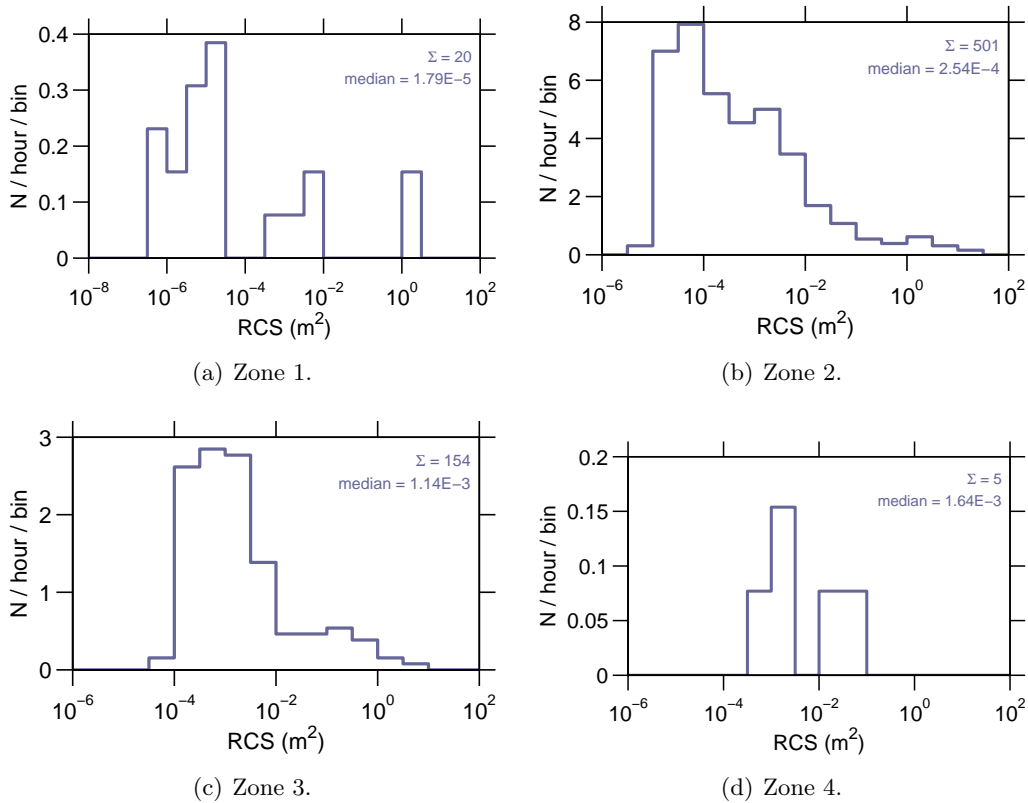


Figure 9: Event rate  $v$  RCS on 25-August-2007.