



## EISCAT Space Debris 29-September-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.

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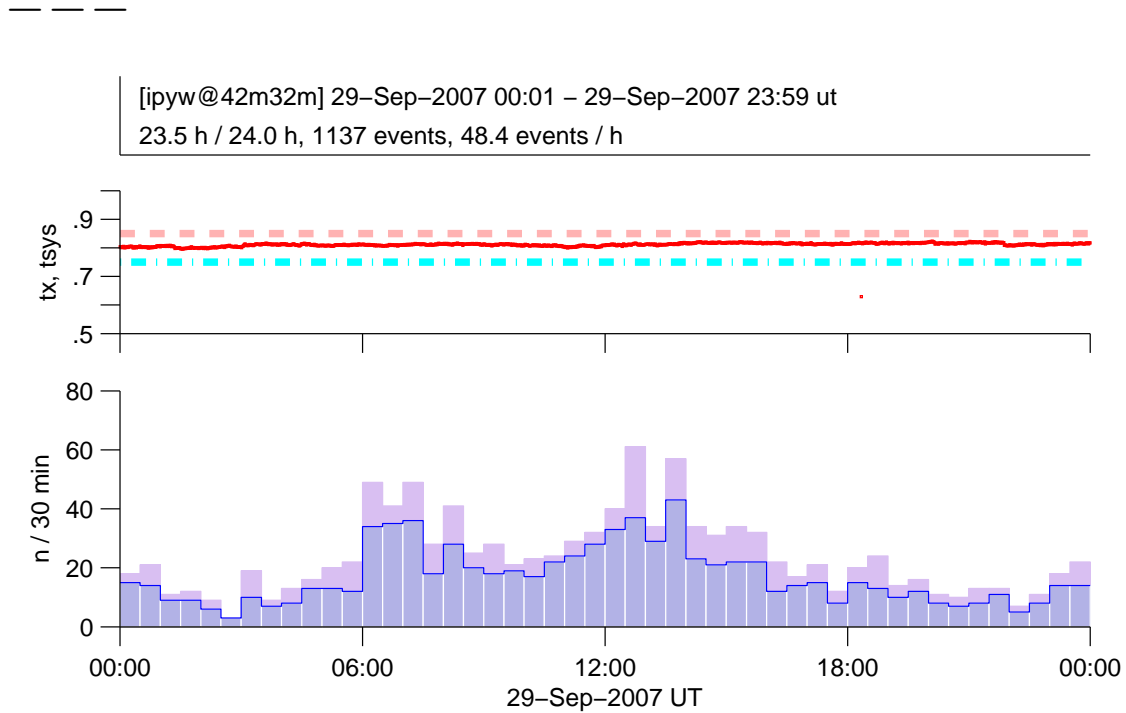
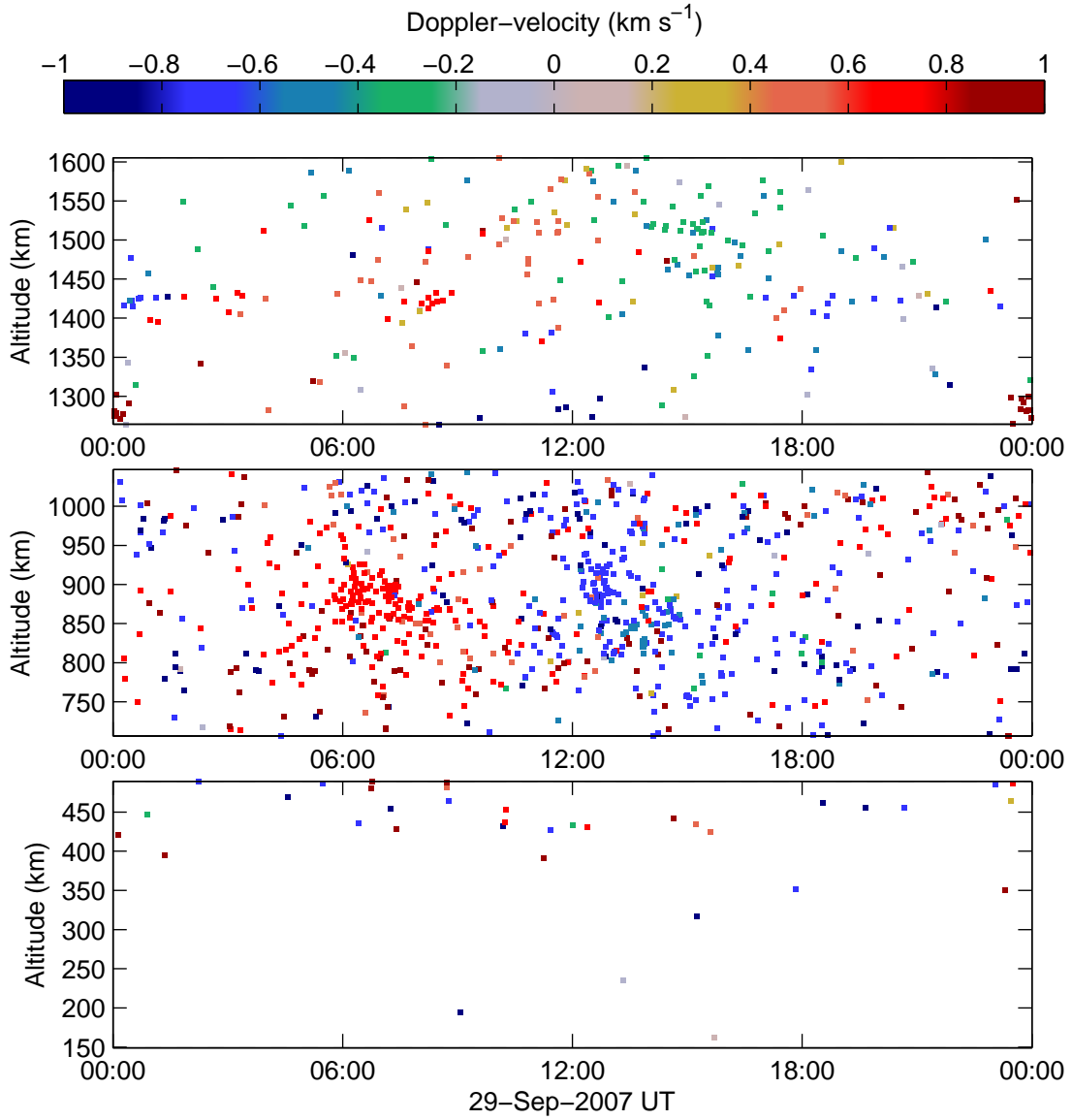


Figure 1: **Overall event rate.** Header panel, first line: first event – last event of the day. Second line: good measuring time; time interval between first and last event; total number of events; mean event count per good hour. Middle panel: peak transmitted power in MW (red); the constant transmitted 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).

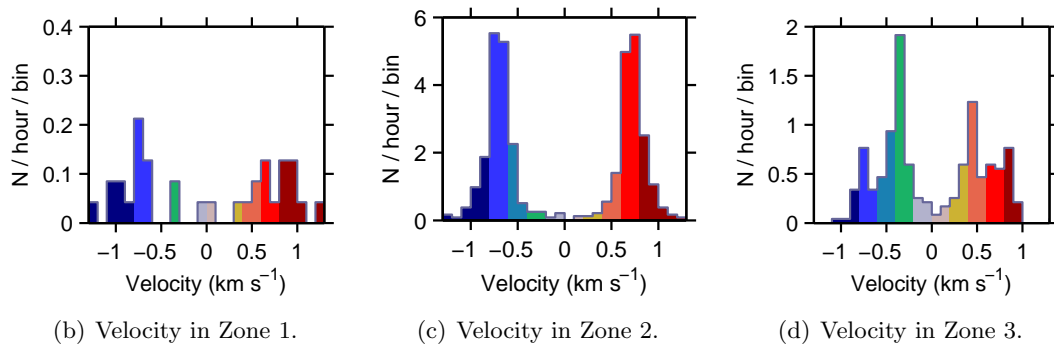
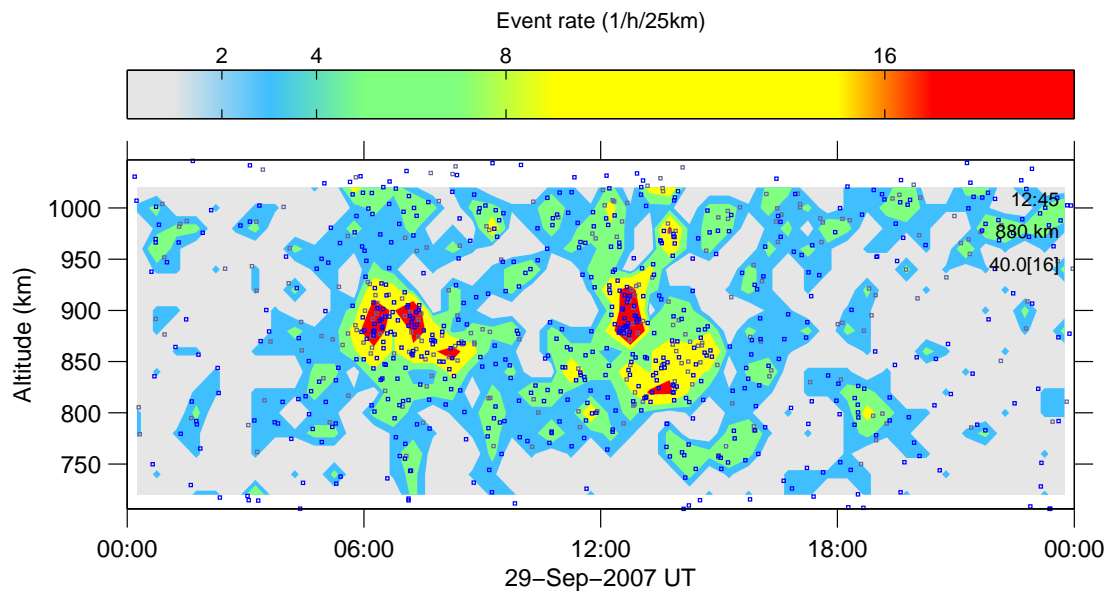
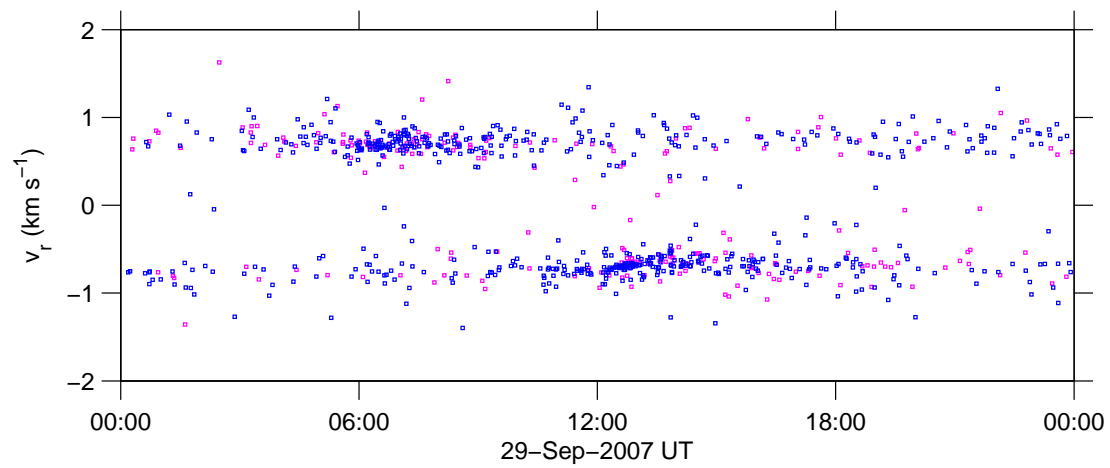


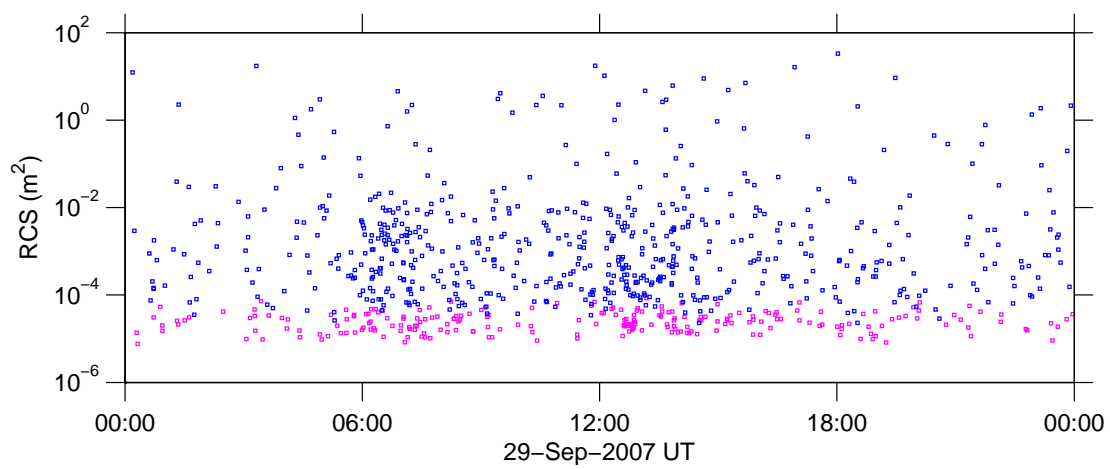
Figure 2: **Altitude and Doppler-velocity.**



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

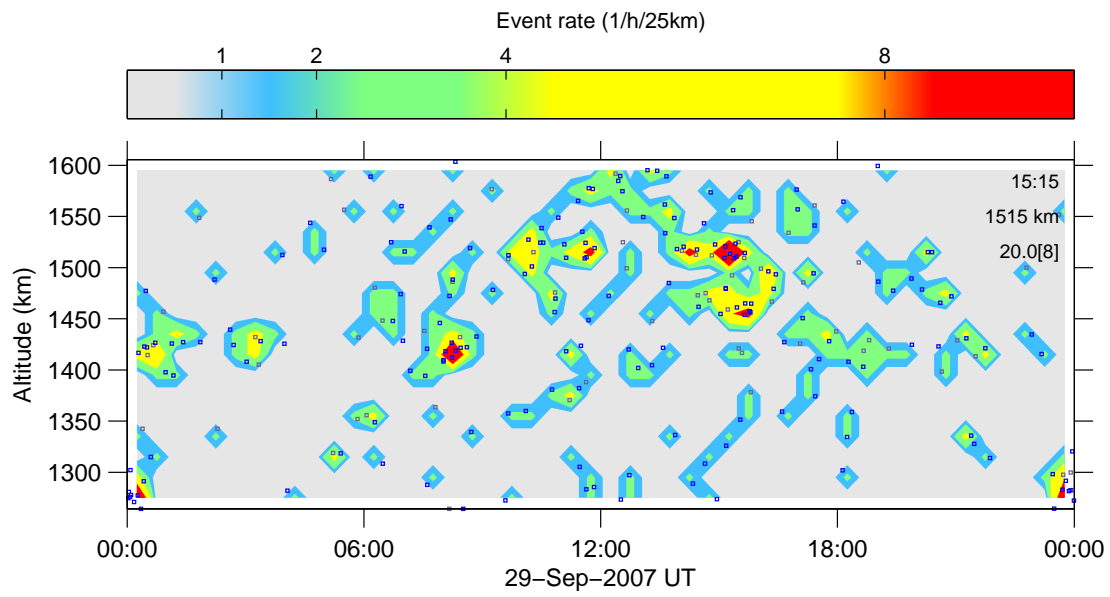


(b) Doppler-velocity v time.

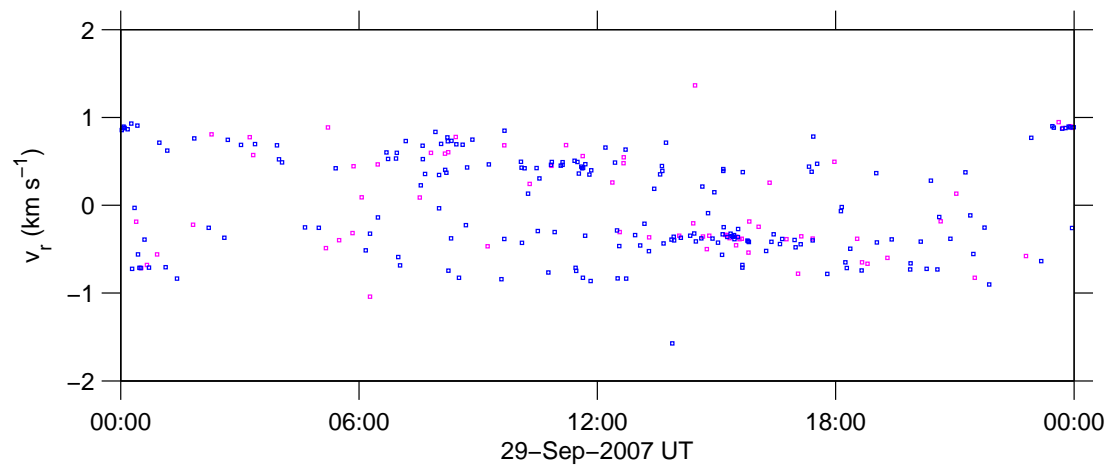


(c) Radar cross section v time.

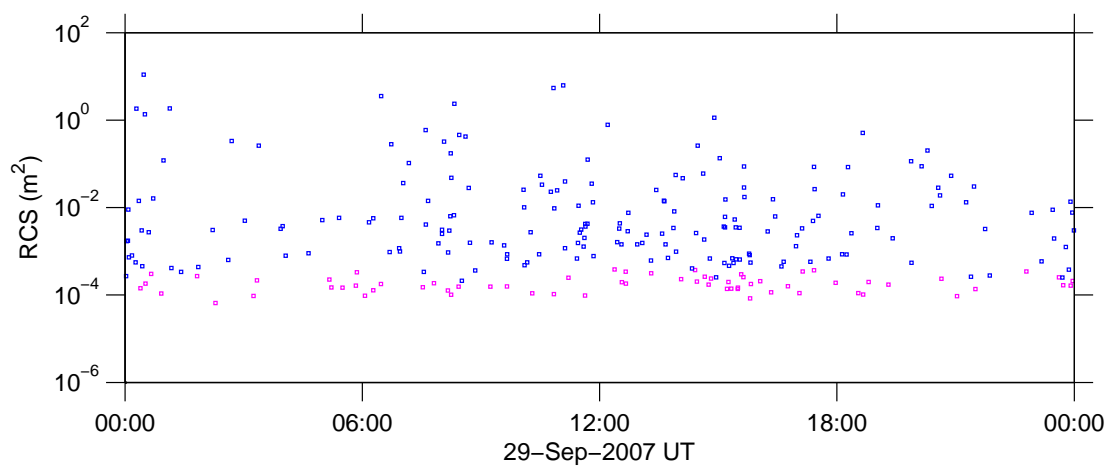
Figure 3: **Zone 2**. Altitude, Doppler-velocity, and radar cross section, v time.



(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.

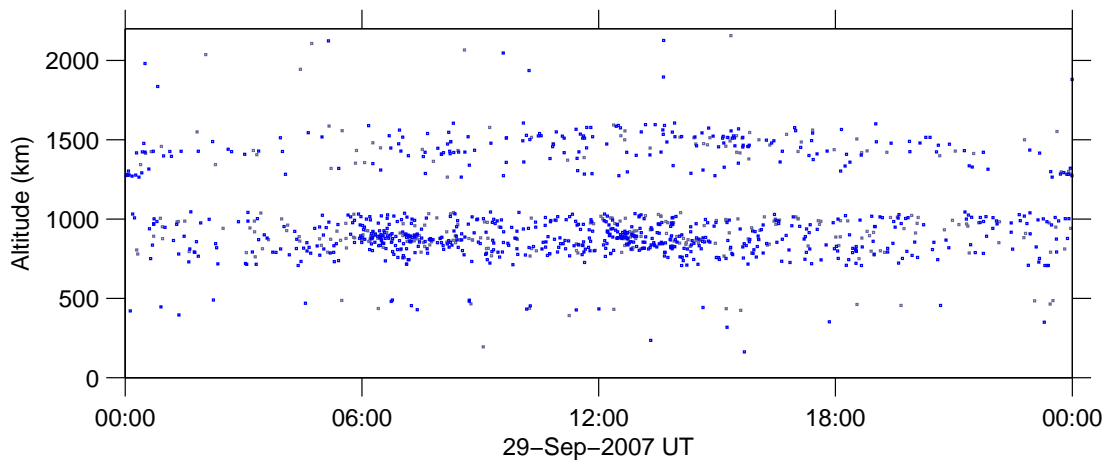


Figure 5: **Altitude v time.**

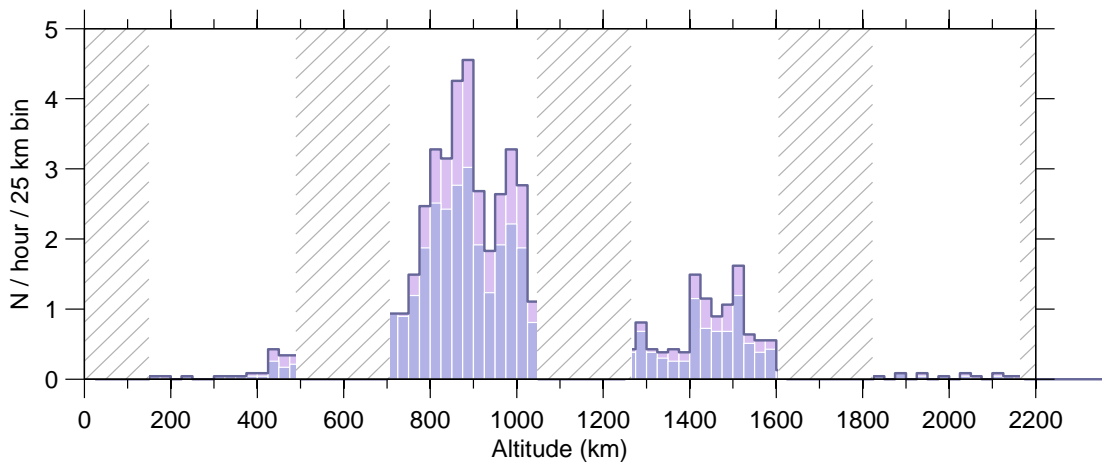


Figure 6: **Event rate v altitude.**

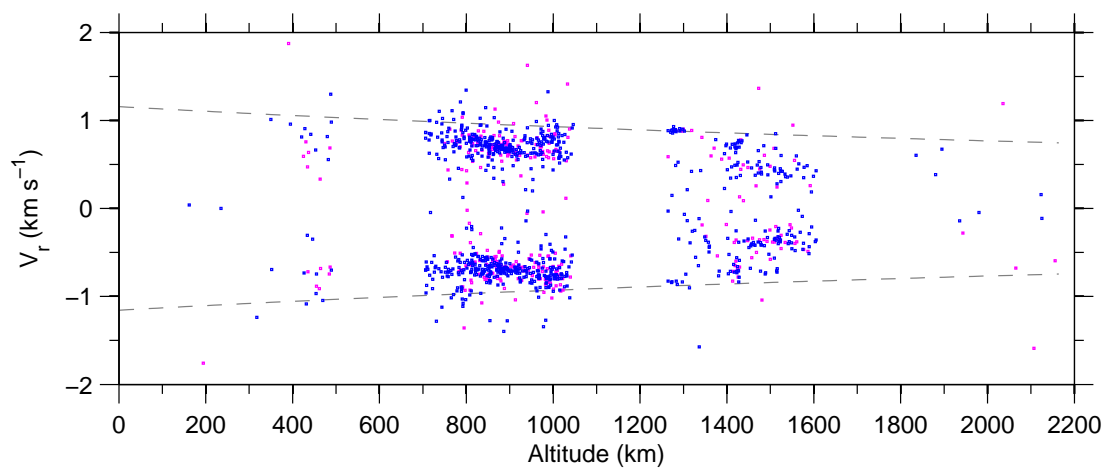


Figure 7: **Doppler-velocity v altitude** on 29-September-2007.

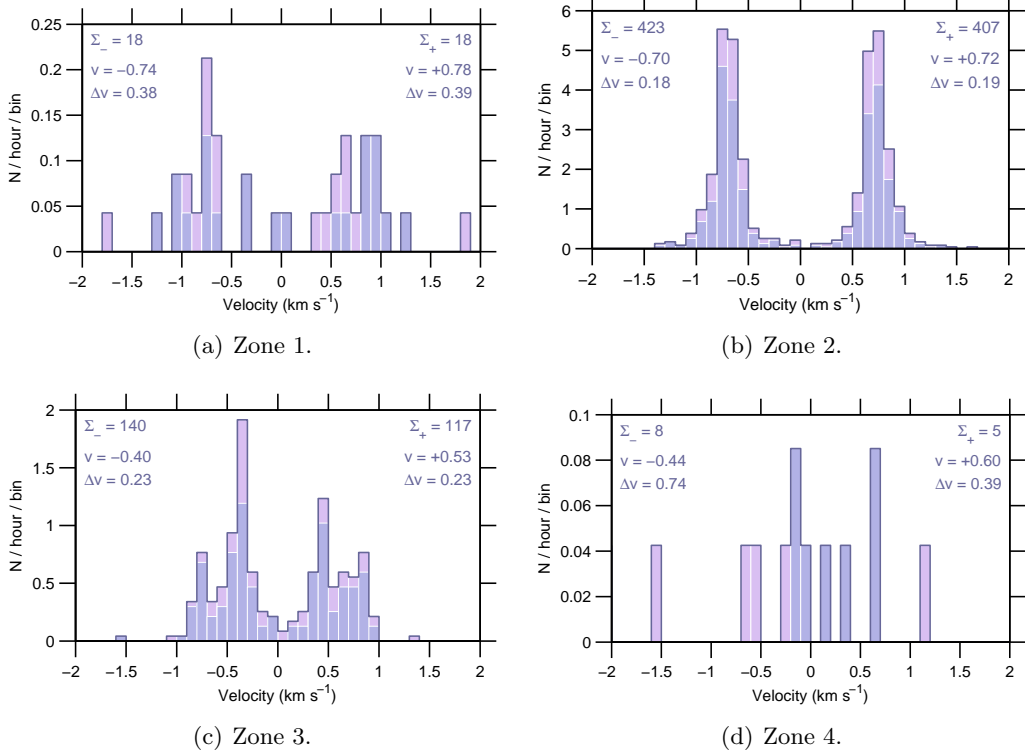


Figure 8: Event rate  $v$  Doppler-velocity.

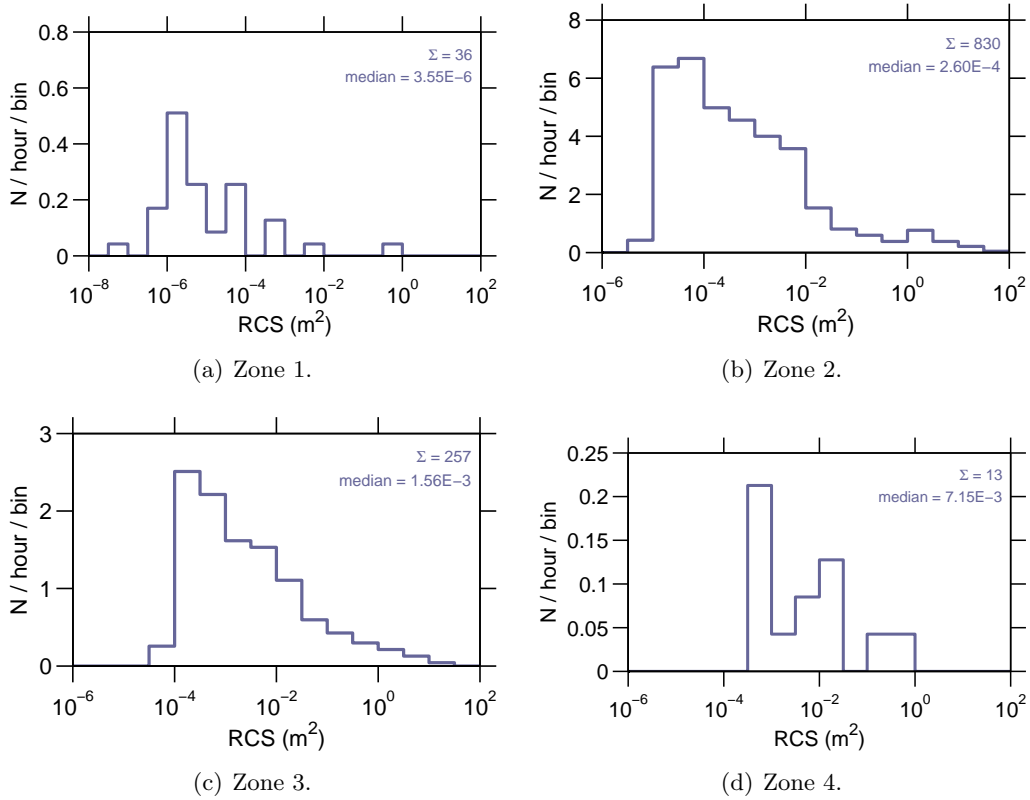


Figure 9: Event rate  $v$  RCS on 29-September-2007.