

Start

Compare four-point running mean  $Z_{obs}$  with the theoretical radar sensitivity curves ( $S_1$  and  $S_5$ )

Is  
 $Z > S_5$

No

Noise

Yes

Is  
 $\sigma < 1$

No

Biota

Yes

Cloud  
( $Z=Z_p$ )

Tracing cloud boundaries

$Z_p(ht)$  extends to  $Z_p(ht+n)$  and to  $Z_p(ht-m)$ , where  $n$  and  $m$  are adjacent height ( $ht$ ) points above and below the peak  $Z_p$  (minimum  $Z$  limited close to  $S_1$ ). Finally remove all those  $Z(ht)$  values with  $< 5\%$  frequency count of total, which are probably the isolated echo floors that show below  $\sim 10$  s duration and are considered as non-cloud echoes.