

RVP7 V10 Release Notes

These notes cover changes made to the RVP7 code since release V09 of 10 Aug 1998. If you are upgrading from an earlier release, please read those notes also.

Bug Repairs

1. Repaired a bug in which the range normalization values were being calculated two range bins past their correct range. For example, with 0.125km bin spacing, the range normalization values were being calculated at ranges that were 0.250km too large. The data timing was correct, and the samples were placed at the correct ranges within the pulse; only the range normalization itself was wrong. The effect was most noticeable at ranges less than 4km (beyond 4km the error would be less than 0.5dB).
2. Several bugs were repaired having to do with the selection of IIR clutter filter sets. The setup question "Doppler Filter Set- 0:40dB, 1:50dB, 2:User" had to be answered with an additional carriage-return in order for the new setting to take effect. Also, the LFCOEFS command (which permits user-loadup of custom IIR coefficients) would not actually begin running with the new coefficients until a "save" had been done. The LFCOEFS command is not used (yet) by any IRIS code.

New Features

1. The behavior of the six output triggers during noise measurements has been improved to include trigger blanking. The RVP7 can now inhibit the subset of blankable trigger lines whenever a noise measurement is taken. This will be forced whenever trigger blanking (based on TAG0) is enabled, but it can also be selected in general via a new setup question in the "Mt" section. Since noise triggers must be blanked whenever trigger blanking is enabled, the new question only appears if trigger blanking is disabled. As a result of this change, the state of the triggers during noise measurements is consistent and known, regardless of whether the antenna happens to be within a blanked sector; and you have the additional flexibility of choosing blanked noise triggers all the time.
2. Several improvements have been made in the detection and reporting of blanked triggers in the output data stream. The data within a ray are now considered to be invalid if any of the pulses that were used to compute the ray were blanked. Previously only the last pulse of the ray was being checked. Also, the RVP7 will now output all zeroed data whenever a ray contains any blanked pulses. The End-TAG-0 bit in the output ray header is still set according to whether the ray was blanked (0), or normal (1).
3. Bit #12 of GPARM Immediate Status Word #2 is now set according to whether the RVP7 is performing trigger blanking. This allows the host computer to decide whether to interpret the End-TAG-0 bit in the output ray header as a blanking flag, or as a normal TAG line.

Setup Changes

1. New question in "Mt" to inhibit triggers during noise sampling (See New Feature #1.).