



Trigger Algorithm of NuMoon (UHEP) mode

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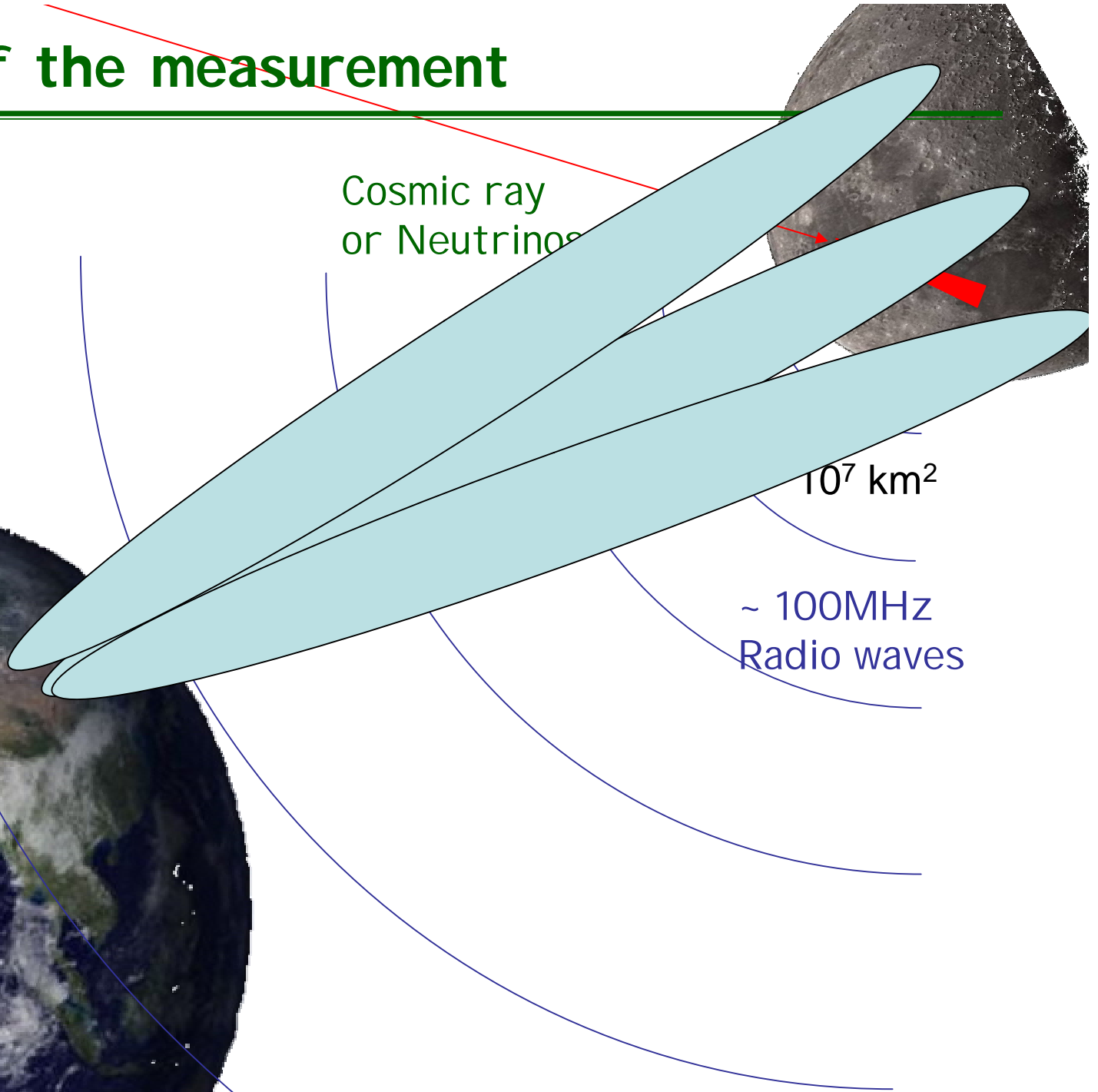
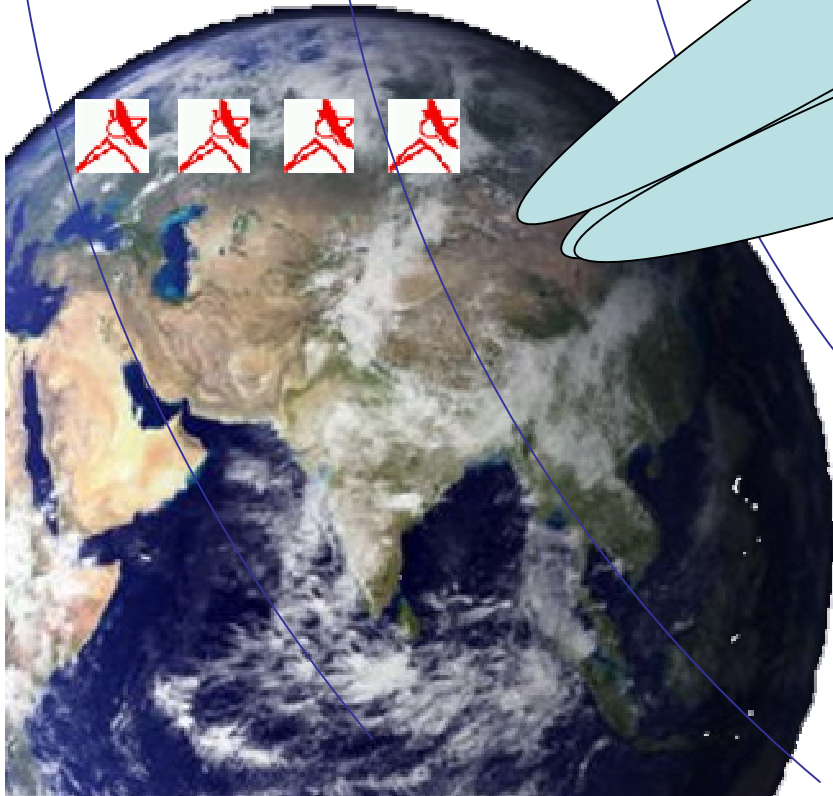
Principle of the measurement

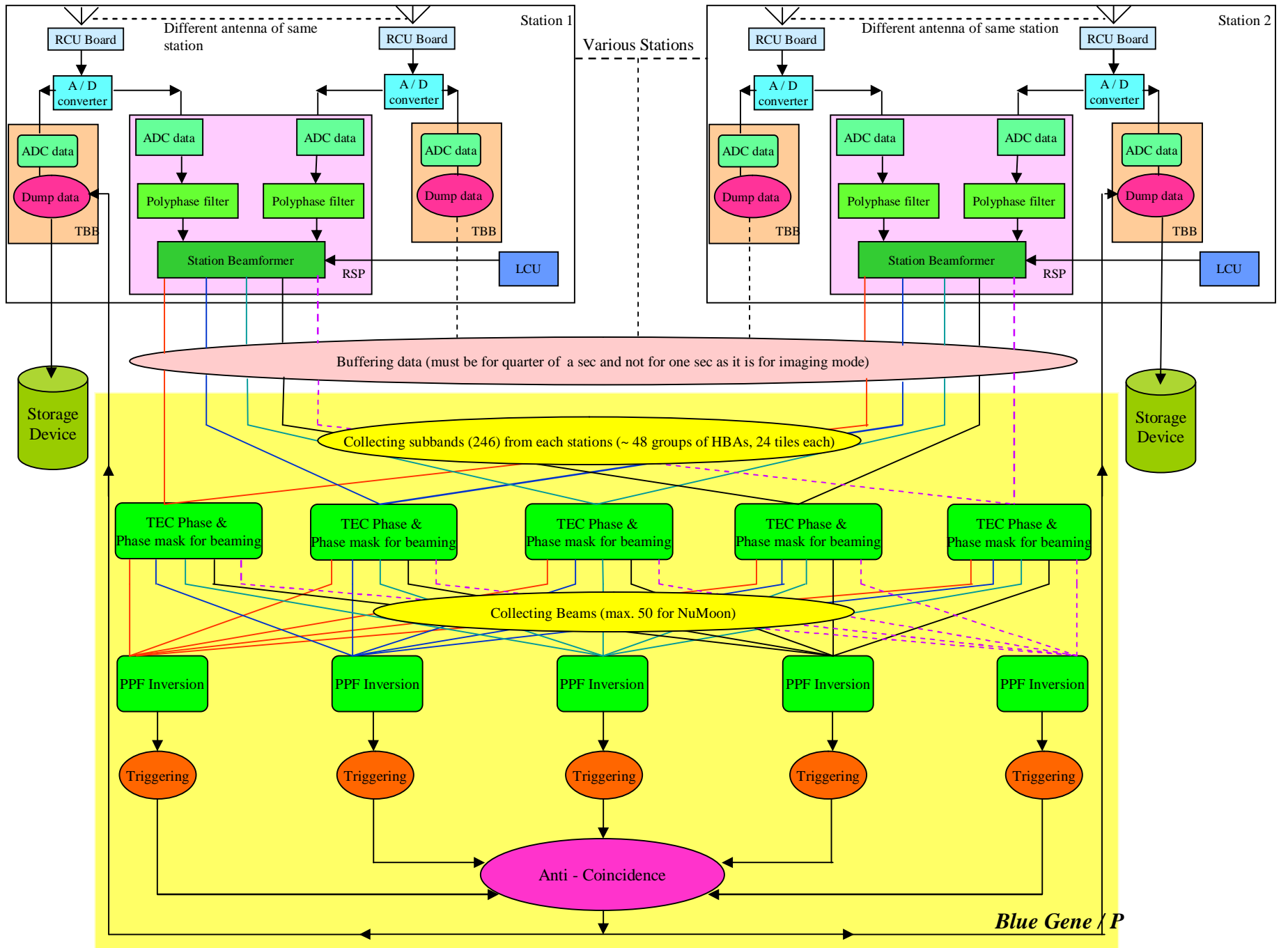
Cosmic ray
or Neutrinos

Detection:
Radio
antennas

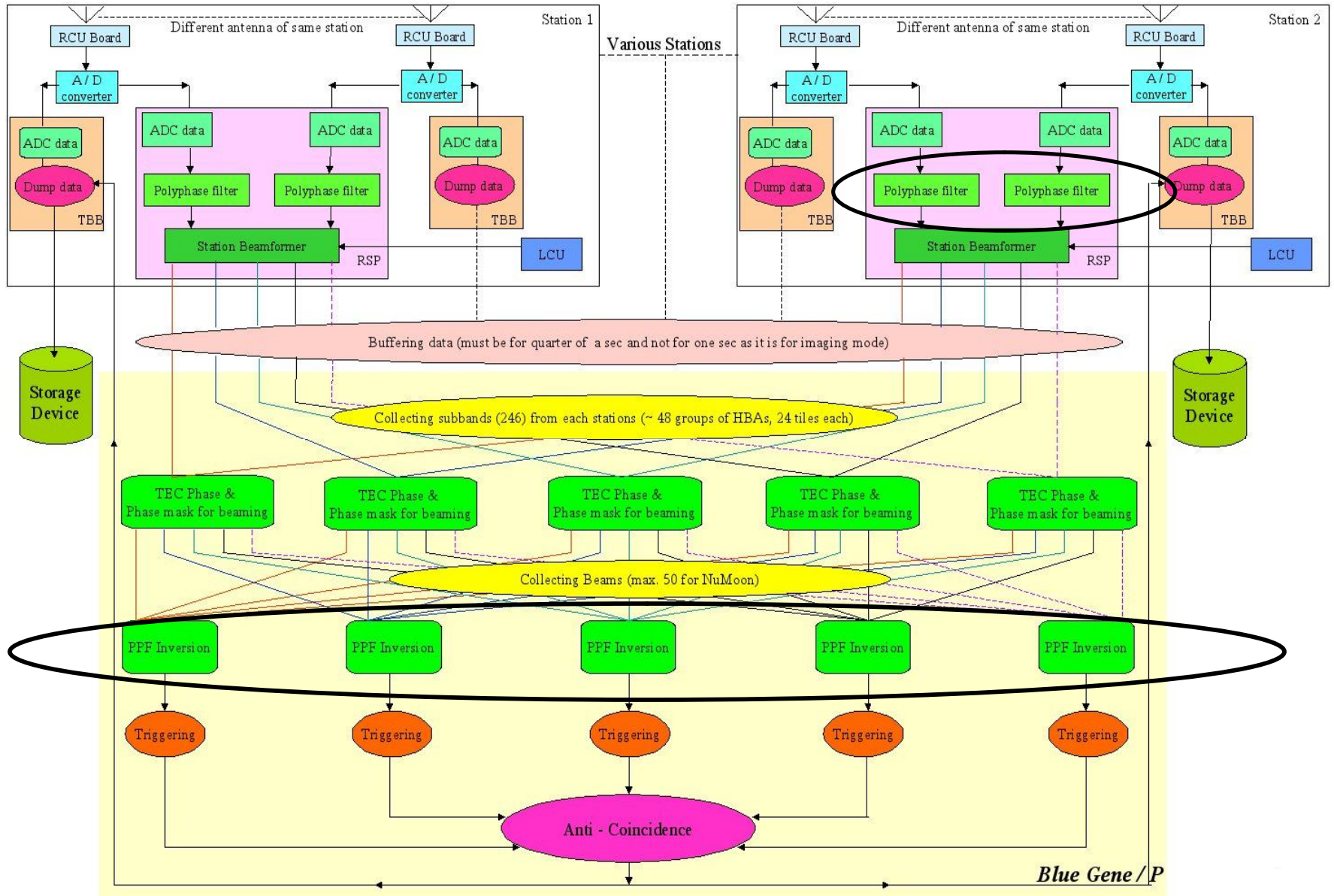
10^7 km^2

~ 100MHz
Radio waves

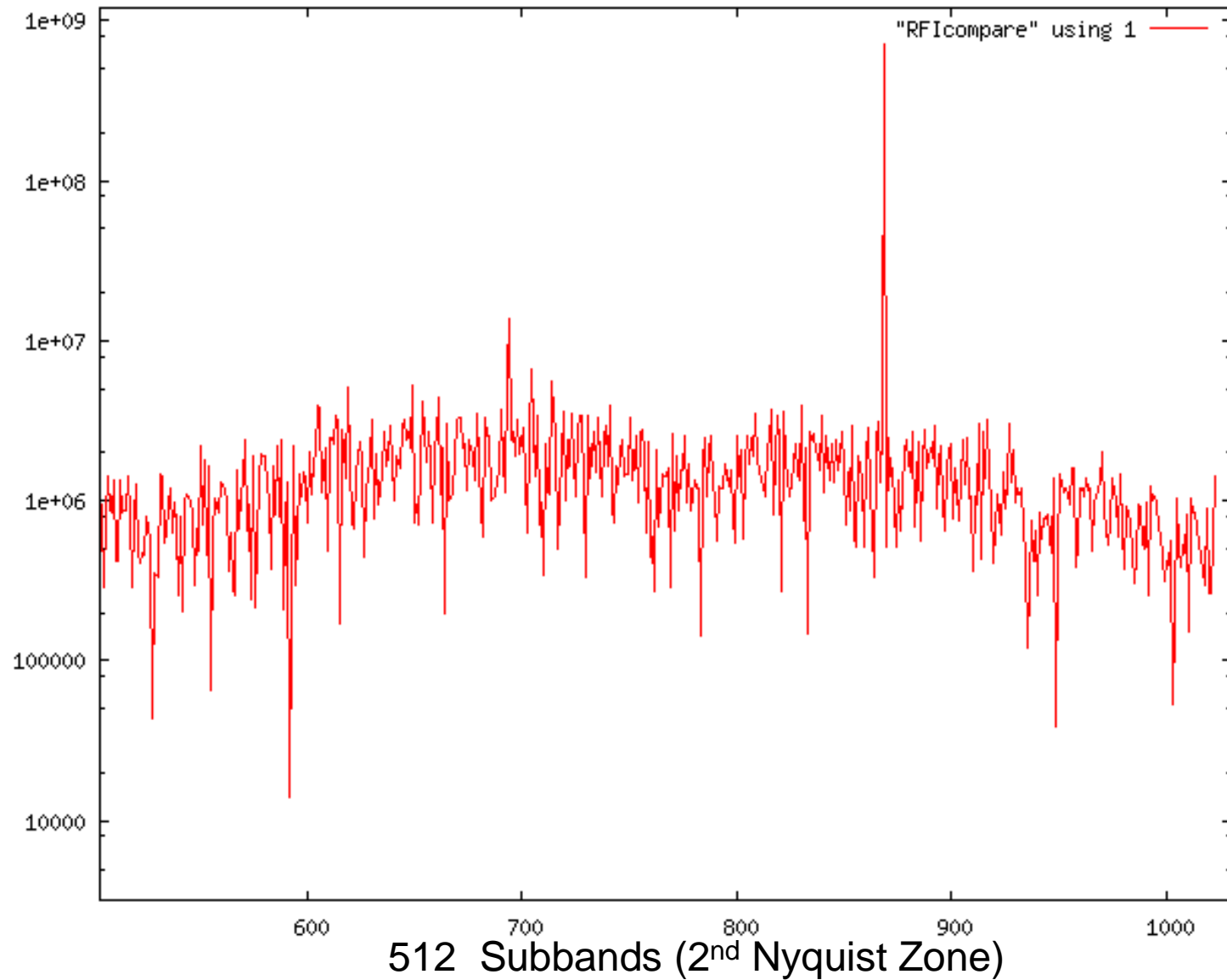




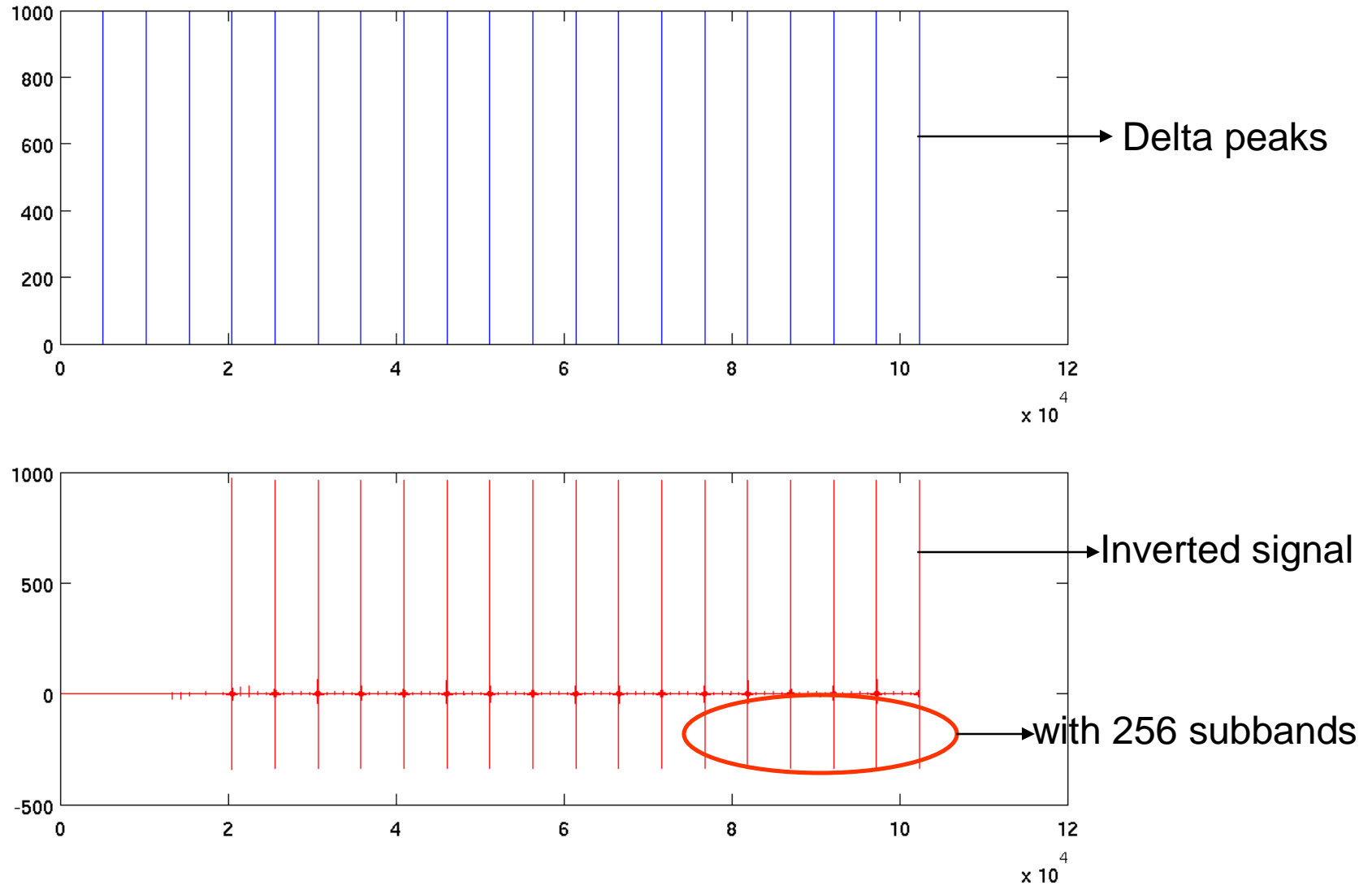
Dataflow



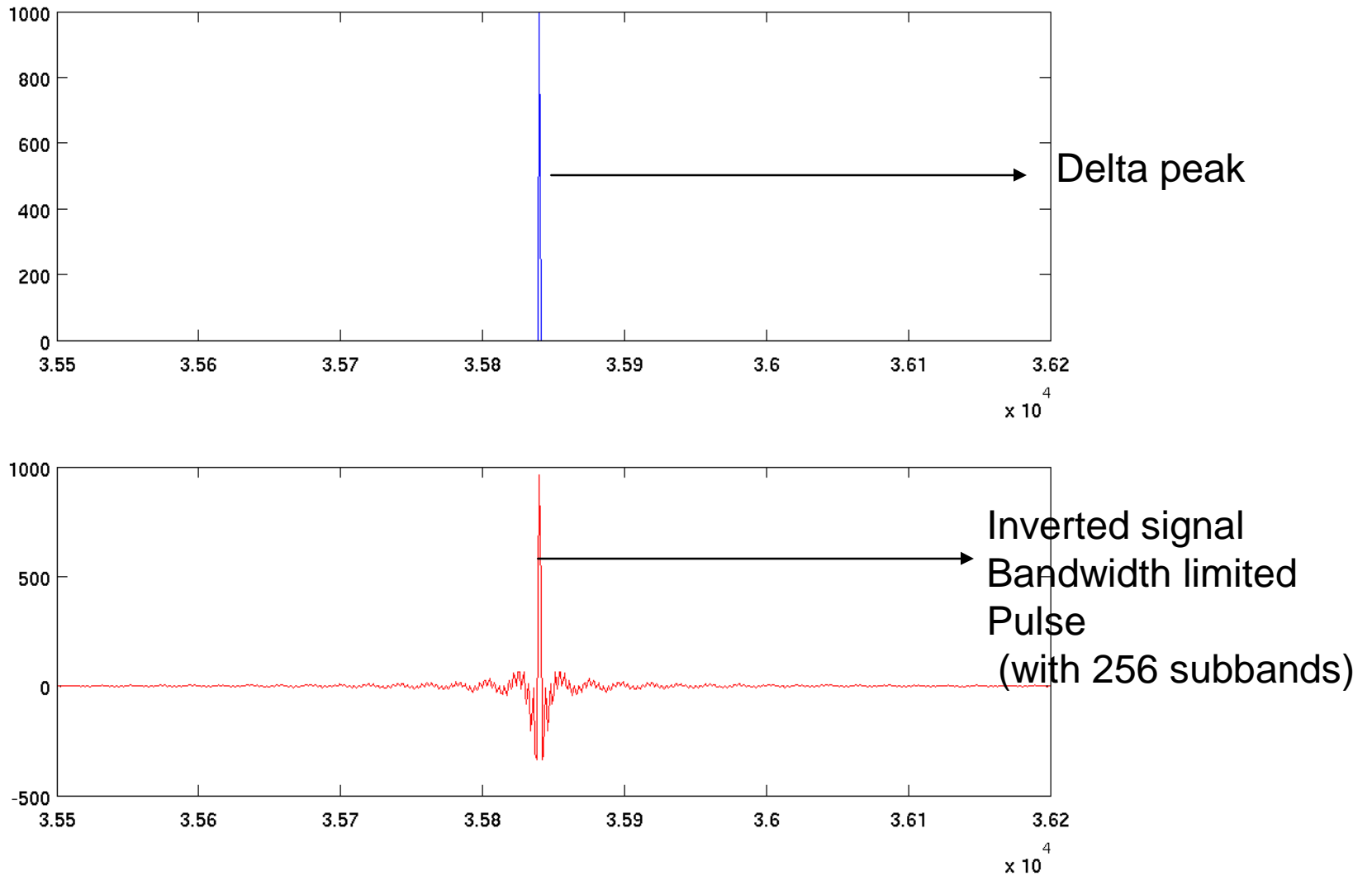
(simulated) PPF Response



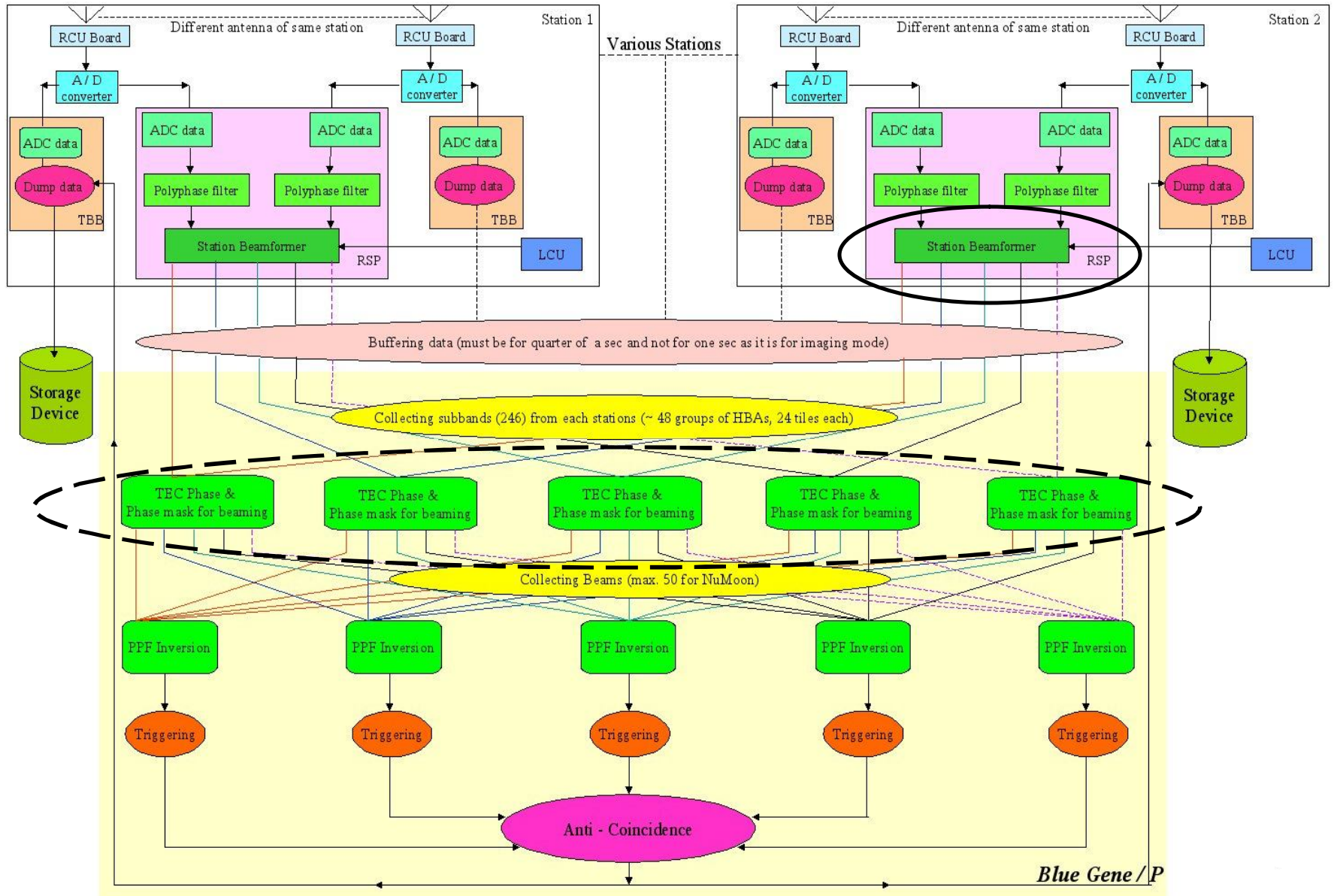
PPF Inversion Routine - I



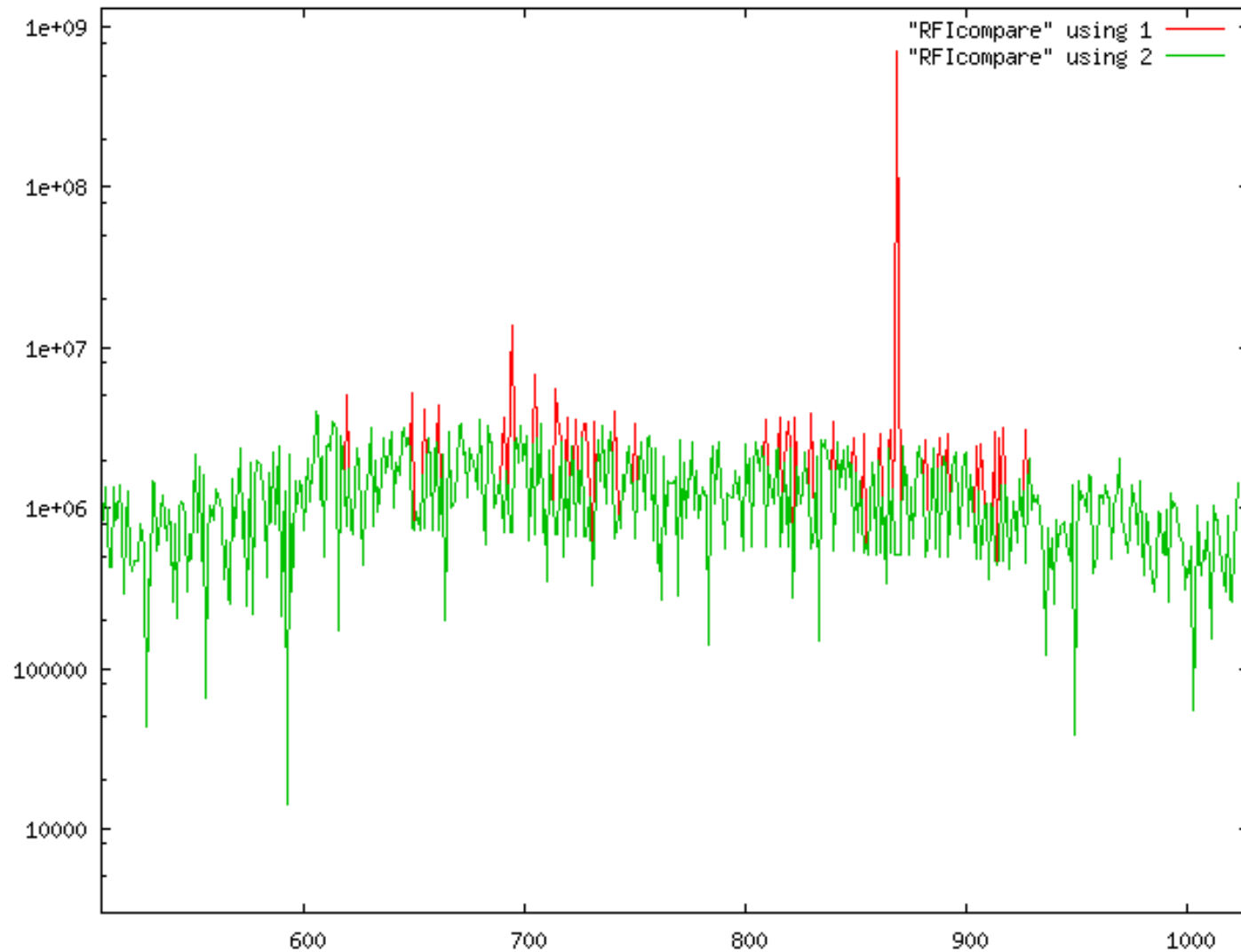
PPF Inversion Routine - II



Dataflow

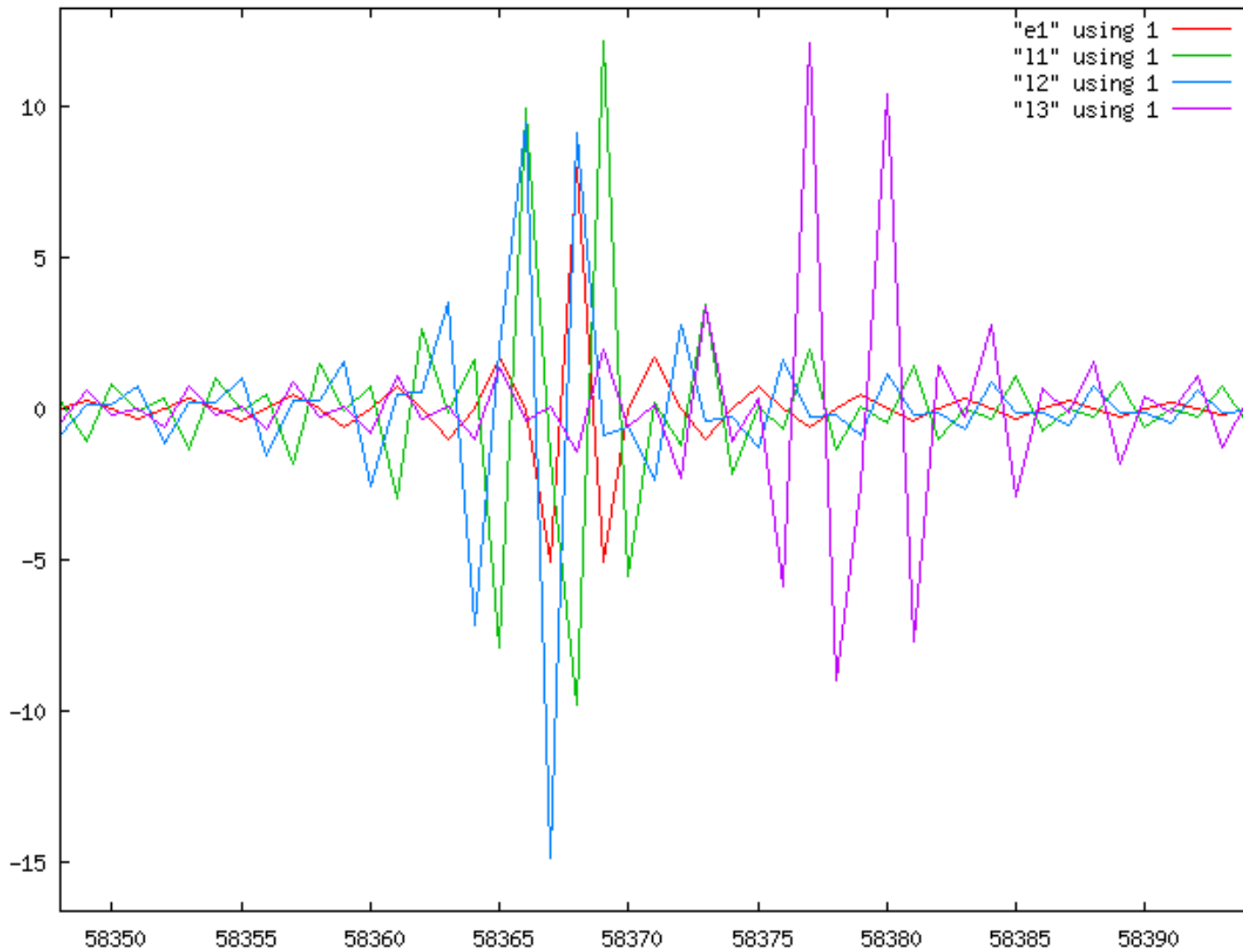


RFI Mitigation (freq selection)

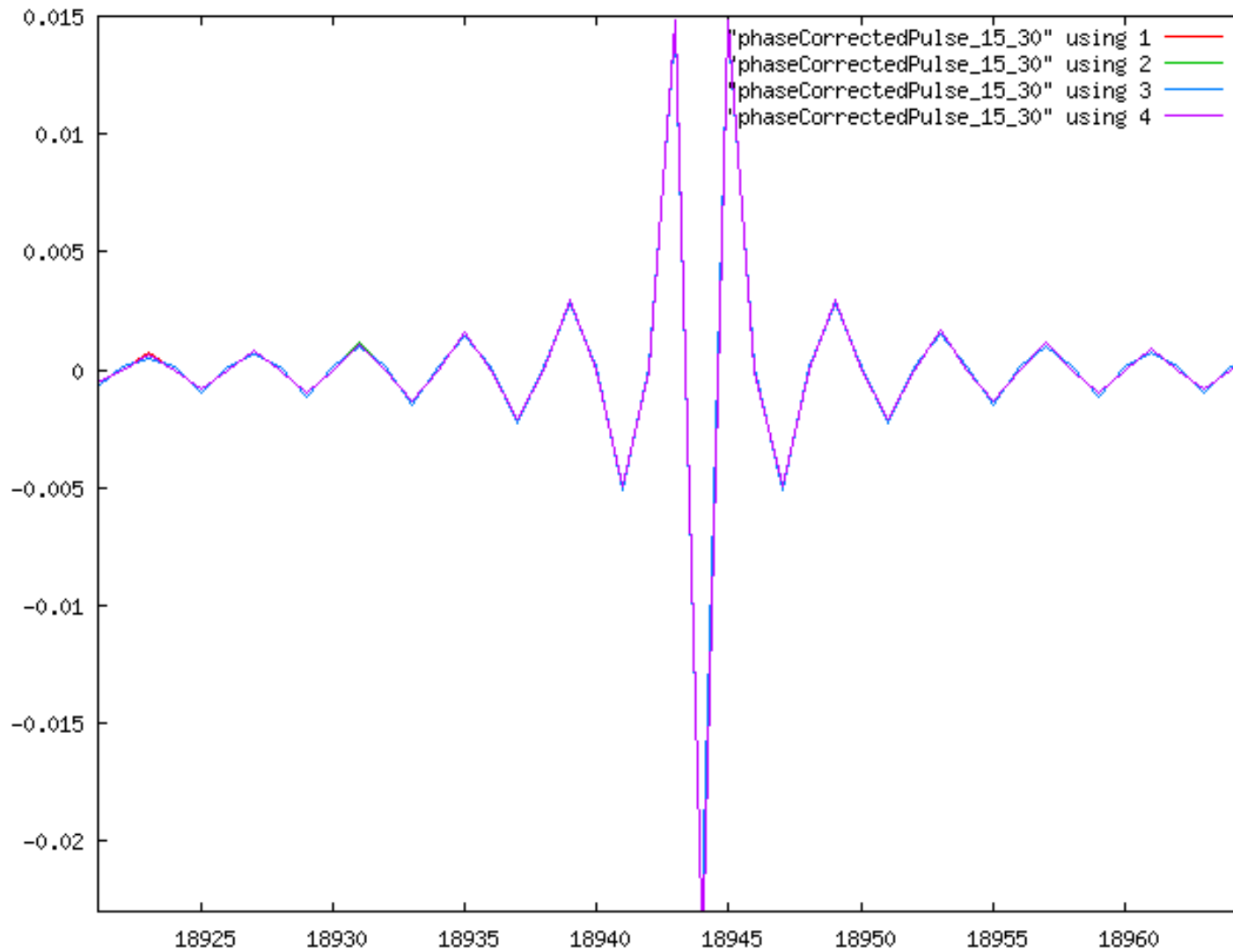


512 Subbands (2nd Nyquist Zone)

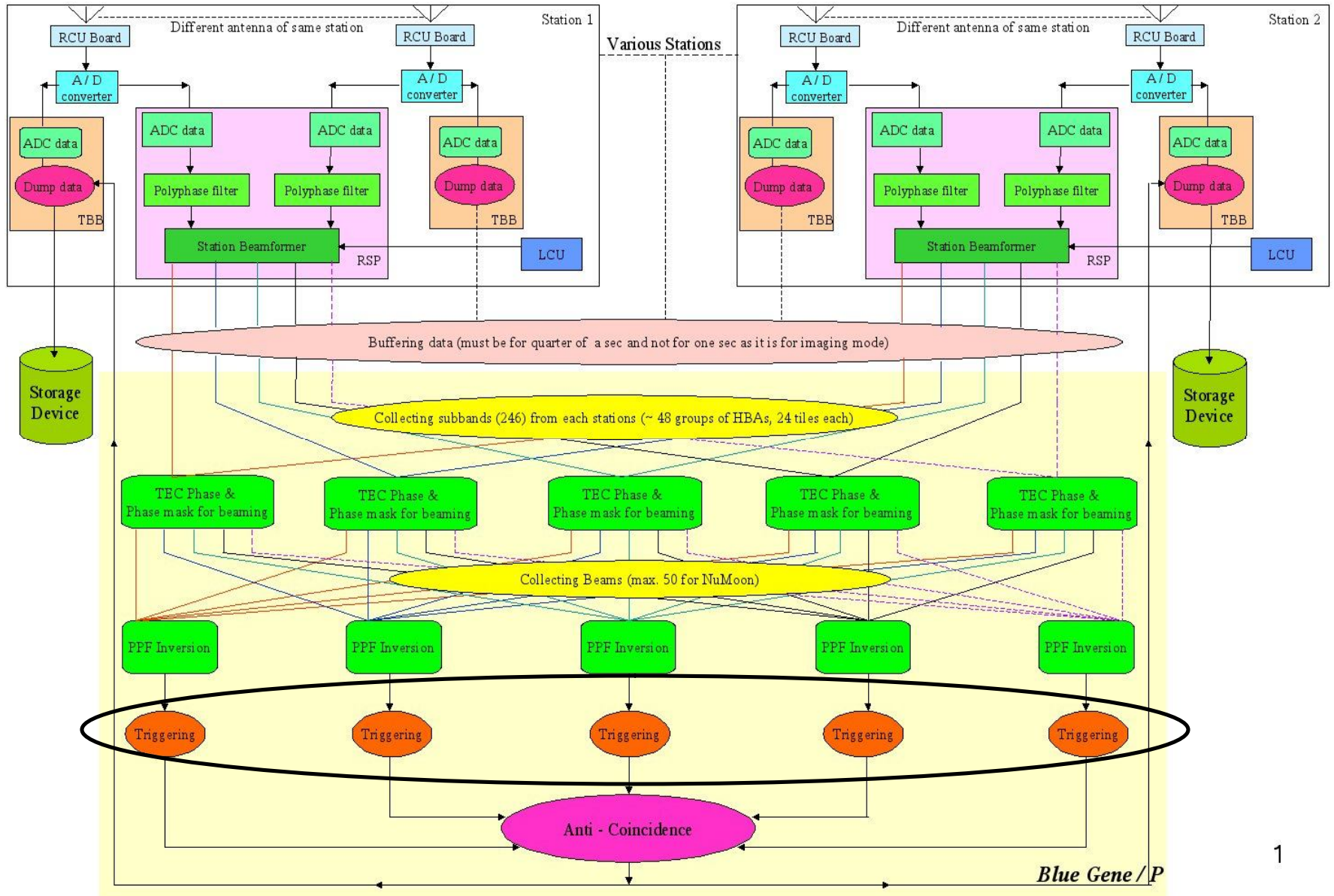
Time delay in antenna signals



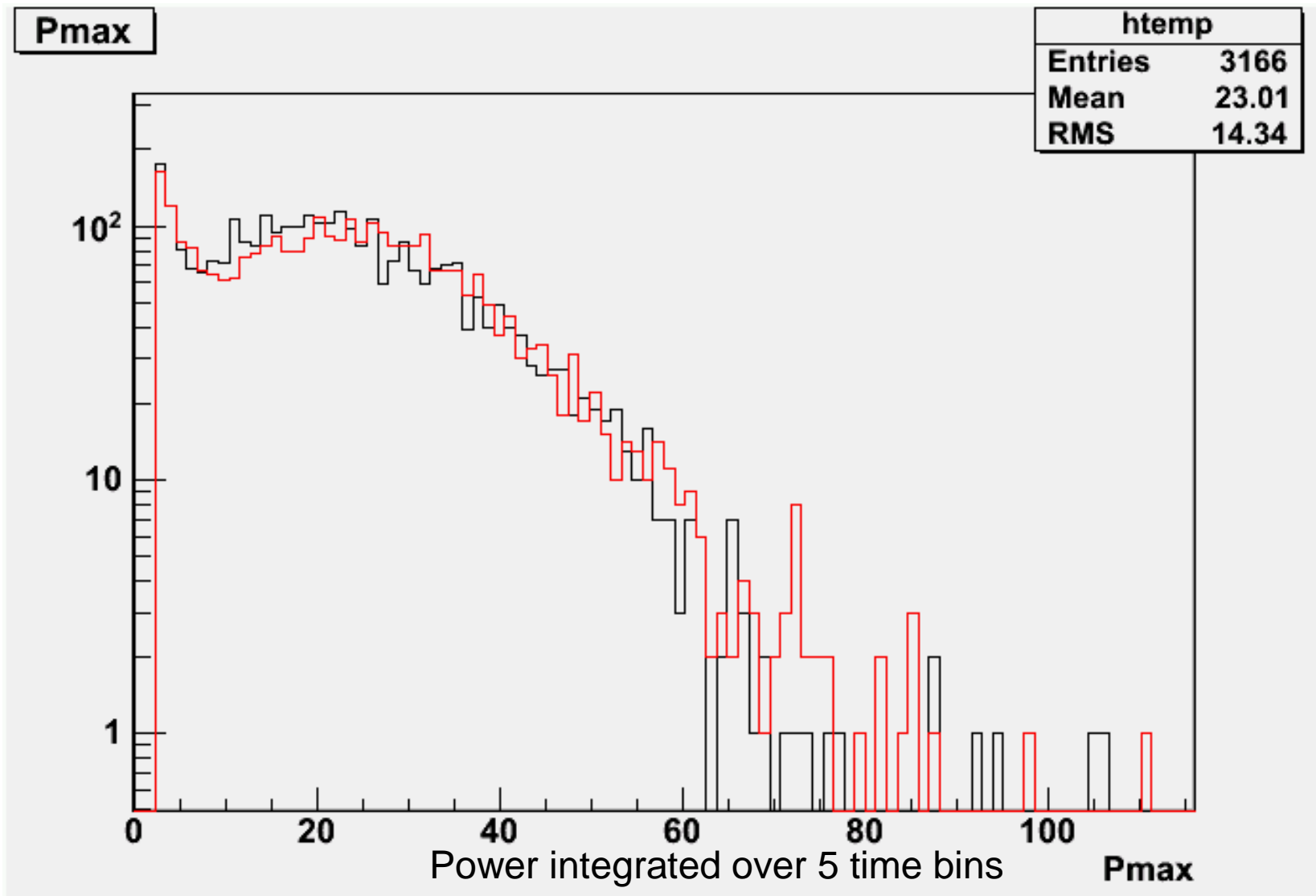
Phase Corrected antenna signals



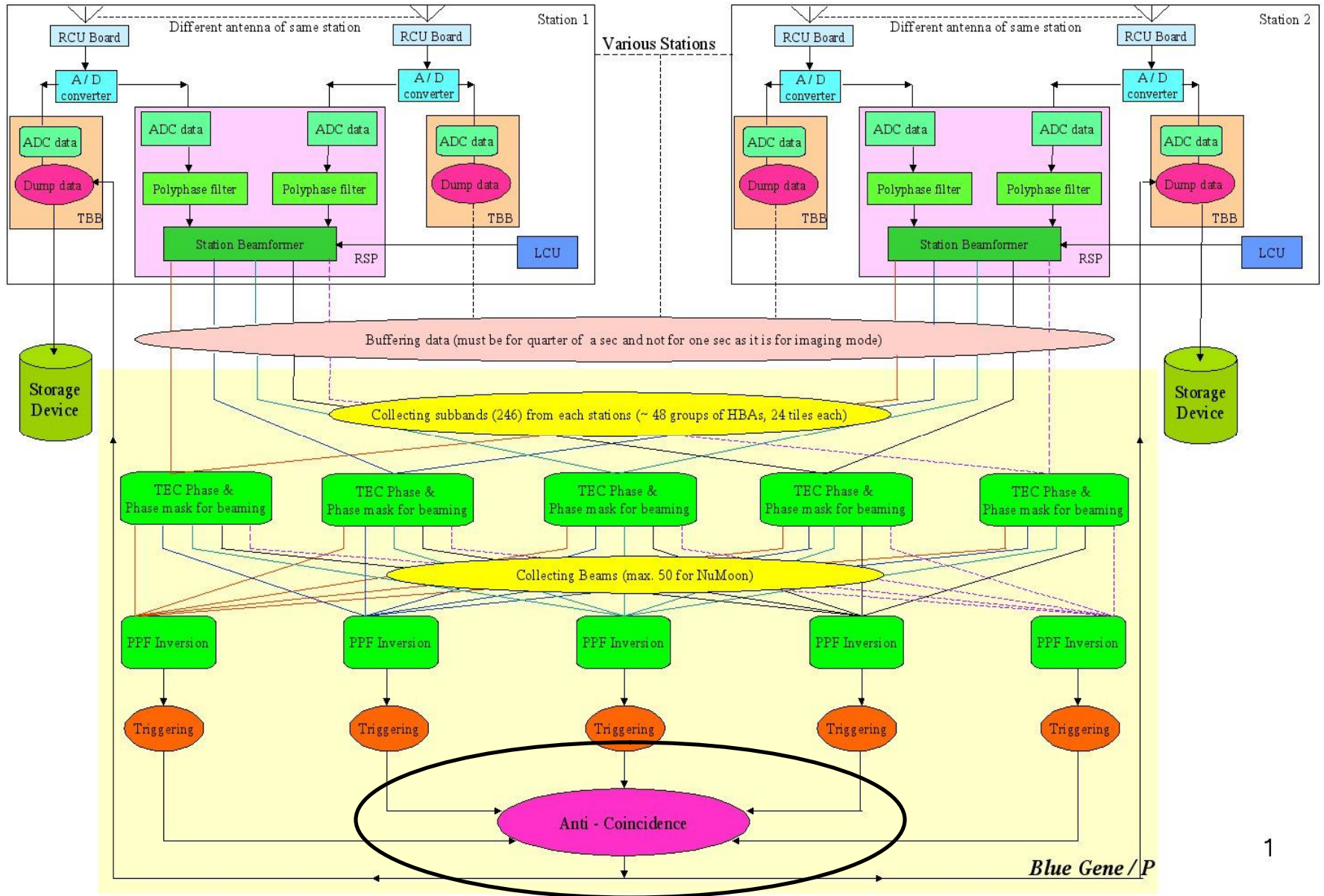
Dataflow



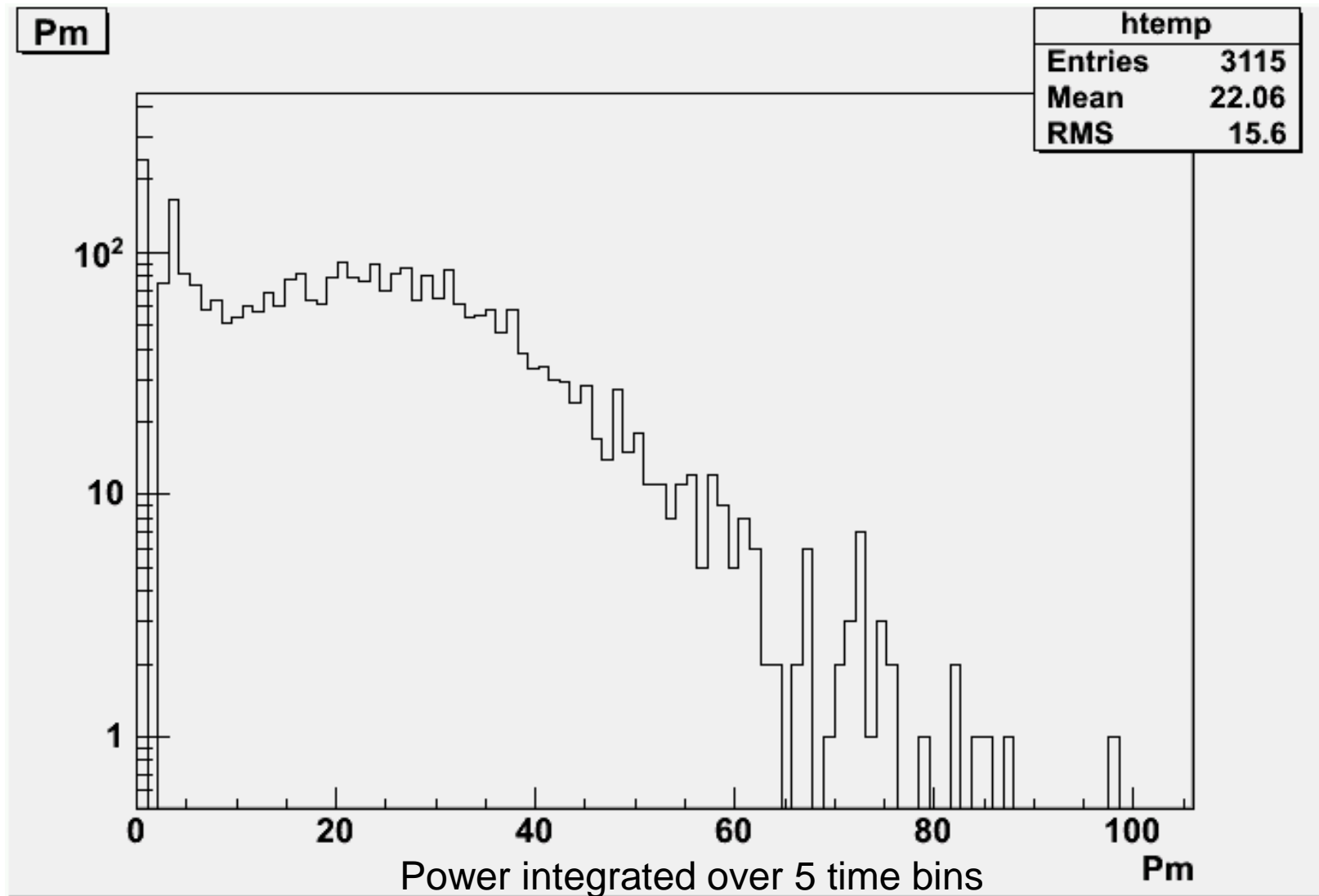
Beams – towards source – few degrees off



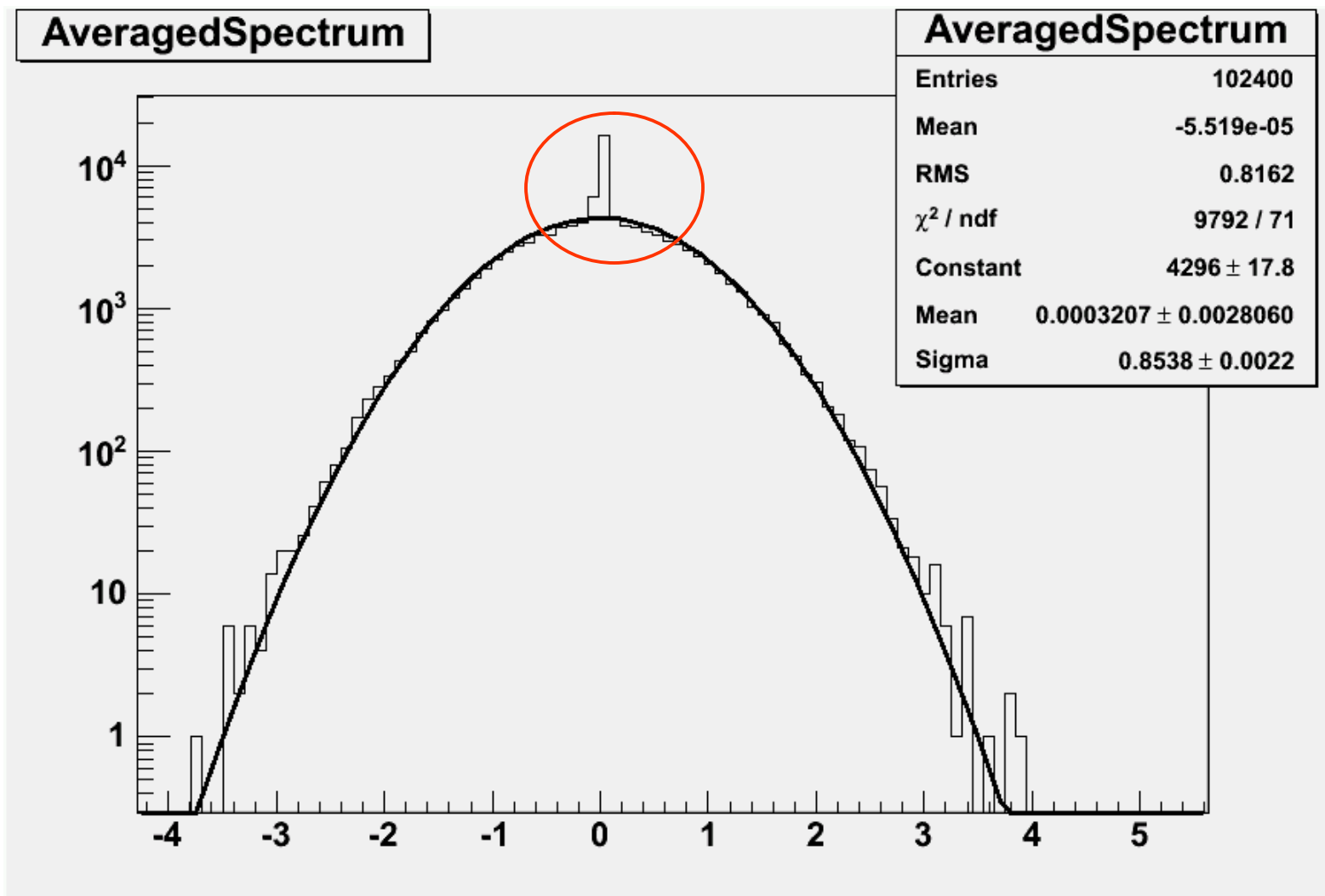
Dataflow



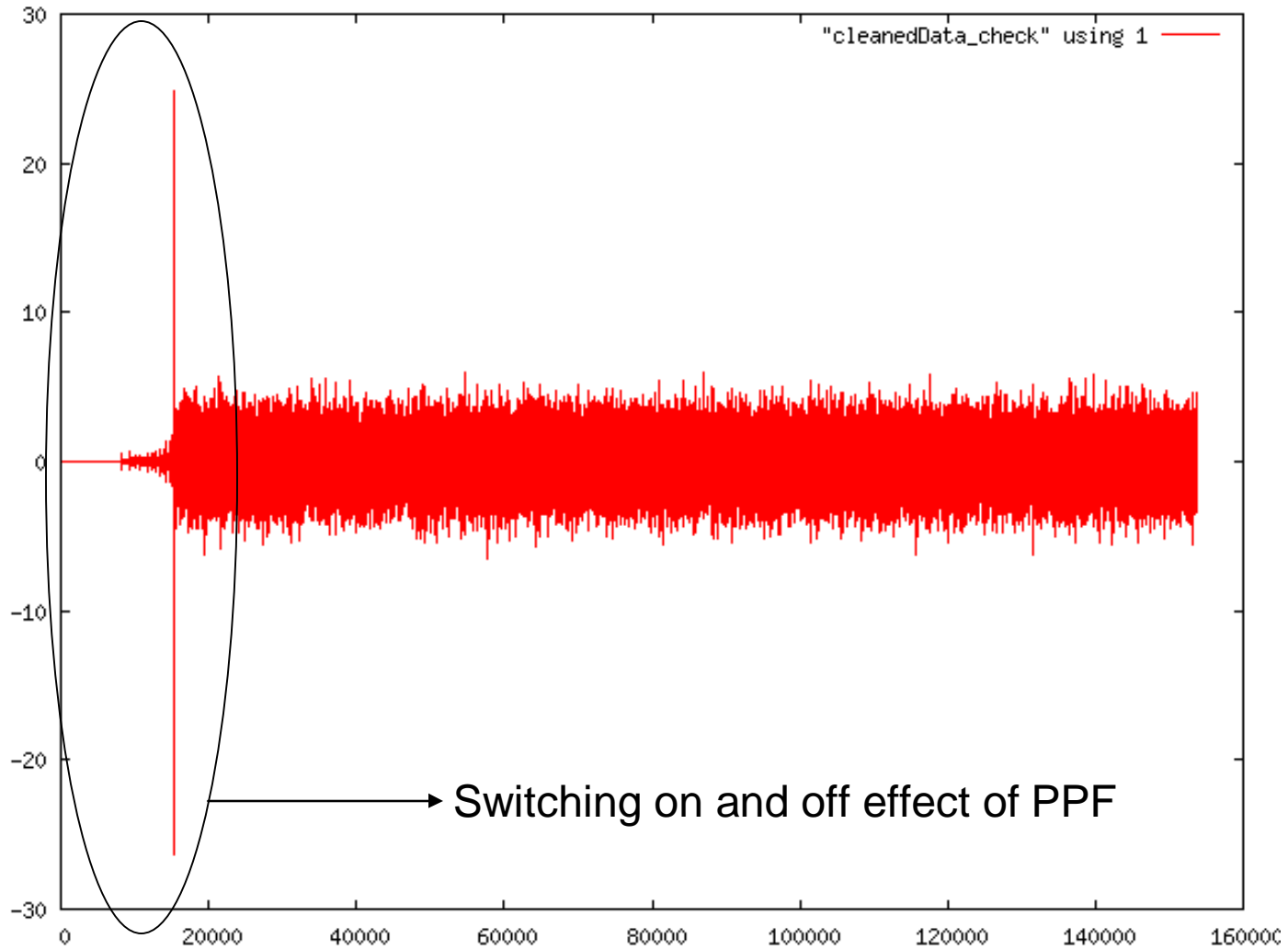
Anti-coincidence check (should remove pulsed noise)



CS- 302 data (Gaussian)



Cleaned data



Summary

- We are ready with routines, code exists.
- Tuning of trigger parameters calls the need for implementation of trigger algorithm.
- Time delay of each steps involved in triggering will give information about how long buffering time is needed.

Beam Statistics

(coherent beam of 36 quarter stations for 120MHz to 150 MHz)

36 quarter stations	Azimuth 120°	Azimuth 150°	Azimuth 180°	Azimuth 210°	Azimuth 240°
Zenith 15°	0.070°, 0.0756° 47	0.072°, 0.071° 48	0.076°, 0.069° 47	0.078°, 0.068° 46	0.074°, 0.069° 48
Zenith 30°	0.078°, 0.075° 42	0.08°, 0.071°	0.086°, 0.069°	0.086°, 0.068°	0.082°, 0.069° 44
Zenith 45°	0.096°, 0.0 34	36	34	34	1°, 0.0693° 36
Zenith 60°	0.136°, 0.075° 24	0.138°, 0.071° 25	0.148°, 0.069° 24	0.15°, 0.067° 24	0.142°, 0.069° 25
Zenith 75°	0.264°, 0.075° 12	0.268°, 0.072° 13	0.288°, 0.069° 12	0.292°, 0.068° 12	0.276°, 0.069° 13

Noise Flux Density = 124 Jy
For 48 stations (best 24), $F_N = 92.67$ Jy