

Global Position System (GPS) Based Clutter Loss Measurement (BCLM) Q&A II

Question: Is the Government looking at clutter coming from this referenced AWS-3 band into the GPS bands?

Government Response: The Government's intention is just for that 1575-megahertz band. It is only for the signals coming from the satellites; nothing in the AWS-3 band. The reference to the AWS-3 band is just because it is the Government's primary band of focus and all the research and modeling efforts need to tie back to that band.

Question: The RWP references the Government's interest in other GNSS bands but the focus for this is the 1575-megahertz band. Please expand on the reference to the other bands.

Government Response: The Government's primary focus is in the GPS L1 band however, we do have interest in the other constellations and we'd like the receivers to have the ability to make measurements in all of the bands such as GNSS, Galileo, or GPS.

Question: The RWP makes no mention of bandwidth associated with that. Is the Government interested in the M-code, the P-code, or C/A? How much bandwidth of the clutter assessment is of interest to the Government?

Government Response: The Government is interested in the all L1 signal types, as these were provided in the initial study to be capable of characterizing clutter up to 40 dB of attenuation.

Question: We noticed there was this interest in sensitivity of the GNSS receiver. Can you provide more details on where that interest came from?

Government Response: Previous clutter characterization campaigns have indicated attenuation up to 35dB. The receivers need a dynamic range capable of staying in the linear range regardless of being in LOS with the satellite or being embedded in clutter.

Question: The RWP did not mention any sort of update (refresh) rate or frequency for the receivers. What is the requirement for update (refresh) rate?

Government Response: Receiver update rate is directly correlated to the degree resolution achievable/desired. The higher the resolution the more desirable but there is some CBA there.

Question: Is there interest in understanding what the make-up of the clutter (for example signal noise vs. character noise, etc.) within the spectrum is?

Government Response: The OT includes different studies and different topics the successful offeror will research, and the make-up of clutter is one of areas that will be studied.

Question: Please confirm that the Government anticipates to the approach for conducting the study and not the study itself to be included as part of the White paper.

Government Response: That is correct. The whitepapers should address the vendor's approach to conducting the study. The individual studies are slated to be conducted within the period of performance of this prototype.

Question: Does the Government prefer a system that records and saves the data (in some agreed-to standard form) and have others post-process the data?

Government Response: As mentioned in the RWP, and shown in the initial study, we wish for there to be a level of on board processing, an example may be data reduction through binning or removal, as well as for the data to be saved to allow for post processing/manipulation/data mining. As far as measurement standards, we do not have one in mind, and would be open to an open source option, example may be SigMF.

Question: Are you looking for the system to store the data (for possible post-processing) and process the data with built-in algorithms (which could be changed)?

Government Response: Yes to both. We intend to work with the vendor to refine those algorithms and processes. There is mention of involvement with the standing WGs, SSTD, for dialog like this.

Question: What angular accuracy is desired?

Government Response: We desire an accuracy consistent with that of the initial study.

Question: Is the requirement for measuring both azimuth and elevation angles? Or just azimuth angle?

Government Response: There is a requirement for 3D measurements, so yes both Az and El.

Question: Can the Government provide an anticipated cost range for the prototype effort?

Government Response:

The Government will not provide an anticipated cost range for the prototype effort.