Please let me know if there are questions. Here is the response from HRD:

We ultimately decided to request float for reflectivity both in the HWX and NAW mode files. While we understand the advantages of byte storage, there was enough confusion surrounding the metadata for such a format that we wanted to keep things simple for research community use. Therefore, as illustrated below, we request HWX mode DBZ remain as float. The "(resolution=0.375)" statement in the units attribute should be removed. We request that NAW mode NAW\_Range\_Vector\_Map be stored in float format, just as done for HWX mode DBZ. We do not understand why the FillValue for NAW\_Range\_Vector\_Map is 999.f. Should it not be -9999.f for consistency with HWX mode DBZ? Additionally, NAW\_Range\_Vector\_Map should have its units attribute consistent with HWX mode DBZ.

We assume that with these changes, one can interpret reflectivity values reported in the DBZ and NAW\_Range\_Vector\_Map variables as actual reflectivity values. That is, no additional manipulation of the data values is required to obtain physical reflectivity values one would expect from a research radar. Can L3 Harris confirm this?

We hope that the default mode for the MMR will be HWX. The reflectivity variable for the NAW mode is poorly named. While we would prefer that reflectivity in NAW mode have the same structure as reflectivity in HWX mode (i.e., a single value, rather than 4 quarter values), we understand that the NAW mode structure is perhaps what it is. But, for the record, the name "NAW\_Range\_Vector\_Map" would not immediately indicate to the user that this is the NAW reflectivity variable. Furthermore, the metadata does little to explain the nuances of the 4 quarters structure that we had to figure out by asking & searching through the provided documentation. While we are reluctant to ask for the NAW mode reflectivity variable to conform to the same structure (float, single value, named DBZ) as the HWX DBZ variable (knowing that it is probably what it is), we wanted to go on record as voicing this as our preference. As it stands, we would not advise simply changing the name of NAW\_Range\_Vector\_Map to "DBZ" as that would simply create confusion since they presently are different variables with different structures.

HWX:

        float DBZ(time, range) ;
                DBZ:long\_name = "DBZ" ;
                DBZ:\_fillValue = -9999.f ;
                DBZ:units = "dB ~~(resolution=0.375)~~" ;

NAW:

        ~~byte~~**float** NAW\_Range\_Vector\_Map(time, range) ;
                NAW\_Range\_Vector\_Map:long\_name = "Range\_Vector\_Map" ;
                NAW\_Range\_Vector\_Map:\_fillValue = ~~999.f~~-**9999.f** ;
                NAW\_Range\_Vector\_Map:sampling\_ratio = 1.f ;
                NAW\_Range\_Vector\_Map:coordinate = "time range" ;
                NAW\_Range\_Vector\_Map:grid\_mapping = "grid\_mapping" ;

                **NAW\_Range\_Vector\_Map:units = "dB" ;**