WE CLAIM:

1. An apparatus for communication, comprising:

at least one processor; and

at least one memory storing instructions that, when executed by the at least one processor, cause the apparatus at least to:

receive, from a location management function, a request to perform a positioning measurement reporting of positioning reference signals, PRSs, aggregated across a plurality of positioning frequency layers (PFLs); and

reporting, to the location management function, a positioning measurement and an indication indicating whether the positioning measurement is obtained from at least a portion of the PRSs aggregated across the plurality of PFLs.

2. The apparatus of claim 1, wherein the indication indicates whether the positioning measurement is obtained from the PRSs aggregated across the plurality of PFLs.

3. The apparatus of claim 1, wherein the apparatus is caused to perform one or more of:

reporting at least one of the plurality of PFLs that the apparatus successfully measured or failed to measure;

reporting at least one of the plurality of PFLs that the apparatus successfully measured to obtain the positioning measurement; or

obtaining the measurement of the PRSs aggregated across the plurality of the PFLs, wherein the indication indicates that the positioning measurement is obtained from at least the portion of the PRSs aggregated across the plurality of PFLs.

4. The apparatus according to claim 1, wherein the reporting comprising rules provided by the location management function, to configure the apparatus with the plurality of positioning frequency layers (PFLs) and one or more positioning reference signal processing windows (PPW), wherein each PPW is associated with a respective positioning frequency layer (PFL).

5. The apparatus according to claim 4, wherein the rules configure the apparatus to perform one or more of:

reporting that a set of a positioning measurement, a positioning frequency layer identifier (PFL ID), and a transmission reception point (TRP) ID, are successfully measured by the apparatus;

reporting a set of the PFL ID and a PPW ID that the apparatus has failed to measure;

reporting the set of the PFL ID and the PPW ID that the apparatus has successfully measured, when a quantity of successfully measured positioning frequency layers (PFLs) is less than a quantity of positioning frequency layers (PFLs) that the apparatus has failed to measure;

reporting the positioning measurement only when the reported positioning measurement is obtained by the carrier aggregation and not across all of the plurality of positioning frequency layers (PFLs); and

reporting the positioning measurement, the PFL IDs, and the TRP ID, which are obtained by carrier aggregation from at least a portion of the plurality of positioning frequency layers (PFLs).

6. The apparatus according to any one of claims 1-3, wherein the positioning reference resources are transmitted from a transmission reception point (TRP) over the plurality of positioning frequency layers (PFLs).

7. The apparatus according to any one of claims 1-4, wherein, when the apparatus is configured by rules provided by a network node to drop receiving specific PRS resources within a PPW for one positioning frequency layer (PFL), the apparatus is further configured by the rules provided by the network node to drop receiving PRS resources over all concurrent PPWs in all of the plurality of positioning frequency layers (PFLs).

8. The apparatus according to any one of claims 1-7, wherein, when the apparatus is further configured by the rules provided by the network node not to obtain the positioning measurement by the carrier aggregation from any two consecutive positioning frequency layers (PFLs), the apparatus is further caused to drop receiving PRS resources in all PPWs in all of the plurality of positioning frequency layers (PFLs).

9. The apparatus according to claim 1, wherein the positioning measurement report comprises one or more of:

one or more positioning measurements obtained from at least a part of the plurality of positioning frequency layers (PFLs); or

no positioning measurement.

10. The apparatus according to claim 2, wherein the apparatus is further caused to perform one or more of:

receive information indicating one or more rules for the positioning measurement reporting applied at the apparatus when the apparatus is unable to obtain any positioning measurement by carrier aggregation (CA) from a requested positioning frequency layer (PFL) of the plurality of positioning frequency layers (PFLs) indicated in the request by the location management function; or

transmit, in the positioning measurement report, at least one identifier for each positioning frequency layer (PFL) and PPW in which the measurement failed, or at least an indication of a failure event to obtain positioning measurement by carrier aggregation (CA).

11. An apparatus for communication, comprising:

at least one processor; and

at least one memory storing instructions that, when executed by the at least one processor, cause the apparatus at least to:

transmit, to a user equipment, configurations to configure the user equipment to drop receiving positioning reference signals (PRS) resources when the user equipment fails to obtain a positioning measurement report by carrier aggregation (CA) within positioning processing windows (PPW) across a plurality of positioning frequency layers (PFLs); and

reconfigure and transmit, to the user equipment, one or more positioning processing windows (PPWs) for one or more of the plurality of positioning frequency layers (PFLs) that the user equipment previously failed to measure.

12. The apparatus according to claim 11, wherein the apparatus is further caused to transmit positioning reference resources over the plurality of positioning frequency layers (PFLs).

13. The apparatus according to claim 11 or claim 12, wherein the configurations comprising rules to configure the user equipment such that when the user equipment drops receiving specific PRS resources within a PPW for one positioning frequency layer (PFL), the rules configure the user equipment to drop receiving PRS resources over all concurrent PPWs in all of the plurality of positioning frequency layers (PFLs).

14. The apparatus according to any one of claims 11-13, wherein the rules configure the user equipment such that, when the user equipment cannot obtain the positioning measurement by the carrier aggregation (CA) from any two consecutive positioning frequency layers (PFLs), the rule configures the user equipment to drop receiving PRS resources in all PPWs in all of the plurality of positioning frequency layers (PFLs).

15. An apparatus for communication, comprising:

at least one processor; and

at least one memory storing instructions that, when executed by the at least one processor, cause the apparatus at least to:

provide, to a user equipment, a request to report positioning measurement reporting by carrier aggregation (CA) across a plurality of positioning frequency layers (PFLs); and

receive, from the user equipment according to the provided rules, a positioning measurement report indicating at least one or more of the plurality of positioning frequency layers (PFLs) that the user equipment successfully measures or failed to measure.