**3GPP TSG RAN WG4 Meeting #116 R4-2510784**

**Bengaluru, India, 25 Aug. – 29 Aug. 2025**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | 38.133 | **CR** | Draft CR | **rev** | **-** | **Current version:** | 19.1.0 |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network |  | Core Network |  |

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| ***Title:*** | Draft CR for CSI-RS based L1 measurements | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | R4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_Mob\_Ph4-Core | | | | |  | ***Date:*** | | | 2025-08-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***Release:*** | | | Rel-19 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Draft big CR for RRM requirements of NR mobility enhancements Phase 4 in RAN4#115 are agreed. However, there is an applicability rule added without the agreement | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Removing the HST not configured applicability rule. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | RRM requirements for NR mobility enhancements Phase 4 would still be missing. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 9.14.3.4 (new), 9.14.3.5 (new), 9.14a (new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **x** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | | **x** |  | Test specifications | | | | TS38.533 | | |
| ***(show related CRs)*** | |  | **x** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**<<Start of change>>**

## 9.14a CSI-RS based Intra-frequency L1-RSRP measurements for neighbor cell

### 9.14a.1 Introduction

A measurement is defined as a CSI-RS based intra-frequency L1-RSRP measurement provided that:

- the SCS of the CSI-RS resource of LTM candidate cell(s) configured for L1 measurement is the same as the SCS of active DL BWP, and

- for SCS of 60KHz, the CP type of the CSI-RS resource of LTM candidate cell(s) configured for L1 measurement is the same as the CP type of active DL BWP, and

- at least 48 RBs of the CSI-RS resource of LTM candidate cell(s) configured for L1 measurement is included within the active DL BWP.

Otherwise, a measurement is defined as a CSI-RS based inter-frequency L1 measurement.

When configured by the network, the UE shall be able to perform CSI-RS based L1-RSRP measurements for neighbour cell, on the intra-frequency CSI-RS resources configured for L1-RSRP measurements.

The UE shall report the measurement quantity and send periodic, semi-persistent or aperiodic reports, according to the higher layer parameter [*reportConfigType*] of each reporting setting[*LTM-CSI-ReportConfig*].

### 9.14a.2 Requirements Applicability

The requirements in the clause 9.14a are applicable to FR1 and FR2-1 for LTM.

The requirements in clause 9.14a apply for CSI-RS L1-RSRP measurements for configured LTM candidate cell, provided the following conditions are met:

- The cell is known,

- The CSI-RS L1-RSRP measurement is configured as periodic CSI-RS or semi-persistent CSI-RS measurement, and

- at least 48 RBs of the CSI-RS configured for measurement is within the active BWP, and

- repetition is set to “OFF” [or not configured].

For CSI-RS based L1-RSRP measurement, the cell is considered as known if the following conditions are met:

- The UE has performed L3 measurement on the target cell during the last 5 seconds, and

- The SSB from the target cell configured for L3 measurement remains detectable according to the cell identification requirements in clause 9.2, and

- The CSI-RS from the target cell configured for L1 measurement remains measurable

Otherwise, the cell is unknown.

A CSI-RS resource configured for L1-RSRP for LTM candidate cell shall be considered measurable when for each relevant CSI-RS the following conditions are met:

- LTM CSI-RS L1-RSRP related side conditions given in clause [10.x.x] for FR1 and [10.x.x] for FR2-1 are met respectively, for a corresponding band.

### 9.14a.3 Measurement Reporting Requirements

The UE shall report the L1-RSRP value as a 7-bit value in the range -140, -44 dBm with 1 dB step size according to clauses 10.1.19D.2 for FR1 and 10.1.20A.2 for FR2 if *noOfReportedRS-PerCell-r18* and *noOfReportedCells-r18* are both configured to one. If *noOfReportedRS-PerCell-r18* and/or *noOfReportedCells-r18* are configured to be larger than one, the UE shall use differential L1-RSRP based reporting as defined in clause 10.1.19D.2 for FR1 and 10.1.20A.2 for FR2. The differential L1-RSRP is quantized to a 4-bit value with 2 dB step size. The mapping between the reported L1-RSRP value and the measured quantity is described in clause 10.1.6, where the reported differential value for unmeasured LTM L1-RSRP resources is DIFFRSRP\_15 in table 10.1.6.1.

#### 9.14a.3.1 Periodic Reporting

Reported L1-RSRP measurements contained in periodic L1-RSRP measurement reports shall meet the requirements in clauses 10.1.19D.2 for FR1 and 10.1.20A.2 for FR2, respectively. The UE shall transmit the periodic L1-RSRP reporting on PUCCH over the air interface according to the periodicity defined in clause 5.2.1.4 in TS 38.214 [26].

#### 9.14a.3.2 Semi-Persistent Reporting

Reported L1-RSRP measurements contained in a Semi-Persistent L1-RSRP measurement report shall meet the requirements in clauses 10.1.19D.2 for FR1 and 10.1.20A.2 for FR2, respectively. This requirement applies for semi-persistent L1-RSRP reports send on PUSCH or PUCCH.

The UE shall only send semi-persistent L1-RSRP measurement reports on PUSCH, if a DCI request has been received.

The UE shall only send semi-persistent L1-RSRP measurement reports on PUCCH, if an activation command [7] has been received.

The UE shall transmit the semi-persistent L1-RSRP reporting on PUSCH or PUCCH over the air interface according to the periodicity defined in clause 5.2.1.4 in TS 38.214 [26].

#### 9.14a.3.3 Aperiodic Reporting

Reported L1-RSRP measurements contained in aperiodic triggered, aperiodic triggered periodic and aperiodic triggered semi-persistent L1-RSRP reports shall meet the requirements in clauses 10.1.19D.2 for FR1 and 10.1.20A.2 for FR2, respectively.

The UE shall only send aperiodic L1-RSRP measurement report if a DCI trigger has been received.

After the UE receives CSI request in DCI, the UE shall transmit the aperiodic L1-RSRP reporting on PUSCH over the air interface at the time specified according to clause 6.1.2.1 in TS 38.214 [26].

#### 9.14a.3.x1 Event-triggered Periodic Reporting

Reported CSI-RS based L1-RSRP measurements contained in event-triggered periodic measurement reports shall meet the requirements in clauses 10.x1.y1.z1 for FR1 and 10.x2.y2.z2 for FR2.

The first report in event triggered periodic measurement reporting shall meet the requirements specified in clause 9.14a.3.x2.

#### 9.14a.3.x2 Event Triggered Reporting

Reported CSI-RS based L1-RSRP measurements contained in event triggered measurement reports shall meet the requirements in clauses clauses 10.x1.y1.z1 for FR1 and 10.x2.y2.z2 for FR2.

The UE shall not send any event triggered measurement reports as long as no reporting criteria is fulfilled.

The event triggered measurement reporting delay is defined as the time between an event that will trigger an event triggered measurement report and the point when the UE starts to transmit the first UL transmission to report the measurement results over the air interface. This measurement reporting delay excludes a delay which is caused by no UL resources being available for UE to send the measurement report on.

The event triggered measurement reporting delay shall be no larger than the maximum L1-RSRP measurement period of the cells corresponding to the event.

If serving cell is involved in event evaluation, L1-RSRP measurement period of serving cell refers to TL1-RSRP\_Measurement\_Period\_CSI-RS as defined in 9.5, assuming TReport = 0 and [TCSI-RS is the periodicity of the serving cell CSI-RS for event triggered L1-RSRP measurement report.]

If neighbor cell is involved in event evaluation, L1-RSRP measurement period of neighbor cell refers to [TL1-RSRP\_Measurement\_Period\_CSI\_intra] defined in [9.x], assuming TReport = 0, and TCSI-RS is the periodicity of the neighbor cell CSI-RS configured for intra-frequency event-triggered L1-RSRP measurement report.]

### 9.14a.4 Number of cells and number of CSI-RS resources

The number of cells and number of CSI-RS resources that UE shall be capable of performing L1-RSRP measurements on are reported by the capabilities [TBD].

### 9.14a.5 CSI-RS based L1-RSRP measurement requirements without measurement gaps

The requirements specified in this clause are only applicable when

- maximum RTD between cells are within CP.

- At least 48 RBs of the CSI-RS configured for measurement is confined within the active BWP of the UE.

If a neighbor cell is known according to 9.14a.2, the UE shall be capable of performing L1-RSRP measurements based on the configured CSI-RS resource for L1-RSRP computation, and the UE physical layer shall be capable of reporting L1-RSRP measured over the measurement period of TL1-RSRP\_Measurement\_Period\_CSI-RS\_intra.

The value of TL1-RSRP\_Measurement\_Period\_CSI-RS\_intra is defined in table 9.14a.5-1 for FR1 and in table 9.14a.5-2 for FR2, where

- For periodic and semi-persistent CSI-RS resources in a resource set configured with higher layer parameter *repetition* set to OFF

- N=8 if UE is capable of *[skippingSSBbasedL1mesurement-R19] and* the CSI-RS resources shall be Type-D QCL’ed with the associated SSB for L3 measurement and the CSI-RS resource is configured with [TBD]; Otherwise,

- N=1 if *qcl-InfoPeriodicCSI-RS* is configured for all the resources in the resource set and for each resource one RS has QCL-TypeD with SSB for L1-RSRP measurement.

- P value for CSI-RS resource to be measured is defined as

- Ntotal / Noutside\_MG in FR1

- Psharing factor \* Ntotal / Noutside\_MG in FR2 with Navailable = 0

- Ntotal / Navailable in FR2 with Navailable > 0

For a window W of duration max (TL1, MGRP\_max), where MGRP max is the maximum MGRP across all configured per-UE measurement gaps and per-FR measurement gaps within the same FR as serving cell, and starting at the beginning of any CSI-RS resource occasion:

- Ntotal is the total number of CSI-RS resource occasions within the window, including those overlapped with measurement gap occasions or SMTC occasions within the window, and

- Noutside\_MG is the number of CSI-RS resource occasions that are not overlapped with any measurement gap occasion within the window W

- Navailable is the number of CSI-RS resource occasions that are not overlapped with any measurement gap occasion nor any SMTC occasion within the window W

- TL1 is periodicity of the target CSI-RS resource.

- Psharing factor = 1, if the CSI-RS configured for L1-RSRP measurement outside measurement gap is

- not overlapped with the SSB symbols indicated by *SSB-ToMeasure* and 1 data symbol before each consecutive SSB symbols indicated by *SSB-ToMeasure* and 1 data symbol after each consecutive SSB symbols indicated by *SSB-ToMeasure*, given that *SSB-ToMeasure* is configured, where the *SSB-ToMeasure* is the union set of *SSB-ToMeasure* from all the configured measurement objects merged on the same serving carrier, and,

- not overlapped with the RSSI symbols indicated by *ss-RSSI-Measurement* and 1data symbol before each RSSI symbol indicated by *ss-RSSI-Measurement* and 1 data symbol after each RSSI symbol indicated by *ss-RSSI-Measurement*, given that *ss-RSSI-Measurement* is configured,

- Psharing factor = 3, otherwise.

If the high layer in TS 38.331 [2] signaling of *smtc2* is configured, TSMTCperiod corresponds to the value of higher layer parameter *smtc2*; Otherwise TSMTCperiod corresponds to the value of higher layer parameter *smtc1*. TSMTCperiod is the shortest SMTC period among all CCs in the same FR2 band, provided the SMTC offset of all CCs in FR2 have the same offset.

Longer measurement period would be expected if the combination of CSI-RS, SMTC occasion and measurement gap configurations does not meet previous conditions.

For either an FR1 or FR2 cell, longer measurement period would be expected during the period Tidentify\_CGI when the UE is requested to decode an NR CGI.

For either an FR1 or FR2 cell, longer L1 RSRP measurement period would be expected during the period Tidentify\_CGI,E-UTRAN when the UE is requested to decode an LTE CGI.

Table 9.14a.5-1: Intra-frequency L1-RSRP measurement period TL1-RSRP\_Measurement\_Period\_CSI-RS\_intra in FR1

|  |  |
| --- | --- |
| Configuration | TL1-RSRP\_Measurement\_Period\_CSI-RS (ms) |
| non-DRX | max(TReport, ceil(P)\*TCSI-RS\_NBC) |
| DRX cycle ≤ 320 ms | max(TReport, ceil(K\*P)\*max(TDRX,TCSI-RS\_NBC)) |
| DRX cycle > 320 ms | ceil(P)\*TDRX |
| NOTE 1: TCSI-RS\_NBC is the periodicity of neighbor cell CSI-RS configured for L1-RSRP measurement. TDRX is the DRX cycle length. TReport is configured periodicity for reporting.  NOTE 2: the requirements are applicable provided that the CSI-RS resource configured for L1-RSRP measurement is transmitted with Density = 3.  NOTE 3: K = 1.5. | |

Table 9.14a.5-2: Intra-frequency L1-RSRP measurement period TL1-RSRP\_Measurement\_Period\_CSI-RS\_intra in FR2

|  |  |
| --- | --- |
| Configuration | TL1-RSRP\_Measurement\_Period\_CSI-RS (ms) |
| non-DRX | max(TReport, ceil(P\*[PL1\_sharing]\*N)\*TCSI-RS\_NBC) |
| DRX cycle ≤ 320 ms | max(TReport, ceil(1.5\*P\*[PL1\_sharing]\*N)\*max(TDRX,TCSI-RS\_NBC)) |
| DRX cycle > 320 ms | ceil(M\*P\*[PL1\_sharing]\*N)\*TDRX |
| NOTE 1: TCSI-RS\_NBC is the periodicity of neighbor cell CSI-RS configured for L1-RSRP measurement. TDRX is the DRX cycle length. TReport is configured periodicity for reporting.  NOTE 2: the requirements are applicable provided that the CSI-RS resource configured for L1-RSRP measurement is transmitted with Density = 3. | |

### 9.14a.6 Measurement restriction for CSI-RS based L1-RSRP measurement

Measurement restrictions described in the following clauses apply when UE is performing L1-RSRP measurement on neighbor cell(s) without measurement gap.

Unless explicitly stated, the CSI-RS to be measured for L1-RSRP measurement is transmitted from neighbor cell(s).

#### 9.14a.6.1 Measurement restriction for CSI-RS based L1-RSRP measurement

The SSB mentioned in this clause can be associated with either the serving cell PCI or a PCI different from serving cell PCI or intra-frequency neighbor cell(s) configured with L1-RSRP measurement or inter-frequency neighbor cell(s) configured with L1-RSRP measurement without gap.

[

For both FR1 and FR2, when the CSI-RS for L1-RSRP measurement is in the same OFDM symbol as SSB for RLM, BFD, CBD or L1-RSRP measurement, UE is not required to receive CSI-RS for L1-RSRP measurement in the PRBs that overlap with an SSB.

For FR1, when the SSB for RLM, BFD, CBD or L1-RSRP measurement is within the active BWP and has same SCS as the CSI-RS for L1-RSRP measurement, the UE shall be able to perform CSI-RS measurement without restrictions.

For FR1, when the SSB for RLM, BFD, CBD or L1-RSRP measurement is within the active BWP and has different SCS than CSI-RS for L1-RSRP measurement, the UE shall be able to perform CSI-RS measurement with restrictions according to its capabilities:

- If the UE supports *simultaneousRxDataSSB-DiffNumerology* the UE shall be able to perform CSI-RS measurement without restrictions.

- If the UE does not support *simultaneousRxDataSSB-DiffNumerology*, UE is required to measure one of but not both CSI-RS for L1-RSRP measurement and SSB. Longer measurement period for CSI-RS based L1-RSRP measurement is expected, and no requirements are defined.

For FR1, when the CSI-RS for L1-RSRP measurement is in the same OFDM symbol as another CSI-RS for RLM, BFD, CBD or L1-RSRP measurement, UE shall be able to measure the CSI-RS for L1-RSRP measurement without any restriction.

For FR2, when the CSI-RS for L1-RSRP measurement on one CC is in the same OFDM symbol as SSB for RLM, BFD or L1-RSRP measurement on the same CC or different CCs in the same band, or in the same symbol as SSB for CBD measurement on the same CC or different CCs in the same band when beam failure is detected, UE is required to measure one of but not both CSI-RS for L1-RSRP measurement and SSB. Longer measurement period for CSI-RS based L1-RSRP measurement is expected, and no requirements are defined.

For FR2, when the CSI-RS for L1-RSRP measurement on one CC is in the same OFDM symbol as another CSI-RS for RLM, BFD, CBD or L1-RSRP measurement on the same CC or different CCs in the same band,

- In the following cases, UE is required to measure one of but not both CSI-RS for L1-RSRP measurement and the other CSI-RS. Longer measurement period for CSI-RS based L1-RSRP measurement is expected, and no requirements are defined.

- The CSI-RS for L1-RSRP measurement or the other CSI-RS in a resource set configured with repetition ON, or

- The other CSI-RS is configured in q1 and beam failure is detected, or

- The two CSI-RS-es are not QCL-ed w.r.t. QCL-TypeD, or the QCL information is not known to UE,

- Otherwise, UE shall be able to measure the CSI-RS for L1-RSRP measurement without any restriction.

For UE incapable of *multiCellL1-measRTD-greaterThan-CP-r18* and for UE capable of *multiCellL1-measRTD-greaterThan-CP-r18*,

- For both FR1 and FR2, when the CSI-RS for L1-RSRP measurement fully or partially overlaps with the OFDM symbol as SSB from candidate LTM neighbor cell for intra-frequency L1-RSRP measurement or inter-frequency L1-RSRP measurement without gap, UE is not required to receive CSI-RS for L1-RSRP measurement in the PRBs that overlap with an SSB.

- For FR1, when the CSI-RS for L1-RSRP measurement fully or partially overlaps with the OFDM symbol as SSB from candidate LTM neighbor cell for intra-frequency L1-RSRP measurement or inter-frequency L1-RSRP measurement without gap, if CSI-RS and SSB have different SCS and UE does not support *simultaneousRxDataSSB-DiffNumerology*, UE is required to measure one of but not both CSI-RS for L1-RSRP measurement and SSB. Longer measurement period for CSI-RS based L1-RSRP is expected, and no requirements are defined.

- For FR2, when the CSI-RS for L1-RSRP measurement on one CC fully or partially overlaps with the OFDM symbol as SSB from candidate LTM neighbor cell for intra-frequency L1-RSRP measurement or inter-frequency L1-RSRP measurement without gap in the same band, UE is required to measure one of but not both CSI-RS for L1-RSRP measurement and SSB. Longer measurement period for CSI-RS based L1-RSRP is expected, and no requirements are defined.

For FR2-1, when the CSI-RS for L1-RSRP measurement on the one CC is in the same OFDM symbol as another CSI-RS for RLM, BFD or L1-RSRP measurement on the same CC, UE supporting *schedulingMeasurementRelaxation-r18* according to the conditions described in clause 3.6.19 shall be able to measure the CSI-RS for L1-RSRP measurement without restriction when the following conditions are met:

- Both CSI-RSs are not in any CSI-RS resource set with repetition ON, and

- One CSI-RS has same QCL source as either

- the active TCI state of a PDSCH scheduled in the same OFDM symbol or

- the QCL source based on the default QCL assumption to be applied in the same OFDM symbol according to 38.214 clause 5.1.5, and

- the other CSI-RS has same QCL source as either

- the active TCI state of a PDSCH scheduled in the same OFDM symbol or

- the QCL source based on the default QCL assumption to be applied in the same OFDM symbol according to 38.214 clause 5.1.5, and

- Resources of the active TCI states of the two PDSCHs, or QCL sources of the default QCL assumption, or the active TCI state of PDSCH and QCL source of the default QCL assumption have been reported as a resource group in Rel-17 group-based RSRP report.

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### 9.14a.7 Scheduling availability of UE during CSI-RS based L1-RSRP measurement

Scheduling availability restrictions described in the following clauses apply when UE is performing CSI-based L1-RSRP measurement on neighbor cell(s) without measurement gap.

Unless explicitly stated, the CSI-RS resource to be measured for L1-RSRP measurement is transmitted from neigbor cell(s).

#### 9.14a.7.1 Scheduling availability of UE performing L1-RSRP measurement with a same subcarrier spacing as PDSCH/PDCCH on FR1

There are no scheduling restrictions due to L1-RSRP measurement performed on CSI-RS as RS for L1-RSRP measurement with the same SCS as PDSCH/PDCCH in FR1.

#### 9.14a.7.2 Scheduling availability of UE performing L1-RSRP measurement on FR2

The following scheduling restriction applies due to L1-RSRP measurement.

- The UE is not expected to transmit PUCCH/PUSCH/SRS or receive PDCCH/PDSCH/CSI-RS for tracking/CSI-RS for CQI on the concerned OFDM symbols, where the concern OFDM symbols are

- the same OFDM symbols corresponding to the CSI-RS resources configured for L1-RSRP measurement.

When intra-band carrier aggregation in FR2 is performed, the scheduling restrictions is performed apply to cell(s) in the band on the symbols that fully or partially overlap with restricted symbols.

When inter-band carrier aggregation in FR2 is performed, there are no scheduling restrictions on FR2 cells in the bands due to L1-RSRP measurement performed on FR2 cell(s) in different band(s), provided that UE is capable of independent beam management on this FR2 band pair. Additionally, there is no scheduling restriction if the UE is configured with different numerology between CSI-RS resources on one FR2 band and data on the other FR2 band provided the UE is configured for IBM operation for the band pair.

#### 9.14a.7.3 Scheduling availability of UE performing L1-RSRP measurement on FR1 or FR2 in case of FR1-FR2 inter-band CA

There are no scheduling restrictions on FR1 cell(s) due to CSI-RS based L1-RSRP measurement performed on FR2 cell(s).

There are no scheduling restrictions on FR2 cell(s) due to CSI-RS based L1-RSRP measurement performed on FR1 cell(s).

#### 9.14a.7.4 Scheduling availability of UE performing L1-RSRP measurement in TDD bands on FR1

When UE performs CSI-RS based L1-RSRP measurement on neighbor cell in a TDD band, the following restrictions apply due to L1-RSRP measurement

- The UE is not expected to transmit PUCCH/PUSCH/SRS on the concerned OFDM symbols and restricted symbols may partially or fully overlap with UL symbols, where the concern OFDM symbols are the same OFDM symbols corresponding to the CSI-RS resources configured for L1-RSRP measurement.

When TDD intra-band carrier aggregation is performed, the scheduling restrictions due to a given serving cell also apply to all other serving cells in the same band on the symbols that fully or partially overlap with the aforementioned restricted symbols.

**<<Unchanged sections omitted>>**

#### 9.15.3.4 Event Triggered Reporting

Reported L1-RSRP measurements contained in an event triggered L1-RSRP measurement report shall meet the requirements in clauses 10.1.19/10.1.19E for FR1 and 10.1.20/10.1.20B for FR2, respectively. This requirement applies for event triggered L1-RSRP reports sent on PUSCH using the MAC CE.

The UE shall not send any event triggered measurement reports if no reporting criteria is fulfilled.

The event triggered measurement reporting delay is defined as the time between an event that will trigger an event triggered measurement report and the point when the UE starts to transmit the first UL transmission to report measurement result over the air interfac. This measurement reporting delay excludes a delay which is caused by no UL resources being available for UE to send the measurement report on.

The event triggered measurement reporting delay shall be no larger than the maximum L1-RSRP measurement period of the cells corresponding to the event.

If serving cell is involved in event evaluation, L1-RSRP measurement period of the serving cell refers to TL1-RSRP\_Measurement\_Period\_SSB as defined in clause 9.5, where TReport = 0 and TSSB is the periodicity of the serving cell SSB-Index configured for event triggered L1-RSRP measurement report, which is indicated by the *ssb-periodicityServingCell*.

If an inter-frequency neighbor cell is involved in event evaluation, L1-RSRP measurement period of the neighbor cell refers to TL1-RSRP\_Measurement\_Period\_SSB\_inter as defined in clause 9.15, where TReport = 0 and TSSB\_NBC is the periodicity of the neighbor cell SSB-Index configured for inter-frequency event-triggered L1-RSRP measurement report.

#### 9.15.3.5 Event Triggered Periodic Reporting

Reported L1-RSRP measurements contained in an event triggered L1-RSRP measurement report shall meet the requirements in clauses 10.1.19/10.1.19E for FR1 and 10.1.20/10.1.20B for FR2, respectively. This requirement applies for event triggered L1-RSRP reports sent on PUSCH using the MAC CE.

The first report in event triggered periodic measurement reporting shall meet the requirements specified in clause 9.15.3.4. For the subsequent reports in the event triggered periodic report, UE follows the [*reportInterval* and ReportAmount] as specified in TS 38.331.

**<<End of change>>**