**3GPP TSG RAN WG1 #120 R1- 250xxxxx**

**Athens, Greece, February 17th – 21st, 2025**

**Title:** LS on measurement quantities for IoT NTN

**Response to:**

**Release:** Rel-18

**Work Item:** IoT\_NTN\_enh-Core

**Source:** RAN1(vivo)

**To:** RAN4

**Cc:**

**Contact person:**

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**Send any reply LS to:** 3GPP Liaisons Coordinator, <mailto:3GPPLiaison@etsi.org>

**Attachments:** None

1. **Overall description**

In TS 36.215, measurement quantities performed by the eNB are defined for various purposes, with their reference points also being specified. The summary of the purposes of these measurement quantities can be found in the moderator summary R1-2501486. However, it remains unclear whether the SAN also supports similar measurement quantities for IoT NTN. Moreover, TS 36.215 does not cover the IoT NTN as 36.108 and SAN are not mentioned.

RAN1 discussed whether to support measurement quantities (i.e., DL RS TX power, Received Interference Power, and Thermal Noise Power) for IoT NTN at SAN, and agreed to consult RAN4 based on the following agreement:

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| --- |
| **Agreement**  Send an LS to ask RAN4 the following:   1. Whether any of the following measurement quantities, described in clause 5.2 of TS 36.214, are applicable for NB-IoT-based NTN and/or eMTC-based NTN:    * DL RS TX power    * Received Interference Power    * Thermal Noise Power 2. For the measurement quantitie(s) that are applicable, if any, whether reference point(s) need to be defined. |

**Question1: Whether any of the following measurement quantities, described in clause 5.2 of TS 36.214, are applicable for NB-IoT-based NTN and/or eMTC-based NTN:**

* DL RS TX power
* Received Interference Power
* Thermal Noise Power

**Question2: For the measurement quantitie(s) that are applicable, if any, whether reference point(s) need to be defined?**

1. **Actions**

**To RAN4**

**ACTION:** RAN1 respectfully asks RAN4 to take the above information into consideration and provides feedback on the above questions.

1. **Date of next TSG-RAN WG1 meetings**

TSG RAN WG1 Meeting #120-bis 7- 11 April, 2025 China, CN

TSG RAN WG1 Meeting #121 19- 23 May, 2025 Malta, EU