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| **Radiocommunication Study Groups** |  |
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| **English only** |
| Annex 2 to Working Party 5C Chairman's Report |
| elements for consideration on future revisions of Recommendations ITU-R F.699 and ITU-R f.1245 |

This document provides elements for consideration on extending the applicable frequency range of Recommendations ITU-R [F.699](https://www.itu.int/rec/R-REC-F.699/en) and ITU-R [F.1245](https://www.itu.int/rec/R-REC-F.1245/en) above 86 GHz.

# 1 Antenna radiation pattern at 100 GHz band

Working Party 5A is now developing a working document towards a preliminary draft new Report ITU-R M.[100-GHz.RSTT.COEXIST] on coexistence between high-speed railway radiocommunication system between train and trackside operating in the frequency bands 92-94 GHz, 94.1-100 GHz and 102-109.5 GHz, and active and passive services (Annex 27 to Doc. [5A/844](https://www.itu.int/md/R15-WP5A-C-0844)). This working document provides the characteristics of the cassegrain antenna whose diameter is 20 cm and gain 42 dBi. Figure 1 shows the measured radiation pattern as well as the calculated results using Recommendation ITU-R F.699-5 and a Recommendation ITU-R F.1245-3.

Figure 1

Measure radiation pattern of cassegrain antenna at 92 GHz and 100 GHz

 

# 2 Antenna radiation pattern at 120 GHz band

WP 5C revised Report ITU-R F.2107 in 2011 to include the specifications of 10 Gbit/s wireless link operating in the frequency band 116.5-133.5 GHz. This Report provides the characteristics of the cassegrain antenna whose diameter is 45 cm and gain 48.6 dBi. Figure 2 shows the measured radiation pattern as well as the calculated results using revised Recommendations ITU-R F.699 and ITU-R F.1245-2.

Figure 2

Measure radiation pattern of cassegrain antenna at 120 GHz

