EXHIBIT B

Kymeta™ u5 Terminal RF Safety Analysis

799-00101-000 rev 01

17 November 2025

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1 Introduction

This report provides an analysis of independent, third-party laboratory measurements of radio frequency (RF) power density near the Kymeta™ u5 53.6 cm Ku-band satellite earth station terminal (herein after referred to as "terminal").

The terminal's antenna operates at elevation angles between 15° and 90° relative to horizontal. Operation at elevation angles less than 15° is inhibited by terminal on-board software so that no RF energy can be radiated from the antenna. If the software process responsible for generating pointing commands attempts to scan the main beam to an elevation angle lower than 15°, the block upconverter (BUC) is muted.

The Terminal is comprised of the Kymeta u5 antenna subsystem module ("Antenna") as well as custom packaged RF components (low-noise block downconverter, diplexer, and BUC). The Antenna is a flat-panel, electronically scanned array that performs beam steering through a reconfigurable holographic metamaterial effect.

The terminal operates in two modes of operation, GEO and LEO mode. Both modes operate from 14.0-14.5 GHz but have different max operating powers: GEO at 23.7 W and LEO at 9.6 W. Analysis and data for both operating modes is provided in this report.

2 Reference documents

2.1 FCC RF guidelines

OET Bulletin 65 sets forth the following guidelines for maximum permissible exposure (MPE) applicable to the Ku-band emissions of the terminal:

(1) General population/uncontrolled: 1 mW/cm^2 averaged over 30 minutes

(2) Occupational/controlled: 5 mW/cm^2 averaged over 6 minutes

2.2 IEEE guidelines

IEEE standard C95.7-2014 "Recommended Practice for RF Safety Programs, 3 kHz – 300 GHz," provides guidance for implementing an RF safety program. These recommendations were used in preparation of this report.

3 Third-party laboratory testing

The terminal was tested for RF power density values by CKC Laboratories, a certified EMI/EMC laboratory, at their Fremont, California facilities. The testing was performed by employees of CKC in a 36 ft. × 20 ft. × 20 ft. anechoic chamber.

The Antenna was positioned in a horizontal orientation on a remote-controlled turntable. A calibrated power density probe was placed on a vertically oriented fiberglass mast for which the vertical (1) and horizontal axes (2) could be remotely controlled. All three axis controls (comprising a cylindrical coordinate system) were used to capture measurements and fully assess the RF power density levels in the 3-dimensional space around the terminal.

A top-down diagram of the chamber with the test setup, with pictures, is shown in Figure 1 and Figure 2.

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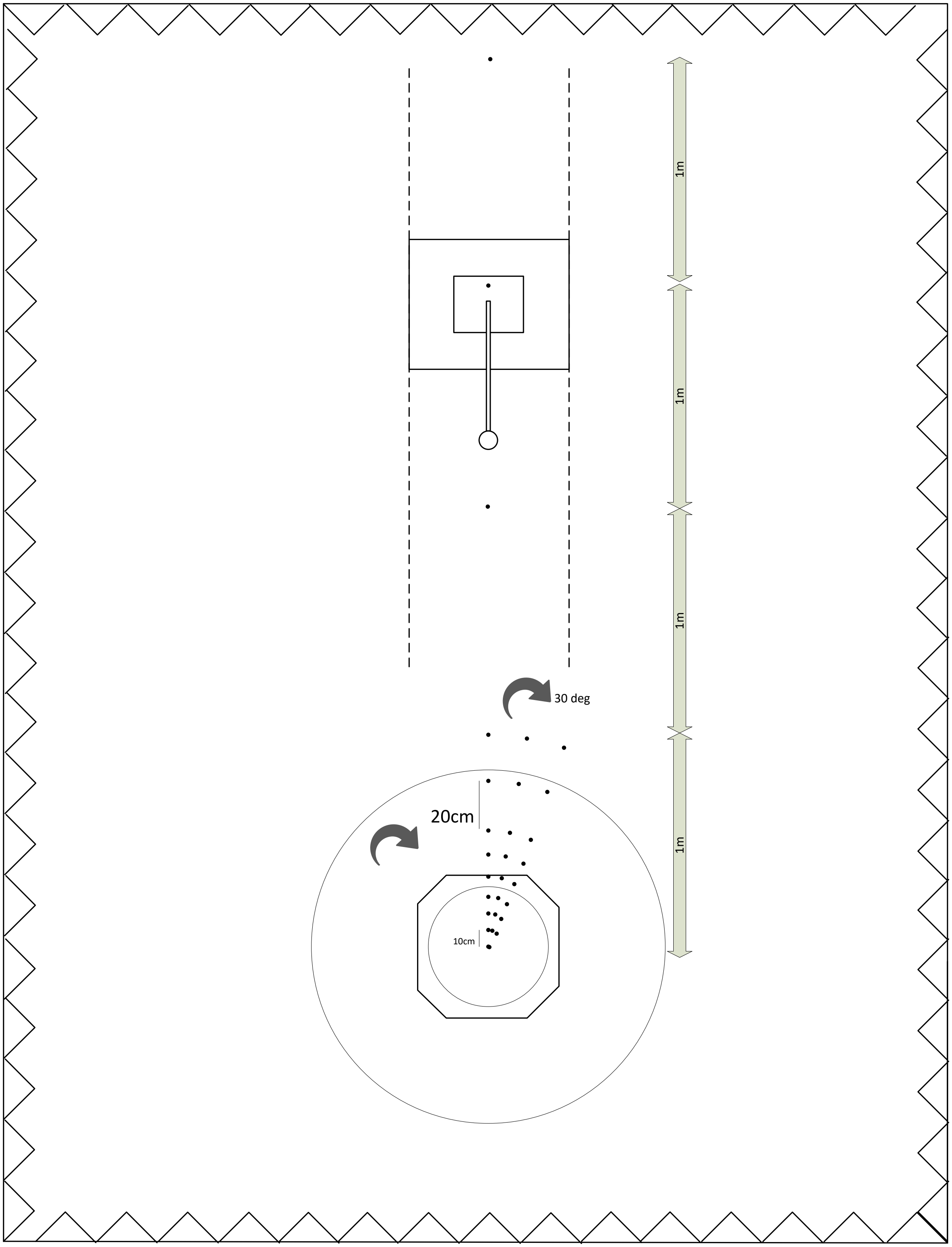

Figure 1: Chamber layout, top-down view

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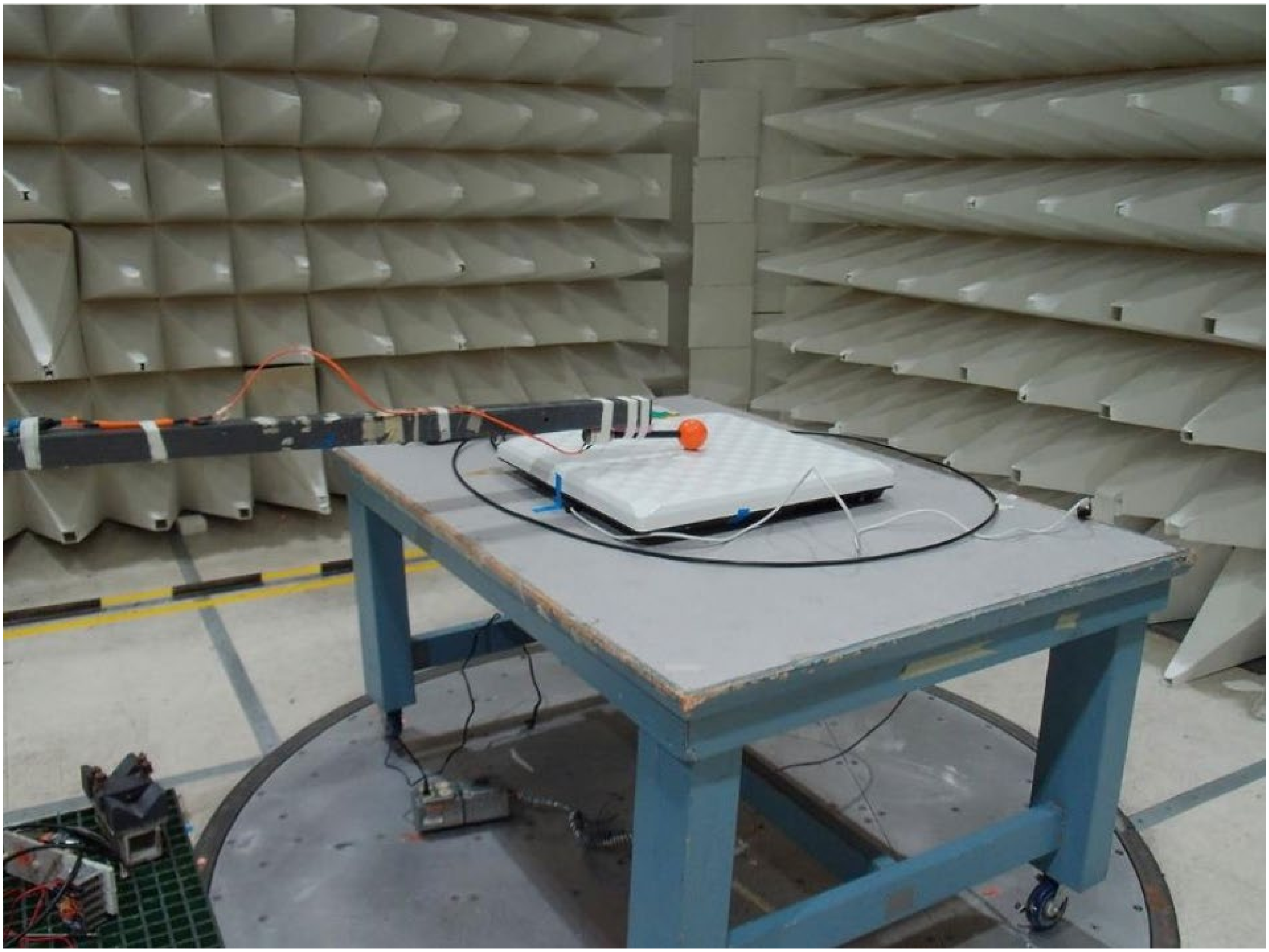

Figure 2: Chamber picture

An AR FL7060 Isotropic Electric Field Probe was used for all measurements, with an operating dynamic range of 2 V/m to 1000 V/m. Considering the specified sensitivity of 2 V/m (0.00106 mW/cm^2), it was deemed appropriate to use 4 W input power as reference, then scale to 23.7 W (GEO) and 9.6W (LEO) linearly. This approach results in minimum detectable power density of 0.00106 × 23.7 / 4 (23.7 W scaled from 4 W reference) = 0.0063 mW/cm^2 when scaled to 23.7 W and 0.0025mW/cm^2 when scaled to 9.6W. This resolution is sufficient considering the 1 mW/cm^2 MPE level requirement.

4 Test parameters and procedures

The measurements were made using a BUC operating at an antenna input reference power of 4 W. The reference power level of 4 W was confirmed using a spectrum analyzer. The raw data were then linearly scaled to the 23.7 W (GEO) and 9.6 W (LEO) power level requested in the application for blanket authority.

During GEO operation, the terminal transmits bursts of energy towards the target satellite only at designated times assigned by the network (a TDMA system). The terminal typically operates at a duty cycle of 10%. However, if enough

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satellite system capacity is available, the terminal can operate up to a 30% duty cycle to accommodate maximum uplink data transfers. All representations of power density in this report assume the extreme case of a 30% duty cycle. For the GEO power density measurements described in this report, the terminal BUC operated at 100% duty cycle and power densities were subsequently scaled to the 30% duty cycle value.

During LEO operation there is no burst energy, therefore for the LEO power density measurements described in this report, the terminal BUC operated at 100% duty cycle and the power densities are given at that 100% duty cycle.

The terminal can perform transmit and receive functions for either GEO or LEO from the same antenna aperture. The BUC requires a 10 MHz (GEO) or 25 MHz (LEO) reference signal to turn on; this was supplied from a 10 MHz/25 MHz reference generator. The reference signal was summed with the intermediate frequency (IF) signal coming from a signal generator to produce a 14.125 GHz continuous wave (CW) signal (corresponding to the 100% duty cycle mentioned above) feeding the Antenna. A detailed diagram of these setups are shown in Figure 3.

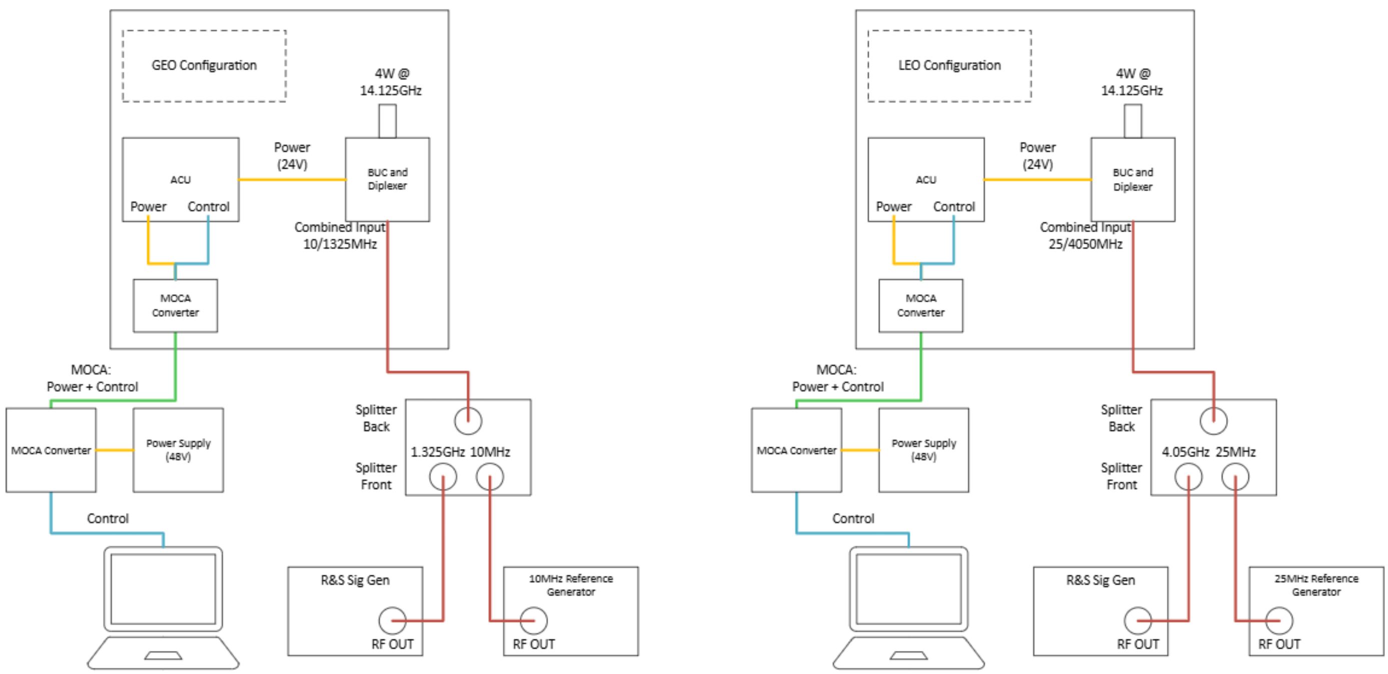

Figure 3: Kymeta u5 terminal – GEO & LEO transmit diagrams

RF power density measurements were taken at the following locations relative to the Antenna position:

- Radial distance from center of the Antenna (centimeters): 0, 10, 20, 30, 40, 50, 60, 80, 100, 200, 300
- Height above the face of the Antenna (centimeters): 0, 10, 20, 30, 40, 50, 100, 200, 300
- Angular rotation around the center of the Antenna: 0° to 360° in 30° steps

In the graphs in the following section, power densities less than 1 mW/cm^2 are shown as green circles, power densities between 1 and 5 mW/cm^2 are shown as orange circles, and power densities greater than 5 mW/cm^2 are shown as red circles.

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Test measurements certified by CKC Laboratories are set forth in the spreadsheets attached as Exhibit 1. Visual presentations of the test measurements are discussed and shown below.

The raw measurements were taken in V/m (field strength), but the analysis was performed with respect to power density specifications. The formula used to relate the two is given here:

$$PD\ (\frac{mW}{cm^2}) = \frac{(\frac{\mathrm{V}}{\mathrm{m}})^2\ \times\ 1000}{FSI\ \times\ 10000}$$

Where FSI is free space impedance, 377 Ω.

This expression was then scaled by P (GEO power = 23.7 W, LEO power = 9.6 W), DC (GEO duty cycle = 30%, LEO duty cycle = 100%) and $RefP$ (reference power = 4 W) to produce the plots presented in this section.

$$PD\ (\frac{mW}{cm^2}) = \frac{(\frac{\mathrm{V}}{\mathrm{m}})^2\ \times\ P\ \times\ DC\ \times\ 1000}{RefP\ \times\ FSI\ \times\ 10000}$$

Figure 4 through Figure 21 show a top-down view of radiation level MPE zones while operating in GEO mode. Figure 22 through Figure 39 show a top-down view of radiation level MPE zones while operating in LEO mode. Each polar plot represents one specific height plane above the Antenna surface. Note that the center point in each of the polar plots was measured 12 times (like every other radial plane, in 30° increment rotations of the turn table), then averaged for the value at the single central point and plotted. In these figures the outer blue rounded square represents the outer dimensions of the square terminal (60 cm side length). The inner blue square represents active area of the Antenna aperture (53.6 cm side length).

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4.1 Measurements at 23.7 Watts input power

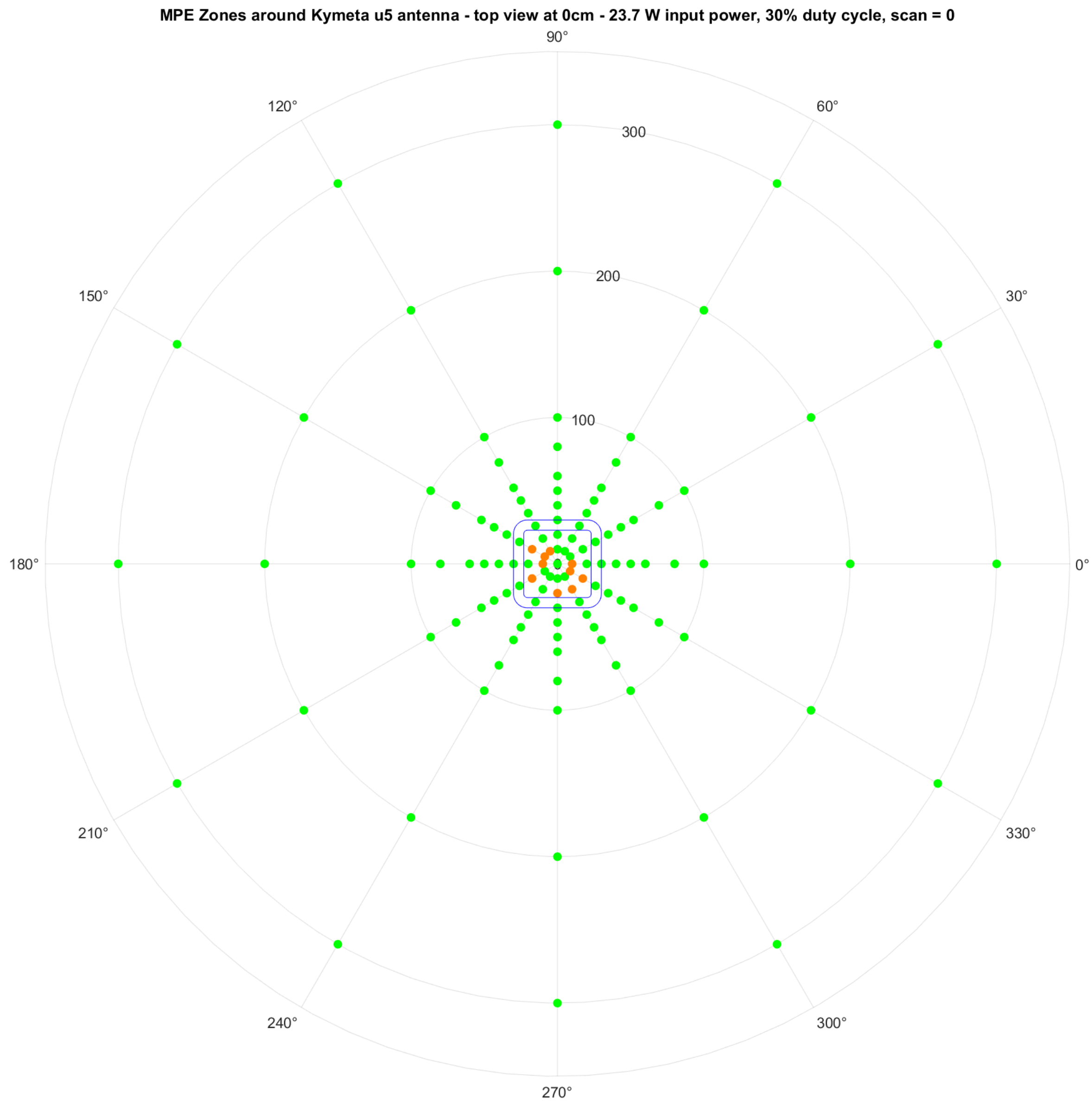

Figure 4: Height 0 cm, 23.7 W input power with 30% Duty Cycle, Scan 0˚

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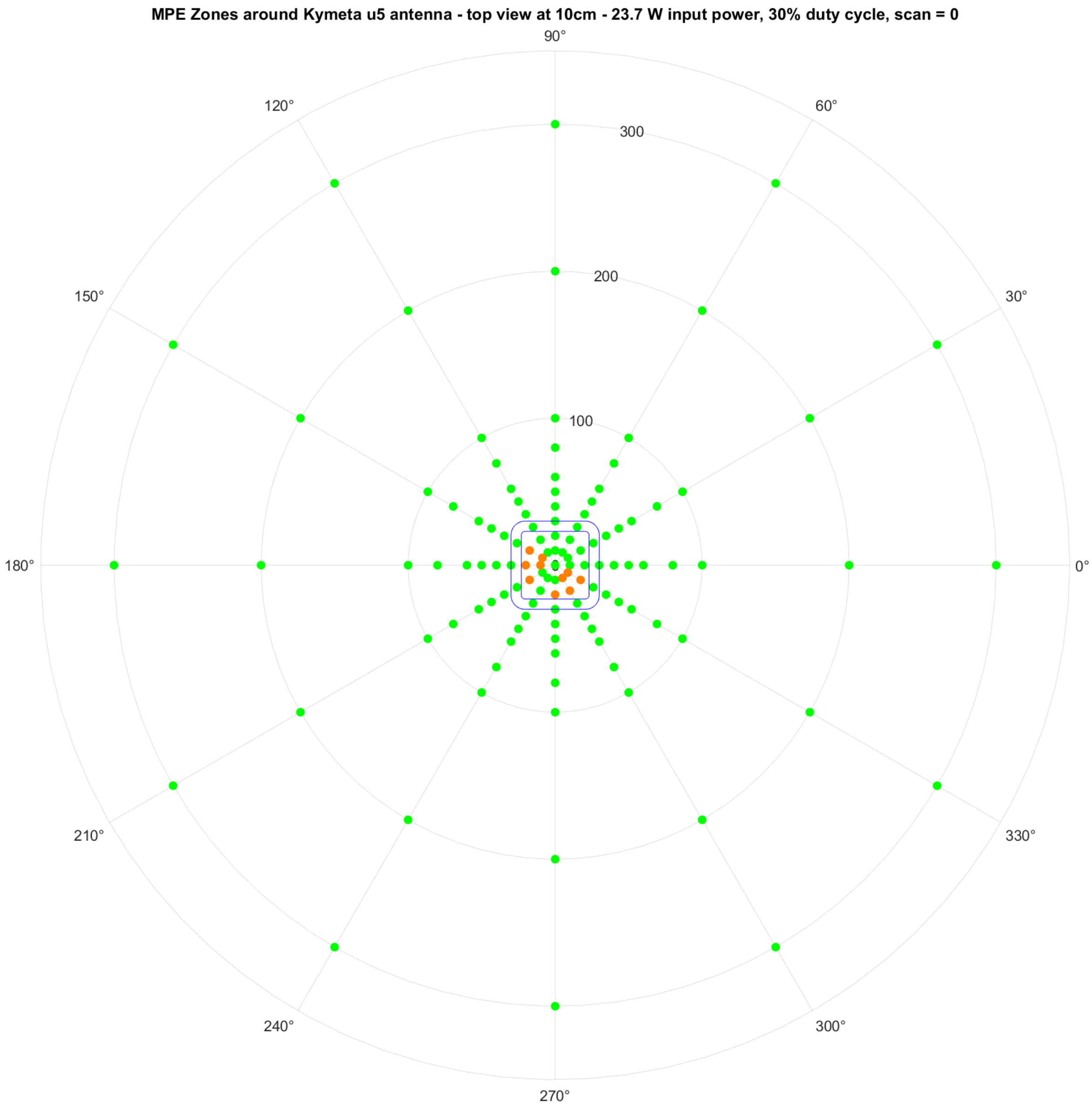

Figure 5: Height 10 cm, 23.7 W input power with 30% Duty Cycle, Scan 0˚

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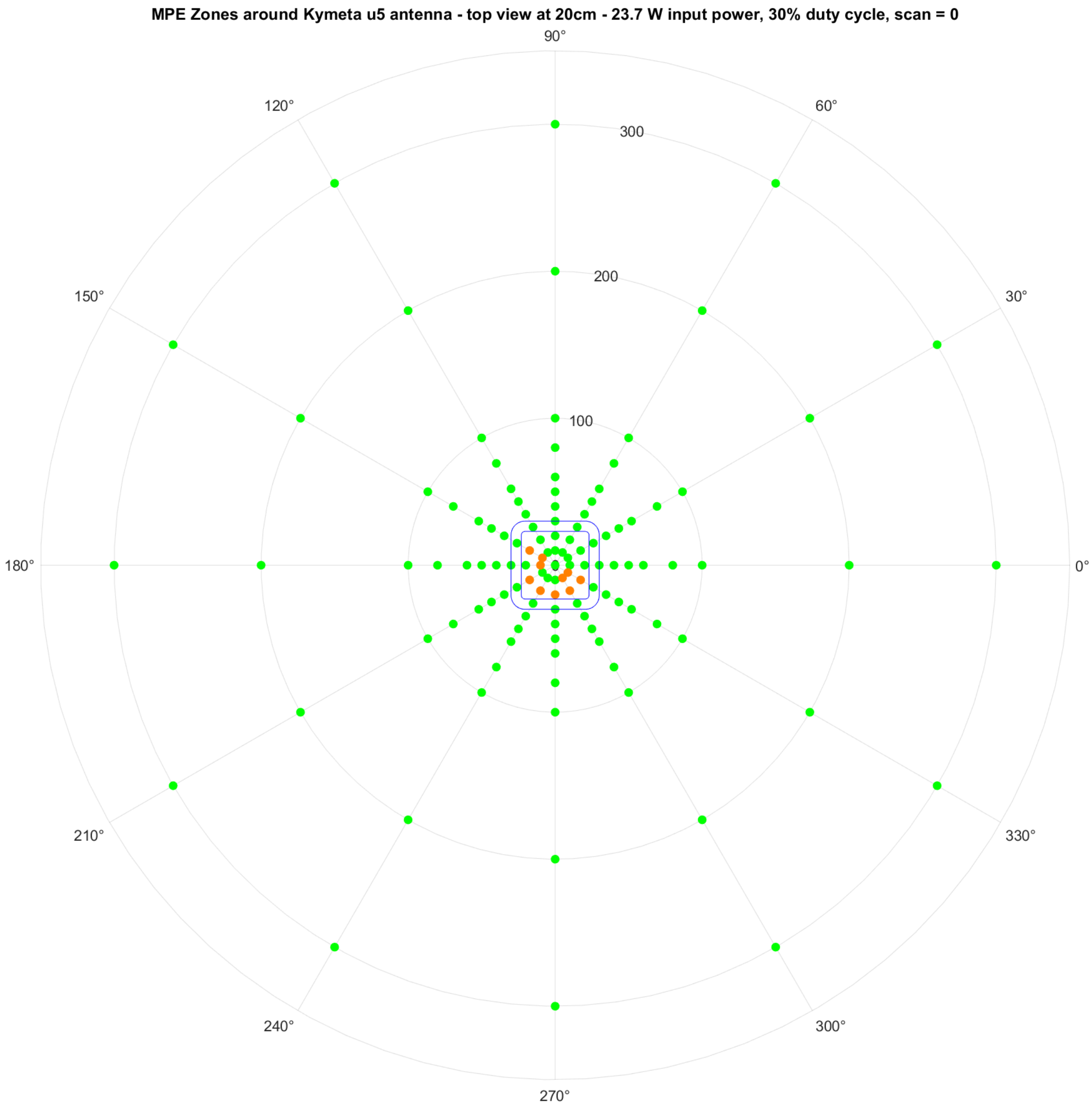

Figure 6: Height 20 cm, 23.7 W input power with 30% Duty Cycle, Scan 0˚

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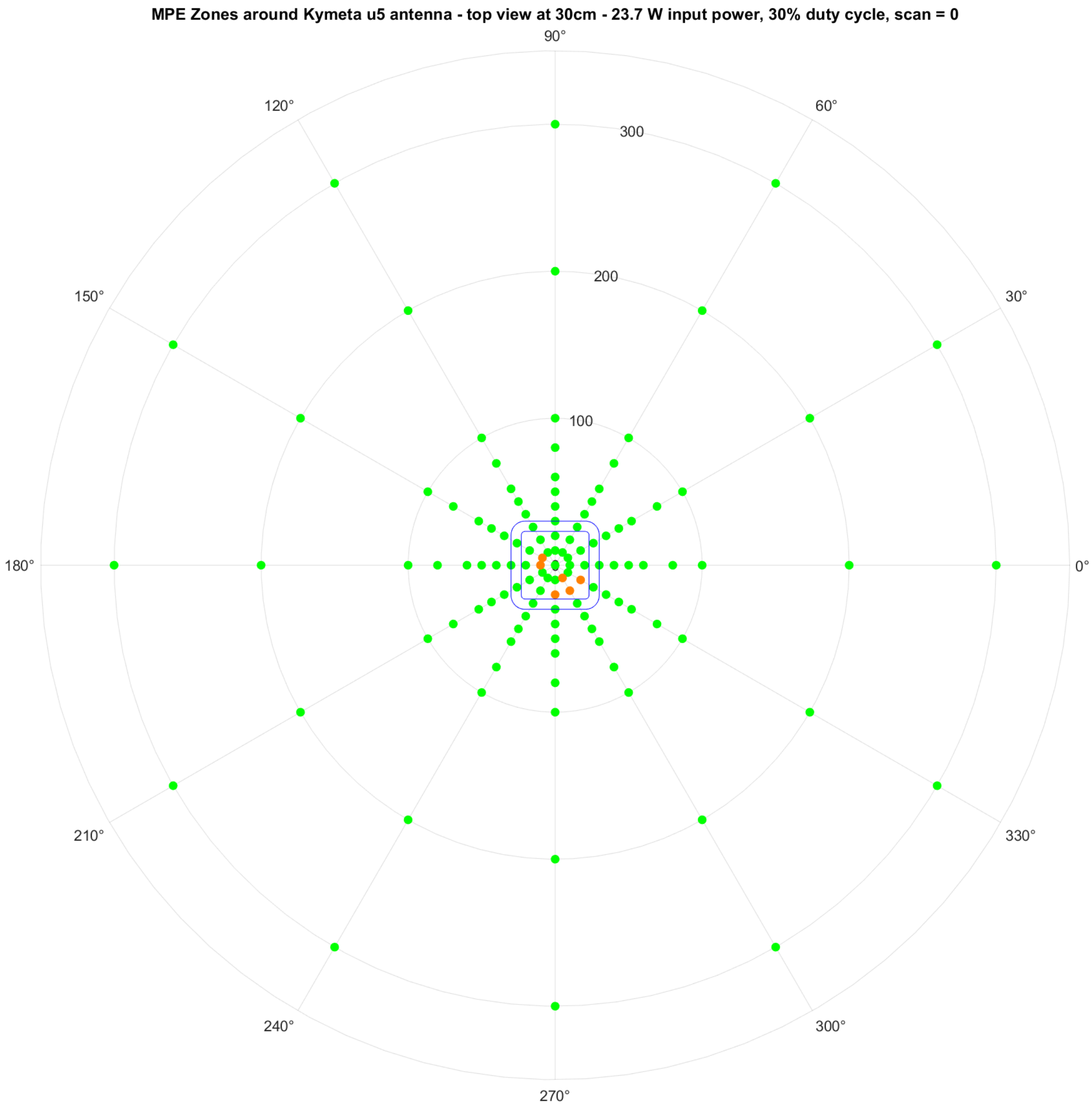

Figure 7: Height 30 cm, 23.7 W input power with 30% Duty Cycle, Scan 0˚

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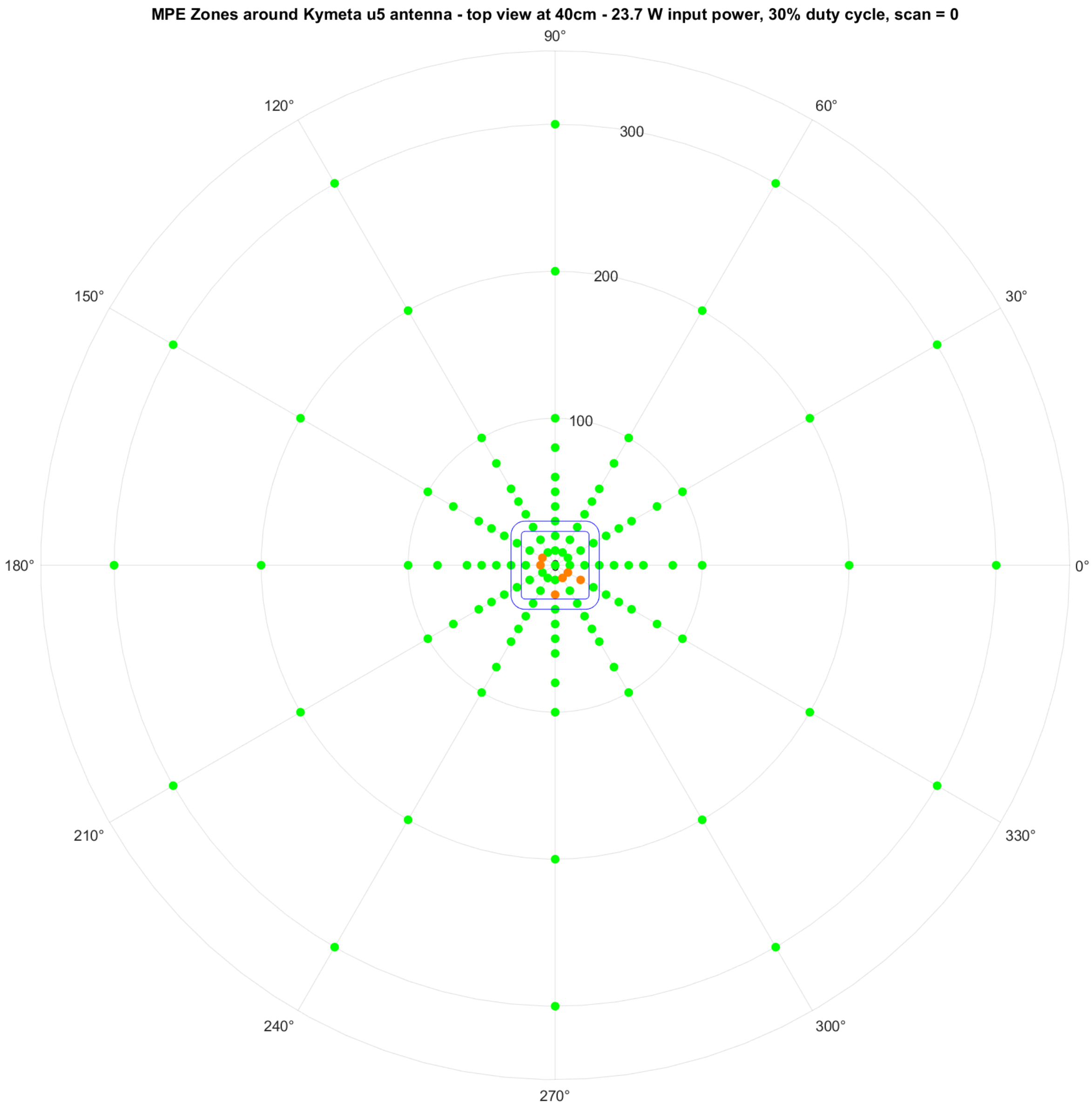

Figure 8: Height 40 cm, 23.7 W input power with 30% Duty Cycle, Scan 0˚

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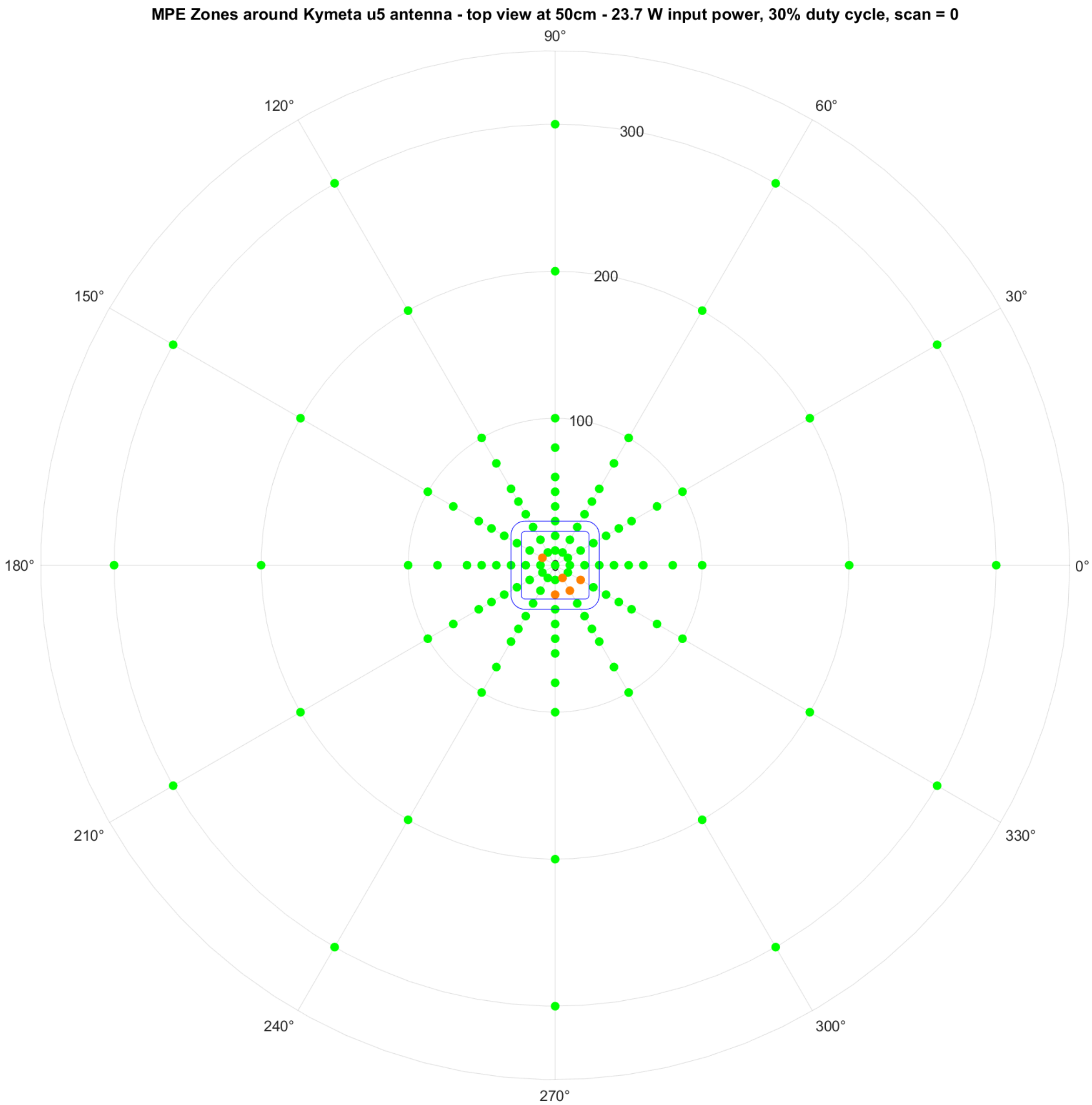

Figure 9: Height 50 cm, 23.7 W input power with 30% Duty Cycle, Scan 0˚

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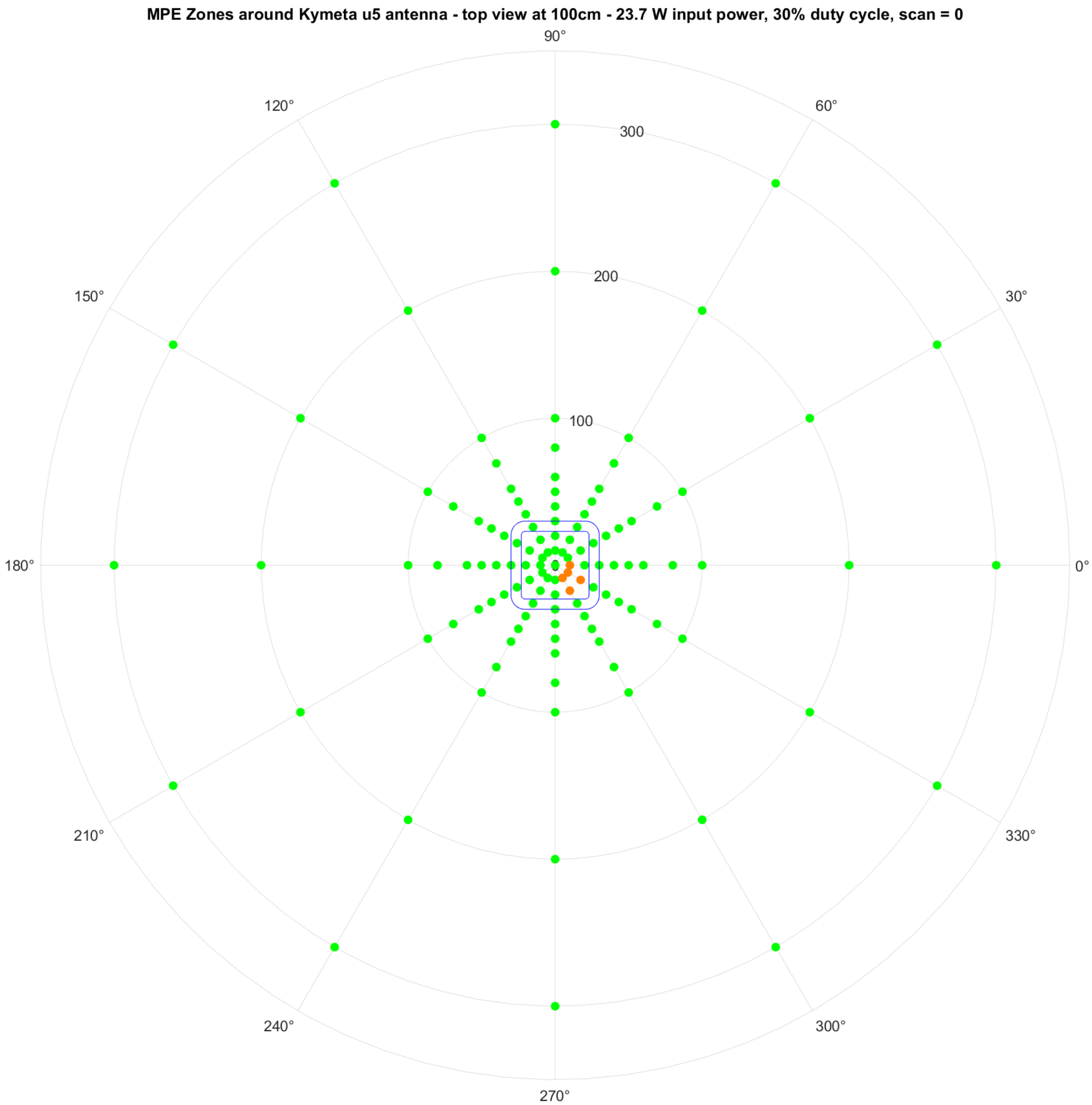

Figure 10: Height 100 cm, 23.7 W input power with 30% Duty Cycle, Scan 0˚

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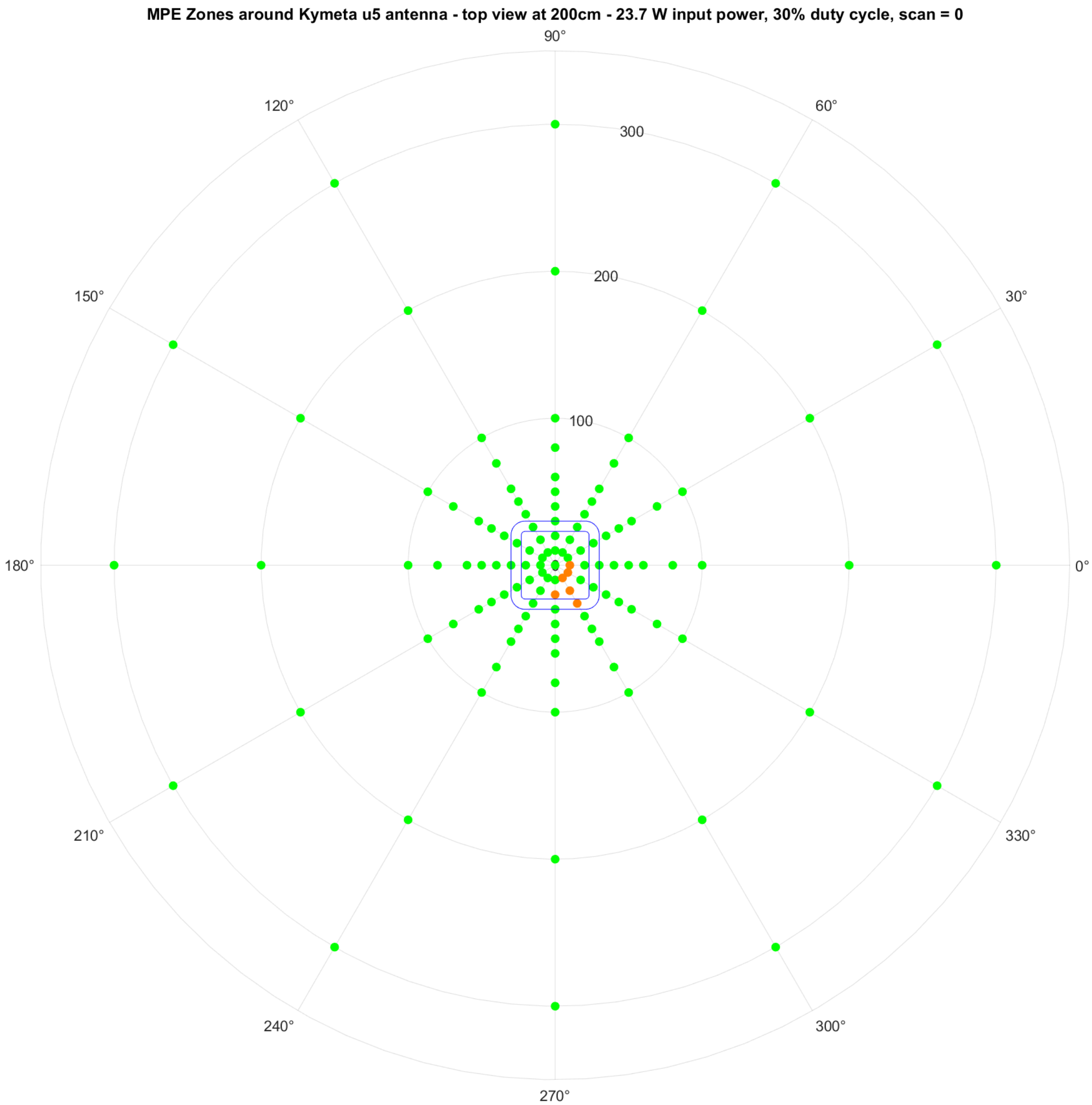

Figure 11: Height 200 cm, 23.7 W input power with 30% Duty Cycle, Scan 0˚

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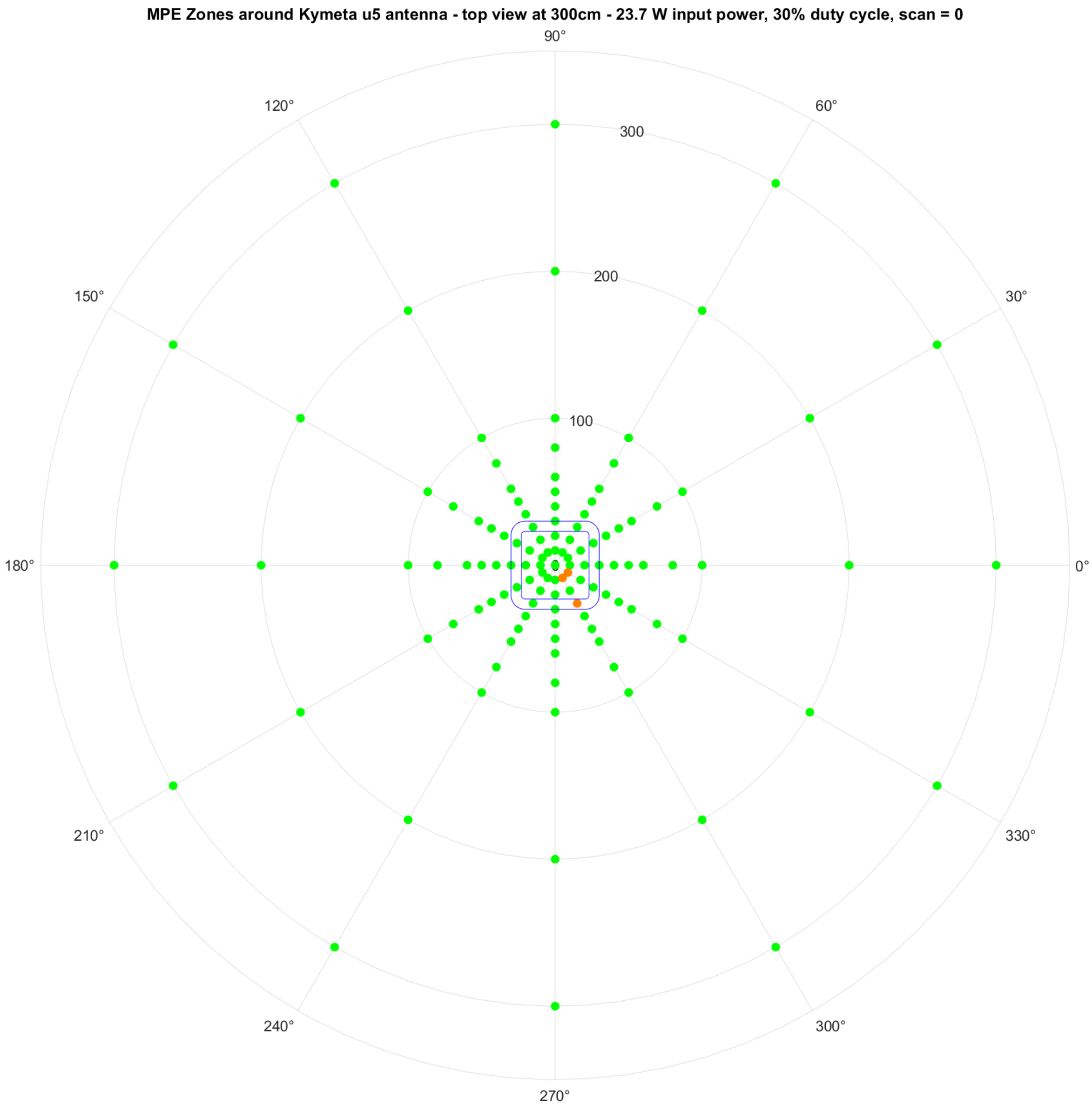

Figure 12: Height 300 cm, 23.7 W input power with 30% Duty Cycle, Scan 0˚

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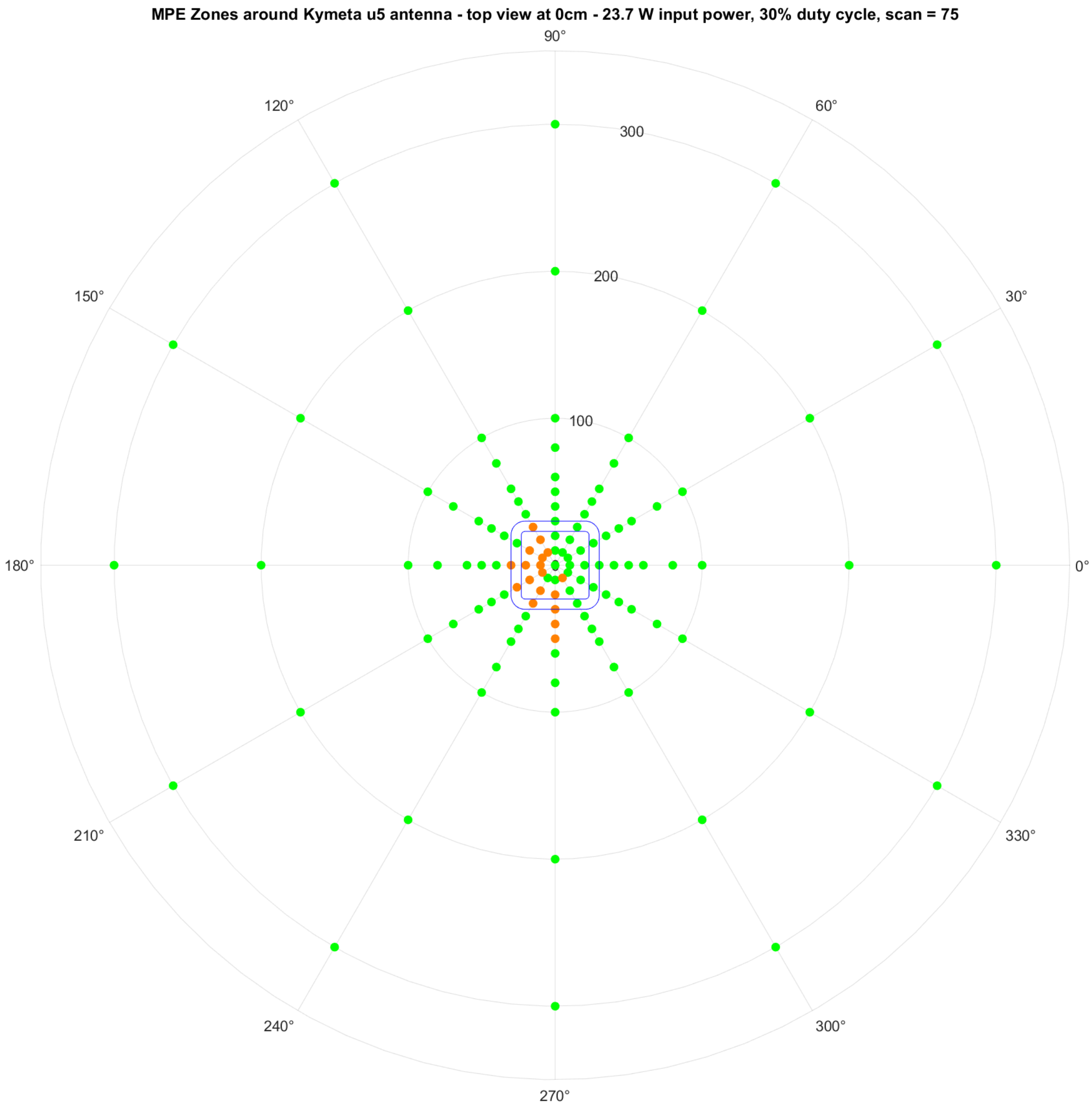

Figure 13: Height 0 cm, 23.7 W input power with 30% Duty Cycle, Scan 75˚

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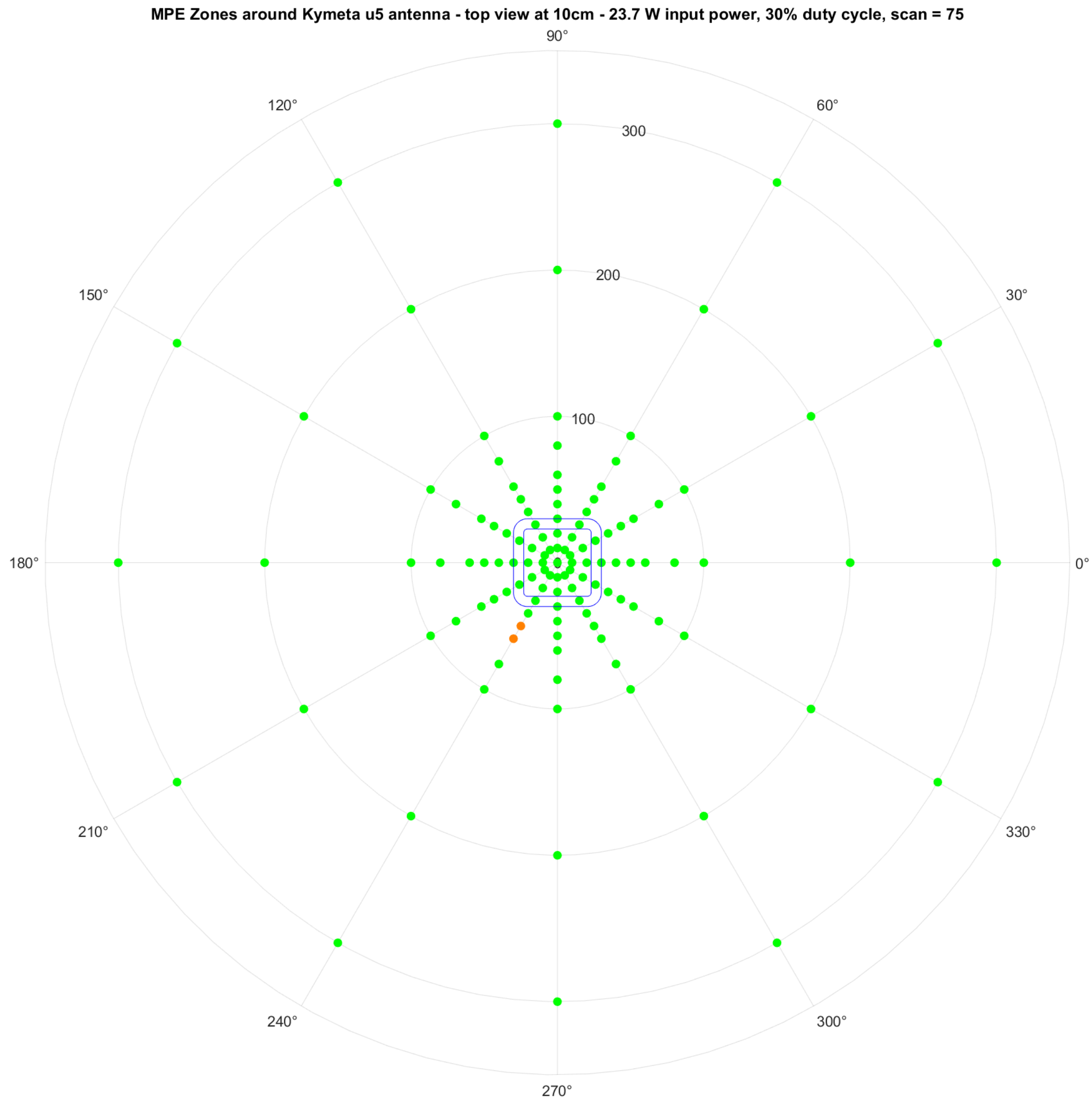

Figure 14: Height 10 cm, 23.7 W input power with 30% Duty Cycle, Scan 75˚

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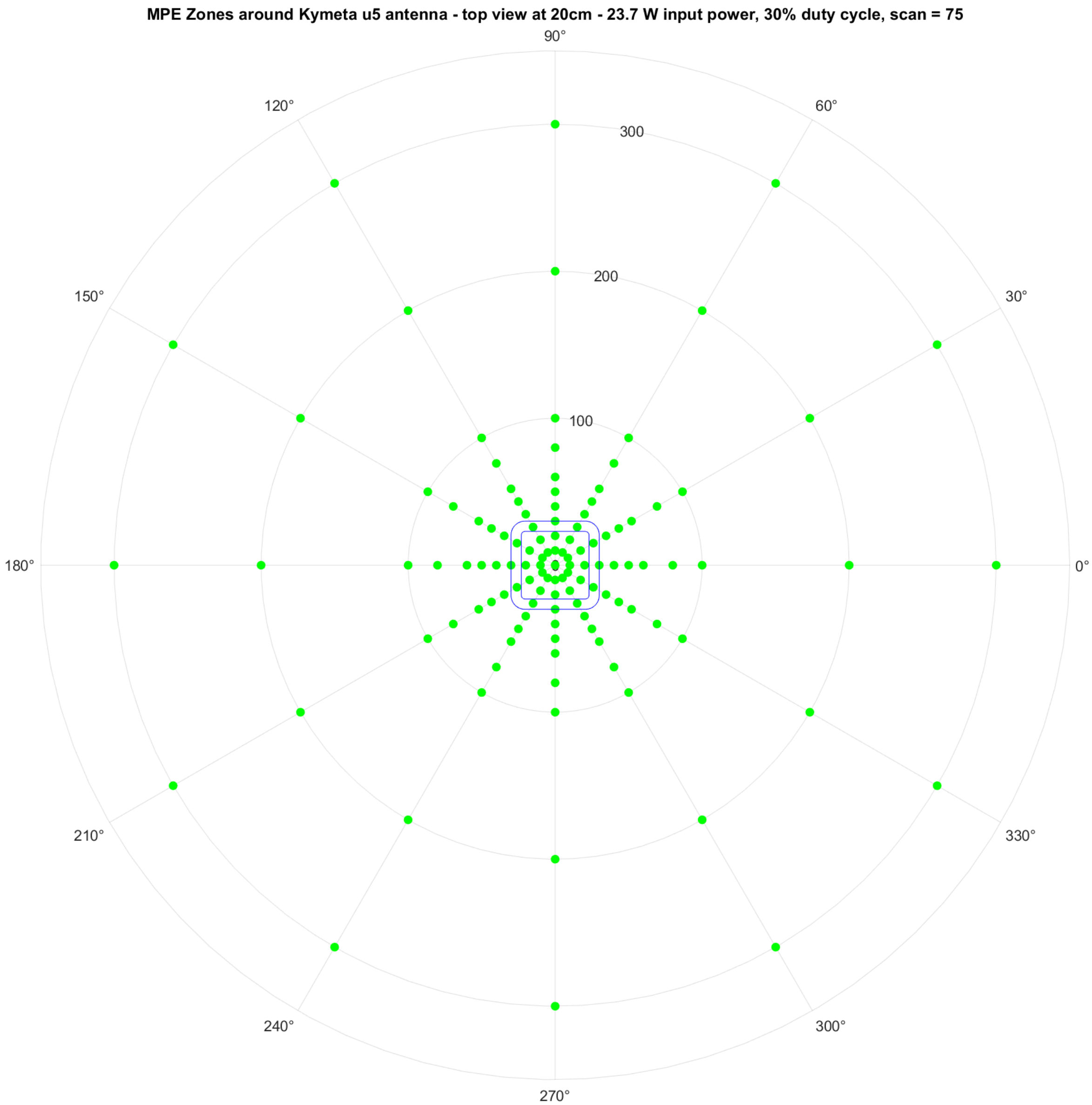

Figure 15: Height 20 cm, 23.7 W input power with 30% Duty Cycle, Scan 75˚

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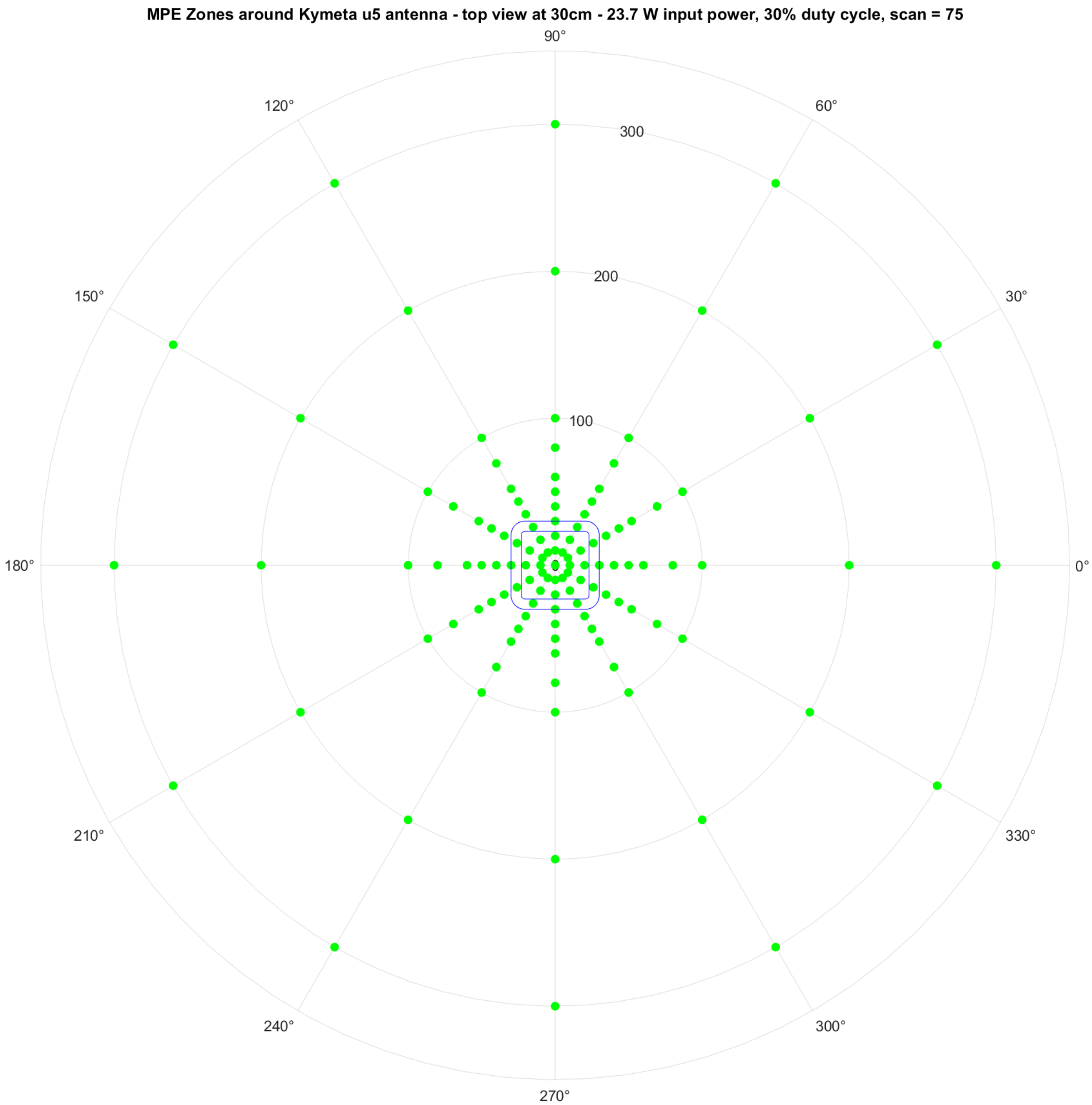

Figure 16: Height 30 cm, 23.7 W input power with 30% Duty Cycle, Scan 75˚

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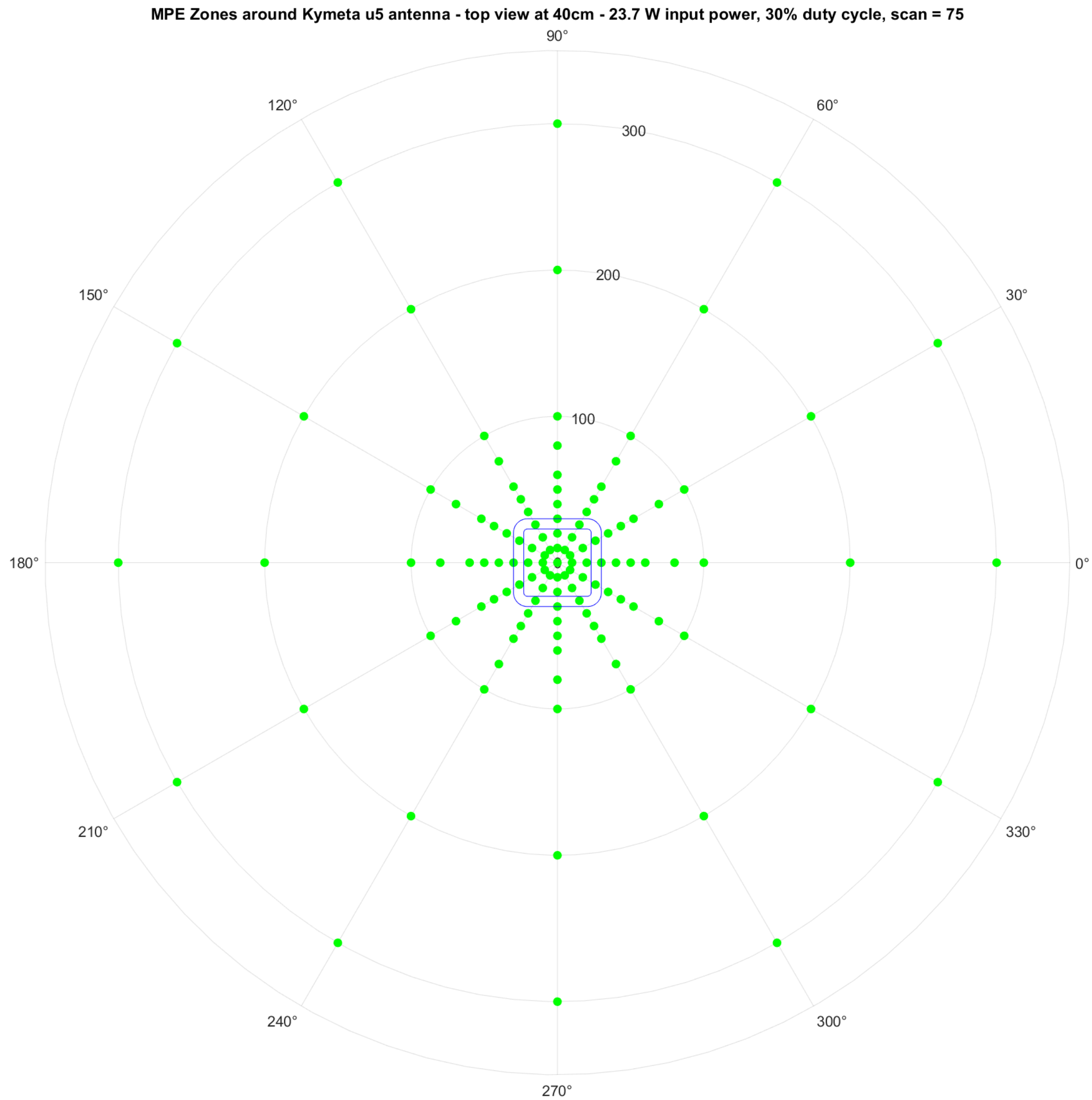

Figure 17: Height 40 cm, 23.7 W input power with 30% Duty Cycle, Scan 75˚

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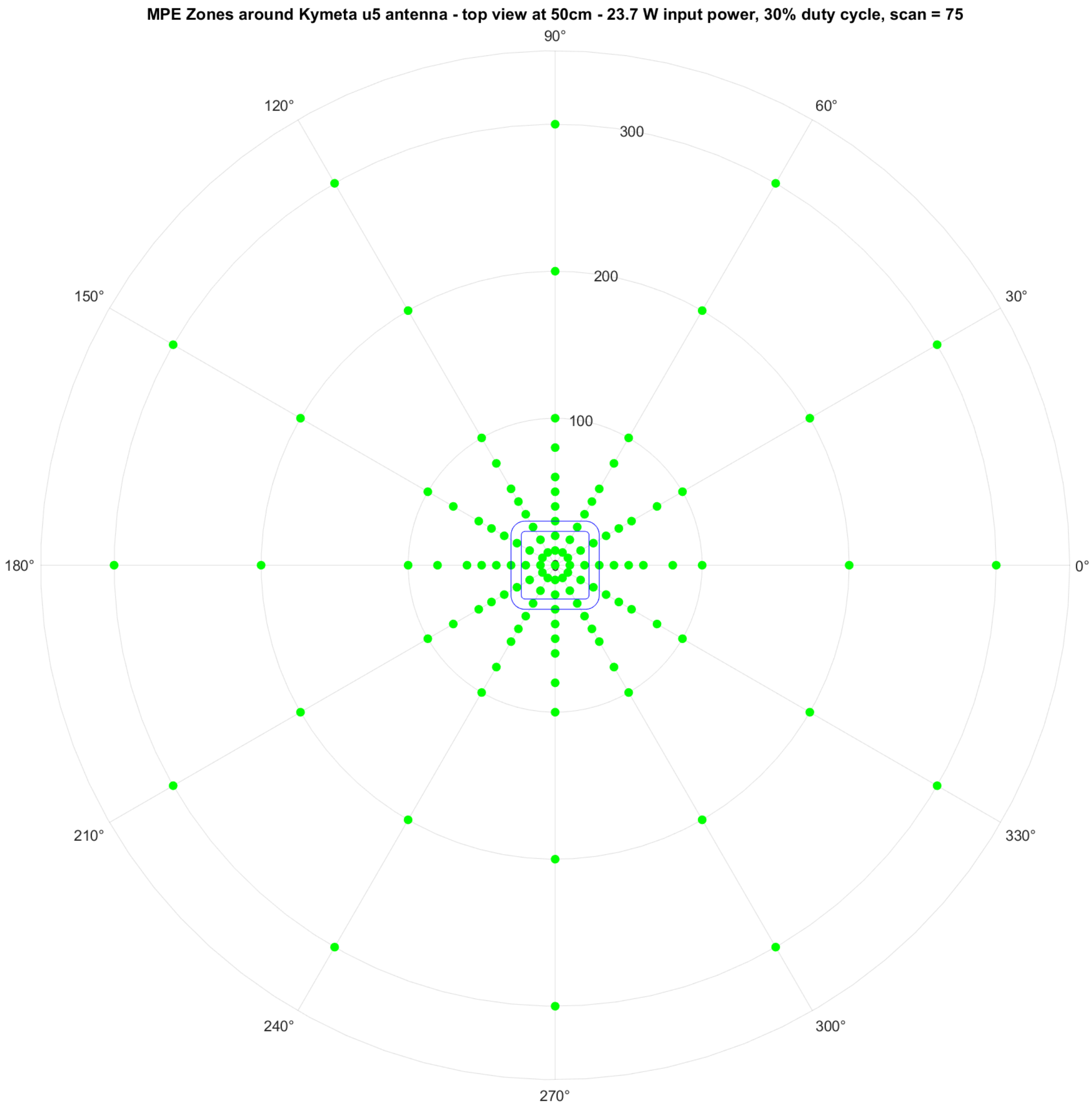

Figure 18: Height 50 cm, 23.7 W input power with 30% Duty Cycle, Scan 75˚

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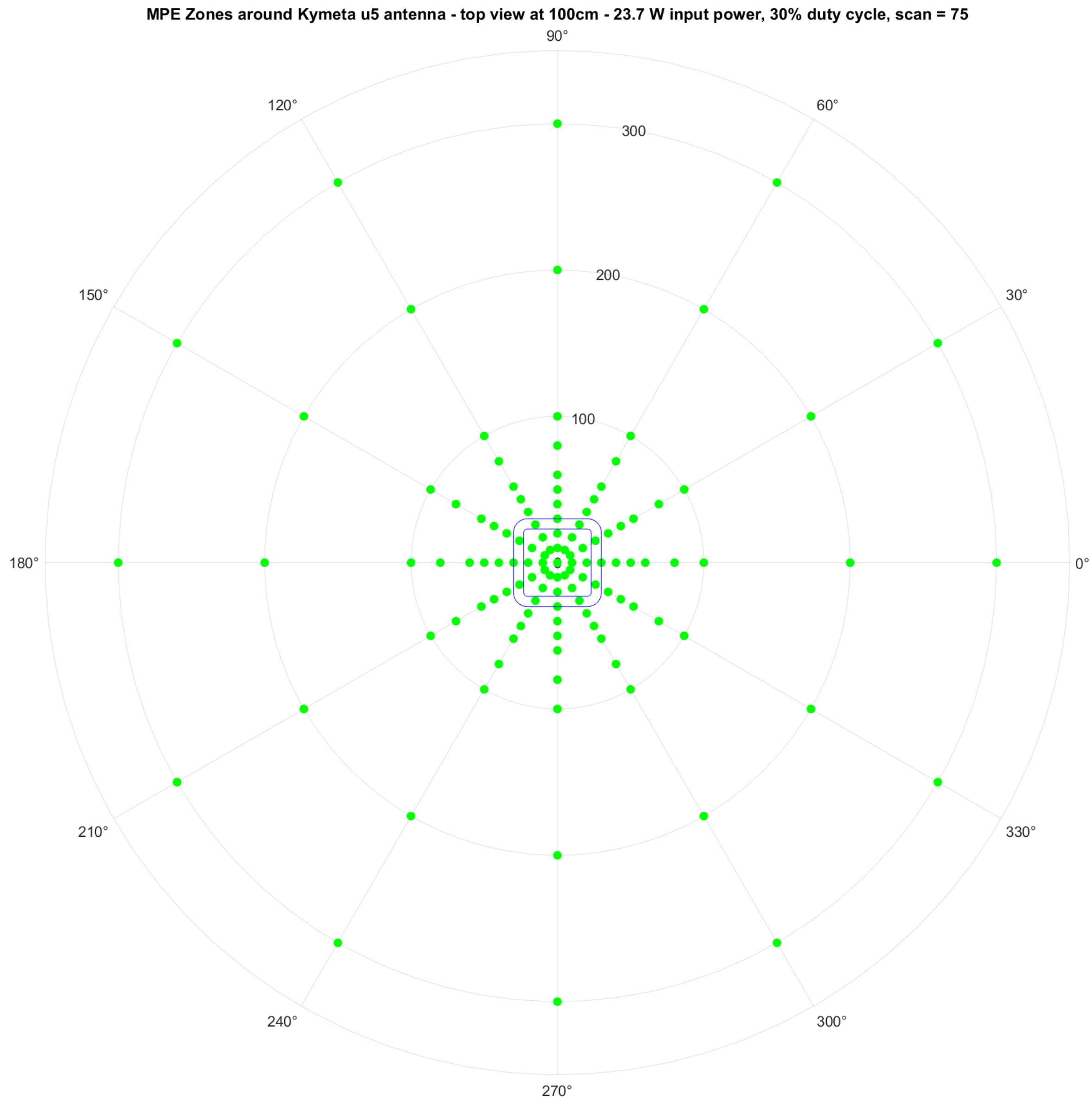

Figure 19: Height 100 cm, 23.7 W input power with 30% Duty Cycle, Scan 75˚

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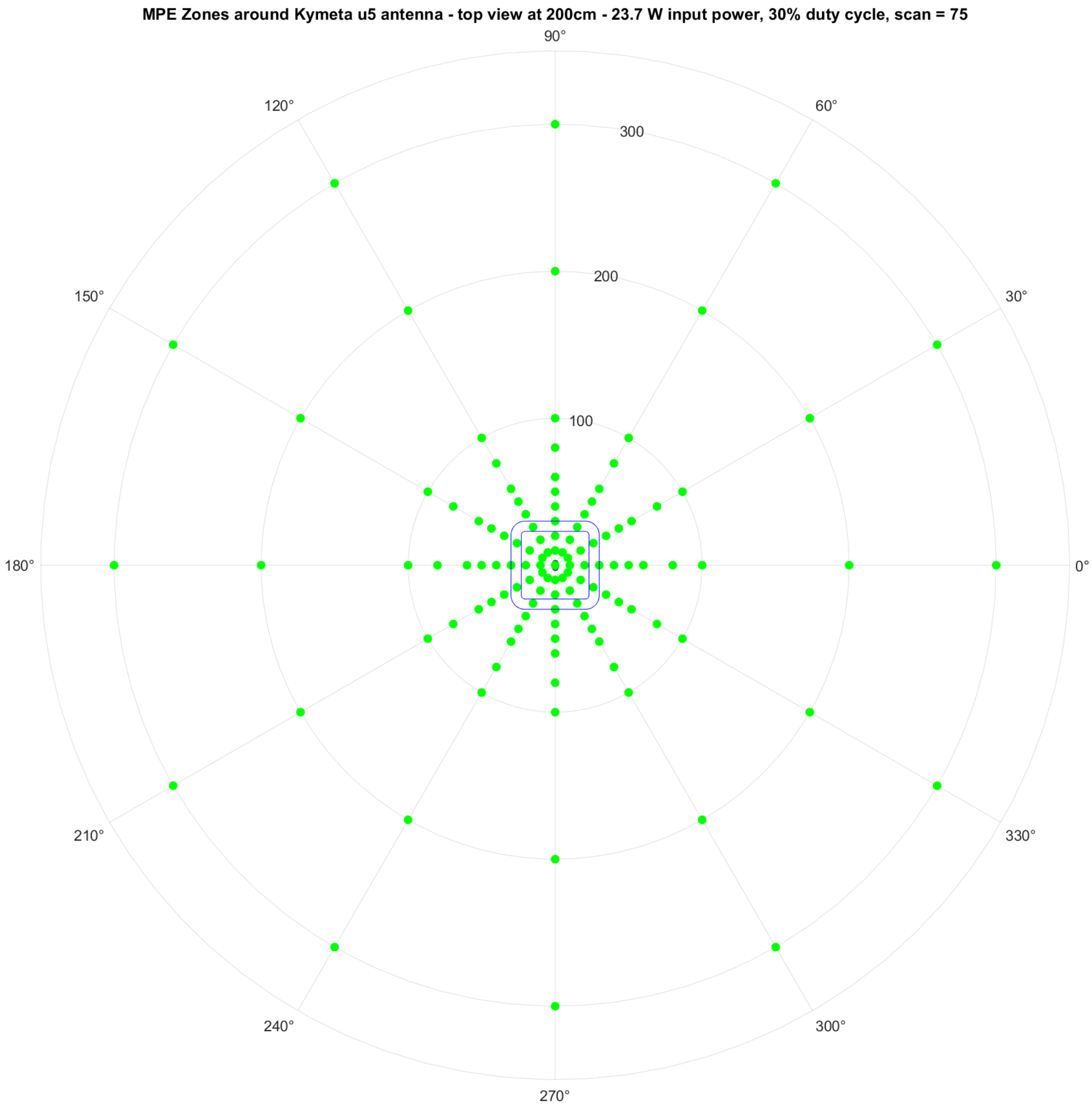

Figure 20: Height 200 cm, 23.7 W input power with 30% Duty Cycle, Scan 75˚

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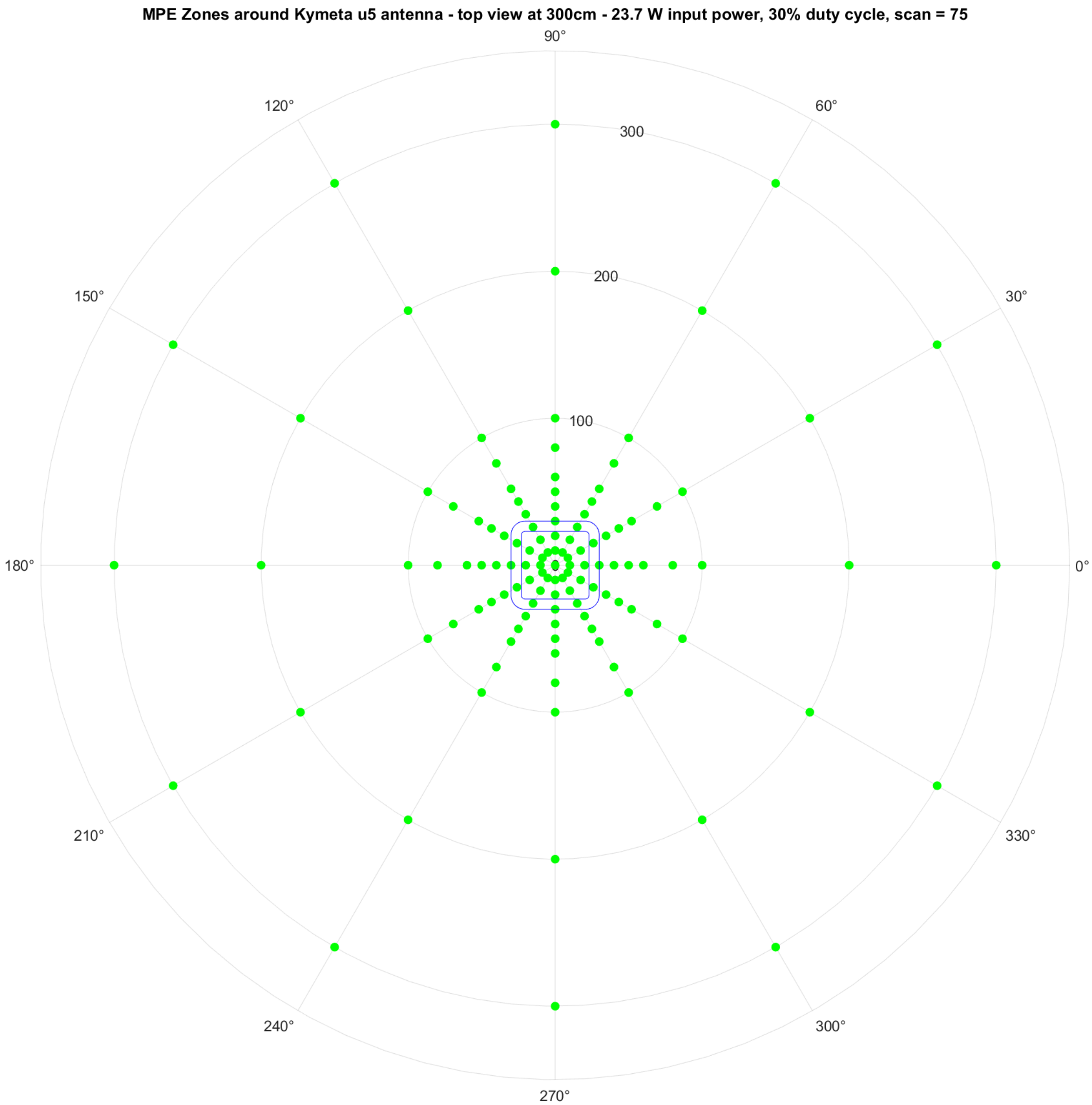

Figure 21: Height 300 cm, 23.7 W input power with 30% Duty Cycle, Scan 75˚

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4.2 Measurements at 9.6 Watts input power

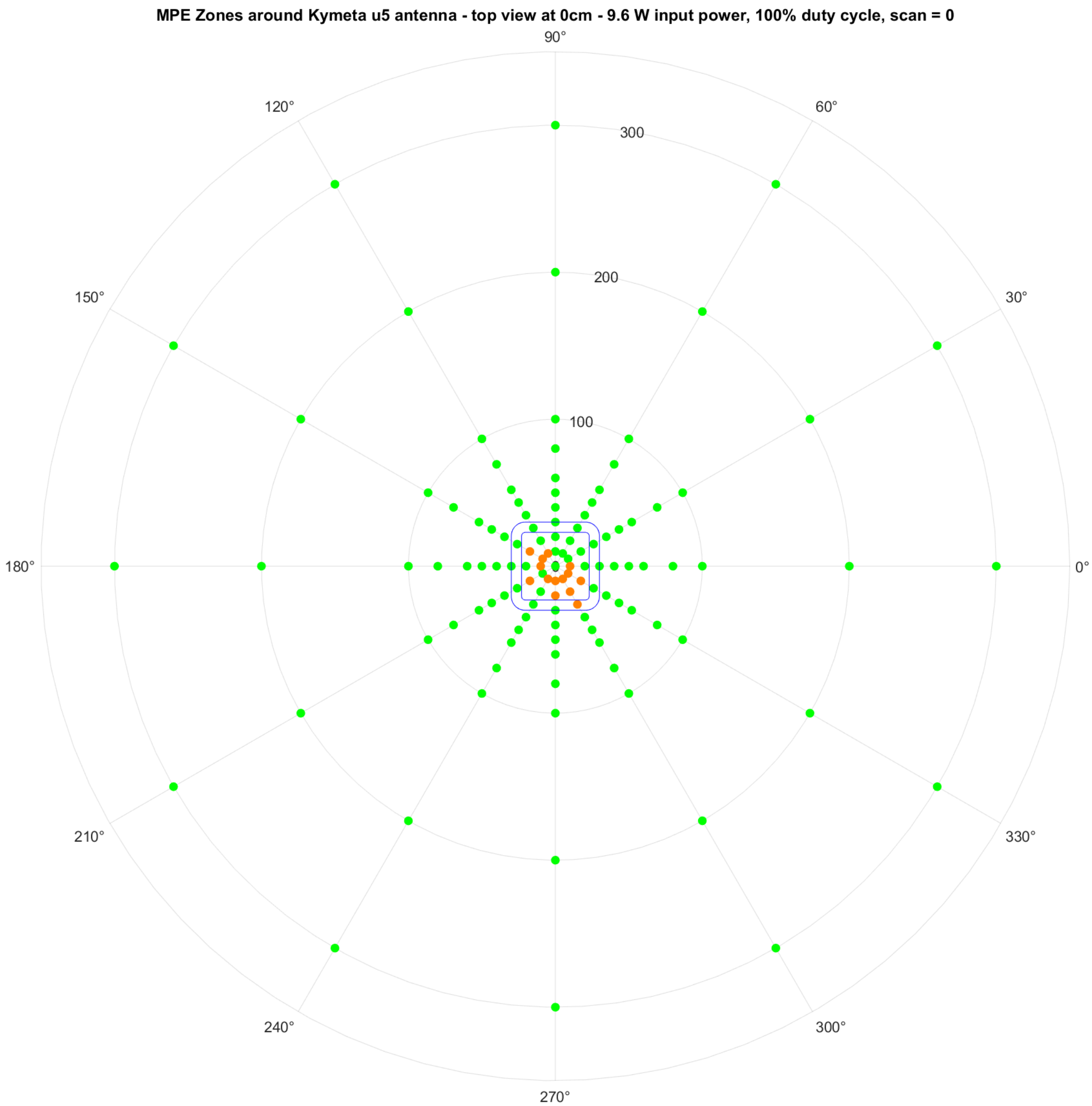

Figure 22: Height 0 cm, 9.6 W input power with 100% Duty Cycle, Scan 0˚

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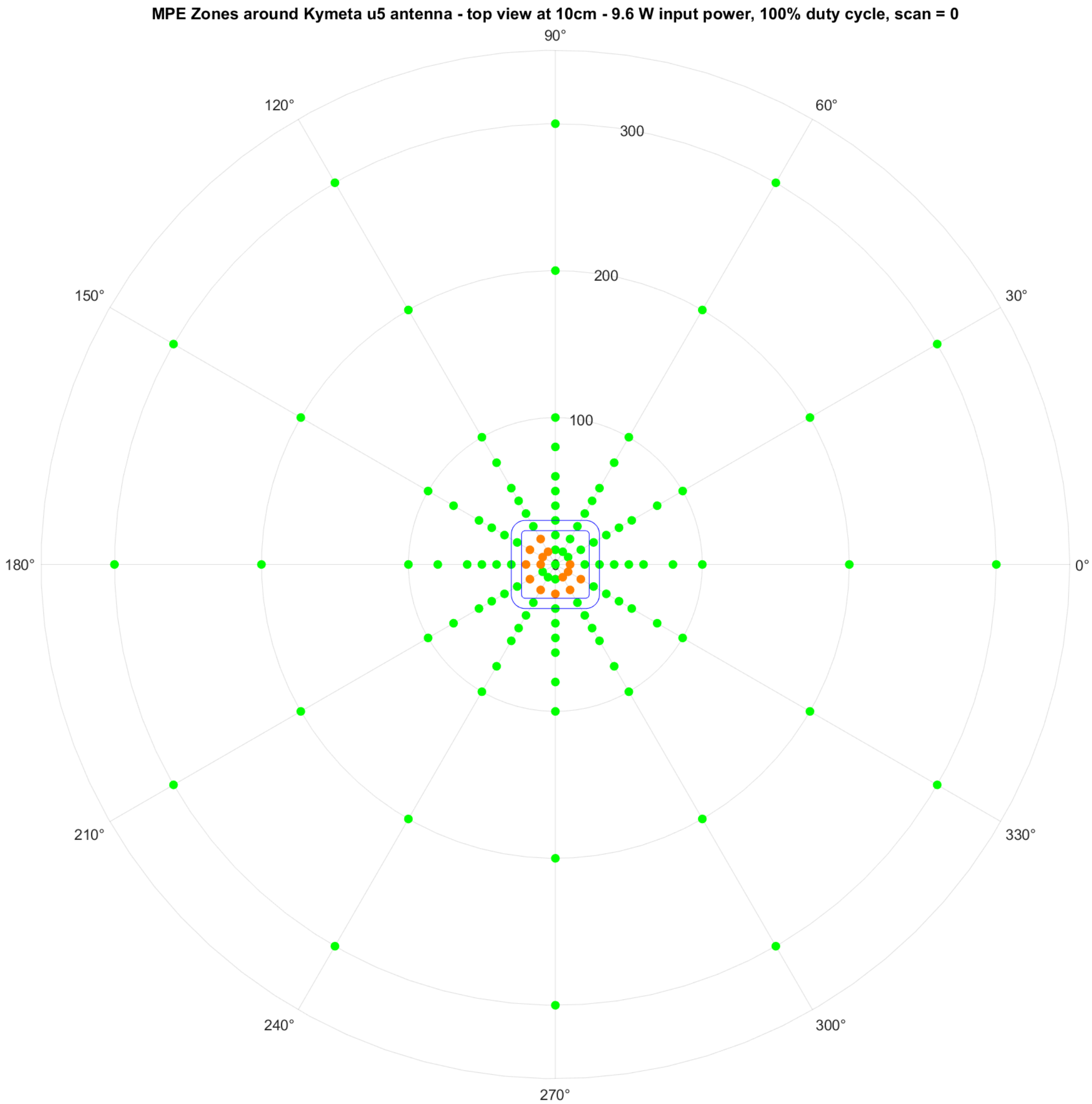

Figure 23: Height 10 cm, 9.6 W input power with 100% Duty Cycle, Scan 0˚

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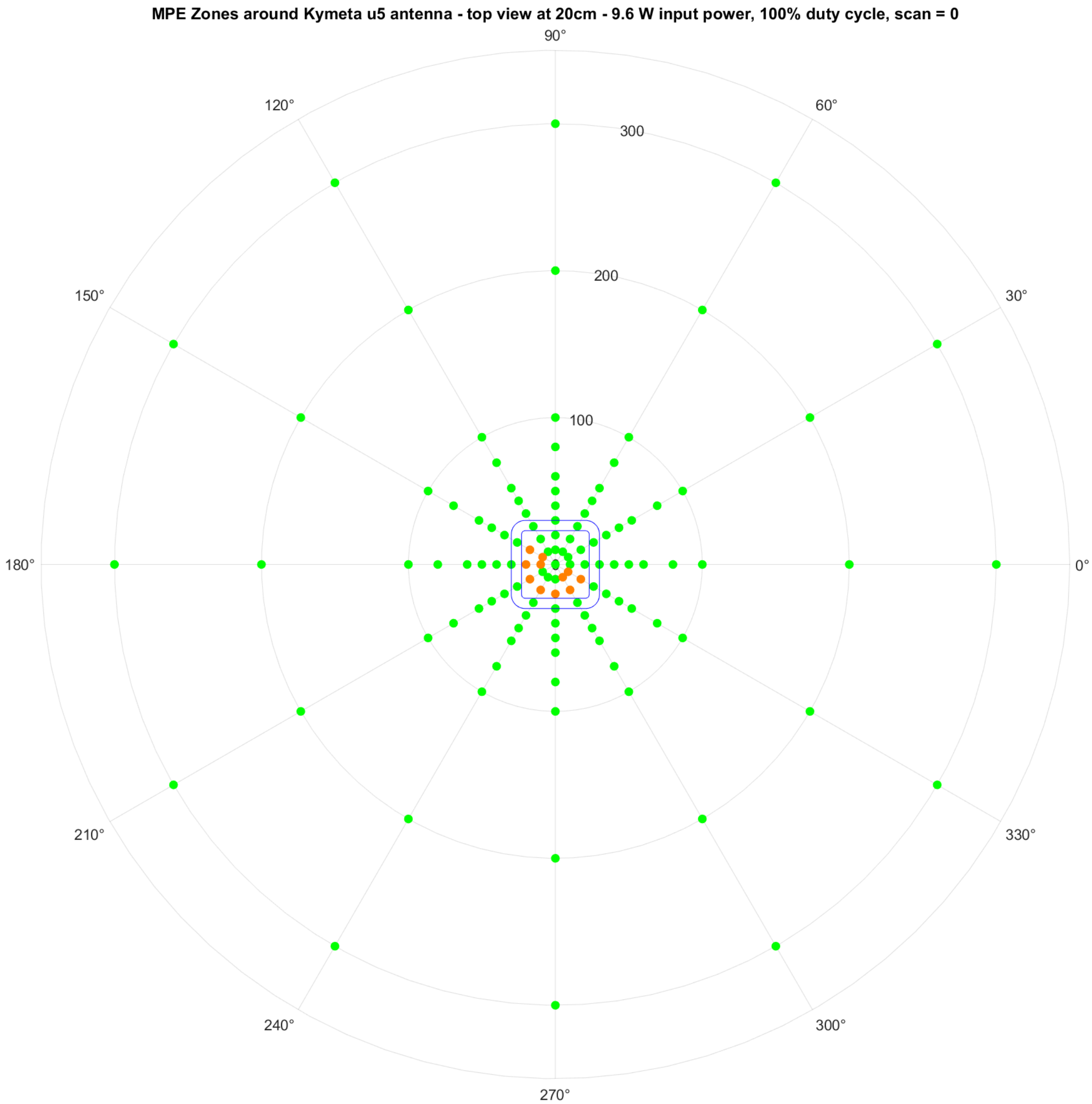

Figure 24: Height 20 cm, 9.6 W input power with 100% Duty Cycle, Scan 0˚

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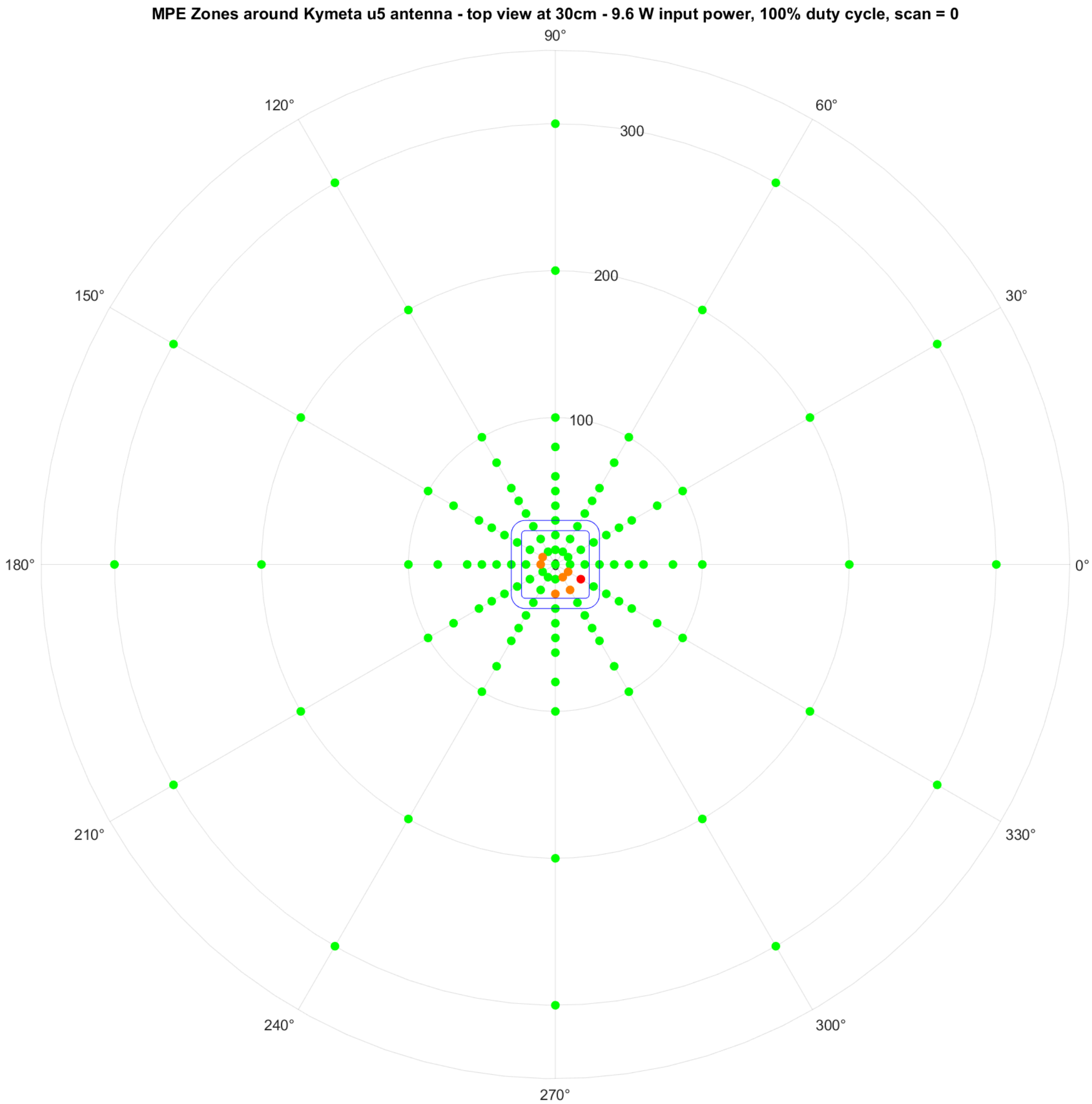

Figure 25: Height 30 cm, 9.6 W input power with 100% Duty Cycle, Scan 0˚

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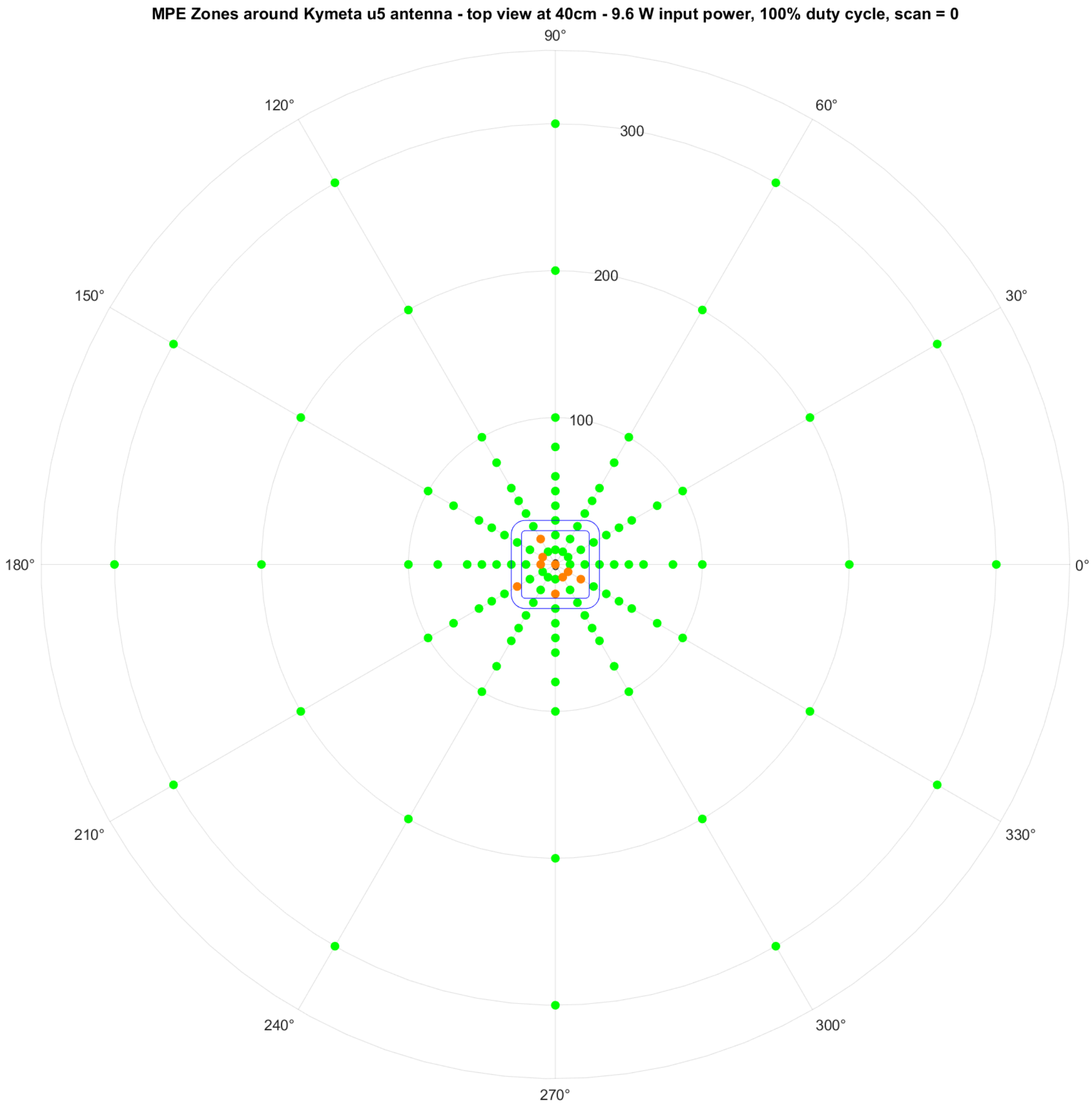

Figure 26: Height 40 cm, 9.6 W input power with 100% Duty Cycle, Scan 0˚

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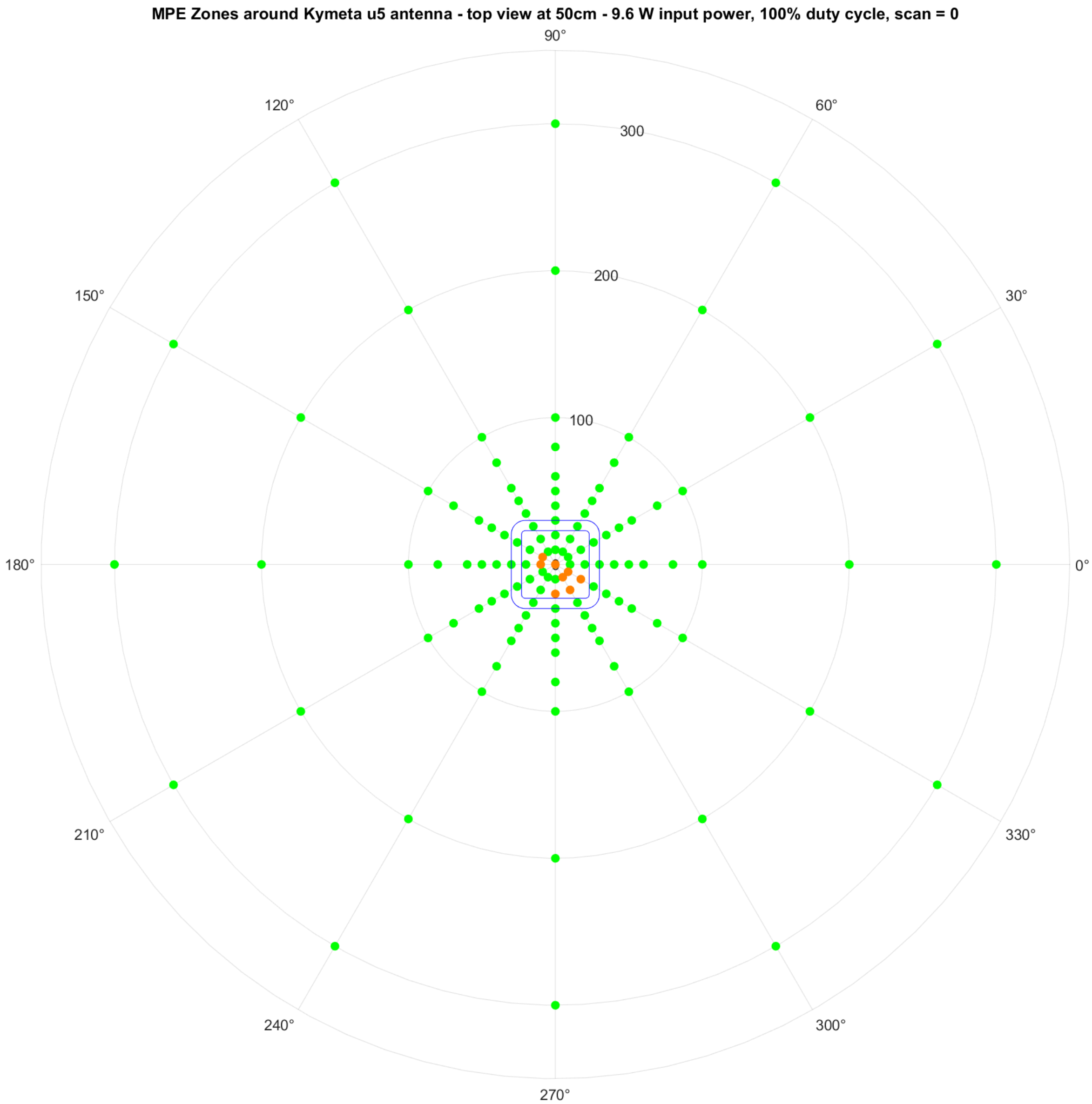

Figure 27: Height 50 cm, 9.6 W input power with 100% Duty Cycle, Scan 0˚

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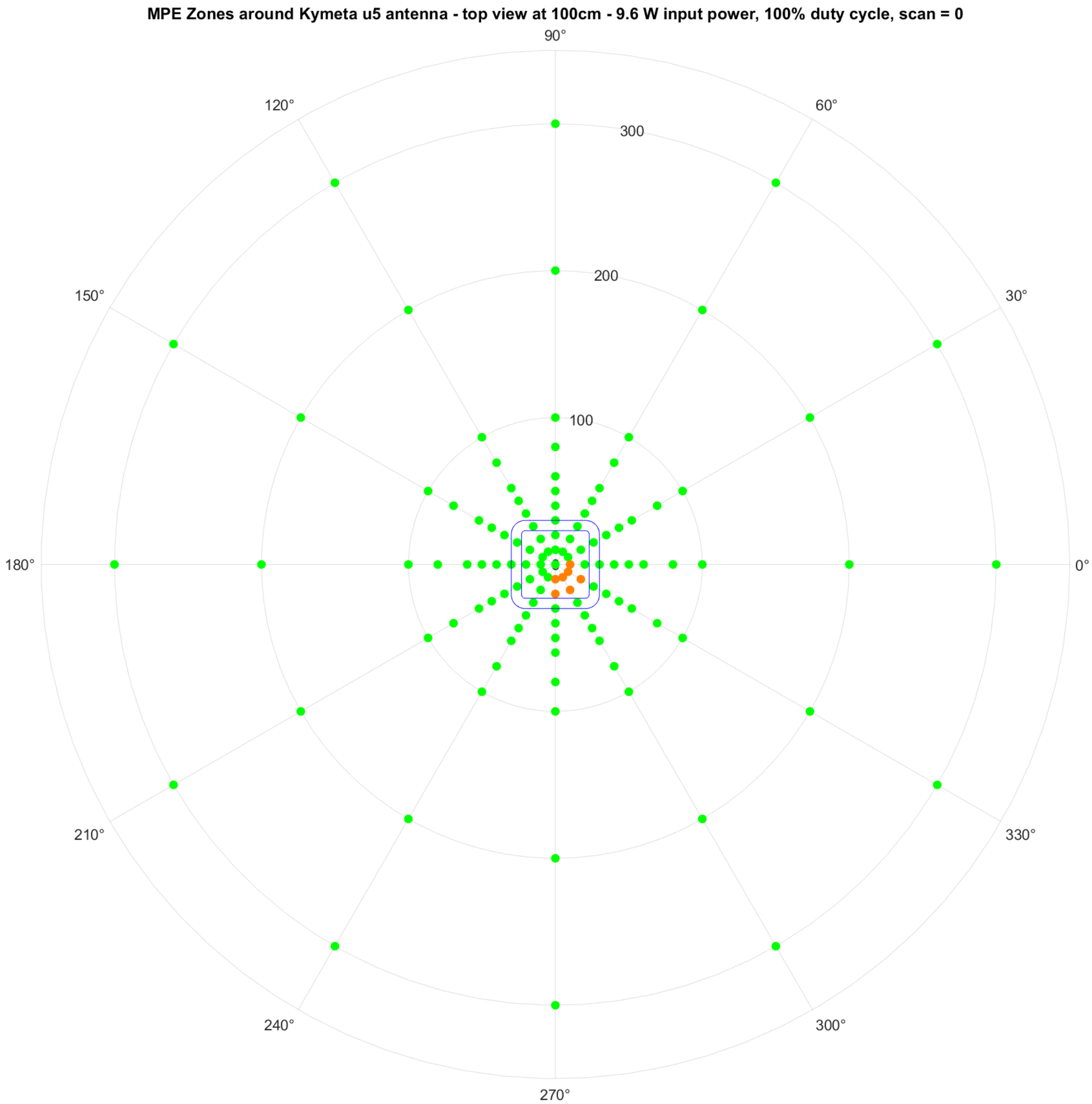

Figure 28: Height 100 cm, 9.6 W input power with 100% Duty Cycle, Scan 0˚

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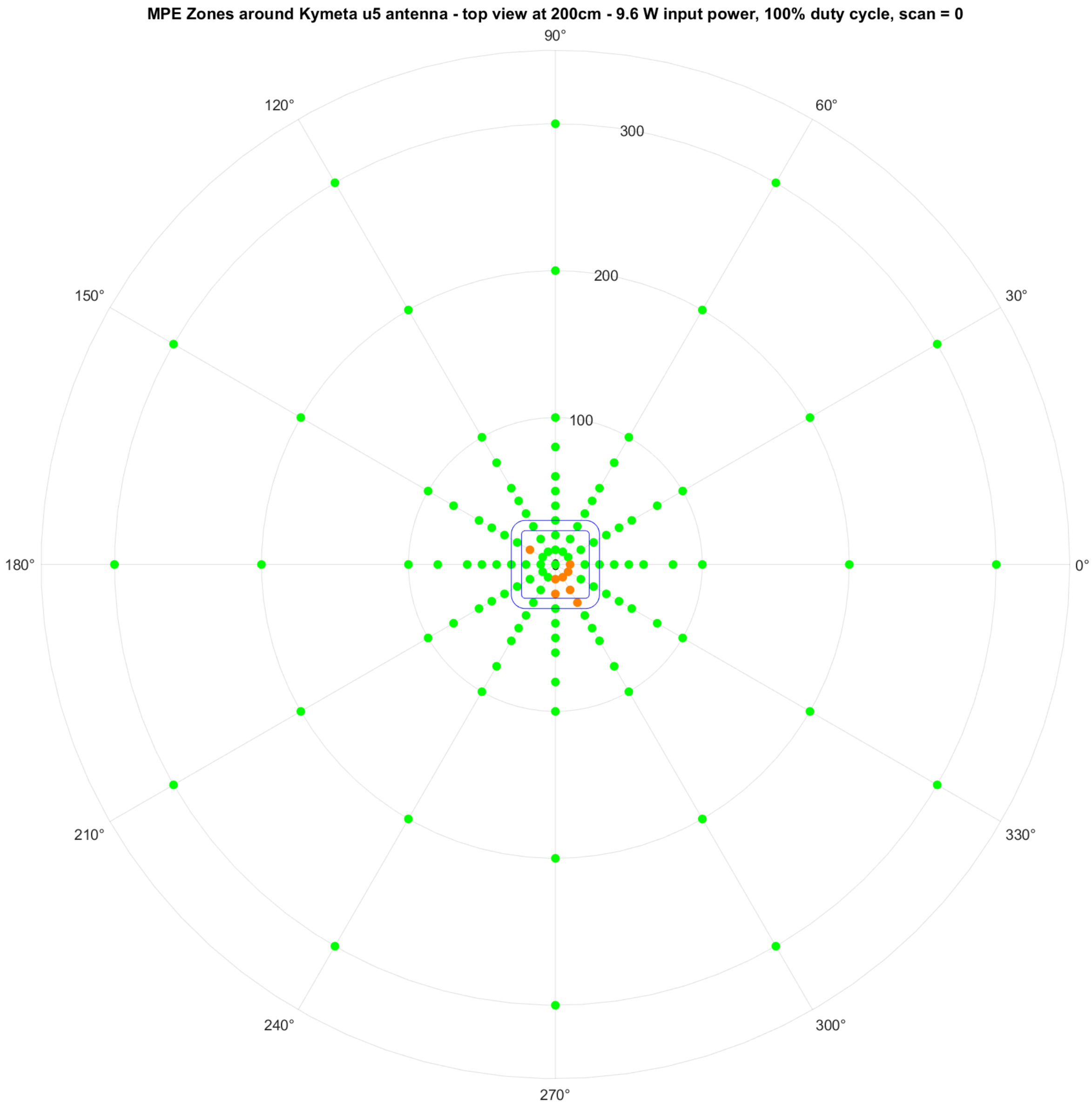

Figure 29: Height 200 cm, 9.6 W input power with 100% Duty Cycle, Scan 0˚

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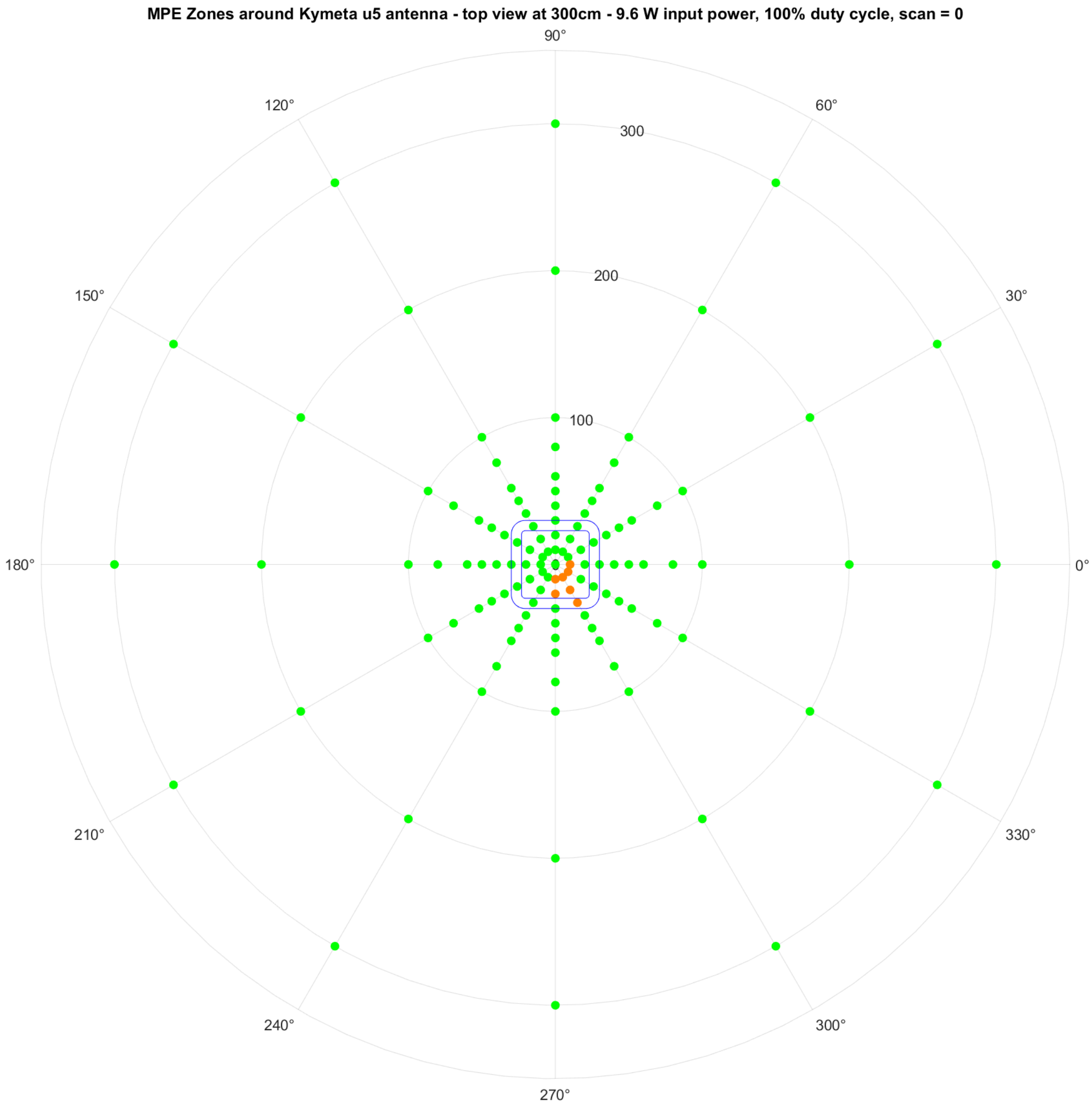

Figure 30: Height 300 cm, 9.6 W input power with 100% Duty Cycle, Scan 0˚

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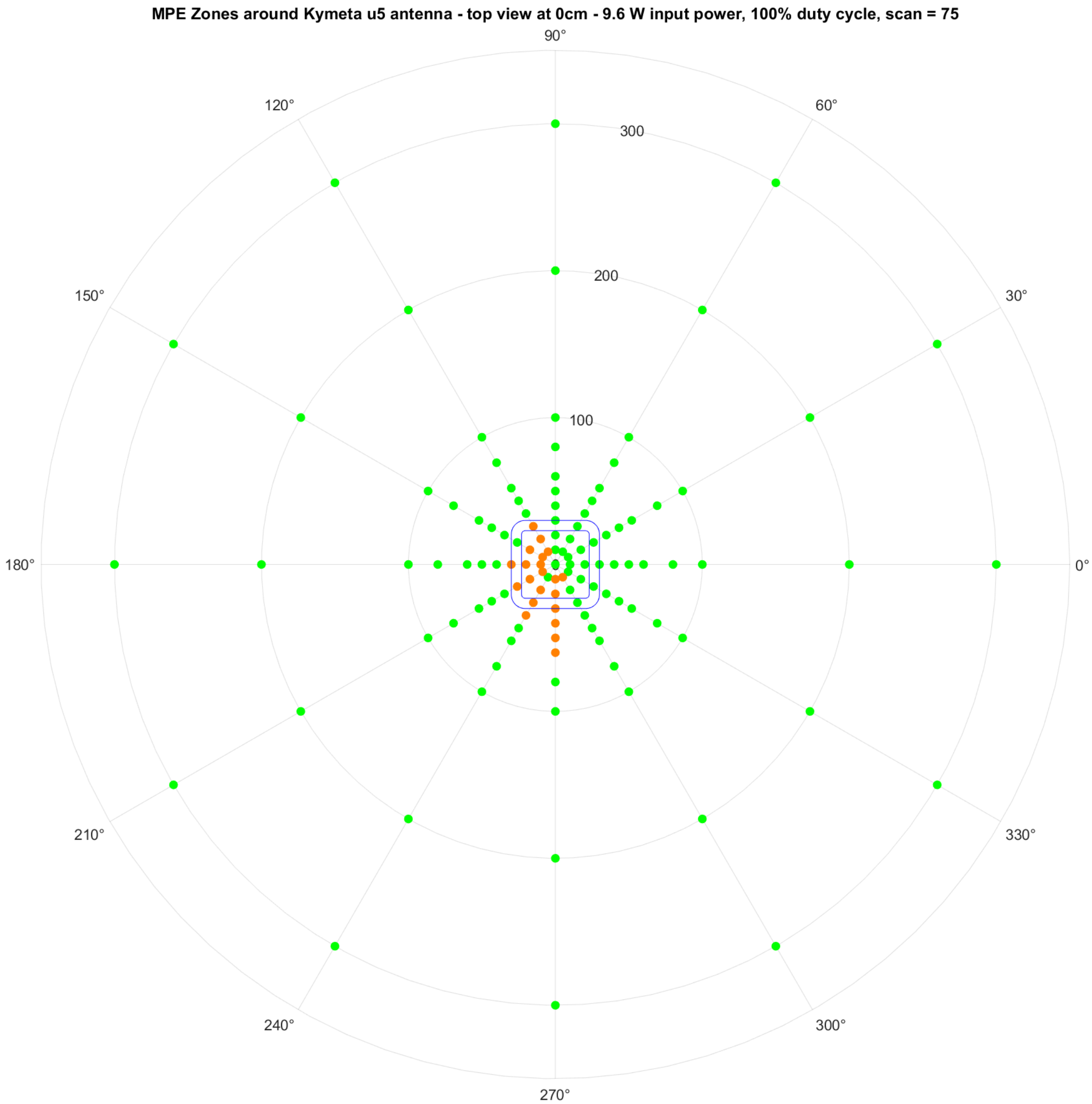

Figure 31: Height 0 cm, 9.6 W input power with 100% Duty Cycle, Scan 75˚

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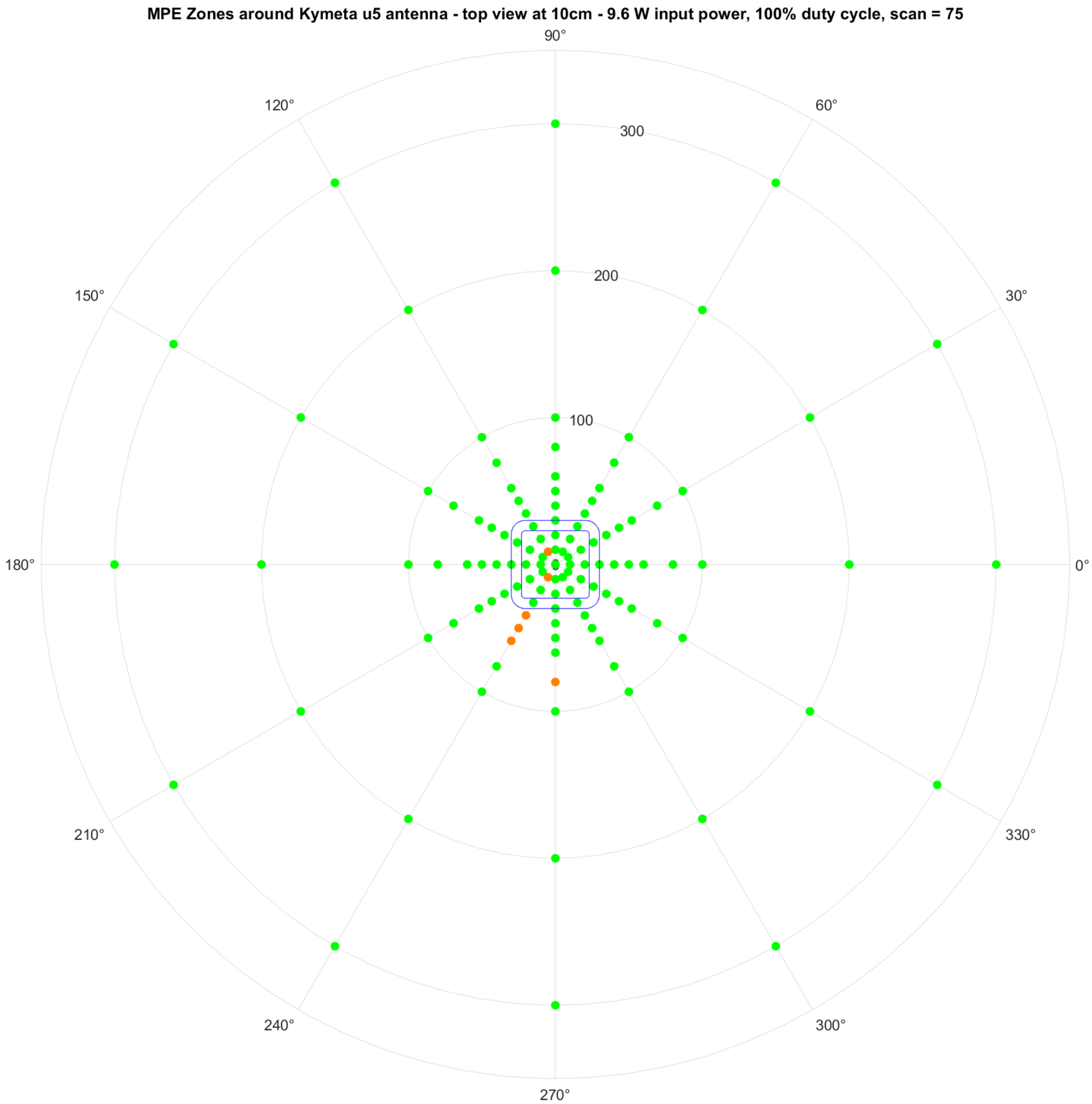

Figure 32: Height 10 cm, 9.6 W input power with 100% Duty Cycle, Scan 75˚

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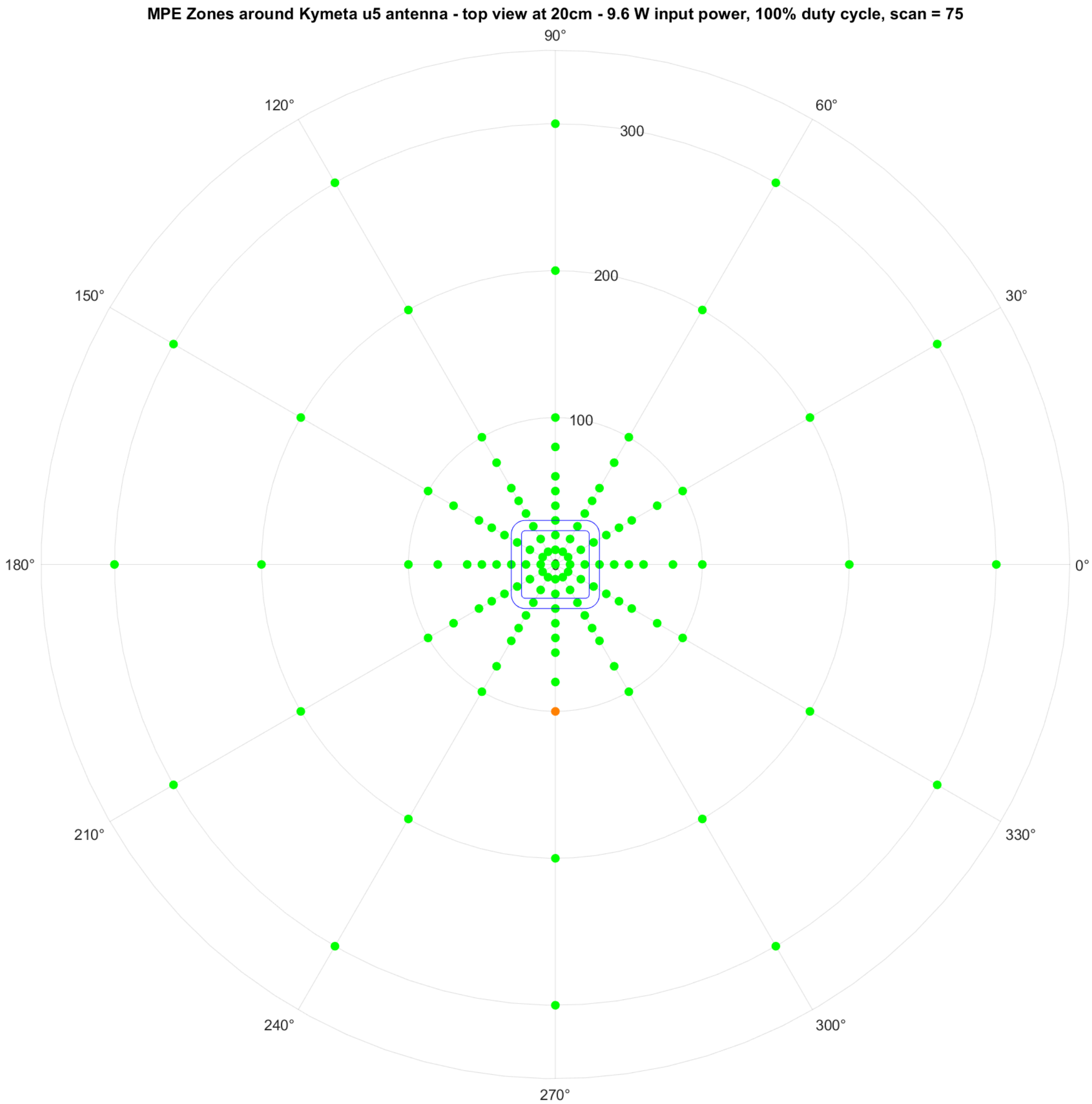

Figure 33: Height 20 cm, 9.6 W input power with 100% Duty Cycle, Scan 75˚

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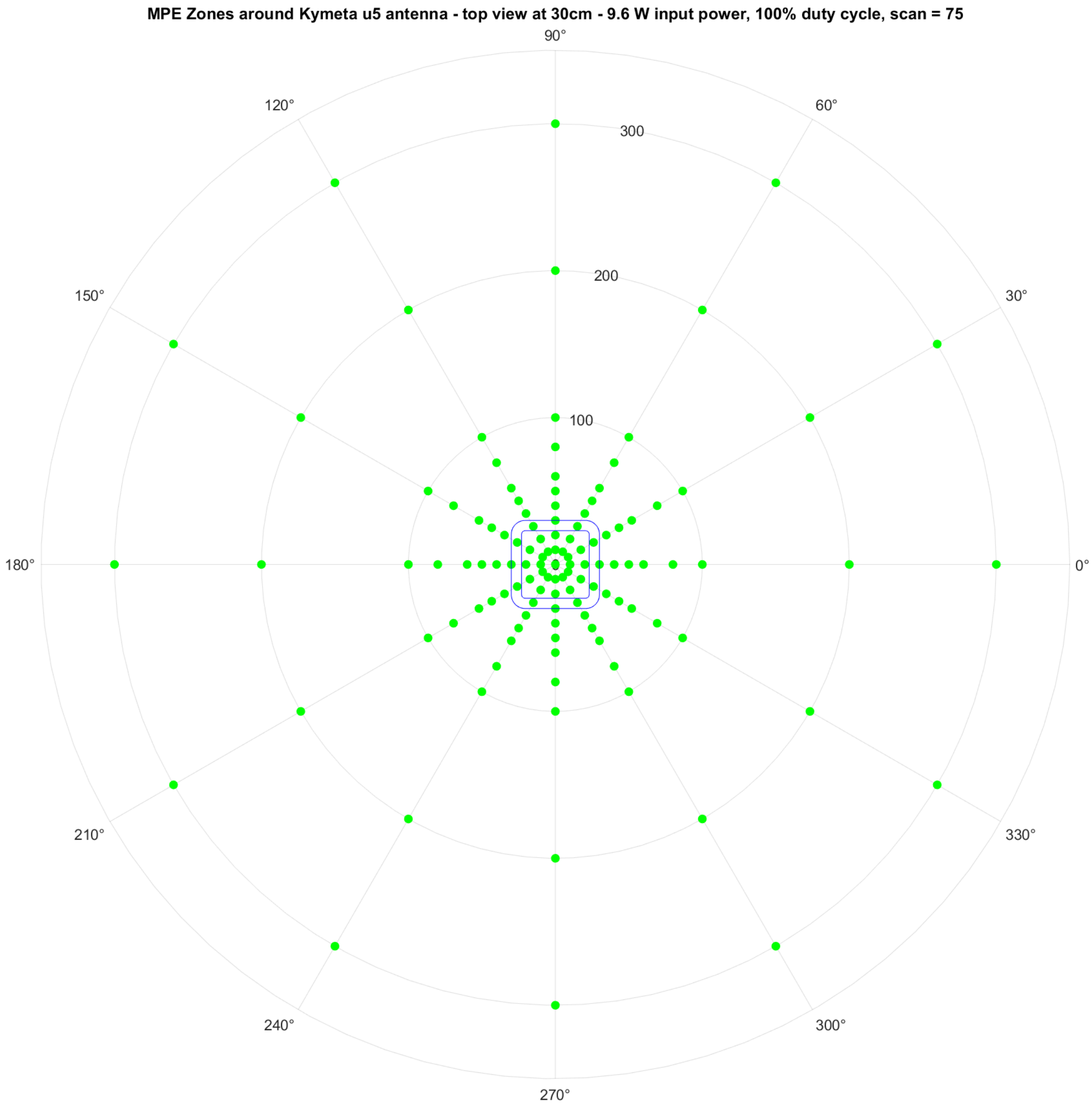

Figure 34: Height 30 cm, 9.6 W input power with 100% Duty Cycle, Scan 75˚

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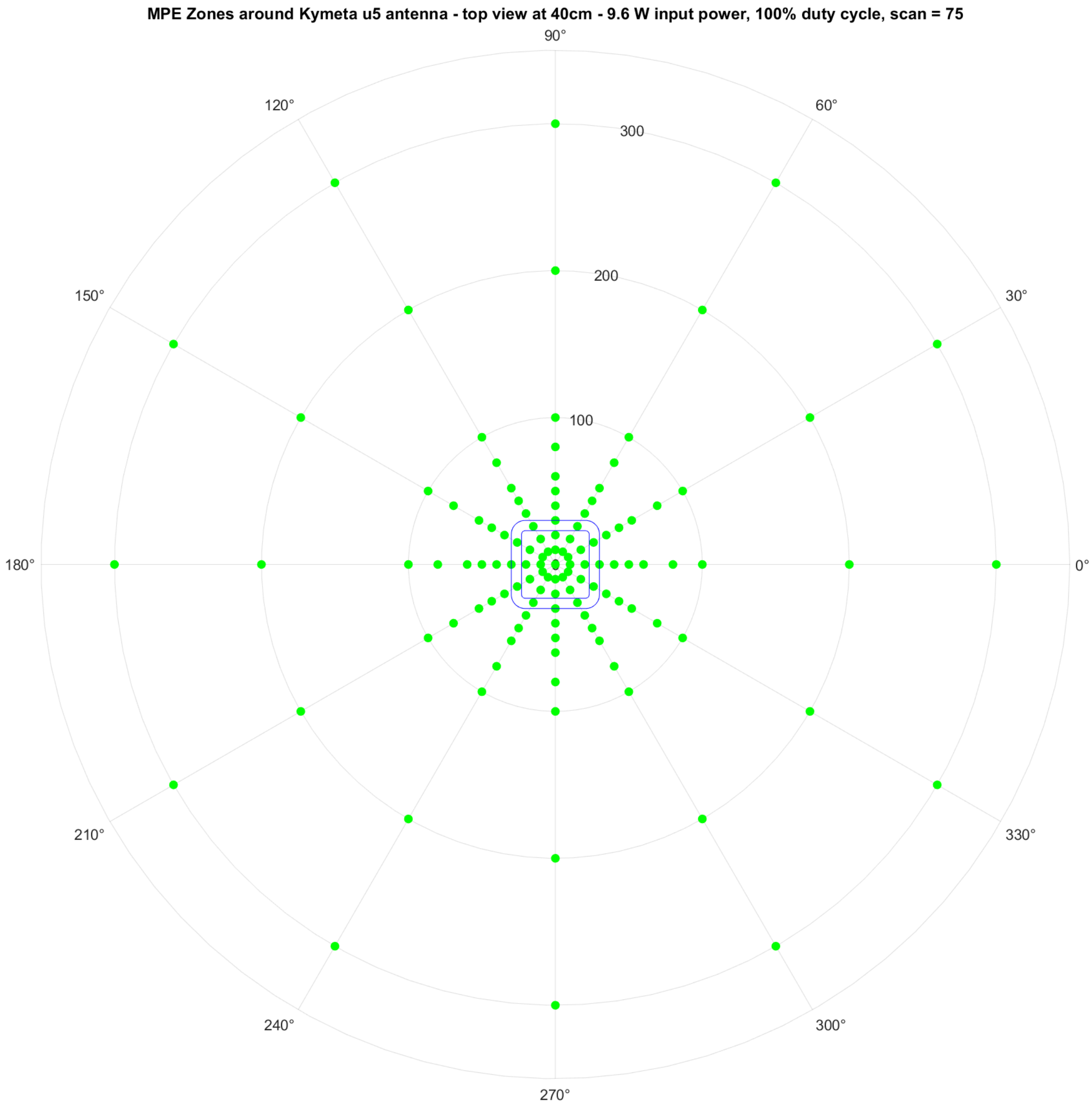

Figure 35: Height 40 cm, 9.6 W input power with 100% Duty Cycle, Scan 75˚

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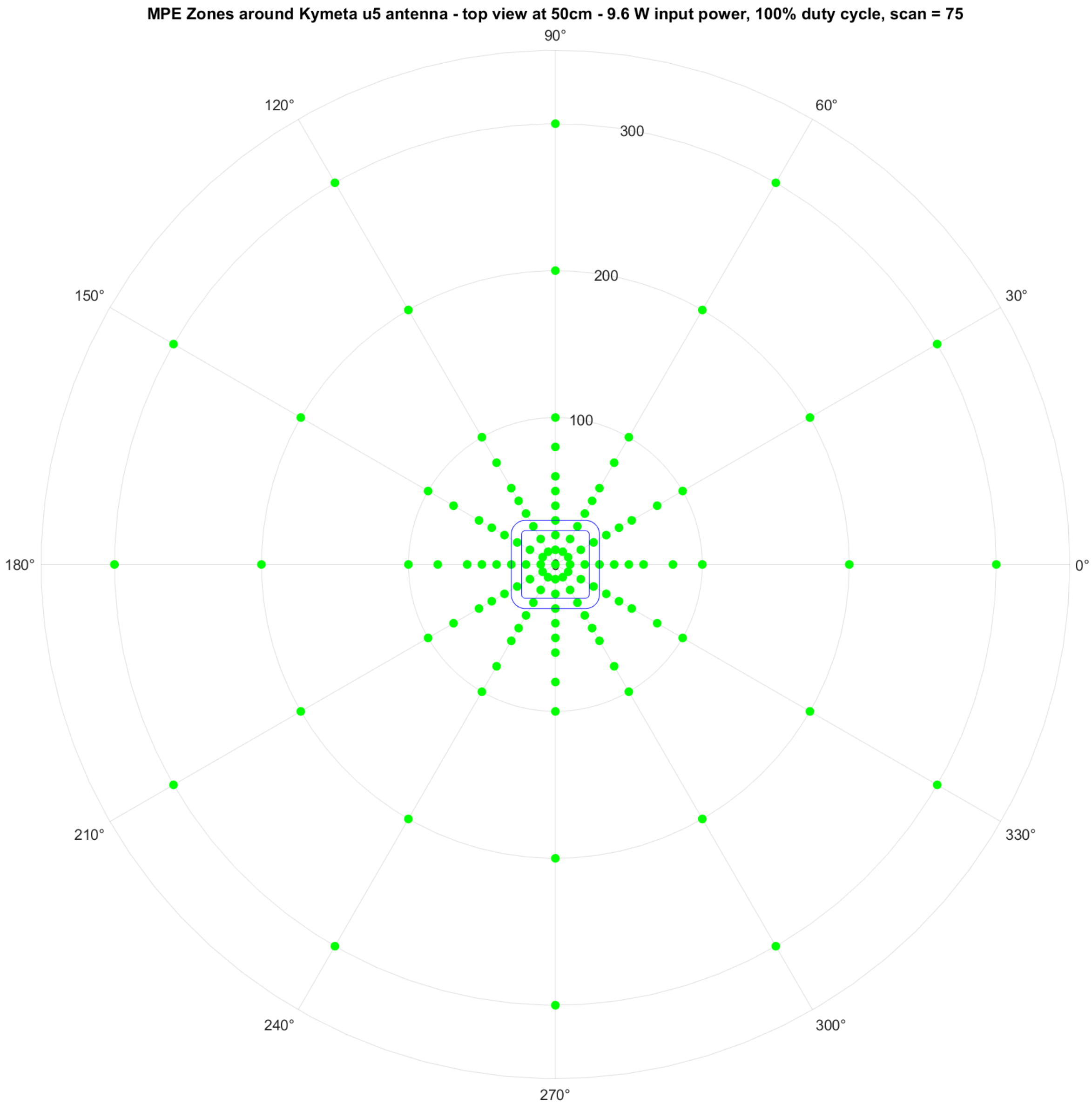

Figure 36: Height 50 cm, 9.6 W input power with 100% Duty Cycle, Scan 75˚

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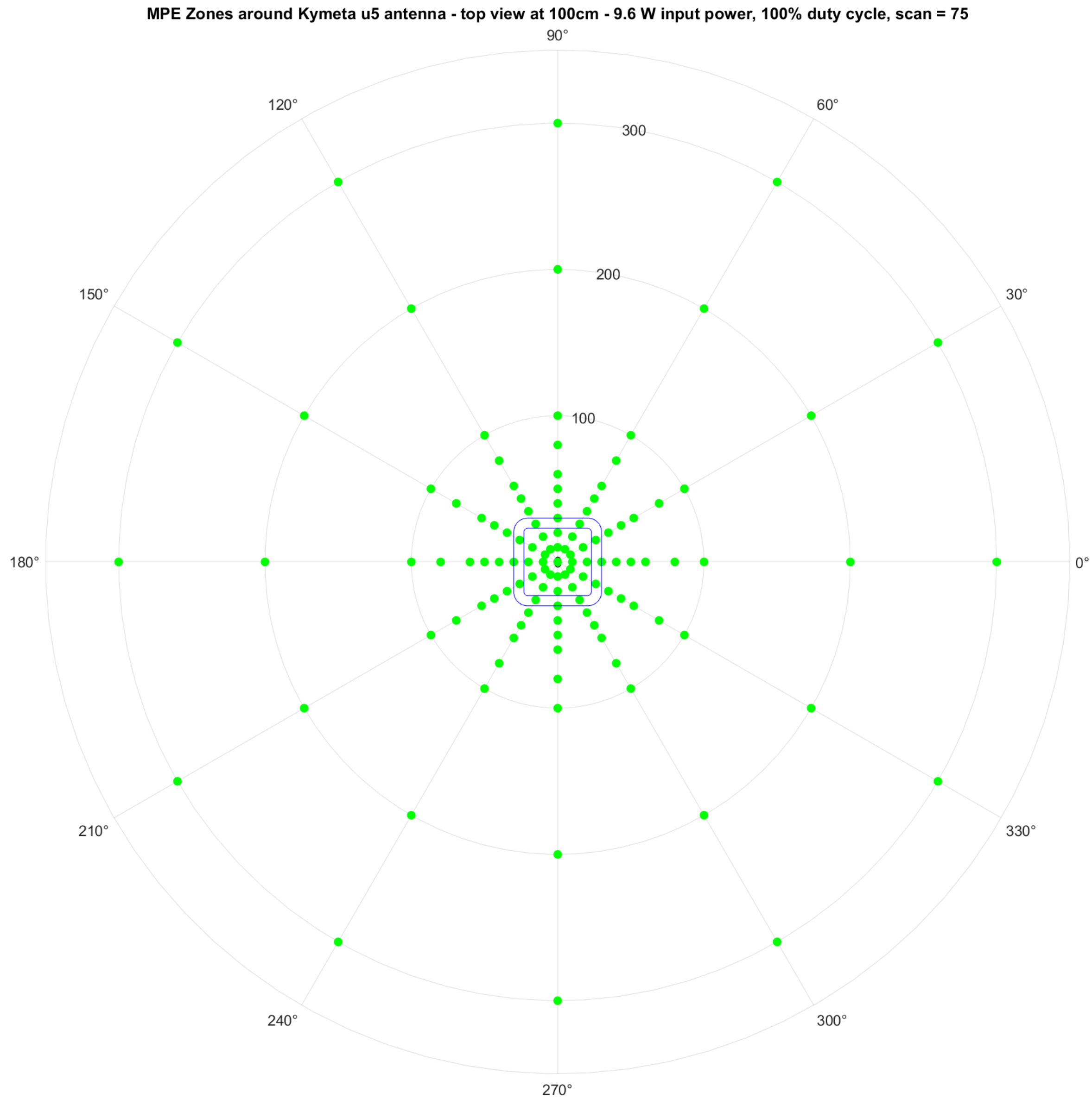

Figure 37: Height 100 cm, 9.6 W input power with 100% Duty Cycle, Scan 75˚

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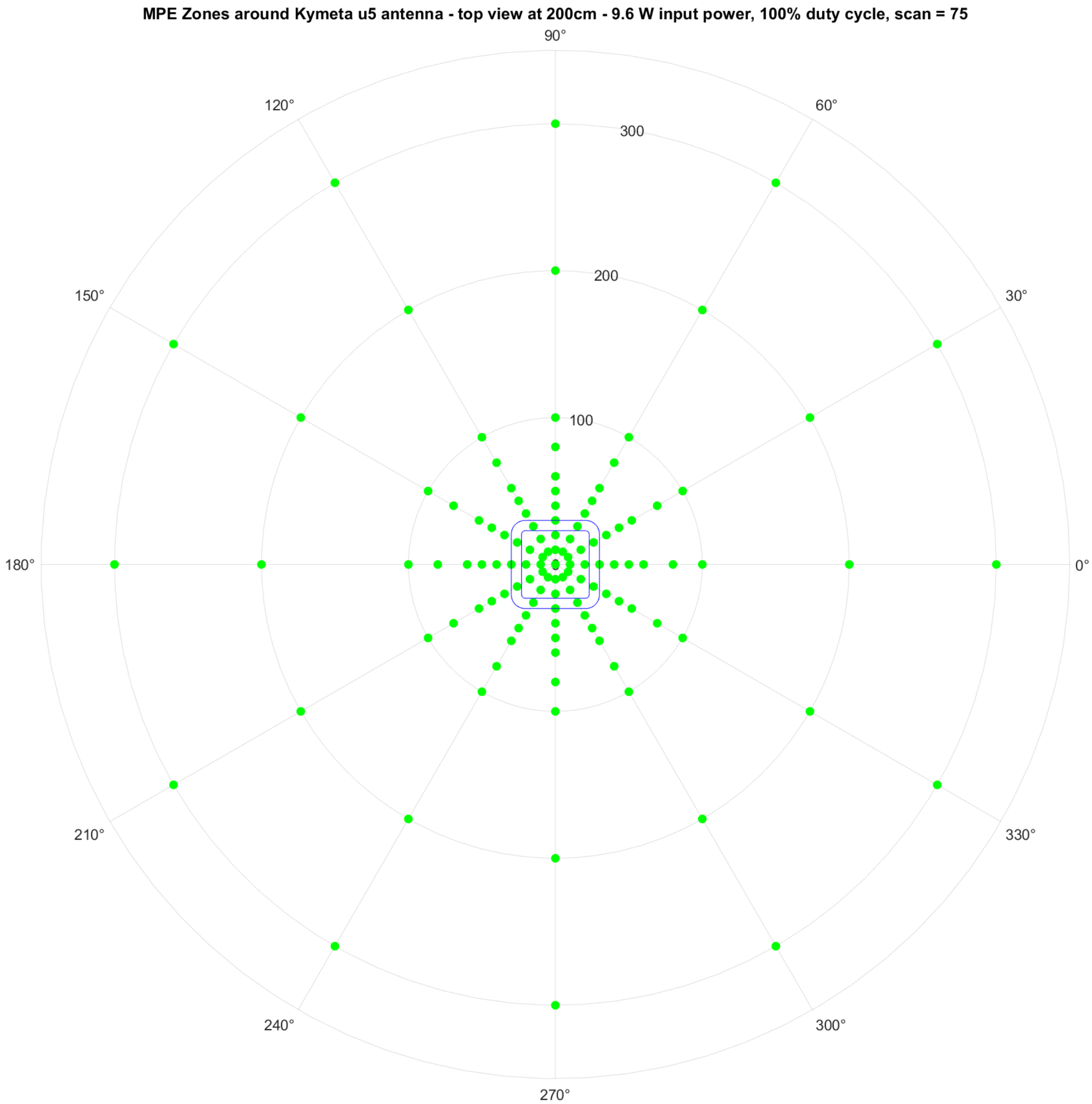

Figure 38: Height 200 cm, 9.6 W input power with 100% Duty Cycle, Scan 75˚

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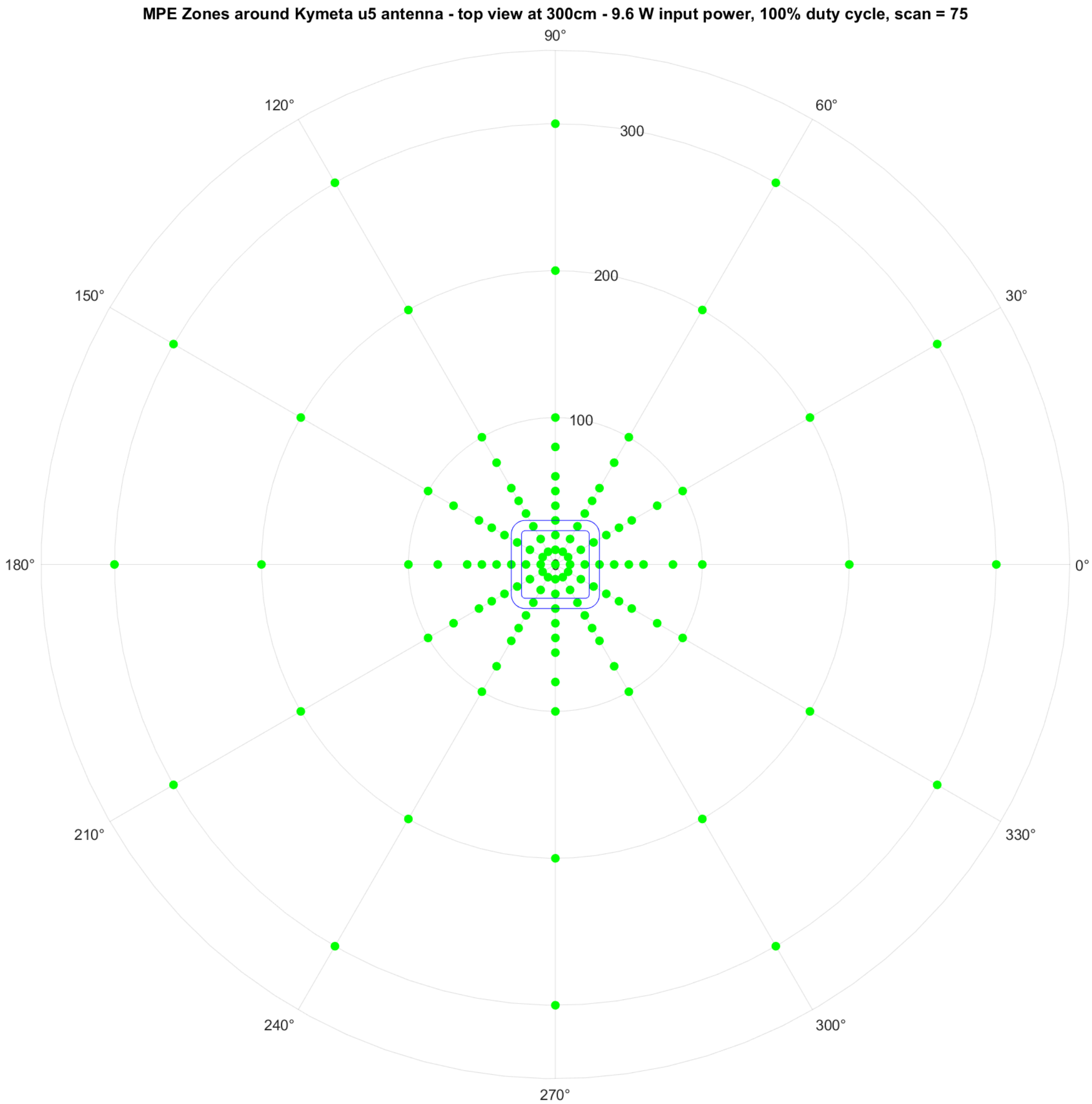

Figure 39: Height 300 cm, 9.6 W input power with 100% Duty Cycle, Scan 75˚

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5 RF analysis for the back of the terminal

The back radiation of the terminal mounted on the roof of a VMES is significantly lower than that of the forward directed (main lobe) radiation, producing power densities much less than the uncontrolled MPE limits. RF exposure of the driver and passengers of a VMES is further reduced because of the shielding effect afforded by the metallic backplane of the terminal as well as the vehicle roof.

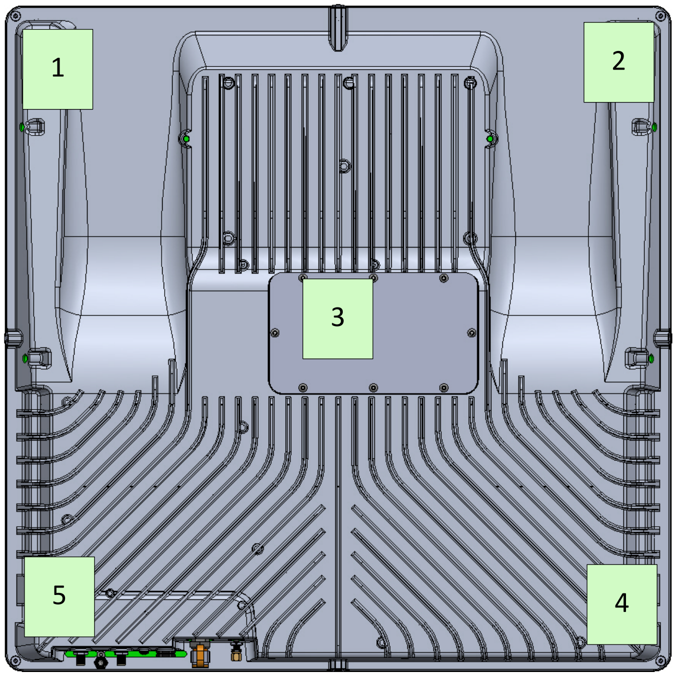

Figure 40: Back of the terminal showing measurement locations for the RF power density measurements

Table 1: Measured power density levels at the back of the terminal (4 W input power)

Measured data (mW/cm^2)		
Location	**1″ from the back of the terminal**	**3″ from the back of the terminal**
1	0.0031	0.0102
2	0.0021	0.0080
3	0.0145	0.0059
4	0.0027	0.0040
5	0.0018	0.0031

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Table 2: Scaled power density levels at the back of the terminal (23.7 W input power, 30% duty cycle)

Scaled data (mW/cm^2)		
Location	**1" from the back of the terminal**	**3" from the back of the terminal**
1	0.0055	0.0181
2	0.0037	0.0143
3	0.0258	0.0104
4	0.0048	0.0072
5	0.0032	0.0055

Table 3: Scaled power density levels at the back of the terminal (9.6 W input power, 100% duty cycle)

Scaled data (mW/cm^2)		
Location	**1" from the back of the terminal**	**3" from the back of the terminal**
1	0.0074	0.0245
2	0.0050	0.0193
3	0.0349	0.0141
4	0.0065	0.0097
5	0.0043	0.0074

Figure 40 shows the power density at various locations behind the terminal. These measurements were performed by Kymeta in its own anechoic chamber using an AR SM40G RF survey meter (AR RF/Microwave Instrumentation) and SHE3M40G Isotropic Electric Field Probe with an operating dynamic range of 0.5 to 350 V/m. This translates to minimum detectable power density of 0.0000663 mW/cm^2, entirely enough to detect the values associated with this measurement.

These measurements were performed using 4 W to the input to the Antenna. The raw data is shown in Table 1. The data was scaled to 23.7 W and a 30% duty cycle and 9.6 W and a 100% duty cycle. See Table 2 and Table 3. As is clear in the table, the RF power density presented from the back side of the terminal is substantially below the general population uncontrolled exposure limits.

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6 General RF safety analysis

The RF measurements performed on the Antenna indicate that only within a very small volume of space near the Antenna is there the potential for power densities to exceed the FCC general public MPE. Exposure of the public to this limited volume of space during normal operation of the Antenna is deemed to be a low probability event given the close proximity that one would have to be to enter the region where the public MPE could be exceeded. Kymeta will comply with the mitigation measures set forth in the Commission's Second Report and Order, *Targeted Changes to the Commission's Rules Regarding Human Exposure to Radiofrequency Electromagnetic Fields*, FCC 19-126, ET Docket No. 19-226, rel. Dec. 4, 2019.

Operations at 23.7 Watts (GEO Mode)

Power density measurements show the following for operation of the terminal at 23.7 W with a maximum duty cycle of 30%:

There are no "red" zones where the RF power density exceeds the occupational/controlled MPE level of 5 mW/cm2.

There are several "orange" zones where the RF power density exceeds the general population/uncontrolled MPE level of 1 mW/cm^2 but is less than the occupational/controlled MPE level of 5 mW/cm^2. These zones occur at the following locations:

- Within 300 cm (3 m) vertically from the surface of the Antenna and within 30 cm radially from the center of the terminal at 0° scan angle.
- Within 10 cm vertically from the surface of the Antenna and within 60 cm radially from the center of the terminal at 75° scan angle.

Operations at 9.6 Watts (LEO Mode)

Power density measurements show the following for operation of the terminal at 9.6 W with a maximum duty cycle of 100%:

There is one "red" zone at 30 cm from the surface of the Antenna within 20 cm from the center of the terminal at 0° scan angle.

There are several "orange" zones where the RF power density exceeds the general population/uncontrolled MPE level of 1 mW/cm^2 but is less than the occupational/controlled MPE level of 5 mW/cm^2. These zones occur at the following locations:

- Within 300 cm (3 m) vertically from the surface of the Antenna and within 30 cm radially from the center of the terminal at 0° scan angle.
- Within 20 cm vertically from the surface of the Antenna and within 100 cm (1 m) radially from the center of the terminal at 75° scan angle.

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7 Analysis and mitigation measures

Use of the u5 terminals will be restricted to military, public safety, maritime and commercial purposes that will not be accessible to the general public, and customers will be educated and trained accordingly and be contractually obligated to comply with the requisite deployment limitations and safety precautions. All u5 terminals will be installed by trained professionals. Kymeta will provide caution/warning/notice labels for the customer to apply to the integrated terminal for maximum visibility after integration of any u5 terminal. Customers will be instructed to use additional indicative barriers, and as needed, physical barriers, to ensure that the general public will not be able to enter any area where the RF exposure from the u5 terminals exceeds 1.0 mW/cm2. Exposure of the public to this limited volume of space during normal operation of the Antenna is deemed to be a low probability event given the close proximity that one would have to be to enter the region where the public MPE level could be exceeded.

Kymeta will provide training materials to its customers to ensure that all persons operating the u5 terminals are instructed not to enter any area where the RF exposure exceeds 5 mW/cm2. Customers will be instructed to shut down the terminals if maintenance work is required such that an employee or contractor would need to enter within a red zone.

Importantly, there is no anticipated operational state where the u5 terminal will continuously transmit in LEO mode with a static 0° scan angle where the red zone occurs due to the trajectory of the NGSO satellites being tracked which typically complete an overhead pass within 90 seconds – substantially less than the 6-minute time averaging defining the Occupational/Controlled MPE criteria.

8 Fixed use case analysis

Kymeta terminals will typically be deployed for commercial use on private property. To ensure that the general population does not have access to any red or orange zone, Kymeta will do the following:

- Instruct customers to apply the supplied caution label to the radome stating: "NOTICE – Radiofrequency fields may exceed FCC limits for the public within 70 cm of the edge of the terminal" (or substantially similar wording). "NOTICE" will be printed in blue color. Instructions will be provided for product installation requirements, including label readability once installed. The text of the label will be large enough so that it can be read from the separation distance required for compliance with the general population limit.
- Instruct customers to post one or more signs around the Antenna stating: "NOTICE – Radiofrequency fields may exceed FCC limits for the public within 70 cm of the edge of the terminal" (or substantially similar wording).
- In unusual cases where the terminal is not in a secured area inaccessible to the public, Kymeta will instruct customers to install an indicative barrier around the terminal. The unlikely scenario of a member of the general public accessing an "orange" or "red" zone region near the terminal is deemed analogous to a condition of transient exposure that would exist for only a very short duration.

In addition, Kymeta will provide a training manual instructing customers to shut down the transmitter whenever maintenance work must be performed on the Antenna in addition to providing RF safety awareness information to the operator and those responsible for using the terminal.

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9 ESV use case analysis

Kymeta terminals will be deployed on commercial vessels and private yachts, typically in non-accessible areas on platforms at or near the highest point of the vessel. To ensure that the general population does not have access to any "orange" or "red" zone, Kymeta will do the following:

- Instruct customers to apply the supplied caution label to the integrated terminal stating: "NOTICE – Radiofrequency fields may exceed FCC limits for the public within 70 cm of the edge of the terminal (or substantially similar wording). "NOTICE" will be printed in blue color. Instructions will be provided for product installation requirements, including label readability once installed. The text of the label will be large enough so that it can be read from the separation distance required for compliance with the general population limit.
- Instruct customers to post one or more signs around the terminal stating: "NOTICE – Radiofrequency fields may exceed FCC limits for the public within 70 cm of the edge of the terminal" (or substantially similar wording).
- In unusual cases where the terminal is not in a secured area inaccessible to the public, Kymeta will instruct customers to install an indicative barrier around the terminal. The unlikely scenario of a member of the general public accessing an "orange" or "red" zone region near the terminal is deemed analogous to a condition of transient exposure that would exist for only a very short duration.

In addition, Kymeta will provide a training manual instructing customers to shut down the transmitter whenever maintenance work must be performed on the terminal in addition to providing RF safety awareness information to the operator and those responsible for using the terminal.

10 VMES use case analysis

Kymeta terminals will be deployed horizontally on the roof-top of various vehicles, including buses, trucks, trains, RVs, and heavy vehicles. Given the heights of these vehicles (≥180 cm) and the height of the mounted terminal (≥10 cm), the bodies of people standing next to them will be well below any "orange" or "red" zone.

Also, the terminal employs a mechanism to detect obscurations to the Antenna aperture and stop RF transmission within 100 ms upon detection of an obscuration. Because Kymeta technology locates both the transmit and receiver antenna aperture on the same physical substrate, any sudden change in receiver strength, as measured by the on-board tracking receiver, is interpreted as an obscuration of the transmit aperture. Thus, in situations where an object or person blocks the line of sight between the terminal and the target (e.g., by a bus), transmissions are ceased well within the timeframe required to satisfy the MPE limit.

To ensure that the general population does not have access to any orange zone, Kymeta will do the following:

- Instruct customers to apply the supplied caution label to the radome stating: "NOTICE – Radiofrequency fields may exceed FCC limits for the public within 70 cm of the edge (or substantially similar wording). "NOTICE" will be printed in blue color. Instructions will be provided for product installation requirements, including label readability once installed. The text of the label will be large enough so that it can be read from the separation distance required for compliance with the general population limit.
- Instruct customers to post one or more signs around the terminal stating: "NOTICE – Radiofrequency fields may exceed FCC limits for the public within 70 cm of the edge of the terminal" (or substantially similar wording).

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In addition, Kymeta will provide a training manual instructing customers to shut down the transmitter whenever maintenance work is to be performed on the terminal and providing RF safety awareness information to the operator and those responsible for use of the terminal.

11 Revision history

Revision	Change
01	Initial release

12 Copyright and trademark information

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