

QZSS Antenna Patterns

July 2023

National Space Policy Secretariat
Cabinet Office, Government of Japan



Package Contents



This package contains the following QZSS antenna pattern data for QZS02 through QZS07, and QZS1R:

- Plots
- Antenna gain [dBi]
- Off-nadir Angle (θ) [deg]

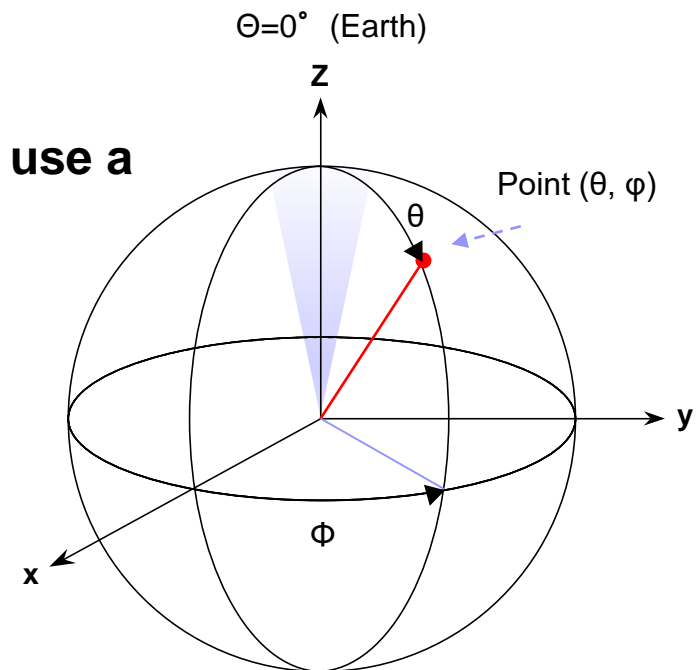
Separate Antenna gain and Off-nadir Angle spreadsheets are provided for each satellite and operation frequency. See the following pages for details.

Spherical Coordinate System

Pattern measurements included in this package use a three-dimensional spherical coordinate system.

A point is specified by two angles:

- Theta θ – angle between z-axis and the vector from the origin to the point
- Phi Φ – angle from the x-axis about the z-axis





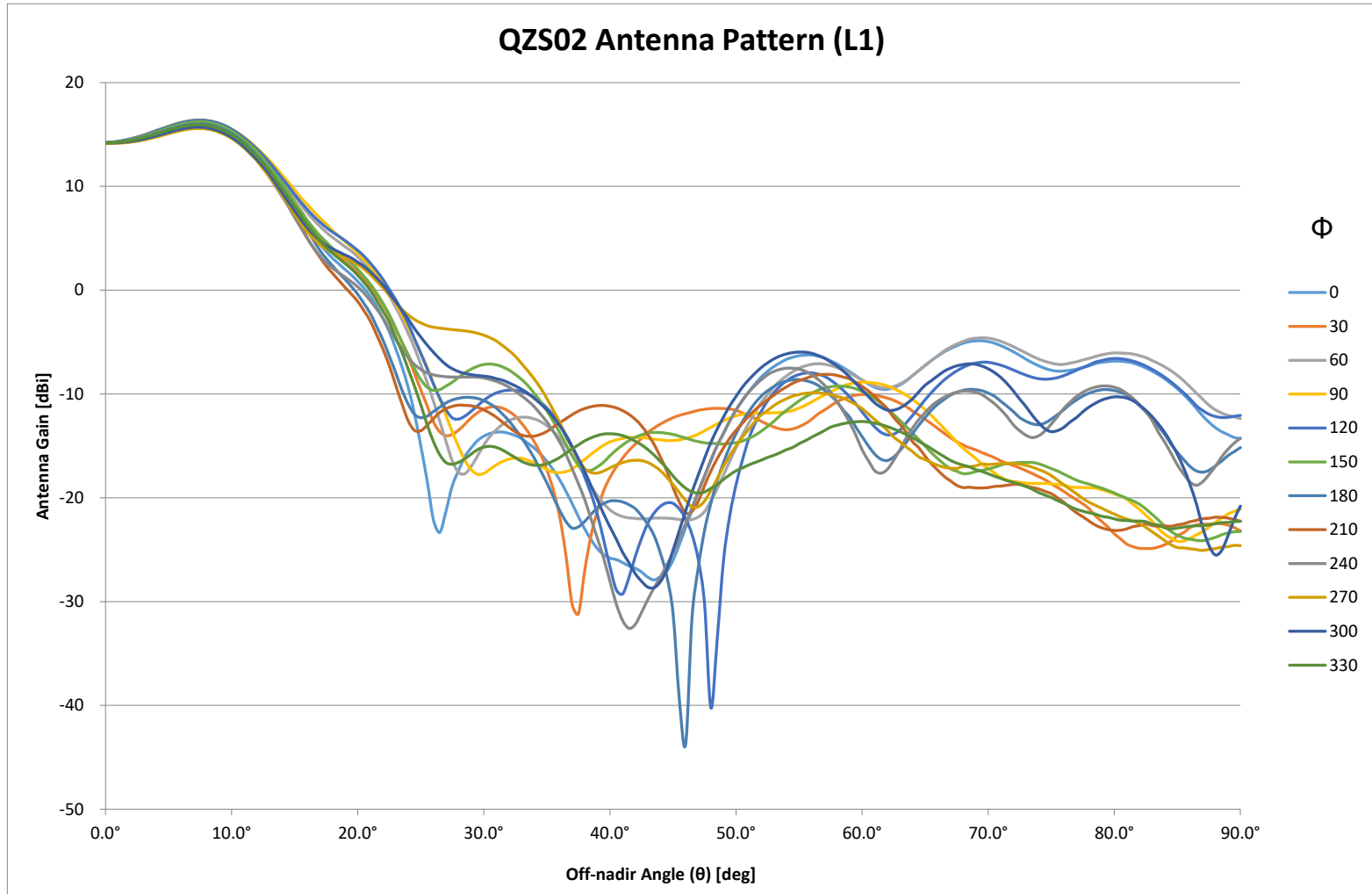
QZS02

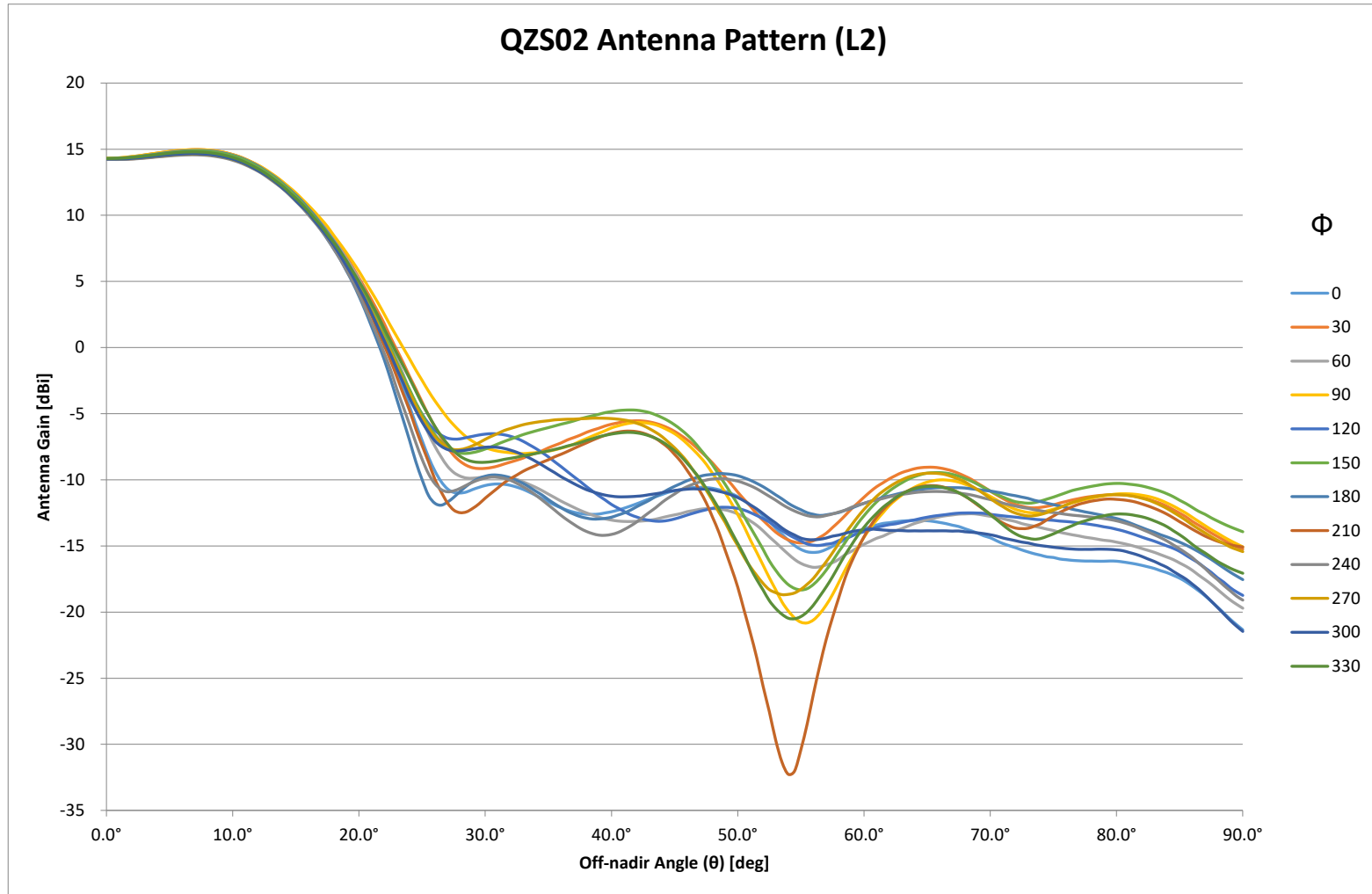
Antenna Type : helical antenna

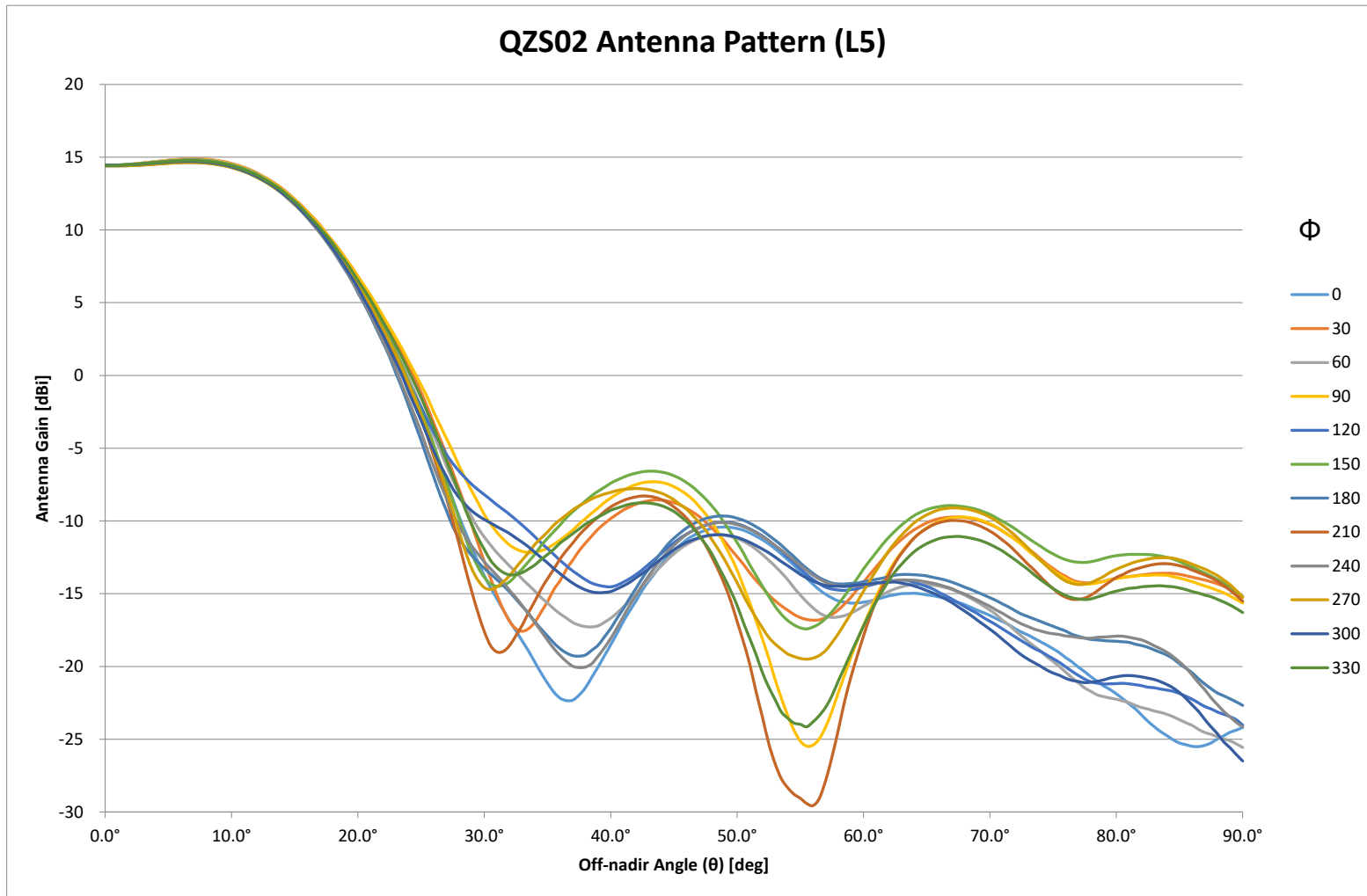
Measurement resolution:

- **Phi: 0° to 330° by 30° increments**
- **Theta: 0° to 90° by 0.5° increments**

Frequency Band: L1, L2, and L5.









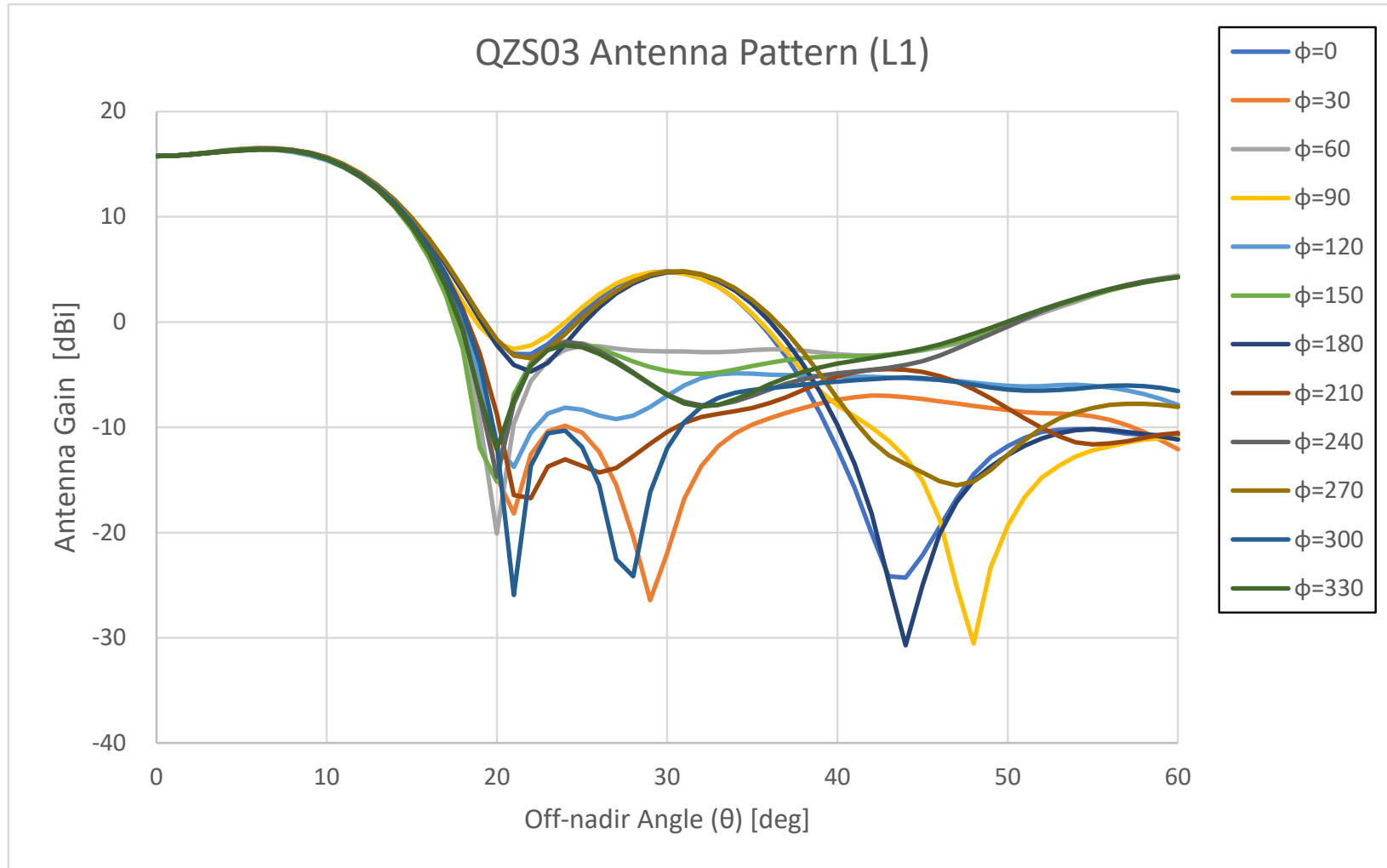
QZS03

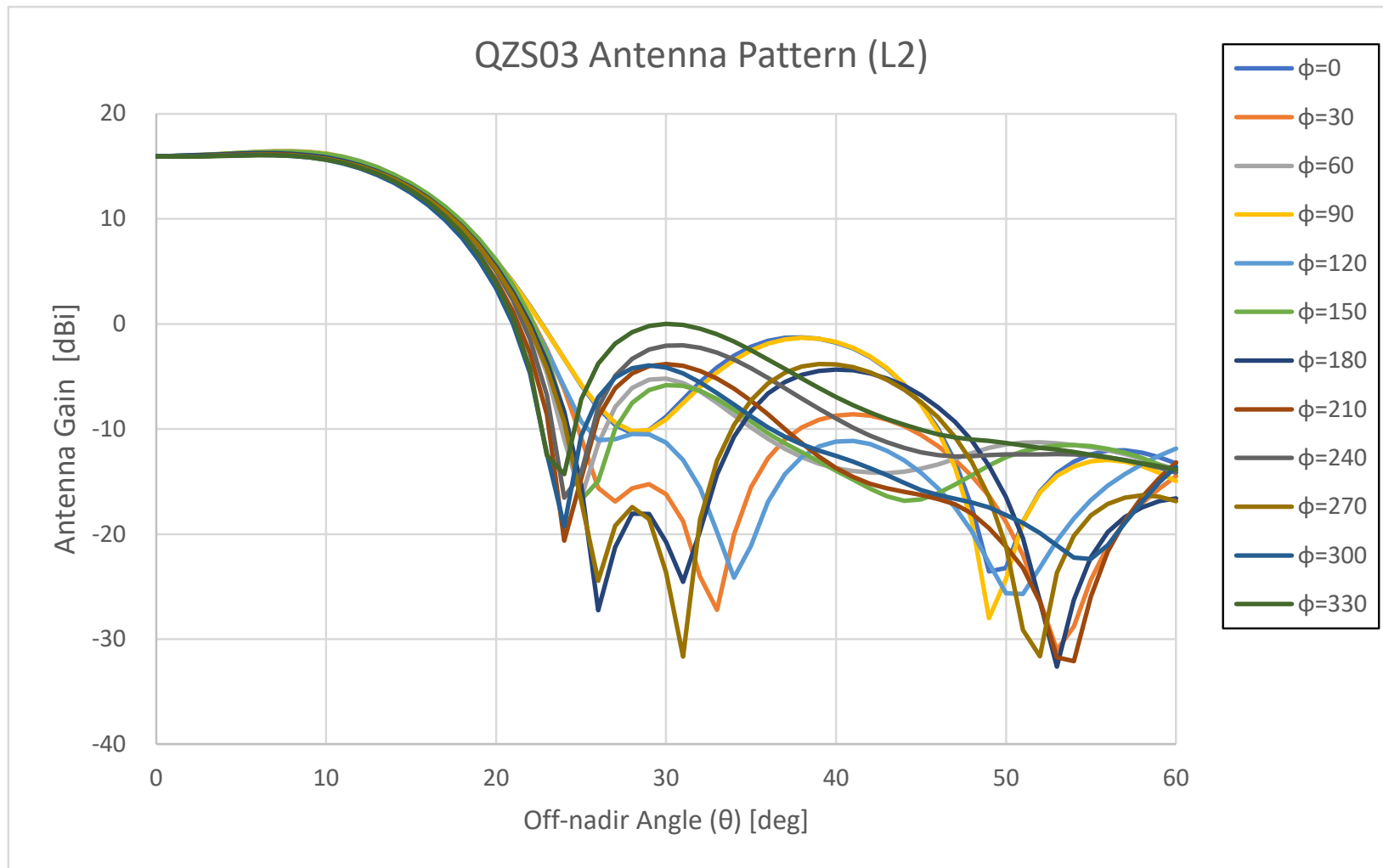
Antenna Type : patch antenna

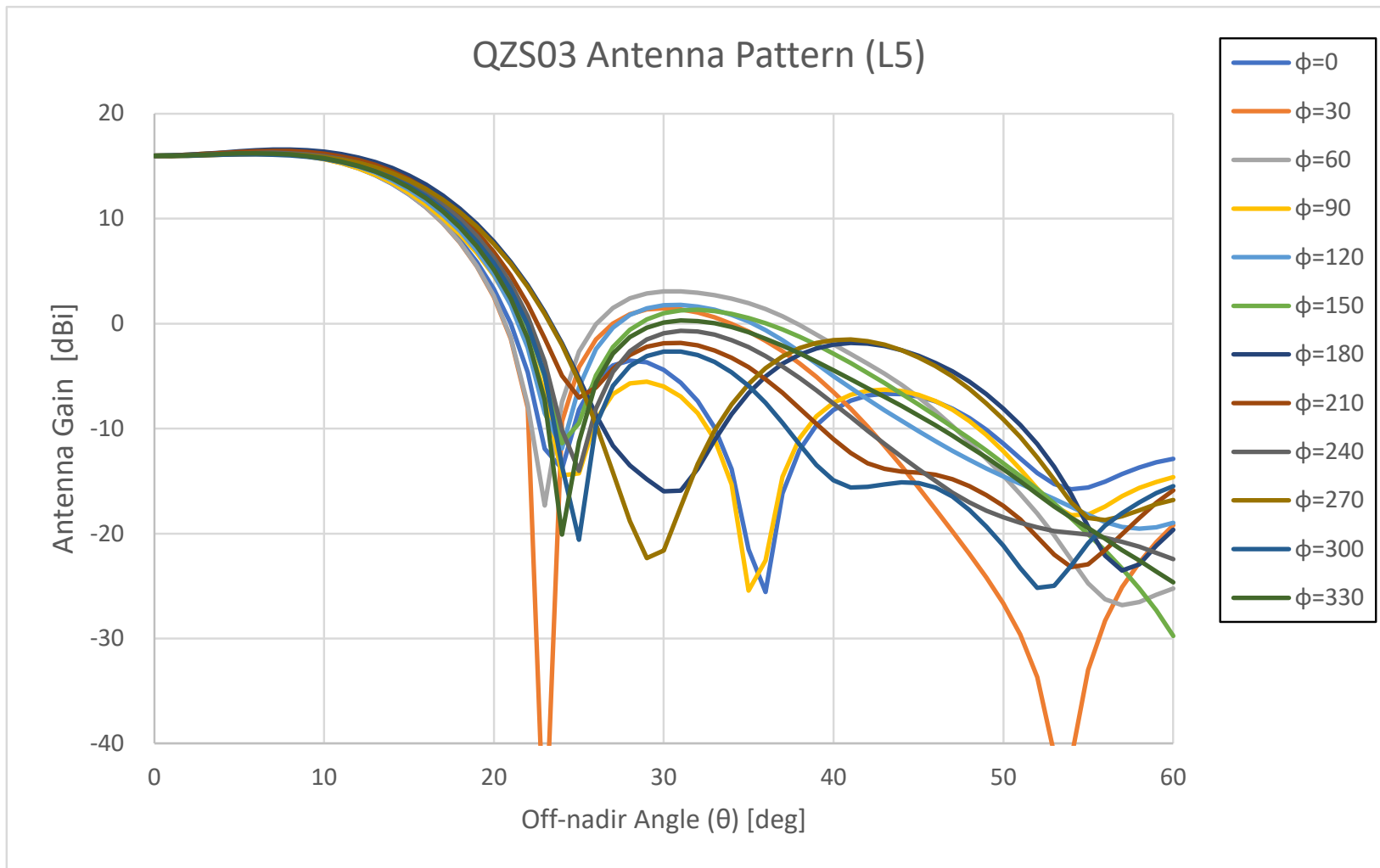
Measurement resolution:

- **Phi: 0° to 330° by 30° increments**
- **Theta: 0° to 60° by 1° increments**

Frequency Band: L1, L2, and L5.









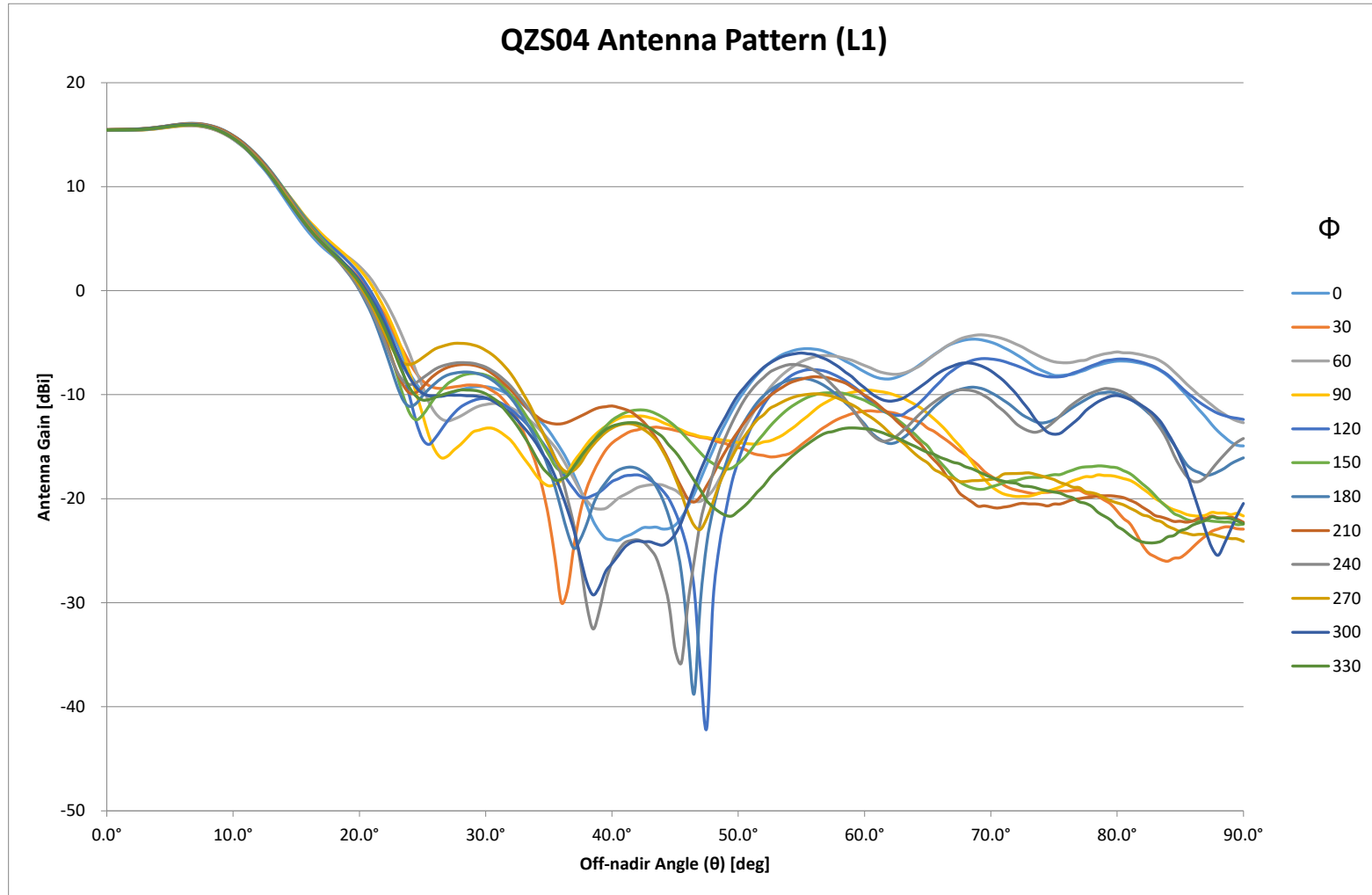
QZS04

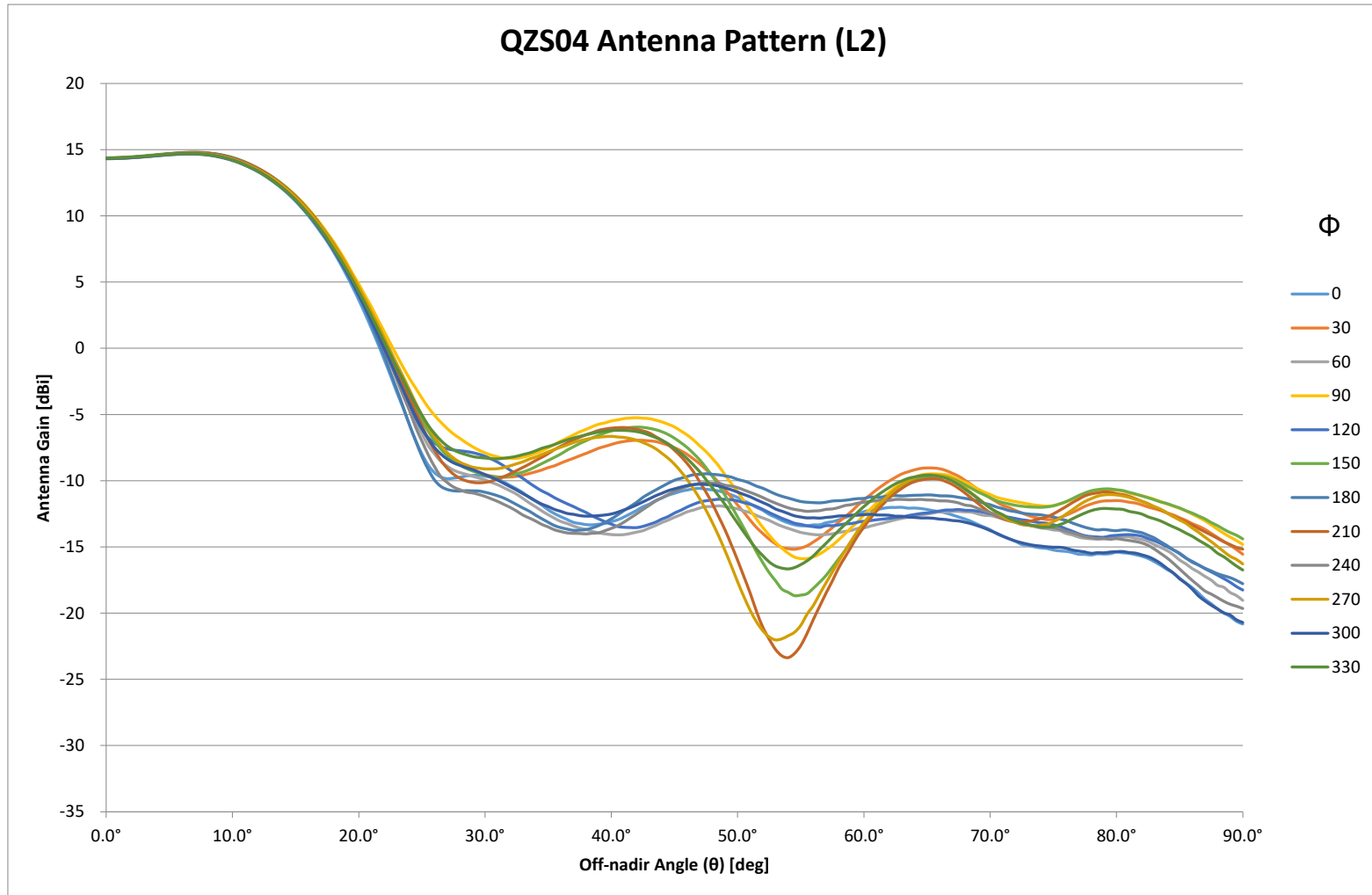
Antenna Type : helical antenna

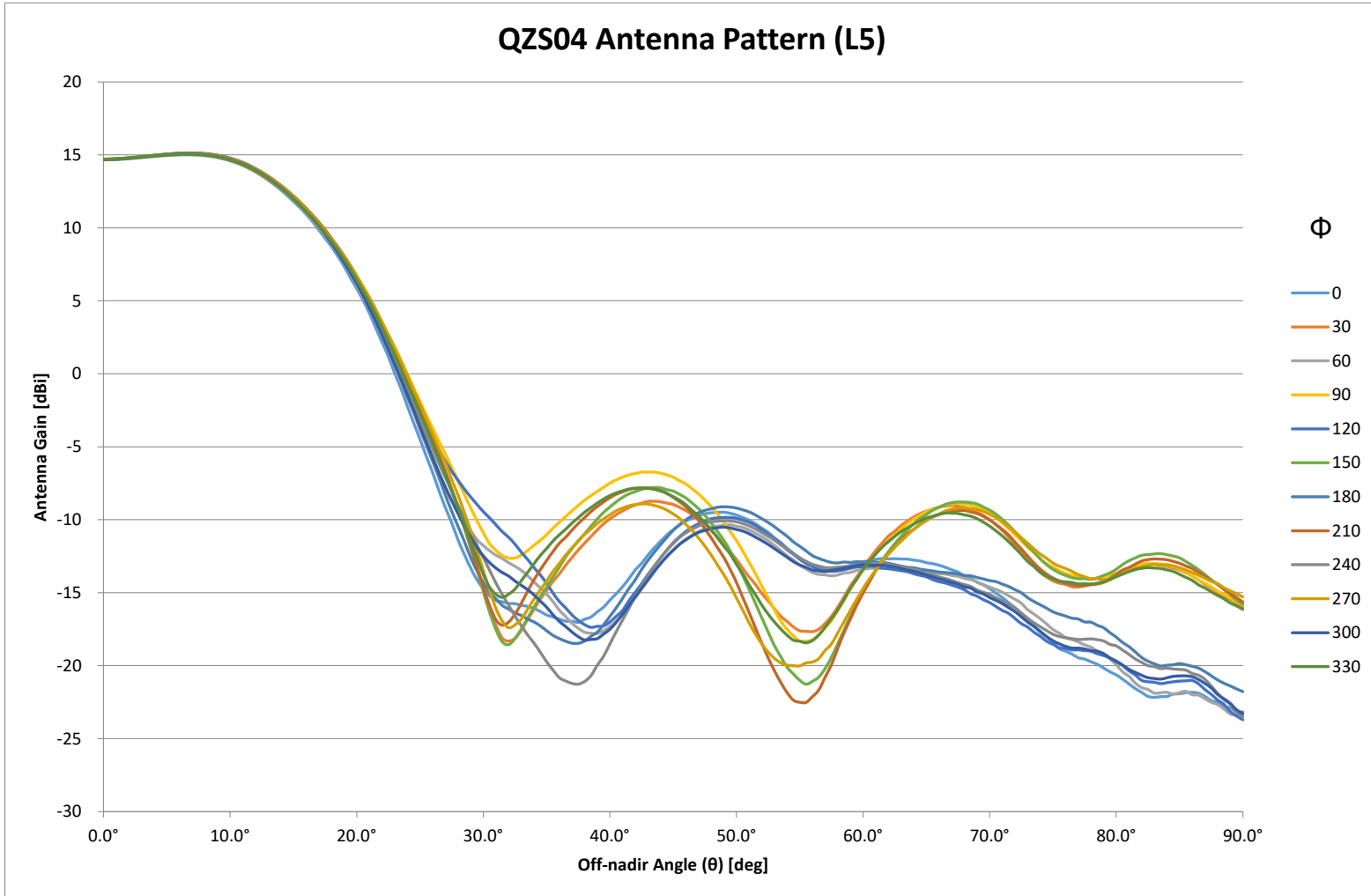
Measurement resolution:

- **Phi: 0° to 330° by 30° increments**
- **Theta: 0° to 90° by 0.5° increments**

Frequency Band: L1, L2, and L5.









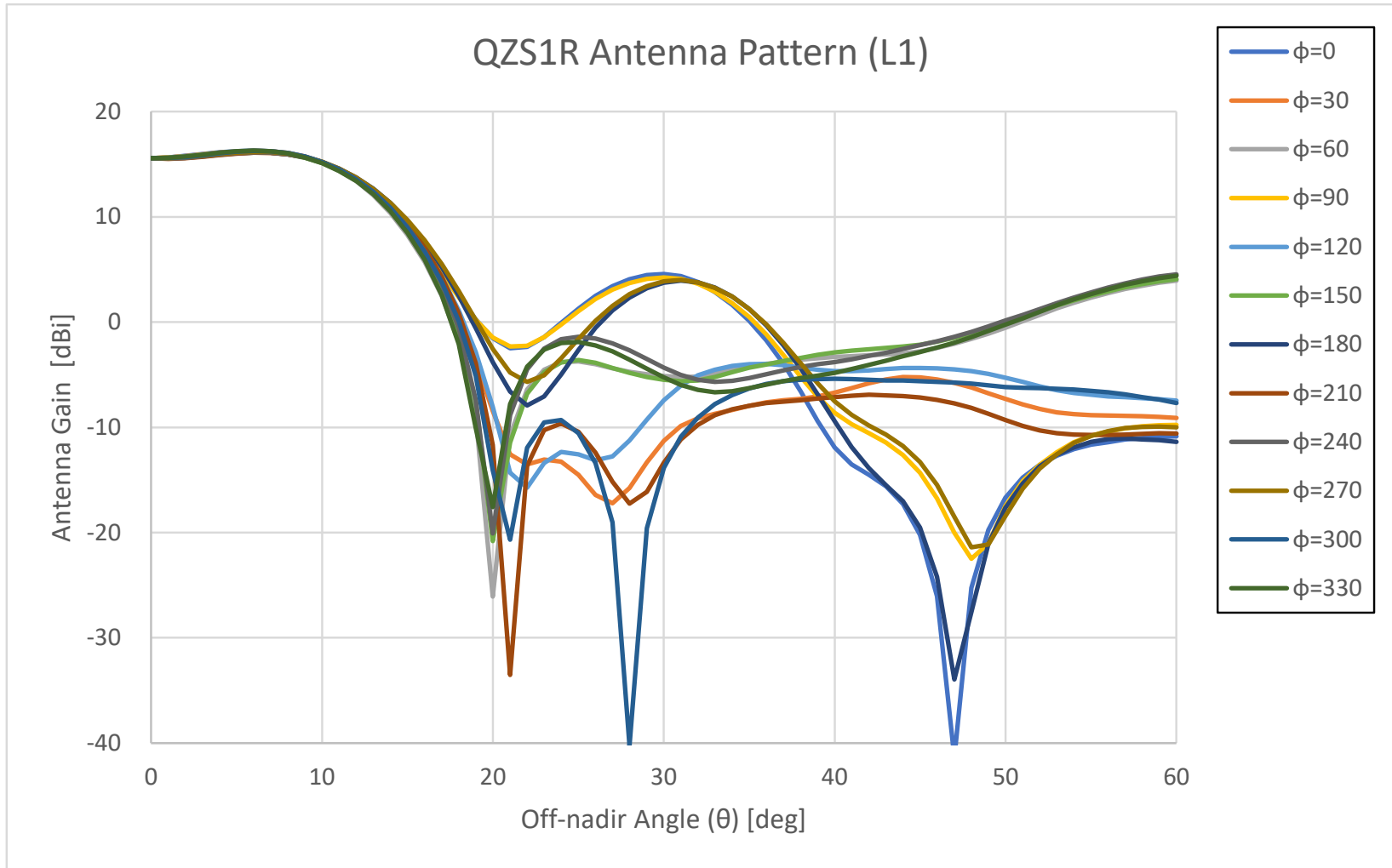
QZS1R

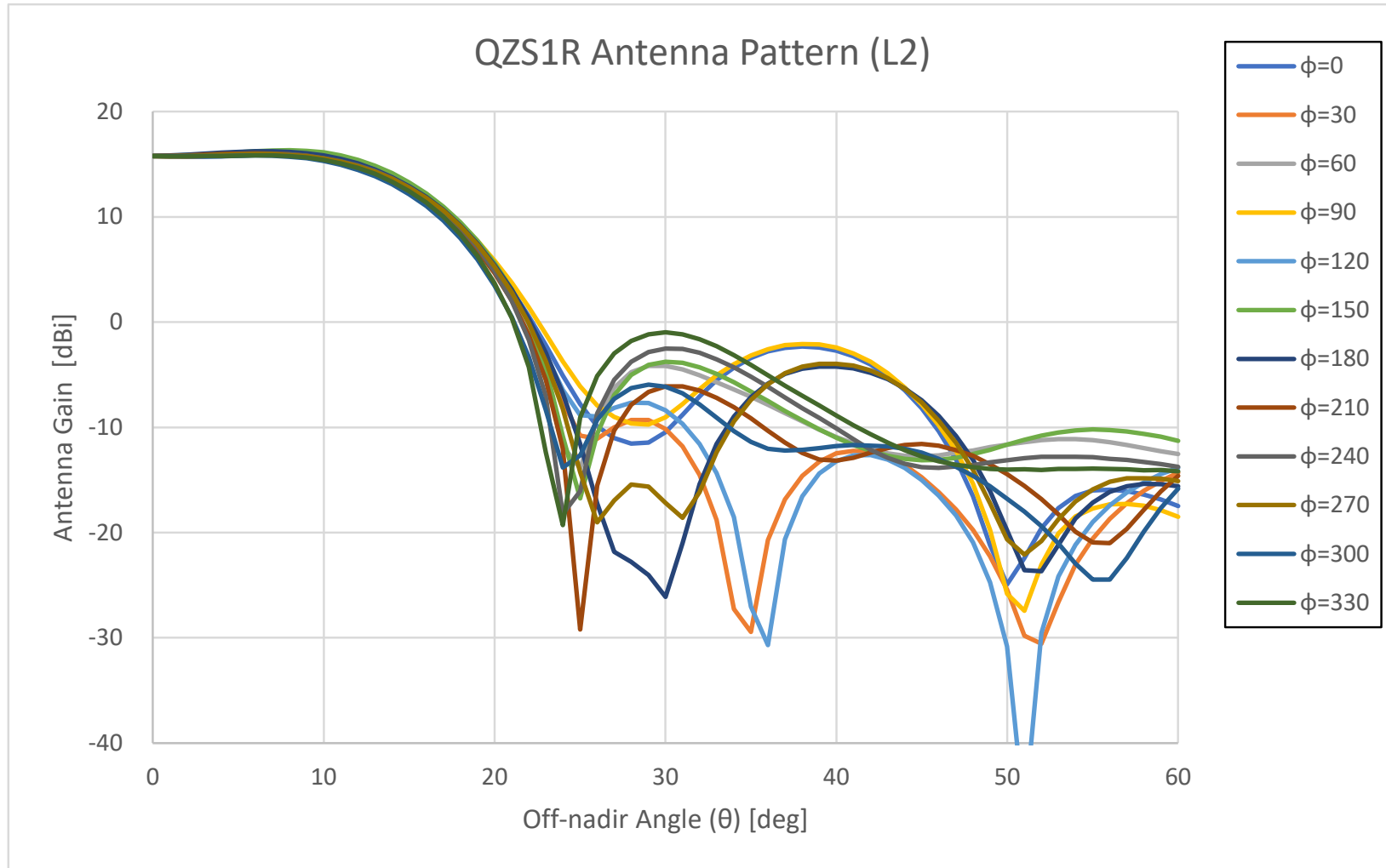
Antenna Type : patch antenna

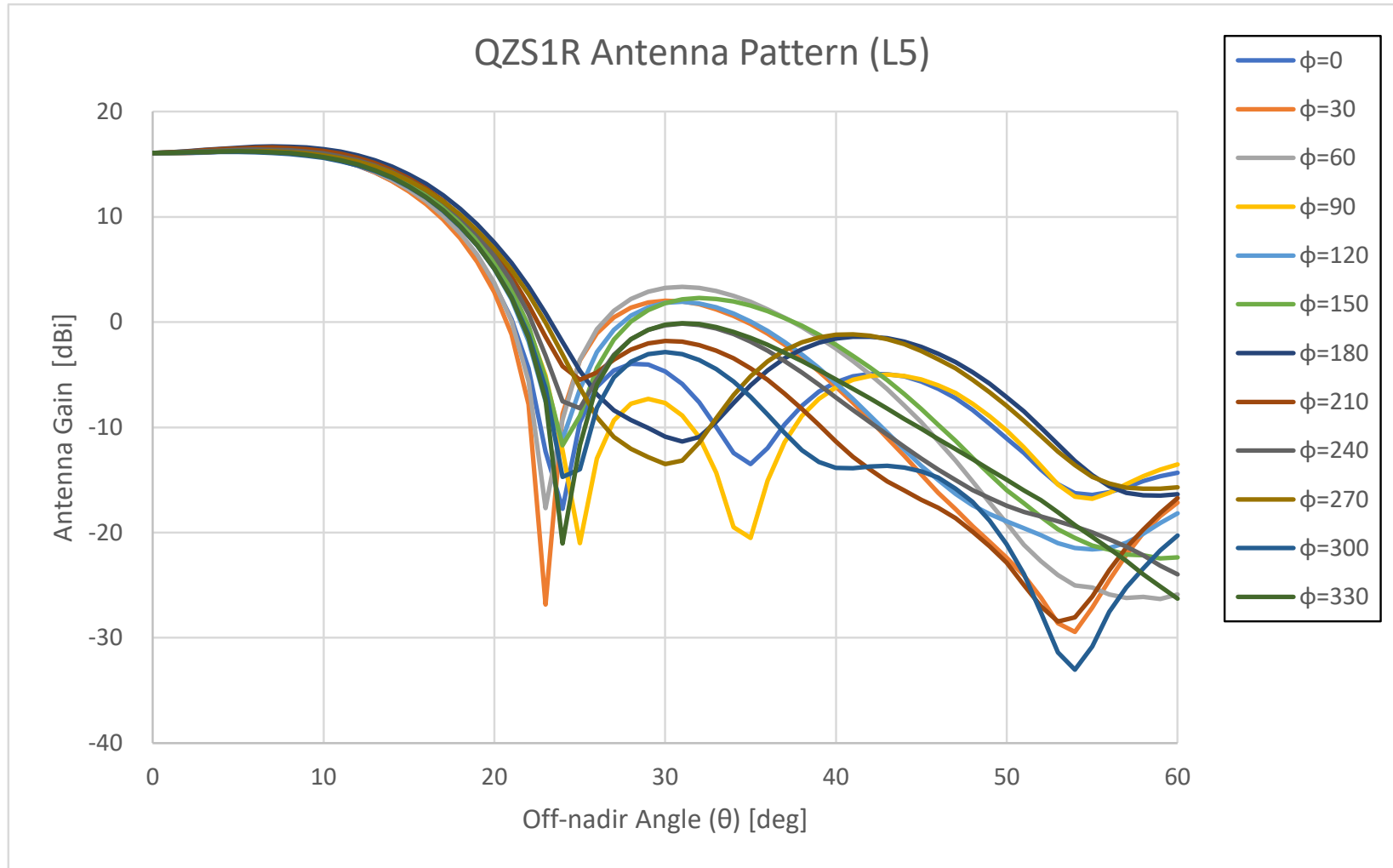
Measurement resolution:

- **Phi: 0° to 330° by 30° increments**
- **Theta: 0° to 60° by 1° increments**

Frequency Band: L1, L2, and L5.









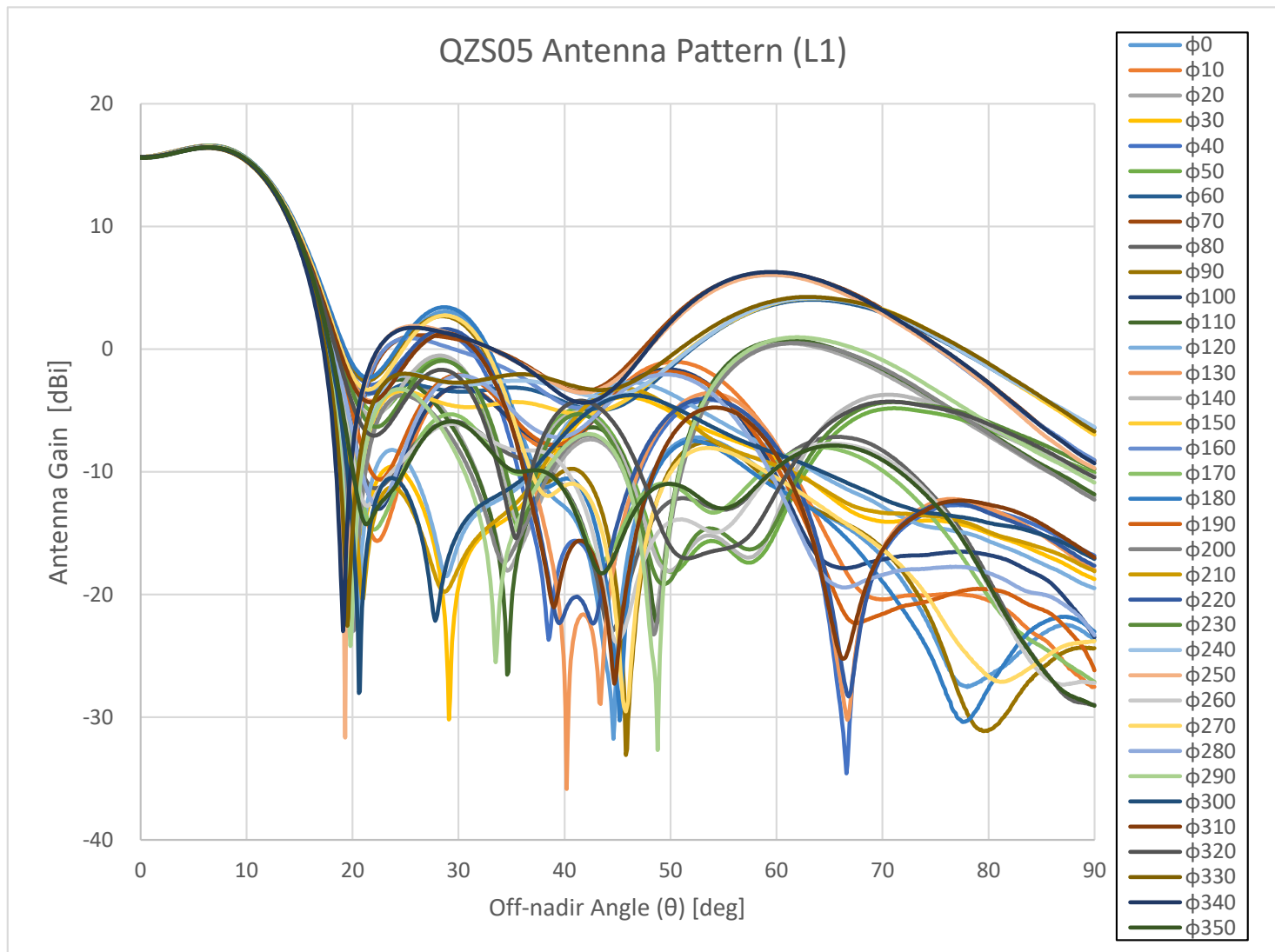
QZS05

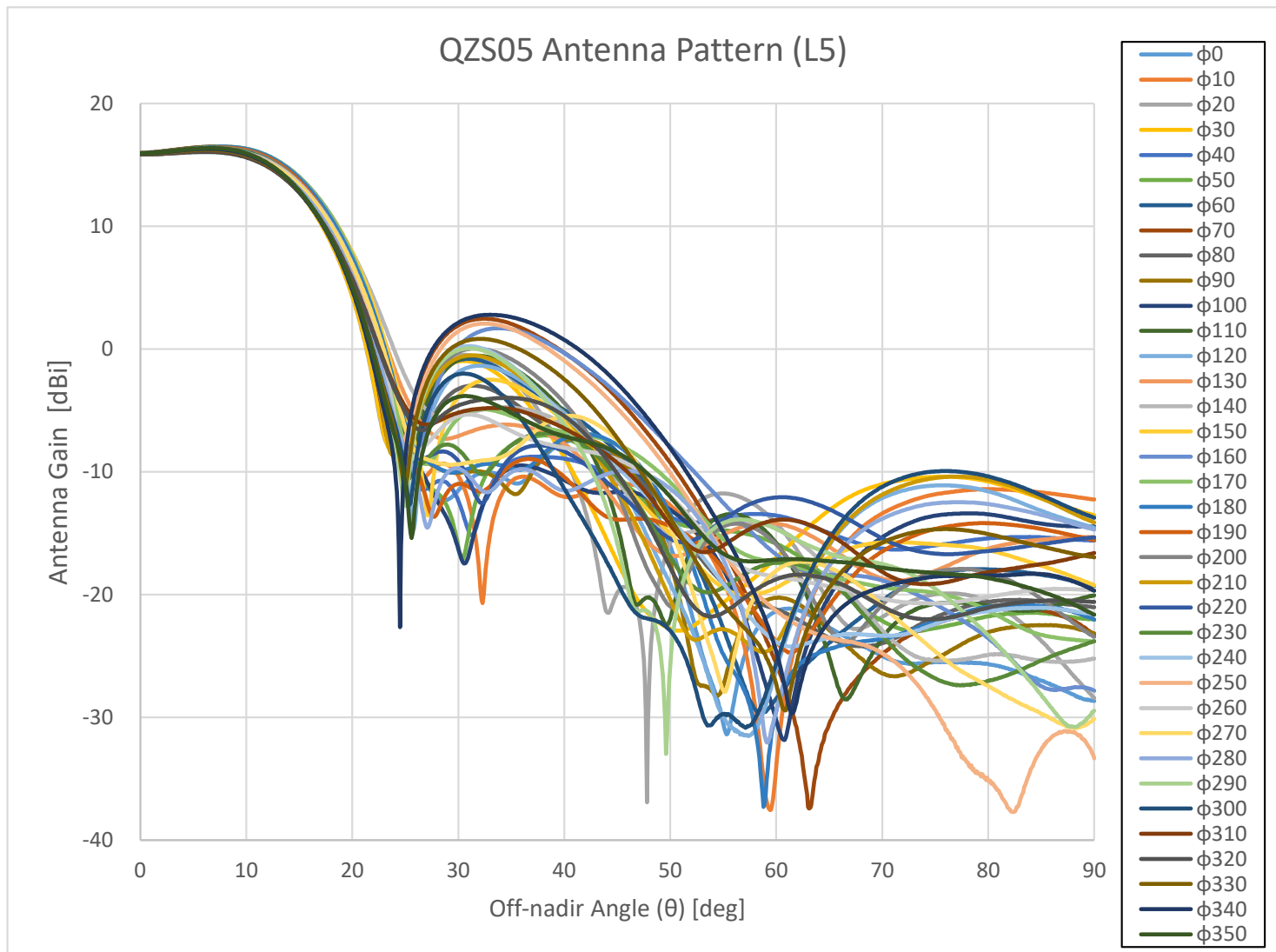
Antenna Type : patch antenna

Measurement resolution:

- Phi: 0° to 350° by 10° increments
- Theta: 0° to 90° by 0.1° increments

Frequency Band: L1 and L5.







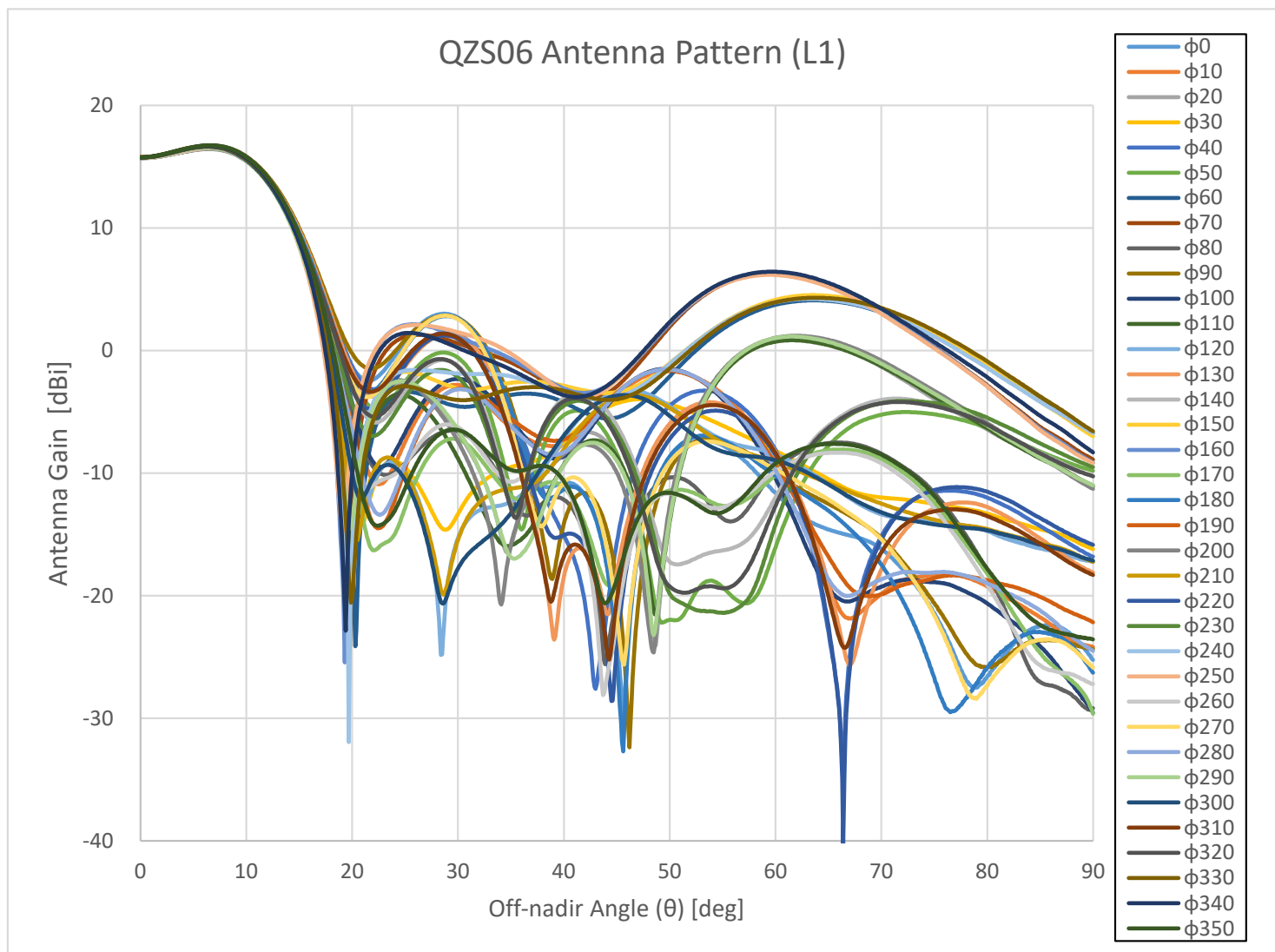
QZS06

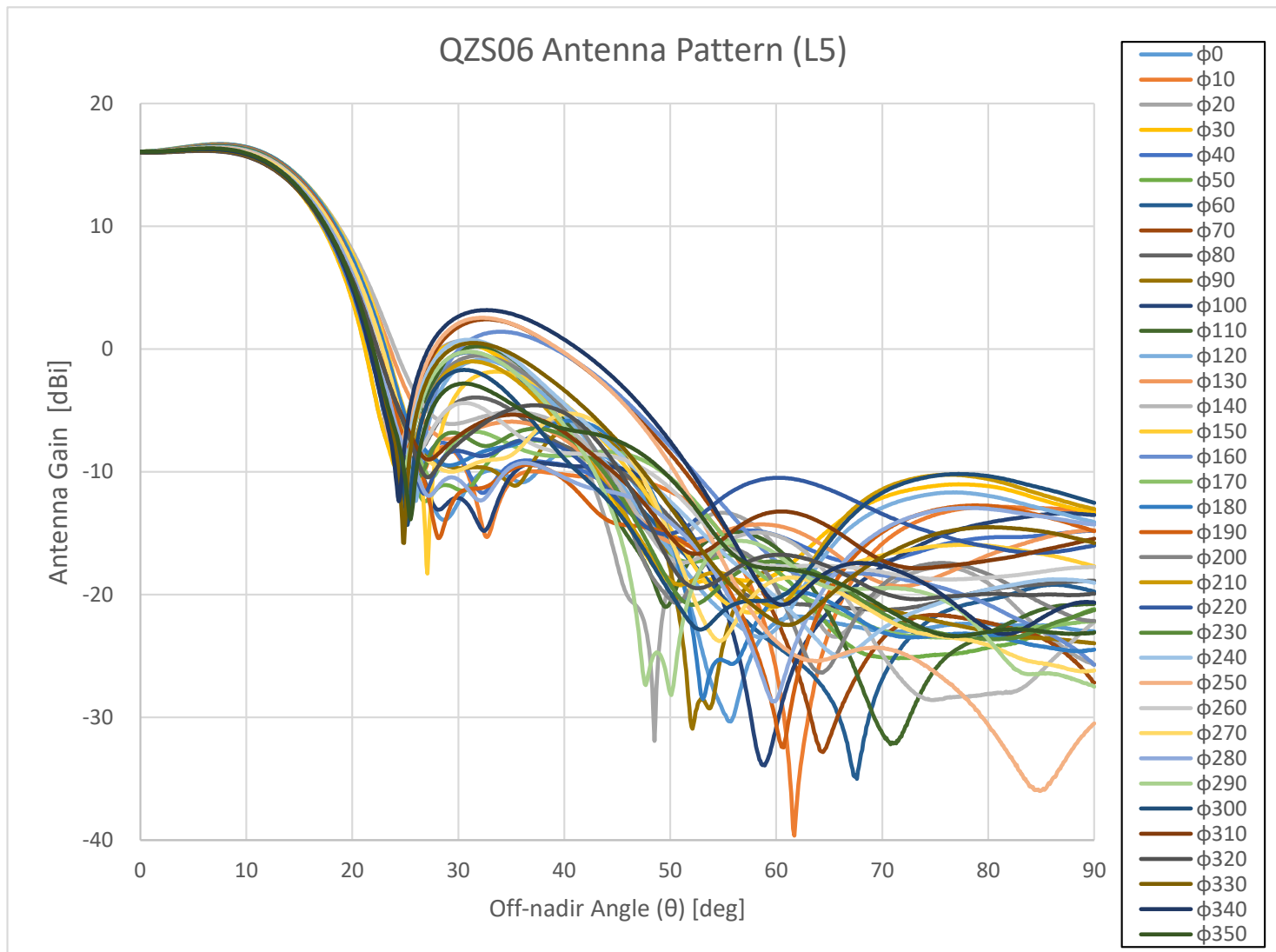
Antenna Type : patch antenna

Measurement resolution:

- **Phi: 0° to 350° by 10° increments**
- **Theta: 0° to 90° by 0.1° increments**

Frequency Band: L1 and L5.







QZS07

Antenna Type : patch antenna

Measurement resolution:

- **Phi: 0° to 350° by 10° increments**
- **Theta: 0° to 90° by 0.1° increments**

Frequency Band: L1 and L5.

