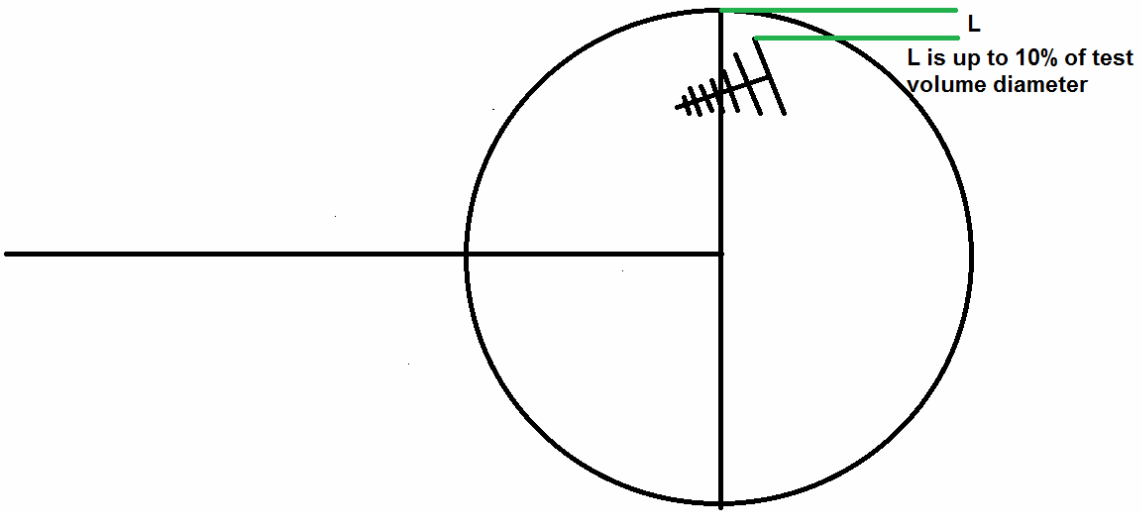
ANSI-ASC-C63® Interpretation Request Form

This form shall be used for submission of Interpretation Requests related to ANSI-IEEE standards that are within the responsibility of ANSI-ASC-C63®. The eight parts of the form must be filled out completely, with the exception of the Subcommittee Response, to ensure expedient processing. This completed form is to be submitted to the Secretary of ANSI-ASC-C63® via e-mail.

Submission Date	Originator Name, Company
11/06/2014	UL LLC

Standard	Clause/ Sub clause	Paragraph Figure/ Table	Type (General/ Technical/ Editorial)	Comment / Inquiry	Subcommittee Response (to be filled in by Subcommittee Chair)
C63.4-2014	Annex D	NA	Technical	We would like to confirm when conducting NSA measurements in accordance with either C63.4:2009 or C63.4:2014, Annex D, the phase center of the antenna can only be shifted inwards towards the center of the volume for the left and right positions for horizontal polarity. For all other positions and polarities, the phase center of the antenna must be located at the periphery of the volume to be validated. So for a 2-meter volume the maximum shift inwards would be 20cm. If the elements of the antenna, from the phase center, are greater than 20cm then they shall remain outside the volume and the antenna shifted no closer to the center. We are assuming a distance of greater than 1-meter from the absorber material to the EUT periphery. Impacted paragraphs from Annex D.3 are as follows:	With the condition that the absorbing wall is greater than 1 meter to the periphery of the test volume and the transmit antenna in horizontal polarity at the left and right position of the test volume, the phase center of the transmit antenna may be moved in towards the center of the volume. It is correct that in all other combination of positions and polarizations, the transmit antenna shall be located at the periphery of the volume being validated. Annex D3, paragraph 5, states that *"…the center of the antenna may be moved toward the center position so that **the extreme outside tip of the antenna** is either at the test volume periphery or at a **distance inward** from the periphery by not more than 10% of the test volume diameter."* Based on the statement above, the 'tip of the antenna' can be moved in a maximum of 10% from the volume periphery. (continued)

Standard	Clause/ Sub clause	Paragraph Figure/ Table	Type (General/ Technical/ Editorial)	Comment / Inquiry	Subcommittee Response (to be filled in by Subcommittee Chair)
				For vertical polarization, the off-center positions of the transmit antenna are at the periphery of the test volume. Furthermore, the lower tip of the antenna shall be greater than 25 cm from the floor, which may require the center of the antenna to be slightly higher than 1 m for the lowest height measurement. *For horizontal polarization measurements in the left and right positions, if the distance between the construction or absorbing material on the side walls and the EUT periphery is at least 1 m, the center of the antenna may be moved toward the center position so that the extreme outside tip of the antenna is either at the test volume periphery or at a distance inward from the periphery by not more than 10% of the test volume diameter. The front and rear positions are at the periphery of the test volume* We have included a diagram of what we believe is the correct interpretation of these paragraphs for the Biconnical antenna but the same would hold true for the LPDA antenna.	Therefore there is **NO** case where the antenna element will be outside the test volume in the left and right position (horizontal polarization) since the tip of the antenna is either at the periphery of the volume or at a point 10% (i.e.20cm in the case of 2m volume) inwards towards the center of the turntable. Please refer to Figure D4 in C63.4:2014 for the correct figure.



"For horizontal polarization measurements in the left and right positions, if the distance between the construction or absorbing material on the side walls and the EUT periphery is at least 1 m, the center of the antenna may be moved toward the center position so that the extreme outside tip of the antenna is either at the test volume periphery or at a distance inward from the periphery by not more than 10% of the test volume diameter. The front and rear positions are at the periphery of the test volume."

Note: The circle in the figure above is the footprint of an imaginary cylinder containing the EUT and NOT necessarily the circumference of the turntable on which the EUT is placed.