

Page 2 - Herbert J. Nevyas, M.D.

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a. Please provide a description of the pattern of ablation including detailed diagrams and explanations of the hardware and software components involved in generating the new surface (variable apertures, masks, annulae, crescents, diaphragms, multizones, multipasses, and scanning patterns).

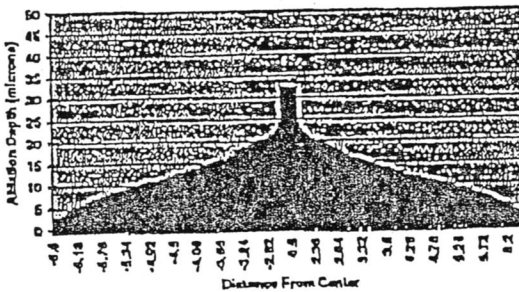
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b. Please provide cross-sectional views (profilometry) of the PMMA ablation for each indication (minimum and maximum), including astigmatism, and compare the theoretical versus the actual (achieved) plot. This profilometry should be for your particular device, rather than for a generic or similar laser. In addition, please provide the following information on your profilometry measurement: signal to noise ratio, accuracy of depth measurement, accuracy of transverse movement, and number of measurement points per surface.

c. The pattern depicted below is from page 153 of your submission and shows theoretically the cumulative effect of a -3.0 diopter ablation using your multizone, multipass ablation algorithm.

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Cumulative Ablation Pattern with CI Treatment



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As seen in the diagram, it appears that the central 2 mm of the ablation is flat (uncorrected), with steep slope (approximately infinite) for about 25% of the ablation depth (8 microns out of 32 microns), then continuing with more modest slope out to 6.6 mm. Please explain:

- i. During vision with narrowed pupils at 2 mm diameter, is the refraction of the cornea the same as prior to surgery (since that area did not receive a modification of the curvature)?
- ii. During vision with pupils greater than 2 mm diameter, will glare and halo be significantly increased?
- iii. Please relate this theoretical pattern to your profilometry measurements and explain any differences.

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