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making a difference

Wavefront guided optics

A new chance with scleral lenses

CS Lens Design

The simple solution for designing and manufacturing custom contact lenses

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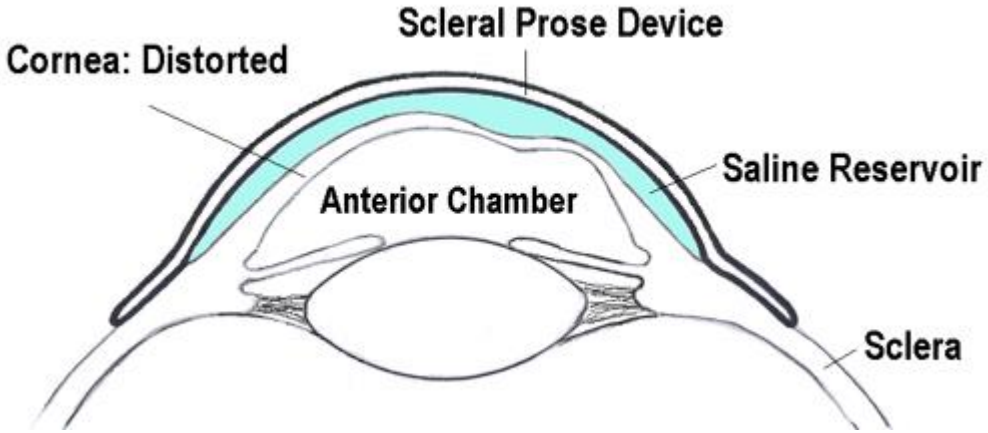
Surfaces

- **Front surface of the lens**
- **Back surface of the lens**
- Front surface of the cornea
- Back surface of the cornea
- Front surface of the IOL
- Back surface of the IOL



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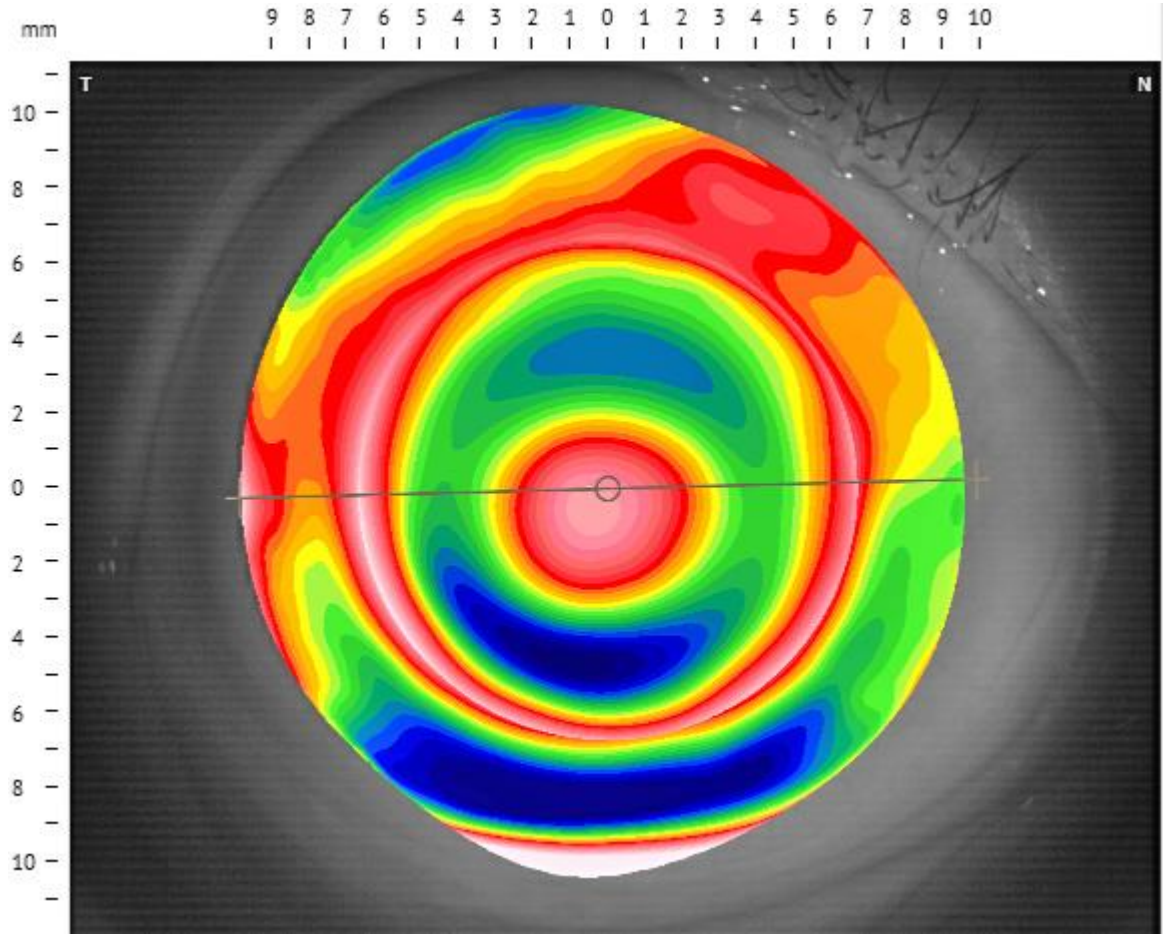
Back surface design

- Multi-meridian lens
- Predictable centration
- OZ – pupil alignment
- No lens flexure



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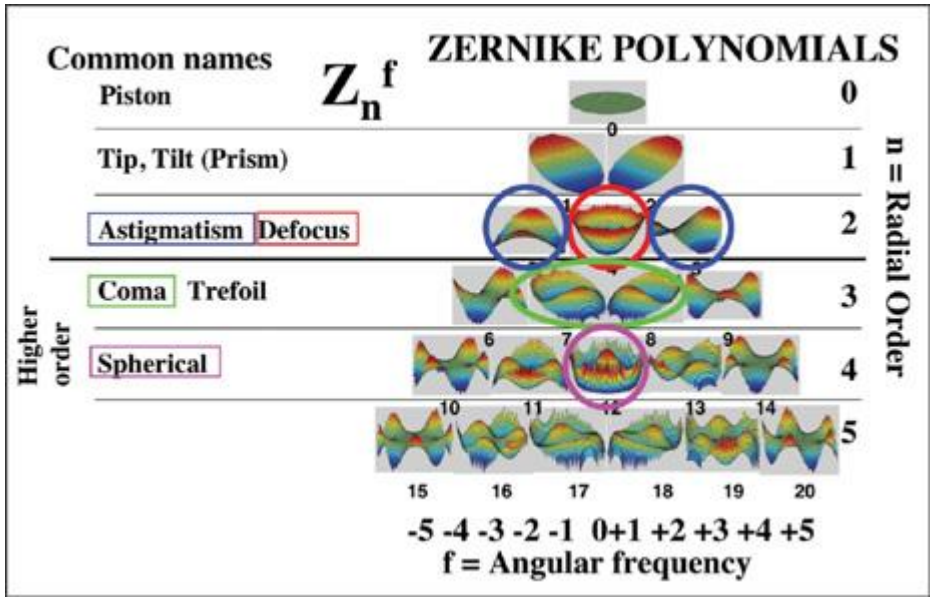
Front surface design

- Healthy eyes: 90% aberations defocus and astigmatism
- Irregular eyes: 70% aberations defocus and astigmatism
- Coma and spherical aberation main HOA in human eyes



Source: **Correcting Aberrations with Contact Lenses** (clspectrum.com)

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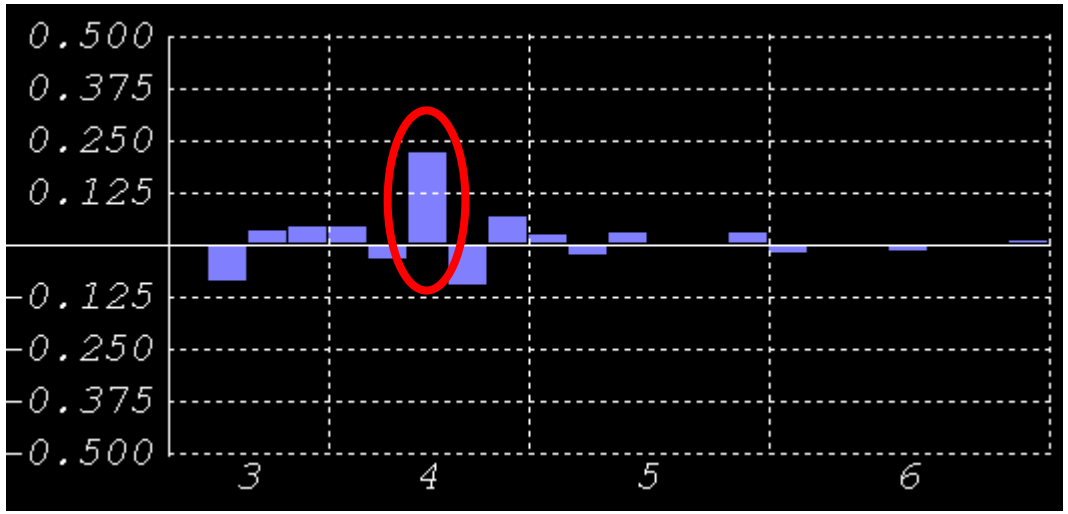
Super vision

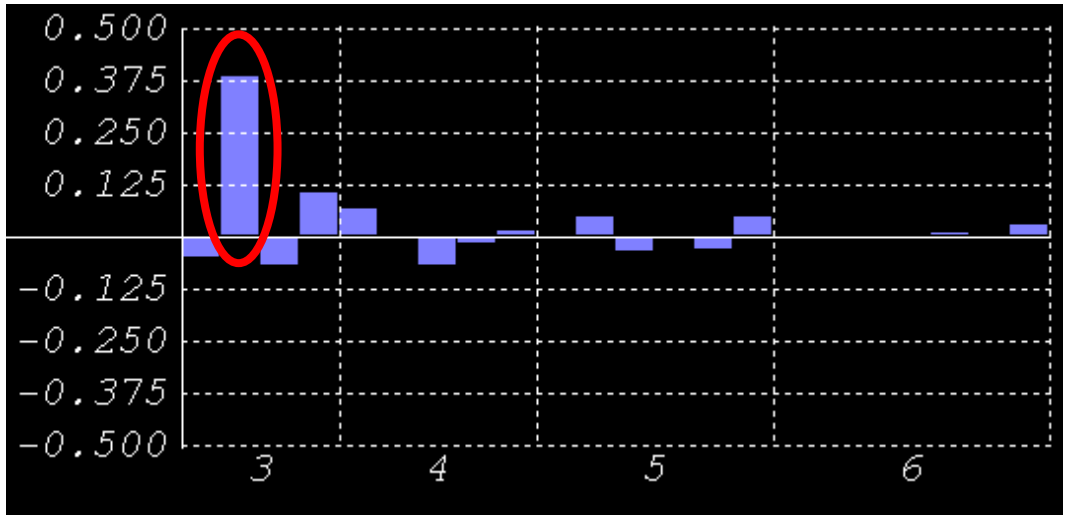
- Solved spherical aberation
  - Can be corrected

- Coma due to decentration
  - Can be corrected with the lens fit only

Without lens



With lens



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Conclusions

- Scleral lenses most suited for custom wave front aberation control
- Stable and predictable fit and movement required
- Front surface can correct spherical aberations
- Back surface equally important to prevent coma aberations

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