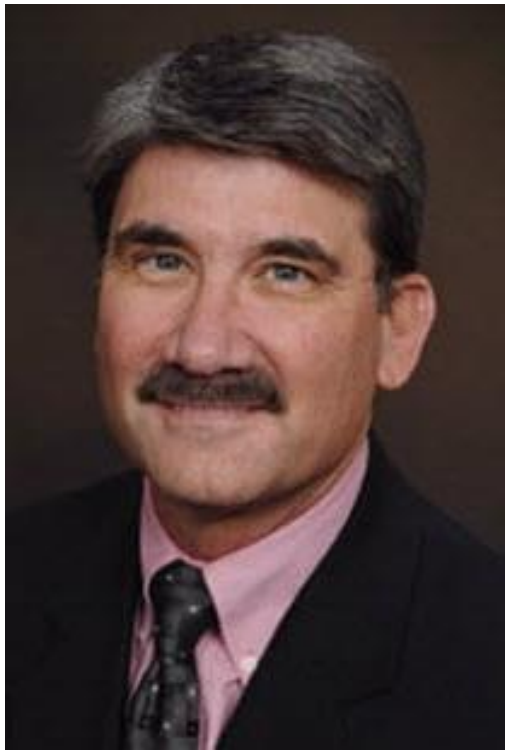
Prevent Blindness®

Our Vision Is Vision®



NASA: Meeting Vision Challenges of Space Travel while Helping Mankind

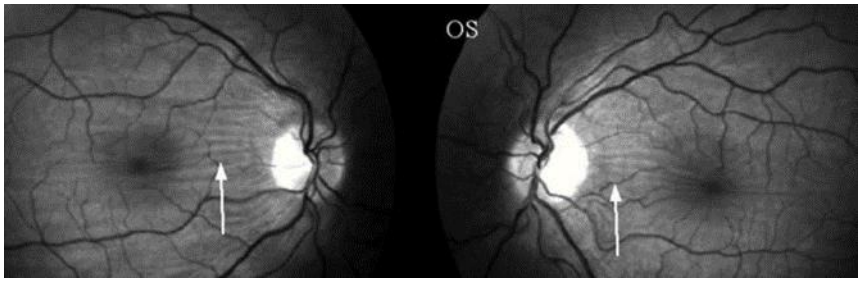
Bob Main, ABOM CEO Web Vision Centers

Advisor to NASA for Eye Care Technology

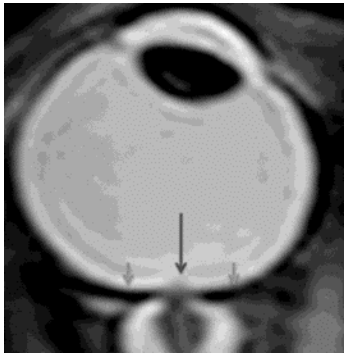
Supported by a Grant from the National Space Biomedical Research Institute

Life in Space

The Problem



- Astronauts are Experiencing Vision Changes During Long-Duration Flights
  - Body Fluids Shift
  - Creating Increased Intracranial Pressure (VIIP)
  - Flatting the Eye Globe
    - Hyperopic shifts (+0.5 D to +1.75 D)
    - Papilledema (Grade 1-3)
    - Choroidal folds
    - Cotton wool spots



NASA Looking For Solutions

Optical Industry Helping

VISION4MARS CHALLENGE

The Challenge: Develop Programmable Eyeglass Lenses

- Programmable in Two Ways
  1. Change Rx in Various Regions of the Lens
  2. Changing the Power to Maximize Vision at Different Distances
- Lenses Programed with Laptop Inflight

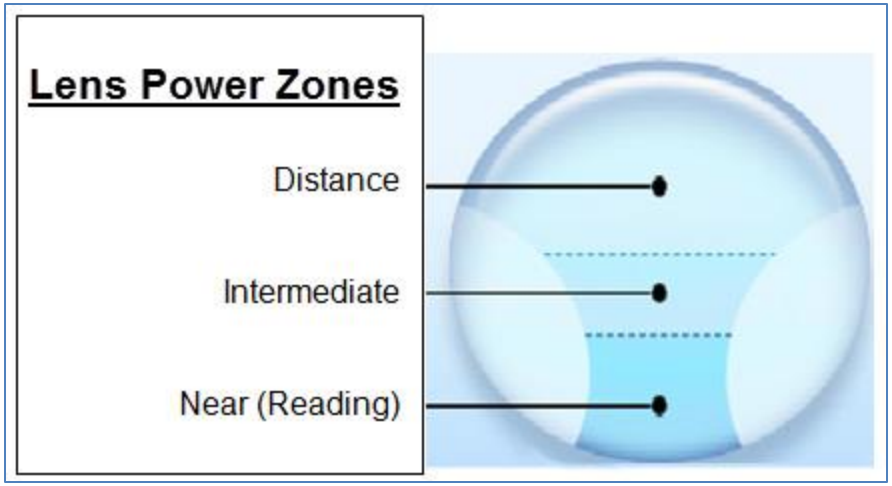
1) Changing the Lens Rx/Power in Various Regions of the Lens

The Problem Needs a Solution

- Over 70% of Astronauts Have Had Vision Changes
- Some as Much as 1.75D
- Trouble Reading Checklists and Instruments
- Currently Using Multiple Pairs of Glasses/Lenses
- Could be a “Show Stopper” for Mars Trip

The Solution

- Programmable Lenses
- Change/Reprogram Power Independently in Various Power Zones as Rx Changes



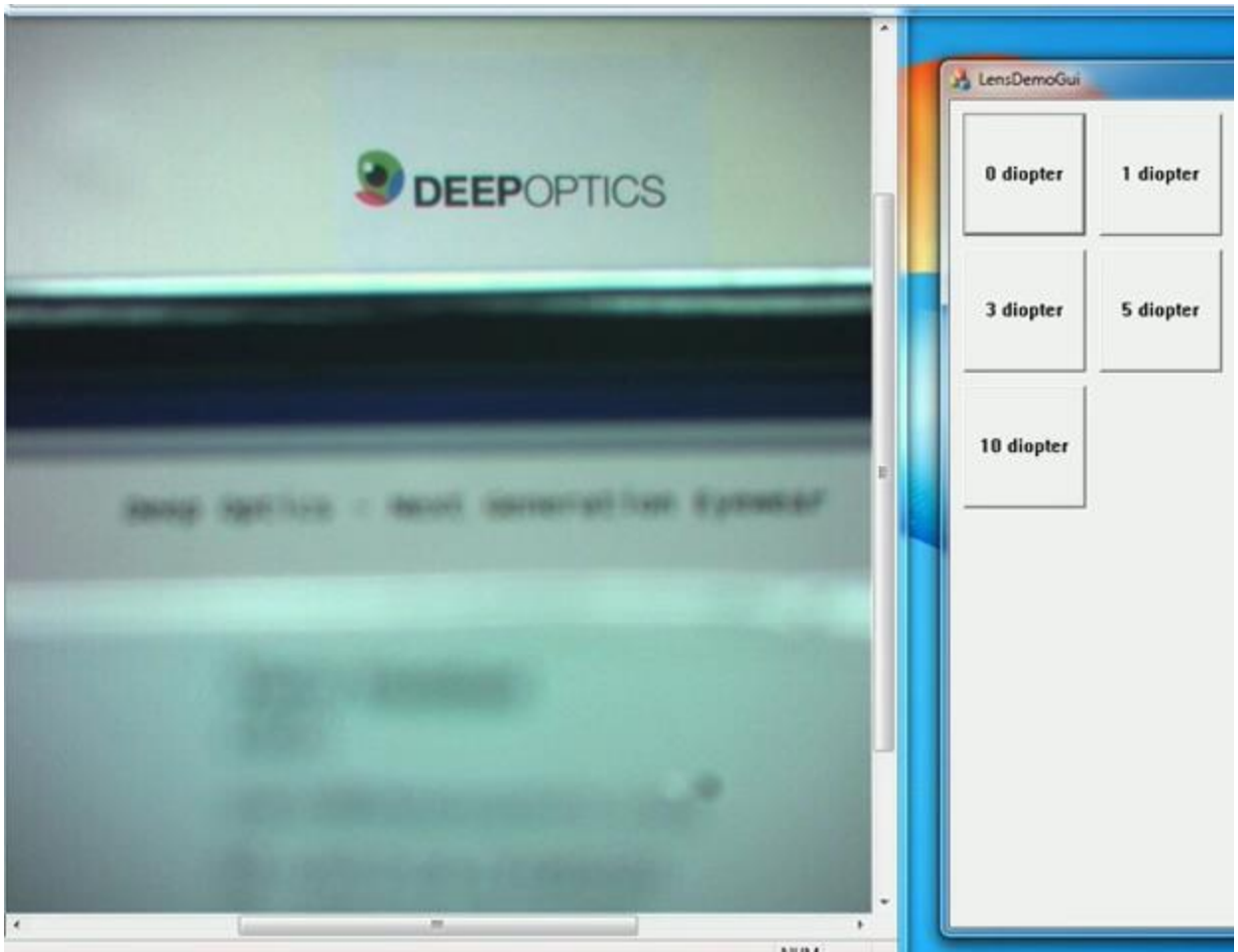
2) Changing the Power to Maximize Vision at Different Distances

The Problem
Astronauts Have Different Tasks That Require Different Visual Needs

The Solution

- Programmable Lenses with Auto Focusing Capabilities
- Rx Changes Automatically as User Looks at Different Distances

Auto-Focusing Glasses



Auto-Focusing Glasses

Is This Possible?

- Working with Two Companies that Have the Core Technology
- Technology has Been Demonstrated
- Working on a Three Year Pathway
- NASA/NSBRI Challenge – Must Also Improve Life for Mankind

How Will This Technology Help People on Earth?

- Reprogram Eyeglasses to Fit Various Daily Visual Tasks
- Possibilities are Unlimited!

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Thank You
Questions?