

EyeMisra "Ellipsometric Tonometer" [all trademarks privileged & reserved]

## **METHODOLOGY**

Tonometry by method of applanation, based on the Imbert-Fick law, has a range of applanation diameter from 2.5 to 4 mm, and 3.06 mm is just one number, deployed by the method of Goldmann (and Perkins) tonometers.

Our technology is a variation of the Mackay Marg tonometer, implemented in a manner that parallels the instrument of Hans Goldmann.

## **AUDIENCE**

- 1) Doctors who measure eye pressure during routine exams
- 2) Doctors that aim for detection and follow-up of glaucoma
- 3) Doctors that plan to control pressure based on outflow mechanism

## **ROUTINE EXAMS**

Eye exams conducted as a routine tend to use air-puff technology, which, as evidence states, has not yet equaled the standards set by Hans Goldmann.

## **DETECTION & FOLLOW-UP**

Common air-puff tonometers read one measure of eye pressure for each diagnostic event. More often, the examiner waits until 3 successive readings are taken to get a mean or average value, and sometimes 5 measurements are obtained after multiple air-puffs, of which some air-puffs fail to deliver.

Our technology takes readings 6 times a second, for a selectable span of 9 seconds, and alternatively, for 13.5 seconds, getting a mean based on either 54, or 81 diagnostic events respectively. Pulsations over time reveal contributions from the cardiac left ventricle, as well as from thoracic breathing and breath-holding, and are Fourier analyzed.

## **OUTFLOW MECHANISM**

Pulsations of eye pressure (in mm Hg) have lower amplitude if uveo-scleral drainage has been compromised from hypertrophy of the ciliary muscle.