

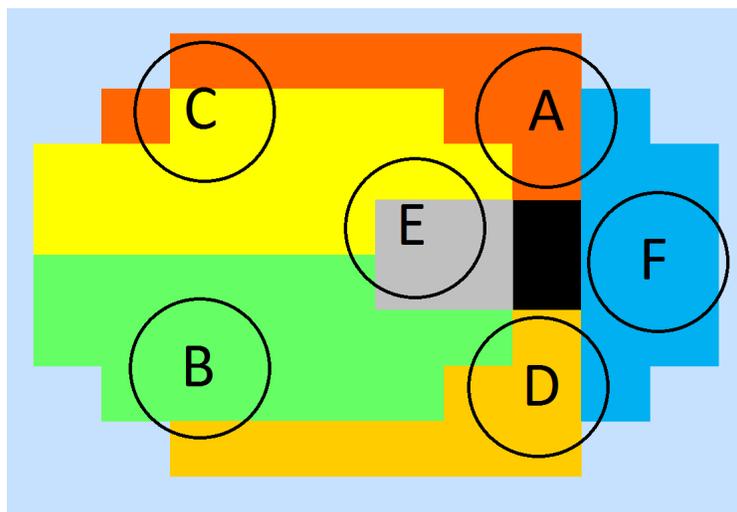
OCULUS introduces SPARK perimetry

Fast and averaged threshold measurement for all OCULUS perimeters

SPARK, a novel visual field test strategy is now available for all OCULUS perimeters (*OCULUS Optikgeräte GmbH, Germany*). The patented **SPARK** threshold algorithm was developed as the result of the statistical evaluation of visual field data from more than 90,000 examinations. From the very beginning, its development was aimed towards early detection and diagnosis of glaucoma and the possibility of an improved progression analysis of the disease. With short test duration, the method features excellent reproducibility of the threshold examination results. The threshold examination takes a maximum of three minutes for each eye and its duration is not influenced by the condition of the measured visual field. This upper limit holds for patients with extended visual field defects. The outstanding stability of the averaged threshold values makes **SPARK** examinations most suitable for progression analysis

Considerably shorter examination times are achieved by taking advantage of the distinct correlations between sensitivity values measured in different locations of the visual field. Locations corresponding to healthy retinal nerve fiber bundles will exhibit normal threshold values, while locations corresponding to already damaged nerve fiber bundles will have diminished sensitivities. The innovative use of these long distance correlations allows **SPARK** to obtain a surprisingly accurate first estimate of the visual field based on a small number of skillfully chosen test locations. This first phase of the measurement serves as starting point for three further phases of the test. Upon completing the measurement, all locations of the examination pattern are tested; the assigned sensitivities are continuously corrected and each phase delivers a complete set of threshold values. The final result is obtained by averaging these individual results.

The **SPARK** software package is intended to simplify visual field exams in glaucoma care. It also includes a test for neurological cases. The **SPARK** threshold strategy is an optional software upgrade for the new OCULUS Easyfield®, Centerfield® 2 and Twinfield® 2 perimeters and is also available for the computer-controlled OCULUS perimeters already in use.



SPARK – Main areas and test locations