BEHAVIOUR OF MECHANISMS OF COLOUR VISION UNDER TRANSIENT ADAPTATION

BY

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P R E F A C E

It is a common experience that under normal viewing conditions the retina is continually adapted to changing backgrounds, i.e. it is subjected to changing adaptations. Therefore, the study of the foveal mechanisms involved in the changing states of adaptation becomes important from prectical view point. This thesis presentes the results of some experiments done with various types of transient adapting situations.

Two - colour threshold techniques are used in all the experiments. A review on the underlying fundamental mechanisms of colour vision known as Π-mechanisms is made in the first Chapter. In the second Chapter the experimental setup and calibrations are mentioned. In the third, fourth and sixth Chapters are presented experiments the results of which demonstrate that the discrimination between different mechanisms of colour vision comes out better in transient adaptations than in static adaptations. The results of transient adaptation study in the fifth Chapter yield the retinal sensitivity peaks more or less at the same spectral positions as already known. Thus the transient adaptational techniques give a further support to the trichromacy of colour vision.

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