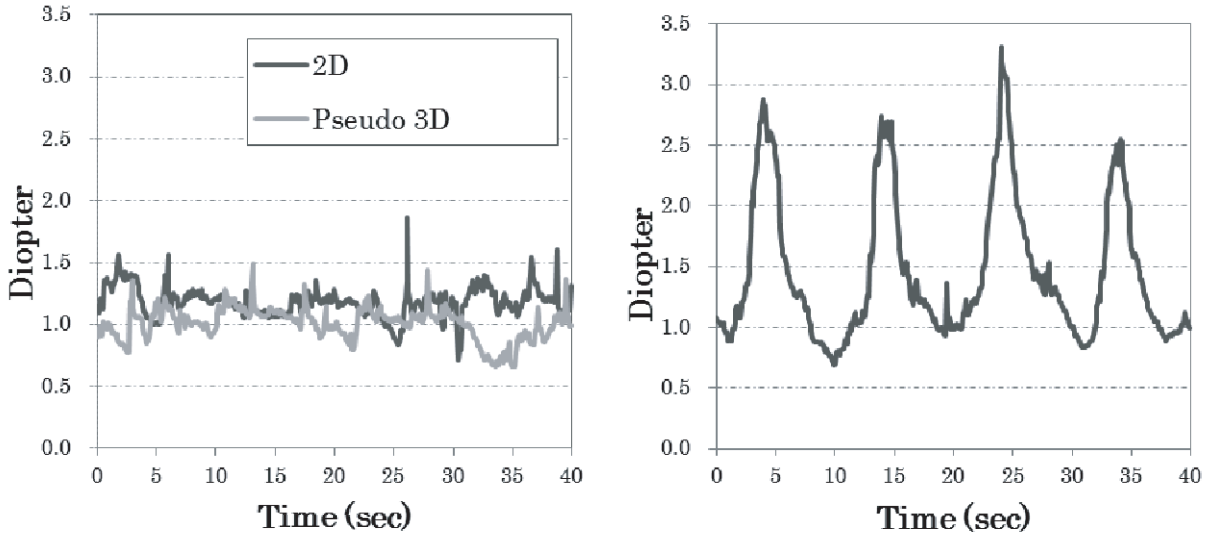
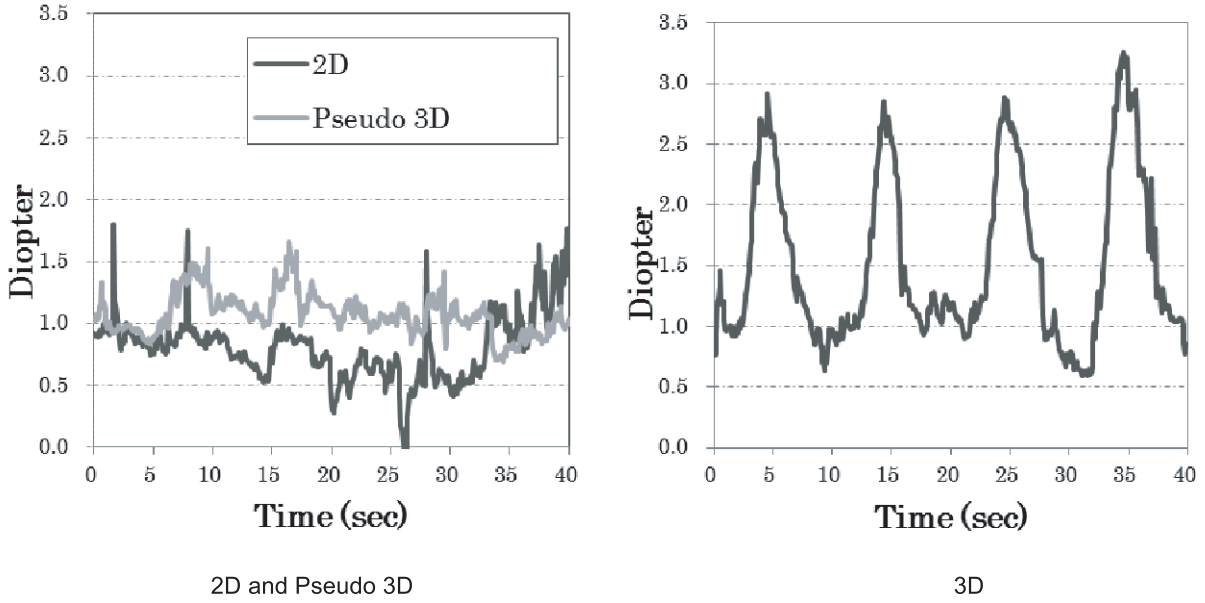


(a)Subject A (age:21, female, naked eyes)



(B)Subject B (age:33, male, soft contact lens)

Fig. 8. Effect of different image content on lens accommodation. 2D, pseudo 3D and 3D were shown in figure.

dation was also shown with the use of HMD. When the sphere moved closer, accommodation was made to approximately 3 diopters in front of the eyes in the subject with the largest amplitude of accommodation. Immediately before the sphere reached the most distant point, the accommodation was about 1 diopter. This result showed accommodation caused by convergence stimulation and suggested that there is agreement of accommodation and convergence in stereoscopic vision. This demonstrates objectively that the ciliary muscle and ciliary zonule tense during near vision and relax during far vision, even when that vision is with virtual movement of a 3D image on an HMD.

This result shows that focus to the appropriate parallax 3D images was not fixed on the screen distance, but moved synchronizing to the changes in convergence.

Are the figures displayed on screen unfocused? To determine this, visual acuity in persons gazing at a 3D object should be measured.

The influence of blur images on the success rate of stereoscopic viewing or the relation between stereoscopic acuity and perception of depth has been studied from many points of view. Some examples are the relation between Magic