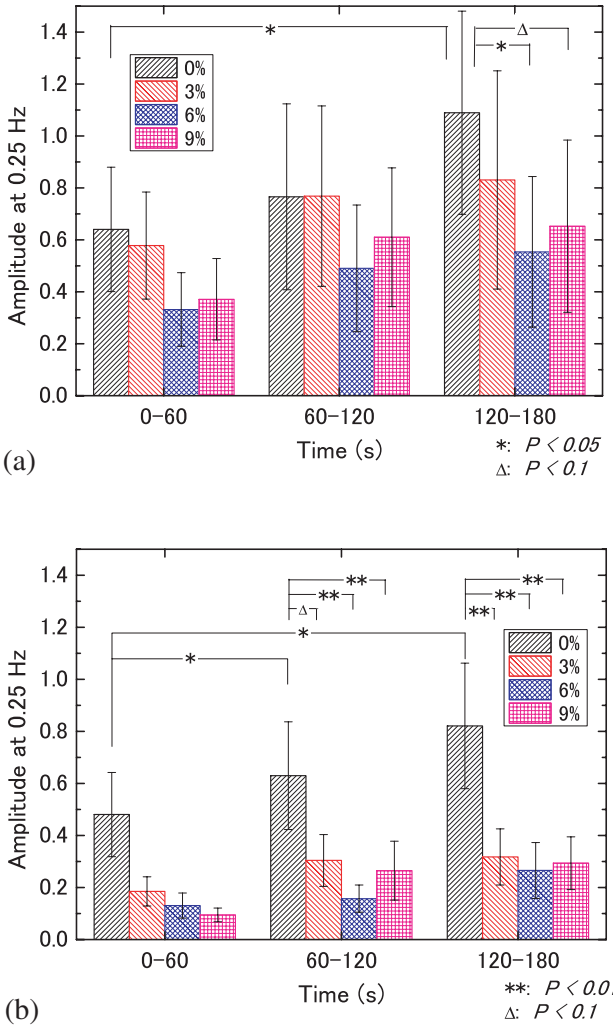

Fig. 5. The temporal change in the amplitude value at 0.25 Hz in the frequency analysis. (a) shows result from viewing of the Z-direction motion movie, and (b) shows that of the X-direction motion movie.

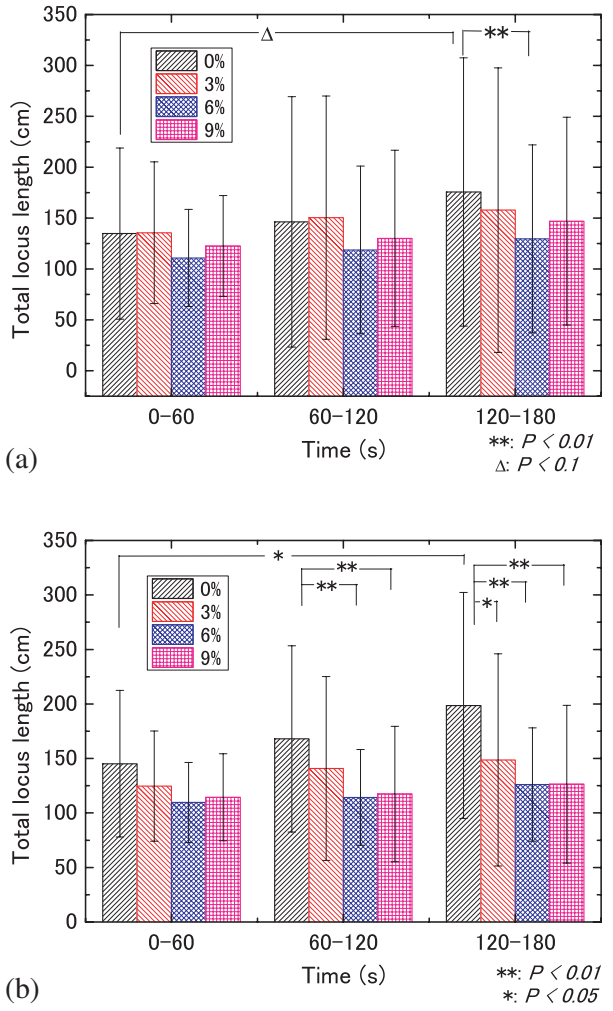

Fig. 6. The temporal change in the total locus length. (a) shows result from viewing of the Z-direction motion movie, and (b) shows that of the X-direction motion movie.

relationship showed no significant differences. In addition, we did not find an increase/decrease tendency matching the change in the amount of the unpredictable component. The difference between the amplitude values in the case of viewing a movie containing an unpredictable component (3% to 9% movie) and that in the case of viewing 0% movie in the X-direction were larger than that in the Z-direction. These temporal increases in difference changes indicated that the amplitude value at 0.25 Hz in the case of viewing a movie containing the unpredictable component changed little despite the increase in the amplitude value in the case of 0% movie viewing. When we used the Tukey-Kramer method with 3 time segments and 4 different amounts of the unpredictable components, significant differences were found, as shown in Figs. 5a and 5b.

3.4 Change in total locus length

The temporal change in the total locus length while viewing a variety of movies was analyzed (Figs. 6a and 6b). Figure 6a shows the results obtained in the case of viewing Z-direction motion movies, and Fig. 6b shows those obtained in case of viewing X-direction motion movies, as shown in Fig. 5. Both the result of the total locus length and the result of the frequency analysis at 0.25 Hz exhibited the similar tendency. First, while viewing the 0% movie of both directions, we found an increase tendency of the total locus length with an increase in the viewing time. For the difference in the amount of the unpredictable component, the total locus length while viewing the 3% movie was high in all time segments compared with the results for the 6% and 9% movie viewing. However, this relationship showed no significant differences. In addition, we did not detect an increasing/decreasing tendency according to the change in the amount of the unpredictable motion component. The difference between the total locus length observed while viewing a movie containing the unpredictable component (3% to 9% movie) and that in the case of viewing a 0% movie in the X-direction was higher than that in the Z-direction. This temporal increase change indicated that the total locus length in the case of viewing a movie containing the unpredictable component changes little in spite of the increase in the total locus length in the case of 0% movie viewing. When we used the Tukey-Kramer method with 3 time segments and 4 different amounts of the unpredictable component, significant differences were found, as shown in Figs. 6a and 6b.