Answers for the reviewer comments:

Ad 1. Numbers of figures are changed

Ad 2. Description of Y axes are ordered

Ad 3. Time scales in both figures are different due to different experiments

1. Depolarization analyses

Small differences in the output signal are observed in the middle part of the old Fig. 4a (for 2.8 sec.). It is for relatively small strain and therefore this results only in a-few percent changes in dynamics of the sensor.

1. FFT-based signal analysis

The reviewer’ comment is right. This is a quasi-static response of the sensor.

In Fig. 3 (now Fig. 4) we have shown a result of a depolarization effect which may be used for strain calculation. In Fig. 5 we have plotted calculated FFT values in function of strain by integrating the power spectrum of the polarimetric fiber sensor output signal over all frequencies.

Comparative results obtained in both methods i.e. DOP analysis and integrated FFT value will be discussed in future since up-to-the date we have only quantitative results obtained due to the DOP analysis method in the dynamic case.