

In this work, 16-bit A/D-converters were used for processing the I- and Q-signals of TAITs, which limit the sensitivity of FMZI for measuring phase difference. The A/D-converter limited phase sensitivity is $\sim 3.1 \times 10^{-5}$ rad. and the corresponding tilt is $\sim 1.5 \times 10^{-4}$ μ rad. It should be mentioned that, as shown in Fig. 8, noise levels for tilt measurements, especially for yaw measurements, at some frequencies above 10Hz are much lower than the A/D-converter limited resolution because the corresponding noises at these frequencies of FMZI are much smaller than the quantization level for the A/D-converters. Although tilt measurement results below the A/D-converter limit do not represent actual motions of the target mirror, we can have useful information about the motions mirror qualitatively.