

Abstract Submitted  
for the DFD19 Meeting of  
The American Physical Society

**Invariant PDF profile in the log-region of high-Re-number turbulent boundary layer** YOSHIYUKI TSUJI, Nagoya University, ATSUHI IDO, Railway Technical Research Institute Japan, MICHIO NISHIOKA, Osaka Prefecture University — The probability density function (pdf) of a streamwise velocity component is studied in zero-pressure gradient boundary layers. From analyzing the data up to  $R_\theta \sim 80000$ , it is found that pdfs have self-similar profiles in the log-law region of mean velocity. Pdf profiles asymptote to the universal shape very close to the Gaussian, but are positively skewed at the core region, indicating smaller values in the tail parts. In the log-law region of turbulence intensity, pdf is positively skewed slightly. These characteristics are summarized depending on the Reynolds number.

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Date submitted: 30 Jul 2019

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