## REVIEW OF "UN UPPER BOUND FOR THE PROOF-THEORETIC STRENGTH OF MARTIN-LÖF TYPE THEORY WITH W-TYPE AND ONE UNIVERSE" BY ANTON SETZER

## DANKO ILIK

The paper preciselly formalizes Martin-Löf constructive type theory with the W-type (inductive definitions) and one universe, in its intensional and extensional variants, and in its variants "à la Tarski" and "à la Russell", as well as a version/extension of classical Kripke-Platek set theory. It is then shown how to interpret the extensional type theory into Kripke-Platek set theory, from which an upper bound on the proof-theoretic strength is obtained. Together with previous results on a lower bound for intensional type theory (and an embedding into the extensional one), one obtains as a precise characterisation for the proof-theoretic strength of all variants of type theory the ordinal  $\psi_{\Omega_1}\Omega_{I+\omega}$ .

Date: August 13, 2022.