

Meeting: 1003, Atlanta, Georgia, SS 6A, AMS-ASL Special Session on Reverse Mathematics, I

1003-03-944 **Antonio Montalbán*** (antonio@math.cornell.edu), Department of Mathematics, Cornell University, Ithaca, NY 14853. *On the proof theoretic strength of Jullien's results.*

We analyze the proof theoretic strength of two theorems which appear in Jullien's thesis. One of them is the classification of extendible linear orderings. We prove that it is equivalent to Fraïsé's Conjecture over $\text{RCA}_0 + \Sigma_1^1\text{-IND}$. The other one, INDEC, says that a scattered indecomposable linear ordering is indecomposable either to the right or to the left. We prove that $\text{RCA}_0 + \text{INDEC}$ is a *theory of hyperarithmetic analysis* in the sense that *HYP* is its least ω -model. (Received October 01, 2004)