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Russell J. May* (rmay@unt.edu), Department of Mathematics, P.O. Box 311430, Univeristy of North Texas, Denton, TX 76203-1430, and Steve C. Jackson (jackson@unt.edu), Department of Mathematics, P.O. Box 311430, Univeristy of North Texas, Denton, TX 76203-1430. A New Proof of the Strong Partition Relation on ω_1 . Preliminary report.

Assuming the axiom of determinacy, we prove the strong partition relation on ω_1 . There are already three known proofs of this result, due to D. A. Martin, A. S. Kechris, and S. C. Jackson. The current proof is particularly straightforward and uses only basic set theory. The main task is to obtain a good coding of functions from ω_1 to ω_1 . This is achieved by inverting pressing-down functions. Using this coding, we finish the proof by implementing an argument due to Martin. (Received October 03, 2000)