Math 751 Fall 2010 Test 2.

Prove the following theorem of Martin: If there exists a measurable cardinal, then all boldface $\Pi^1_1$ games (with moves from $\omega$) are determined.
Make sure to appropriately set up and end your proof. You may cite Quiz 5 for Kleene’s Theorem and for the definition and winning conditions of the auxiliary game $G^*$. Indicate why $G^*$ has a winning strategy $s^*$. You may cite the homework for the fact that if $s^*$ is a winning strategy for player $I^*$, then player $I$ has a winning strategy in the original game. In the appropriate case, make sure to:
prove the needed Ramsey-type property,
define a strategy $s$ for player II in the original game,
prove $s$ is in fact a winning strategy for player II in the original game,
and then appropriately finish your proof.