"Big Match" with Lack of Information on One Side

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Abstract

We prove the existence of a minmax for a class of stochastic games with incomplete information on one side by using an auxiliary one shot game.

We study here a new specific class of two person zero-sum stochastic games with lack of information on one side; we assume independence and one non absorbing state. The first hypothesis means that the state space can be represented as K x L, the initial probability being on K (k is fixed from then on) and the transition on L being independent of k. Hence the game can be viewed as a "stochastic game with vector payoffs".