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In this talk, we will introduce a compartmental SIRS epidemic model with asymptomatic infection and seasonal succession, which describes the impact of the asymptomatic infective and season factors on the spread of disease. By defining the basic reproduction number R_0 , we study the threshold dynamics of this epidemic model. The basic reproduction number R_0 is closely related to the asymptomatic infective and season factors. This reveals that classical SIRS epidemic model may underestimate or overestimate infection risks on the disease transmission. (Received September 18, 2015)