

# **Phase-resolved high energy spectrum of pulsars**

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We use a three-dimensional outermagnetospheric model to calculate the phase-resolved radiation spectrum of the Crab pulsar. We argue that pair production can only take place in regions between the inner boundary of the outergap, where is a few stellar radius away from the neutron star, and the null charge surface. Consequently, the observed radiation come from three components, i.e. the radiation from outward current beyond the null surface to the light cylinder, and the radiations from both the inward and outward current between the inner boundary and the null charge surface. High energy photons propagate near the neutron star will be absorbed by the stellar magnetic field. Our model results are roughly consistent with the 360 degree phase-resolved data from 10KeV to 10 GeV energy range.