

## Transition form factors for radiative decays of heavy flavored vector mesons

M. PRIYADARSINI<sup>1</sup>, P.C DASH<sup>1</sup>, SUSMITA KAR<sup>2</sup>, S. PATRA<sup>2</sup> and N. BARIK<sup>3</sup>

<sup>1</sup>Department of Physics, SOA University, Bhubaneswar-751030

<sup>2</sup>Department of Physics, North Orissa University, Baripada-757003

<sup>3</sup>Department of Physics, Utkal University, Bhubaneswar-751004

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**Abstract:** We study the electromagnetic form factors of heavy flavoured vector mesons such as  $(D^*, D_s^*, J/\psi), (B^*, B_s^*, Y)$  via one photon radiative decays  $(V \rightarrow P\gamma)$  in the relativistic independent quark (RIQ) model based on a flavour independent average interaction potential in the scalar-vector harmonic form. The momentum dependent spacelike ( $q^2 < 0$ ) form factors calculated in this model are analytically continued to the timelike region  $0 \leq q^2 \leq (M_V - M_P)^2$ . The coupling constant  $g_{VP\gamma} = F_{VP}(q^2 = 0)$  for real photon case in the limit  $q^2 \rightarrow 0$  is obtained in good agreement with experimental data and other model predictions.

**Keywords:** Electromagnetic form factors, coupling constant, spacelike and timelike region.

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