Salam type suppression factor is taken into account. Another possibility is that colored-states appear in $\sqrt{s} \approx 8\sim 9 \text{GeV}/c$ region. Rising total cross section in hadronic process and observation of "prompt" lepton phenomena in that energy region, which comes from virtual photon decay, may be also a signal of production of colored-hadrons and their radiative decay.

Extension of our scheme to many flavor case is straightforward. Construction of gauge theory with right-handed color-octet current based on the group $G = SU(2)_L \times U(1) \times SU(3)' \times SU(3)_{R'}$ and detailed analysis of $\nu$ anomaly will be treated elsewhere. The author is indebted to Soryushi Shogakukai for financial aid.

1) A. Benvenuti et al., Anomalous in $\nu, \bar{\nu}$ Interactions (HPWF preprint).

\[ \rho(b) \]

$P_\text{Pompton}$ bound on the $D$ component is derived as the unique solution of the absorptive $s$-channel unitarization of the bare, factorizable ND overlap function. It has also been argued that the so-called peripherality of the inelastic $D$ component is not a general consequence of absorption but crucially depends on the edge structure of the ND profile function.\(^1\)

On the other hand, we have proposed a simple and rather natural generalization of the celebrated Chou-Yang droplet model on the basis of postulates: \(^3\) i) the eikonalization with $s, b$-factorizable opacity $\Omega(s, b)$, ii) the dipole form factor $\rho(b)$ of the proton with scaling mass squared $\mu^2 = 0.71 \text{GeV}^2$ and iii) the fixed simple pole Pomeron (FSPP) with two Arnold and Barnett's shielding cuts (ABSC). Moreover we have succeeded in giving a good explanation of all $p-p$ elastic data at the CERN-ISR by using one and the only one $s, b$-independent adjustable parameter $\kappa$.

It will therefore be of physical interest to examine whether or not geometrical features of our model are fully consistent with
the possible peripherality of the inelastic D component at sufficiently high energies. This is done in this short communication. 

The opacity $\mathcal{Q}(s, b)$ of our model reads

$$
\mathcal{Q}(s, b) = \kappa \xi(s) \rho(b),
$$

where the parameter $\kappa$ is eventually fixed at 17.3 GeV$^{-2}$, i.e., the best fitting value in a previous analysis$^3$ of the CERN-ISR data on $\sigma_{tot}(s)$. At least from the qualitative point of view, it seems legitimate to postulate that the saturation of the Pumplin bound is phenomenologically realizable at the CERN-ISR energies in terms of our model (1). Then the impact parameter profiles $\sigma_{inel;D}(s, b)$ and $\sigma_{inel;ND}(s, b)$ immediately turn out to be

$$
\sigma_{inel;D}(s, b) = \frac{1}{4} \exp(-\mathcal{Q}(s, b))
\times [1 - \exp(-\mathcal{Q}(s, b))]
$$

and

$$
\sigma_{inel;ND}(s, b) = \frac{1}{4} \left[1 - \exp(-\mathcal{Q}(s, b))\right],
$$

respectively. A numerical calculation of $\sigma_{inel;D}(s, b)$, $\sigma_{inel;ND}(s, b)$ and $\sigma_{inel;mn}(s, b)$ has been performed with $\kappa=17.3$ GeV$^{-2}$. The results are summarized in Figs. 1, 2 and 3. It is important to note that all

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For the details of the notation, we refer to Ref. 3).
curves in these figures are predictions of our model without free parameter.

These results lead us to the following conclusions in respect to geometrical features of our model. First $\sigma_D(s, b)$ shows the well-localized, peripheral $b$-distribution. Both the peak value and the half-width are almost $s$-independent. On the other hand, the peak location slowly shifts from 0.6 fm to an asymptotic value 0.8 fm. Moreover the central component decreases rather rapidly with increasing $s$, while the peripheral component grows relatively slowly with $s$. Consequently the peripheral structure of $\sigma_{\text{inel}}(s, b)$ becomes more conspicuous as $s$ increases and the total increment $\Delta \sigma_{\text{inel}}(s)$ is approximately only 5% over the CERN-ISR region. Secondly $\sigma_{\text{inel};ND}(s, b)$ is well described by a central disc, the effective radius of which is almost $s$-independent and given by 1.0 fm. The central peak is rather sharp and monotonically rises by about 5% in the CERN-ISR region. Moreover the growth $\Delta \sigma_{\text{inel};ND}(s, b)$ exhibits the rather mild central $b$-distribution. That is, the $b$-structure is relatively uniform in the central region. The total increase $\Delta \sigma_{\text{inel};ND}(s)$ is approximately 10% through the CERN-ISR range.

These observations will shed some light on the physics underlying our previous arguments on the peripheral increase of $\sigma_{\text{inel}}(s, b)$ at very high energies. At least from the phenomenological point of view, our model affords a successful exemplification of the so-called peripherality of $\sigma_{\text{inel}}(s, b)$ at non-asymptotically high energies. From the theoretical point of view, however, the dynamical origin of the ABSC mechanism is obscure and moreover the FSPP enhancement is doubtful at the asymptopia. Consequently the phenomenological predictions of our model should not seriously be taken into account at asymptotically high energies. The possible realization of the Pumplin bound in terms of the self-consistent two-component description of topological cross sections is yet to be systematically investigated.

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