

$$F_i(\omega, q^2) = \frac{1}{2\pi i} \int_{-i\omega+c}^{i\omega+c} dm \omega^{n+1} F_i^{(n)}(q^2), \quad (22)$$

where the contour runs to the right of all singularities of $F_i^{(n)}$.

What we are assuming now, for $q^2 \geq q_0^2$, is that the $F_i^{(n)}$ can be replaced by the expression on the right hand side of Eq. (2). The exponent functions $a_n(i)$ can be explicitly computed and are known to be regular for all $\text{Re } n > -1$. We shall assume that the $b_n(i)$ are similarly regular for $\text{Re } n > -1$. Altogether, then, we are assuming for $q^2 \geq q_0^2$ that $F_i^{(n)}$ is regular in the region $\text{Re } n > -1$ and well approximated there by the right hand side of Eq. (2).

If we are given the structure functions for some value of the momentum transfer in the above asymptotic region, say at the value q_0^2 , we could compute the moments $F_i^{(n)}(q_0^2)$ and thereby the coefficients $b_n(i)$ in Eq. (2). From our assumptions it then follows for all $q^2 > q_0^2$ that

$$F_i^{(n)}(q^2) = F_i^{(n)}(q_0^2) \lambda^{-a_n(i)}, \quad (23)$$

where

$$\lambda = \frac{\log \frac{q^2}{\mu^2}}{\log \frac{q_0^2}{\mu^2}}. \quad (24)$$

In principle the full structure functions $F_i(\omega, q^2)$ can now be computed for all $q^2 > q_0^2$ on the basis of Eqs. (22) and (23). The practical