On further investigation, it was discovered that the decomposition of the parton distribution functions of the spin-independent gluon operator in Eq. (37) of the main paper is incorrect. This lead to a number of errors, which are corrected here.

Replacing Eq. (32) of the main paper, the gluonic analogue of the Soffer bound, for spin-1 particles, is [1–4]

\[ |\delta G(x)| \leq \frac{1}{2} \left( f_1(x) + \frac{1}{2} f_{1LL}(x) + g_1(x) \right), \]

(1)

where \( \delta G(x) \) is the gluonic transversity distribution defined in Eq. (14) of the main paper, \( f_1(x) \) and \( f_{1LL}(x) \) are the spin-independent gluon distributions, and \( g_1(x) \) is the spin-dependent gluon distribution. The notation here for \( f_1, f_{1LL}, \) and \( g_1 \) is the same as in Refs. [3,4], while \( \delta G(x) \) is named \( h_{ITT} \) in those works.

Replacing Eq. (36) of the main paper, the analogue of the Soffer bound for the leading Mellin moments of gluon distributions is [4]

\[ |A_2| \leq \frac{1}{24} (5B_{2,1} - 6B_{2,2}), \]

(2)

where \( A_2 \) is the reduced matrix element defined in Eq. (10) of the main paper and \( B_{2,1} \) and \( B_{2,2} \) are linear combinations of the moments of the structure functions \( f_1 \) and \( f_{1LL} \) in Eq. (1), defined through

\[ \langle pE| \hat{O}_{\mu\nu}| pE \rangle = S[M^2 E_{\mu_1} E_{\nu_2}] B_{2,1}(\mu^2) + S[(E \cdot E^*) p_\mu p_\nu] B_{2,2}(\mu^2). \]

(3)

This equation replaces Eq. (37) from the main paper.

Several figures must also be replaced. Figures 1 and 2 below replace Figs. 6 and 8 from the main paper. The conclusions of the analysis, including that the gluon Soffer bound in the spin-1 \( \phi \) meson is saturated to approximately 80%–100%, do not change.

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**FIG. 1.** Reduced matrix elements \( B_{2,1} \) and \( B_{2,2} \) extracted from ratios of two- and three-point functions as described in Secs. III C and IV of the main text. Results in sections I and II of the figure are determined using vectors in the \( r_3^{(3)} \) and \( r_6^{(6)} \) representations. Different colors (offset on the horizontal access for clarity) denote different basis vectors. These results can be compared with those in Fig. 2 with Wilson-flowed gauge fields. The horizontal bands are fits shown to guide the eye.
FIG. 2. Reduced matrix elements $B_{2,1}$ and $B_{2,2}$ extracted from ratios of two- and three-point functions as described in Secs. IIIC and IV of the main text. Wilson flow [5] was applied to the links in the gluon operator as described in the text. Results in sections I and II of the figure are determined using vectors in the $\tau_{1}^{(3)}$ and $\tau_{6}^{(3)}$ representations. Different colors (offset on the horizontal access for clarity) denote different basis vectors. The horizontal band is a fit shown to guide the eye.