TABLE I: The eigenvalues and eigenvectors of the covariance matrix for the parton-level measurement of a_ℓ, the Legendre moments of the differential cross section $d\sigma/d\cos\theta_t$. A single vertical column contains first an eigenvalue, then the error eigenvector corresponding to that eigenvalue.

Eigenvalue λ	0.452	0.254	0.159	0.0104	0.0276	0.0389	0.0975	0.0791
$\ell = 1$	0.018	-0.021	-0.022	0.930	-0.231	0.259	0.112	0.028
$\ell = 2$	0.108	-0.075	0.294	0.089	0.659	0.332	0.026	-0.586
$\ell = 3$	0.035	-0.105	-0.042	-0.354	-0.427	0.727	0.373	-0.107
$\ell = 4$	-0.051	-0.070	0.459	0.003	-0.523	-0.405	0.064	-0.584
$\ell = 5$	-0.030	-0.319	-0.175	0.034	0.213	-0.338	0.839	0.039
$\ell = 6$	-0.295	-0.141	0.776	-0.015	0.085	0.107	0.096	0.512
$\ell = 7$	0.004	-0.924	-0.122	0.003	-0.044	0.019	-0.358	0.003
$\ell = 8$	-0.947	0.041	-0.229	0.018	0.049	0.069	-0.043	-0.200

The measurement of the moments of the differential cross section $\mathrm{d}\sigma/\mathrm{d}\cos\theta_t$ naturally contains correlations that are important when performing fits to the measurement. Table I provides the eigenvalue decomposition of the covariance matrix, C. In order to perform fits to the measurement, one would compute the inverse covariance matrix, C^{-1}, from the eigenvalue decomposition, and then minimize the negative log-likelihood given by

$$\sum_{\ell,\ell'}(a_\ell - \hat{a}_\ell)(C^{-1})_{\ell\ell'}(a_{\ell'} - \hat{a}_{\ell'}), \tag{1}$$

where a_ℓ are the measured moments and $\hat{a}_\ell$ are the moments predicted by the model being fit to the measurement.