(Notes on some details of implementation for reference during development)

Local correction integrals are implemented as matrix multiplications of the source vector at patch nodes:

$$\phi(\mathbf{x}_i) = \sum_j A_{ij}\sigma_j, \tag{1}$$

where A_{ij} is a matrix of size $N_n \times n_p$, with N_n the number of neighbours, including the patch nodes, and n_p the number of patch nodes. The result of the matrix multiplication is given at nodes $\mathbf{x}_i$, the location of the ith entry in the neighbour list of the patch. The correction matrices are computed for the single and double layer potentials and packed together.