$$G^{(i)}(v) = I_0(v) + 2S(v)\sum_n \cos[-2\pi v(\tau_n - \tau_r) + \Delta_i(v)]$$

$$= I_0(v) + a_1(v)\cos[\Delta_i(v)] + a_2(v)\sin[\Delta_i(v)],$$

$$i = 0, \ldots, N.$$