$$S_{\mathrm{i,ref}} = \left(FR_{\mathrm{meas,i}} - \left(A + B \cdot S_{\mathrm{i}} + C \cdot S_{\mathrm{i}}^{2} \right) \right) \frac{t_{\mathrm{i}} - t_{\mathrm{i-1}}}{M} + S_{\mathrm{i,ref-1}}$$