Sparse sampling points in imaginary time $G(\bar{\tau}_k), \Sigma(\bar{\tau}_k), P(\bar{\tau}_k), W(\bar{\tau}_k)$ $\mathbf{F} \uparrow | \mathbf{F}^+$ IR Arbitrary imaginary G_l, Σ_l, P_l, W_l time/frequency $\hat{\mathbf{F}}_{\alpha} \int \hat{\mathbf{F}}_{\alpha}^{+}$

$$\hat{\mathbf{F}}_{\alpha}$$
 $\hat{\mathbf{F}}_{\alpha}^{+}$

Sparse sampling points in imaginary frequency,

 $G(i\bar{\omega}_k^{\mathrm{F}}), \Sigma(i\bar{\omega}_k^{\mathrm{F}}), P(i\bar{\omega}_k^{\mathrm{B}}), W(i\bar{\omega}_k^{\mathrm{B}})$