(a) Autoregressive modeling

(b) **A**utoregressive **C**oherent modeling with **D**iffusion **C**orrection (**ours**)

$$\boldsymbol{x}_t^1 \sim p(\boldsymbol{x}_t^1|\boldsymbol{x}_0^1) \qquad \tilde{\boldsymbol{x}}_0^1 \sim p_\theta(\boldsymbol{x}_0|\boldsymbol{x}_t^1, \boldsymbol{y}^1)$$

Diffusion Correction Module

$$\boldsymbol{x}_t^2 \sim p(\boldsymbol{x}_t^2|\boldsymbol{x}_0^2) \qquad \tilde{\boldsymbol{x}}_0^2 \sim p_\theta(\boldsymbol{x}_0|\boldsymbol{x}_t^2, \boldsymbol{y}^2)$$

Diffusion Correction Module

$$\boldsymbol{x}_t^3 \sim p(\boldsymbol{x}_t^3|\boldsymbol{x}_0^3) \qquad \tilde{\boldsymbol{x}}_0^3 \sim p_\theta(\boldsymbol{x}_0|\boldsymbol{x}_t^3, \boldsymbol{y}^3)$$

Diffusion Correction Module