

接收信号强度

$$z_1, z_2...z_i$$

衰落参数 v_k, σ_k

衰落参数动态估计

$$\begin{vmatrix} v_{k+1} &= \frac{1}{N} \sum_{i=1}^{N} \frac{I_1(\frac{v_k z_i}{\sigma_k^2})}{I_0(\frac{v_k z_i}{\sigma_k^2})} z_i \\ \sigma_{k+1}^2 &= \frac{1}{2N} \sum_{i=1}^{N} z_i^2 - \frac{v_k^2}{2} \end{vmatrix}$$

衰落参数 v_{k+1}, σ_{k+1}

统计区间

接收信号强度

$$z_1, z_2...z_i$$

衰落参数 K_{k+1} , σ_{k+1}

$$\begin{bmatrix} r^{2}(y) = r_{p}(y)m_{p}(y) \end{bmatrix}$$

$$\hat{\boldsymbol{m}}_{p} = \frac{1}{2L} \int_{\boldsymbol{x}-L}^{\boldsymbol{x}+L} \boldsymbol{r}^{2}(\boldsymbol{y}) d\boldsymbol{y} = f_{1}(\boldsymbol{K}_{k+1}, \sigma_{k+1})$$

$$|\sigma_{\hat{\boldsymbol{m}}_{p}}|^{2} = \frac{1}{2L} \int_{\boldsymbol{x}-L}^{\boldsymbol{x}+L} \boldsymbol{D}[\boldsymbol{r}^{2}(\boldsymbol{y})] d\boldsymbol{y} = \boldsymbol{g}_{1}(\boldsymbol{K}_{k+1}, \sigma_{k+1})$$

$$\left| 1\sigma spread = 10 \cdot \log_{10} \frac{m_p + \sigma_{\hat{m}_p}}{m_p - \sigma_{\hat{m}_p}} = 1 \right|$$

统计区间 2L

采样点数

接收信号强度

$$Z_1, Z_2...Z_i$$

衰落参数 $\boldsymbol{K}_{k+1}, \, \boldsymbol{\sigma}_{k+1}$

$$|\bar{r}^{2}| = 2\sigma^{2} + \nu^{2} \approx \frac{1}{N} \sum_{i=1}^{N} z_{i}^{2}|$$

$$|\hat{\boldsymbol{m}} = \boldsymbol{E}[\bar{\boldsymbol{r}}^2] = \frac{1}{N} \boldsymbol{E}[\sum_{i=1}^{N} \boldsymbol{z}_i^2] = \boldsymbol{f}_2(\boldsymbol{K}_{k+1}, \sigma_{k+1})|$$

$$|\sigma_{\hat{\boldsymbol{m}}}|^2 = \boldsymbol{D}[\bar{\boldsymbol{r}}^2] = \frac{1}{N} \boldsymbol{D}[\sum_{i=1}^{N} \boldsymbol{z}_i^2] = \boldsymbol{g}_2(\boldsymbol{K}_{k+1}, \sigma_{k+1})|$$

$$P_{g} = 10\log(\frac{\hat{m} + \hat{\sigma}_{\hat{m}}}{\hat{m}}) = 1$$

采样点数 N

