$A \alpha N$
$hh \sim$
$exp(1) h$

$$f_H(h) = \exp(-h) \tag{1}$$

$$F_H(h) = P[H \leq h] = 1 - \exp(-h) \tag{2}$$

$P n \lambda$??

$$n_s = \left\lfloor \lambda_s S \right\rfloor \tag{3}$$

$\left\lfloor \cdot \right\rfloor \mathcal{S} i S_i \mathcal{S} =$
$\{S_1, S_2, \ldots, S_{n_s}\}$
$S_i k_i$
??$_d is.pdf$
??m$\times$
100m$\lambda =$
$10^{-3}\mathrm{m}^{-2}$
ϕ??
$A n \lambda A$

$$P(n_s = i) = \frac{e^{-\lambda A}(\lambda A)^i}{i!} \tag{4}$$

$A \lambda$

$$\overline{n_s} = \lambda A \tag{5}$$

$S_i \mathcal{U}_i k_i$
$U \mathcal{U}_i =$
$\{U_1, U_2, ..., U_{k_i}\} \mu \sigma^2$

$$f_{X,Y}(x,y) \overset{(a)}{=} f_X(x) f_Y(y) \overset{(b)}{=} \frac{1}{\sqrt{2\pi}\sigma} \exp\left(-\frac{x^2}{2\sigma^2}\right) \cdot \frac{1}{\sqrt{2\pi}\sigma} \exp\left(-\frac{y^2}{2\sigma^2}\right) = \frac{1}{2\pi\sigma^2} \exp\left(-\frac{x^2+y^2}{2\sigma^2}\right) \tag{6}$$

$(a)(b)$??$_x y_p df.pdf$
??

$$f_R(r) = \frac{r}{\sigma^2} \exp(-\frac{r^2}{2\sigma^2}) \tag{7}$$

R
??
$S_i U_k P_{i,k}$??

$$P_{i,k} = R_{i,k}^{-\alpha} h_{i,k} P \tag{8}$$

$R_{i,k} U_k S_i \alpha h_{i,k} U_k S_i h_{i,k} \sim$
$exp(1) P$??
$S_i U_k$??

$$I_{i,k} = \sum_{c S_j \in \mathcal{S} j \neq i} R_{j,k}^{-\alpha} h_{j,k} P \tag{9}$$

$R_{j,k} U_k S_j \alpha h_{j,k} U_k S_j h_{j,k} \sim$
$exp(1) P$
$S_i U_k$

$$\mathrm{SINR}_{i,k} \overset{(a)}{=} \frac{P_{i,k}}{I_{i,k} + N} \overset{(b)}{=} \frac{R_{i,k}^{-\alpha} h_{i,k} P}{\sum\limits_{c S_j \in \mathcal{S} j \neq i} R_{j,k}^{-\alpha} h_{j,k} P + N} \tag{10}$$

$S_i \in$
$\mathcal{S}$
$U_k \in$
$\mathcal{U}_i (a)(b)$????
??

$$\mathrm{SIR}_{i,k} \overset{(a)}{=} P_{i,k} / I_{i,k} \overset{(b)}{=} \frac{R_{i,k}^{-\alpha} h_{i,k}}{\sum\limits_{c S_j \in \mathcal{S} j \neq i} R_{j,k}^{-\alpha} h_{j,k}} \tag{11}$$

$(a)(b)$??
??
$S_0 \in$
$\mathcal{S} S_0 r r S_0 h$
$hh \sim$
$exp(1)$
$\lambda T \alpha \sigma$??