

A B f D C BM

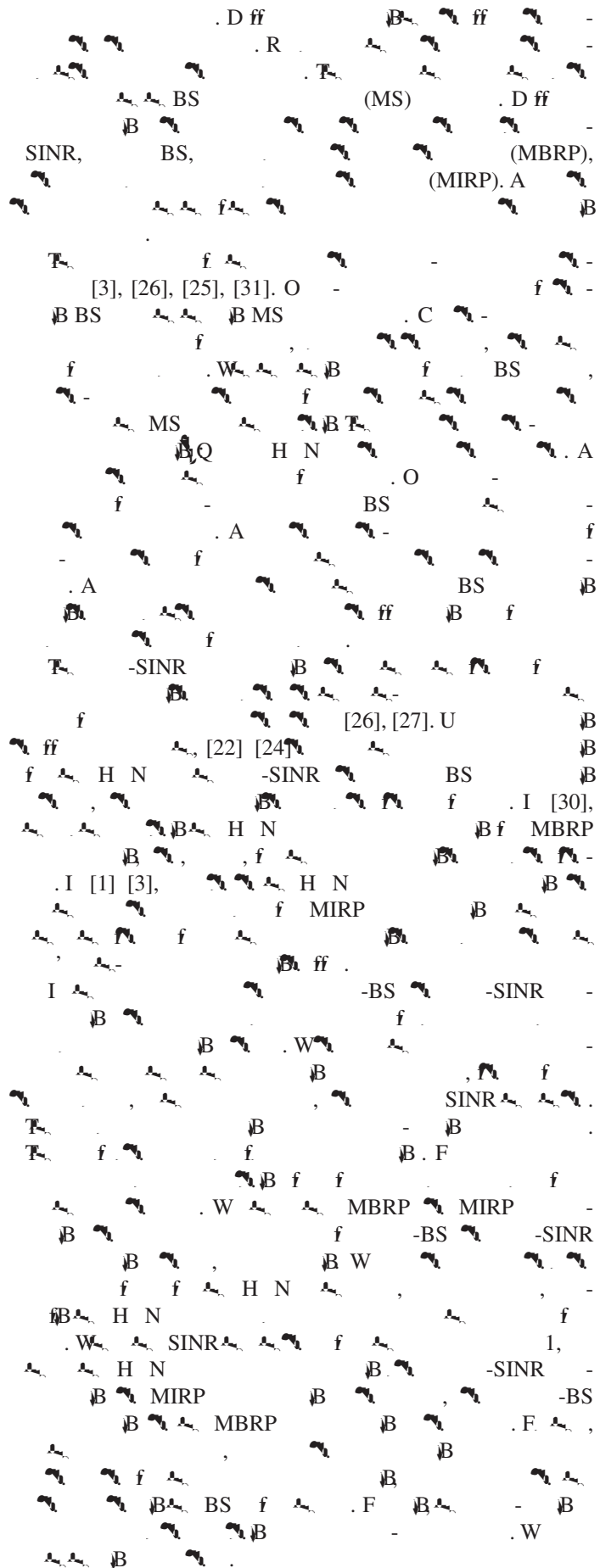
H C N

S G B

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Abstract I t , t t -

II. SYSTEM MODEL



A. BS Layout

B. Radio Environment and Downlink SINR

$$SINR_{ki} = \frac{P_{ok} \Psi_{oki} R_{oki}^{-\epsilon_{ok}}}{I_o - P_{ok} \Psi_{oki} R_{oki}^{-\epsilon_{ok}} + I_c + \eta}, \quad (1)$$

$$I_o = \sum_{m=1}^K \sum_{n=1}^L P_{om} \Psi_{omn} R_{omn}^{-\epsilon_{omn}}$$

$$I_c = \sum_{l=1}^L \sum_{n=1}^L P_{cln} \Psi_{cln} R_{cln}^{-\epsilon_{cln}}$$

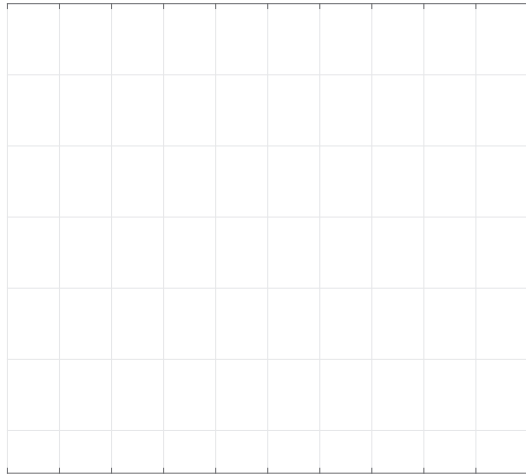








$$(\ ) \quad \mathbb{B} \quad R_{ol1} \quad \prod_{l=1}^K$$



Tier 1 SIR threshold (in dB)





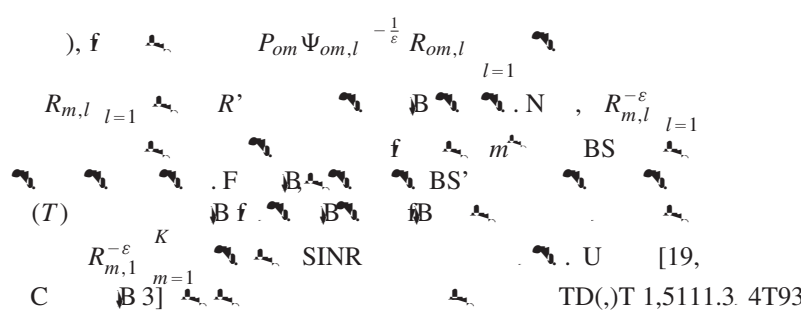
$$\begin{aligned}
 & \mathbf{f} \mathbf{C} \quad [32], \quad -s\eta \\
 & \sum_{k=1, \dots, K} \gamma_k M_k \quad u \quad \gamma_k P_{ok} \Psi_{okl} R
 \end{aligned}$$

(a)

$$I_o + I_c + \eta < \sum_{i=1, \dots, K} \gamma_i M_i = \frac{1}{\kappa} \times \sum_{i=1, \dots, K} \gamma_i M_i + \eta < I_o + I_c + \eta < \sum_{i=1, \dots, K} \gamma_i M_i$$

$$I_o + I_c + \eta < \sum_{i=1, \dots, K} \gamma_i M_i$$

$$I_o + I_c + \eta < \frac{\sum_{i=1, \dots, K} \gamma_i M_i}{\kappa} + \eta$$



(b)

(c)

(27)

(4)

(5)

B. Proof for Lemma 1

G BS

$$R = (P_{ok} \Psi_{ok})^{-1} R^{\epsilon_{ok}}$$

BS

1-D P

$$\lambda_{ok}(r), \quad \mathbb{E} \Psi_{ok}^{\frac{2}{\epsilon_{ok}}} < \dots, \quad k = 1, 2, \dots, K.$$

S BS

$$R = (P_c \Psi_c)^{-1} R^{\epsilon_c}$$

1-D P

$$\lambda(r), \quad \mathbb{E} \Psi_c^{\frac{2}{\epsilon_c}} < \dots$$

[32, P 18]

[32, P 55]

BS

1-D P

[32, P 16]

$$\lambda(r) = \sum_{k=1}^K \lambda_{ok}(r), \quad r > 0.$$

I BS

2-

f H N BS

2-

1-D ( ), SINR

MIRP BS H N

(MS)

2-

A , SINR BS

f R'

(10)

C. Proof for Lemma 2

f H N SINR MIRP

f

m = 1, \dots, K, c ( f )



