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$$R_S = \frac{1}{S} \sum_{c=1}^S \dot{x}_c \dot{x}_c^T, \quad (1)$$

S- ,  $\dot{x}$  - ,

(  $m \in \overline{1, M}$  )

$$F_{LINE} = (1 \exp(j \omega_m) \dots \exp(j(N-1) \omega_m))^T, \quad (2)$$

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Q. SMART- (5).

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$$\hat{X} = \arg \max_X \left[ \left( F_{LINE}^H R_S^{-1} F_{LINE} \right)^{-1} \right], \quad (6)$$

U,  

$$QU = \tilde{U}, \quad (3)$$

$$\hat{X} = (X_1, X_2, \dots, X_m, \dots, X_M)^T -$$

$$U = (Q^H Q)^{-1} Q^H \tilde{U}, \quad (4)$$

$\tilde{U}$ . [8]. (MUSIC)

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[8]:  

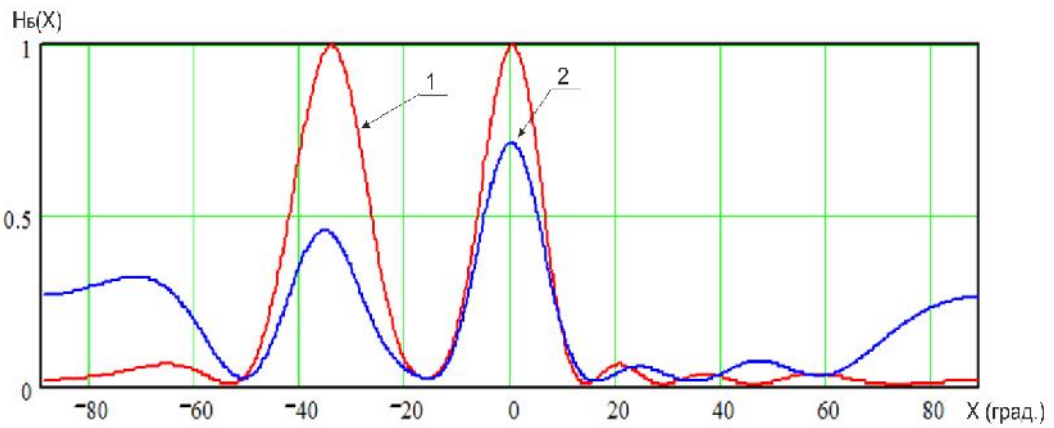
$$\hat{X} = \arg \max_X \left[ \left( N - F_{LINE}^H \sum_{r=M+1}^N g_r g_r^H F_{LINE} \right)^{-1} \right], \quad (7)$$

[7],  

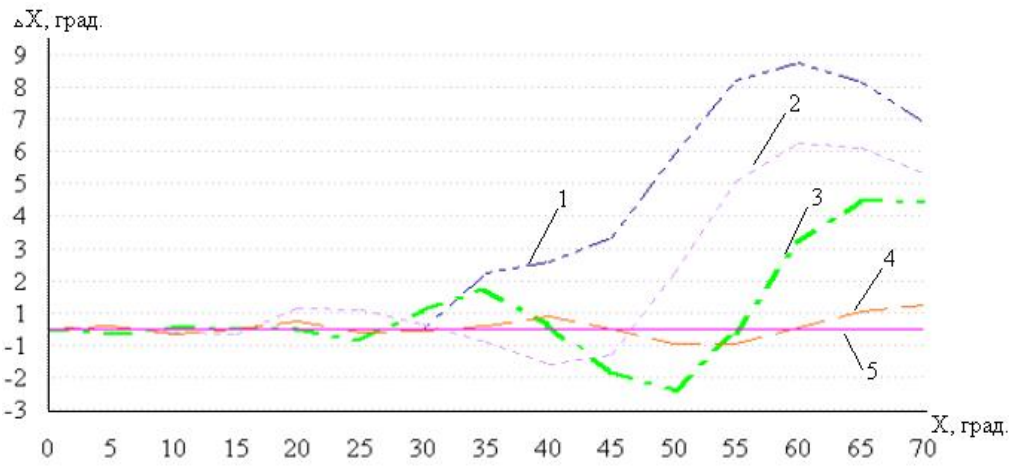
$$\hat{X} = \arg \max_X \left[ F_{LINE}^H R_S F_{LINE} \right], \quad (5)$$

$$\hat{X} = (\hat{X}_1 \dots \hat{X}_m \dots \hat{X}_M)^T - \quad (6) \quad : -38^\circ \quad -34^\circ, \quad . 3.$$

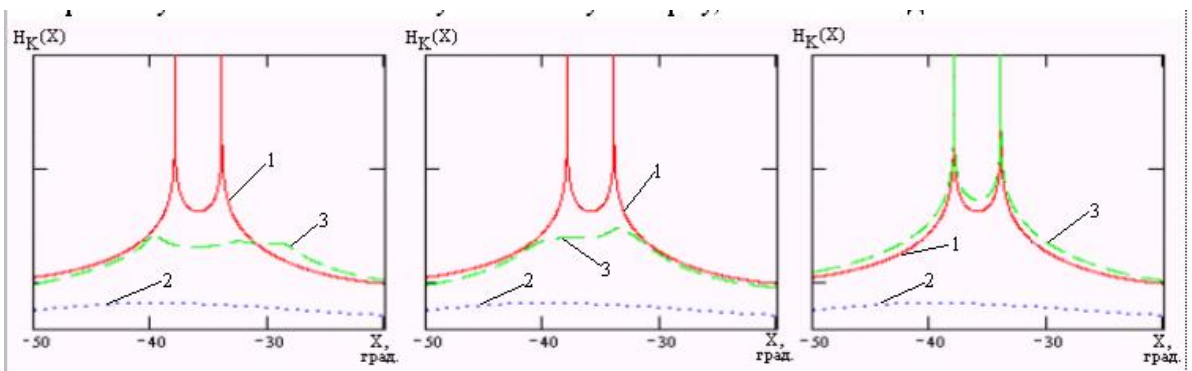
$X_m$ . (M=1)



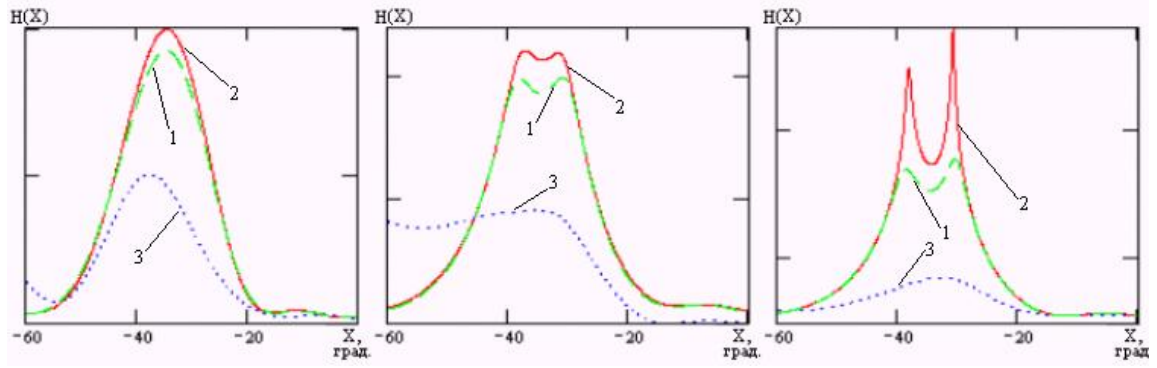
. 1. : 1) – ; 2) –



. 2. 1 – , 2 – , 3 – , 4 – , 5 – 8 – :



. 3. : 1) – , 2) – 8 – , 3) – ) – 5 – ) – 6 – ) – 7 – 8 – ,



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1. Smart- // , 2004. –
2. .62–65.
3. // –2001. – 22. – .79–83.
4. // 2003. – .19–25.
5. // –1999. – 2. – .27–32.
6. // – Millar. J. Equations from “Yagi

