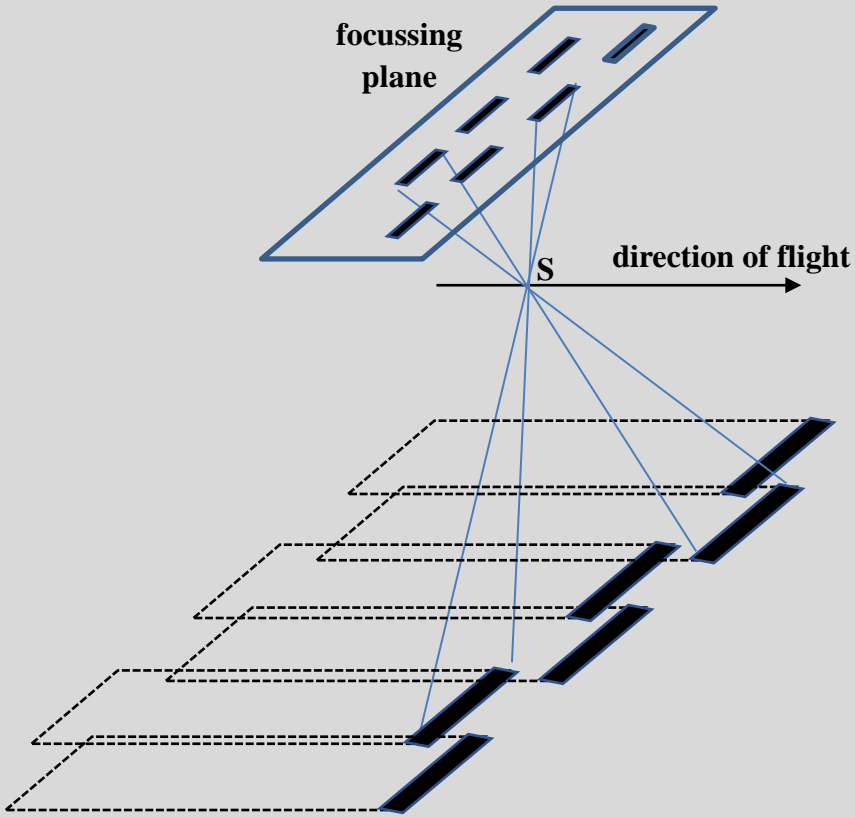
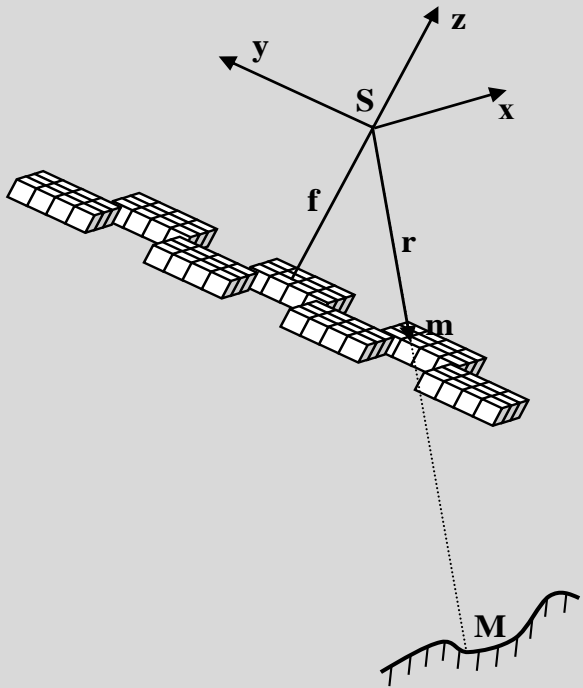
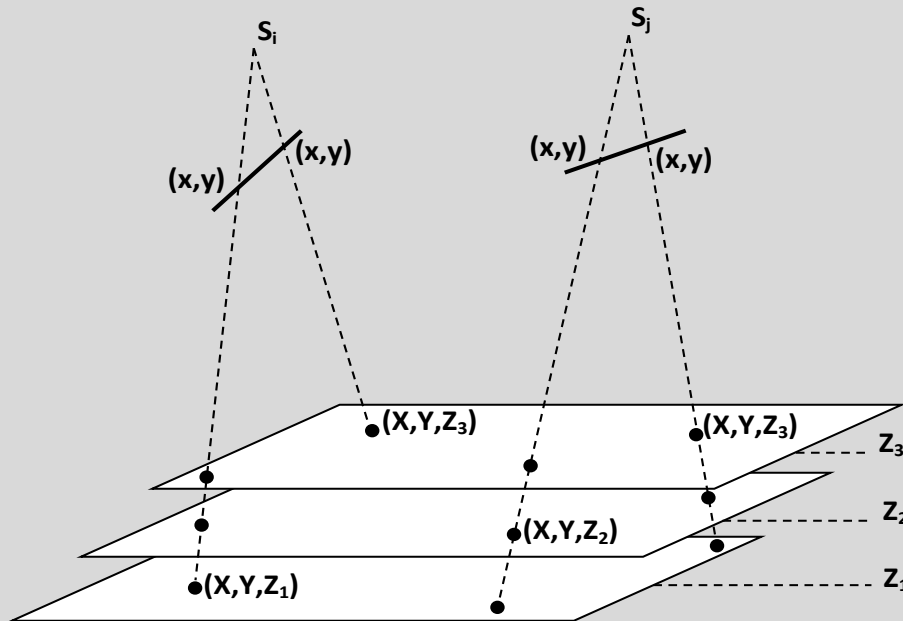


# **SOME FEATURES OF SPACE IMAGES PROCESSING OBTAINED THROUGH OPTOELECTRONIC SCANNER SURVEY SYSTEMS**

**Chibunichev A. – MIIGAik  
Potapov S. – JSC “RI PI”  
Makarov S. – MIIGAik**



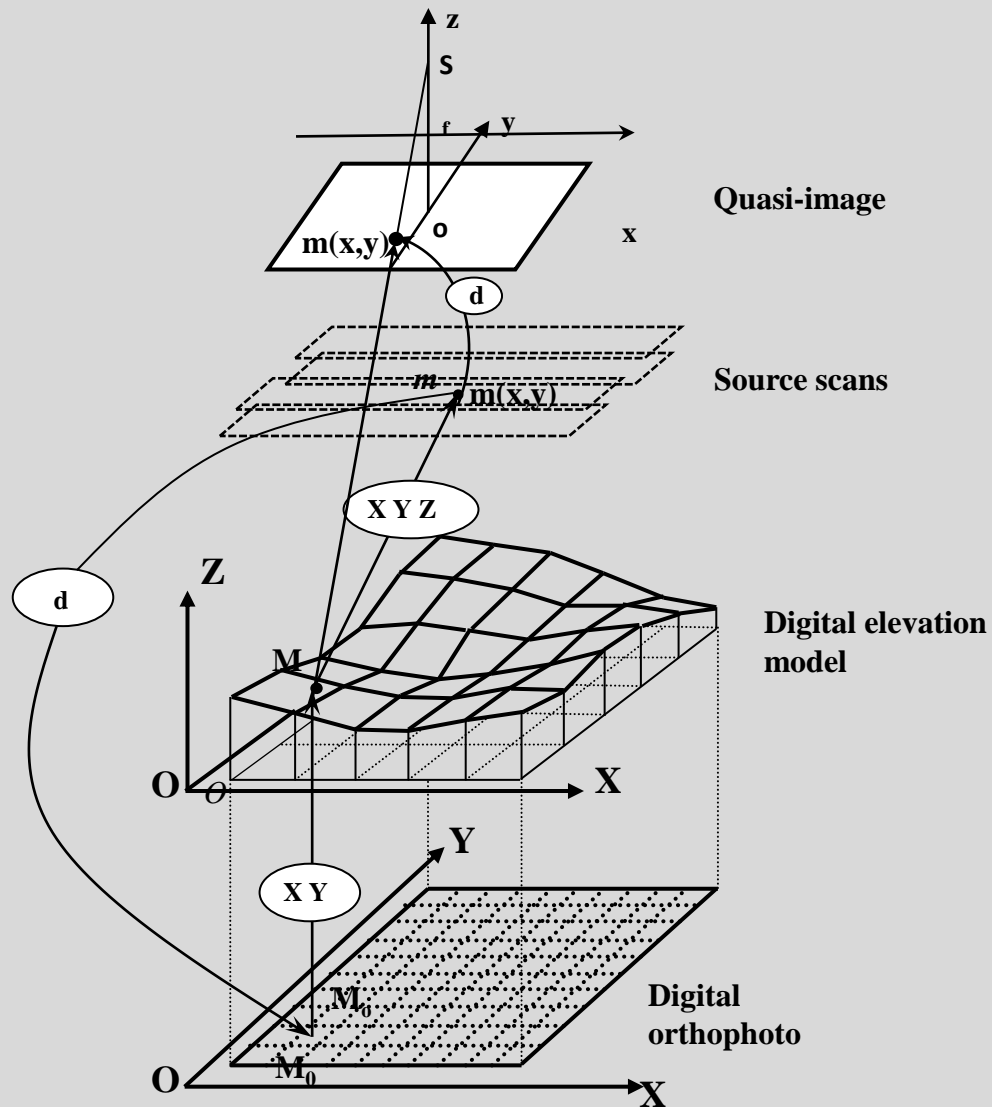


$$\left. \begin{aligned} x &= \frac{P_1(X, Y, Z)}{P_2(X, Y, Z)} \\ y &= \frac{P_3(X, Y, Z)}{P_4(X, Y, Z)} \end{aligned} \right\}$$

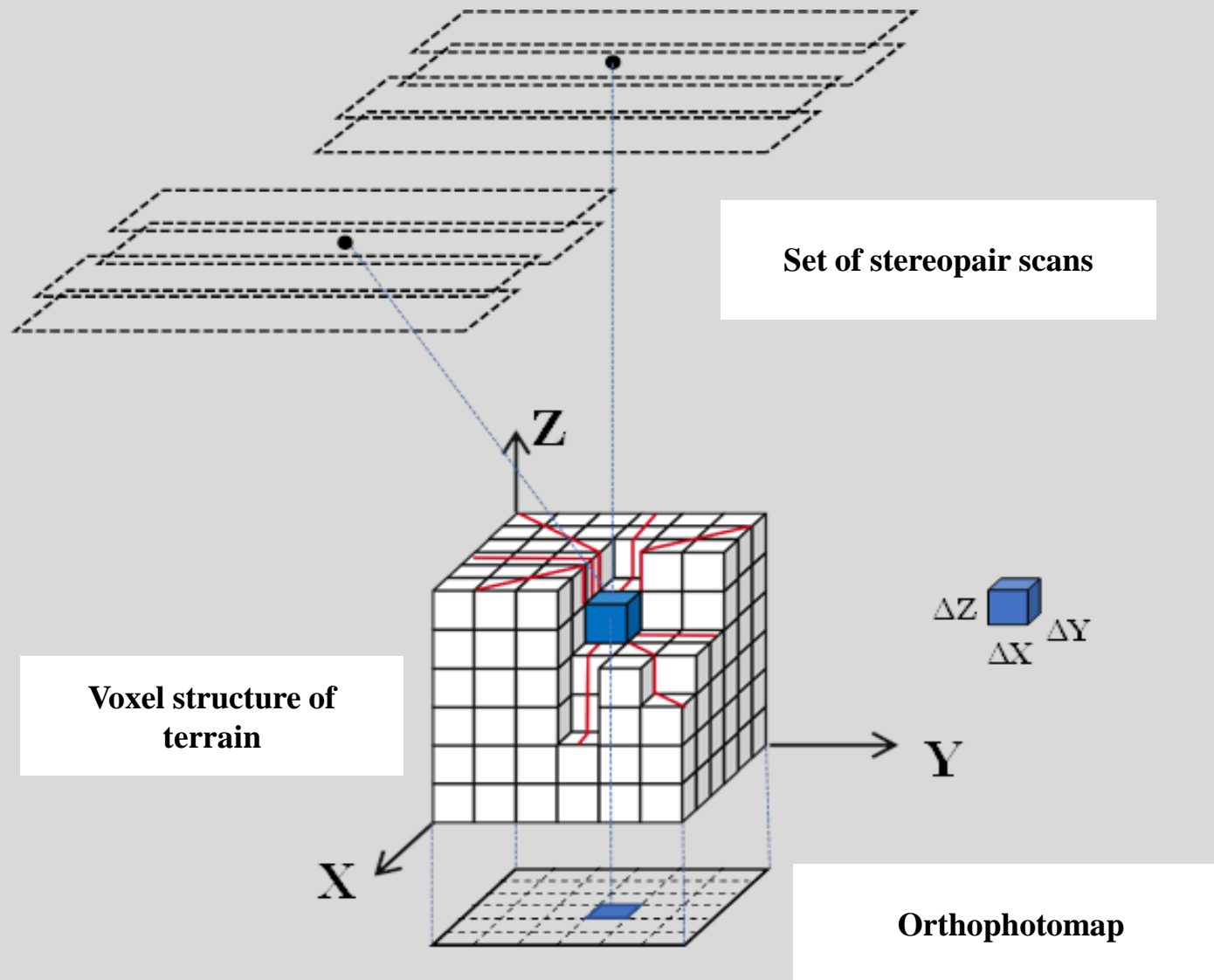
$$P(X, Y, Z) = a_0 + a_1X + a_2Y + a_3Z + a_4X^2 + a_5XY + a_6Y^2Z + a_7YZ^2 + a_8Z^3 + a_9X^2Z$$

$$\left. \begin{aligned} X &= X_{si} + (Z - Z_{si}) \frac{X'}{Z'} \\ Y &= Y_{si} + (Z - Z_{si}) \frac{Y'}{Z'} \end{aligned} \right\} \quad \begin{pmatrix} X' \\ Y' \\ Z' \end{pmatrix} = A_i \begin{pmatrix} x \\ y \\ z \end{pmatrix}$$

# SCHEME OF ORTHOPHOTOS GENERATION ACCORDING TO ALL SCANS 4



# SCHEME OF GENERATION OF DIGITAL SURFACE MODEL AND ORTHOPHOTOMAP ACCORDING TO A STEREOPAIR OF SCANNER IMAGES



$$C_{XYZ} = d_{xy}^1 - d_{xy}^2$$

$$E(Z) = \sum \left\{ C_{XYZ} + \sum P_1 [ |Z - Z_q| = 1 ] + \sum P_2 [ |Z - Z_q| > 1 ] \right\} ,$$

$$L_r(X, Y, Z) = C(X, Y, Z) + \min \left\{ (L_r(X_r, Y_r, Z), (L_r(X_r, Y_r, Z - \Delta Z) + P_1, (L_r(X_r, Y_r, Z + \Delta Z) + P_1, \min_i L_r(X_r, Y_r, i\Delta Z) + P_2) \right\} - \min_k L_r(X_r, Y_r, k\Delta Z)$$

$$S(X, Y, Z) = \sum_r L_r(X, Y, Z)$$

**THANK YOU FOR ATTENTION!**