$$dm_{i,j\to k} \to a_k\ (\alpha_i + \alpha_j) + b_k\ (\beta_i + \beta_j) + y_k\ \eta_i + \frac{y_k\ \eta_j}{\mathcal{A}_i} + \frac{x_k\ \xi_i}{\mathcal{A}_j} + \eta_j\ \xi_i -$$
$$B_k\ \eta_j\ \xi_i + \frac{1}{4\ \mathcal{A}_i\ \mathcal{A}_j} \in \left(2\ y_k\ \eta_j\ \left(2\ x_k\ \xi_i + \mathcal{A}_j\ \left(-2\ \beta_i + (1 - 3\ B_k)\ \eta_j\ \xi_i\right)\right) + \right.$$
$$\mathcal{A}_i\ \xi_i\ \left(x_k\ \left(-4\ \beta_j + 2\ (1 - 3\ B_k)\ \eta_j\ \xi_i\right) + \right.$$
$$\left.\left.\mathcal{A}_j\ \eta_j\ \left(4\ a_k\ B_k + \left(1 - 4\ B_k + 3\ B_k^2\right)\ \eta_j\ \xi_i\right)\right)\right) + x_k\ \xi_j$$
$$d\Delta_{i\to j,k} \to a_j\ \alpha_i + a_k\ \alpha_i + b_j\ \beta_i + b_k\ \beta_i + y_j\ \eta_i + B_j\ y_k\ \eta_i +$$
$$x_j\ \xi_i + x_k\ \xi_i + \frac{1}{2} \in \left(B_j\ y_j\ y_k\ \eta_i^2 + x_k\ \xi_i\ \left(-2\ a_j + x_j\ \xi_i\right)\right)$$
$$dS_i \to -a_i\ \alpha_i - b_i\ \beta_i - \frac{\mathcal{A}_i\ \left(y_i\ \eta_i + \left(-\eta_i + B_i\ \left(x_i + \eta_i\right)\right)\ \xi_i\right)}{B_i} - \frac{1}{4\ B_i^2}$$
$$\in \mathcal{A}_i\ \left(\mathcal{A}_i\ \eta_i^2\ \left(2\ y_i^2 - 6\ y_i\ \xi_i + 3\ \xi_i^2\right) + B_i^2\ \xi_i\ \left(4\ a_i\ x_i + 2\ x_i^2\ \mathcal{A}_i\ \xi_i + \right.\right.$$
$$\left.2\ x_i\ \left(2\ \beta_i + \mathcal{A}_i\ \eta_i\ \xi_i\right) + \eta_i\ \left(-4 + 4\ \beta_i + \mathcal{A}_i\ \eta_i\ \xi_i\right)\right) +$$
$$2\ B_i\ \eta_i\ \left(y_i\ \left(-2 + 2\ \beta_i + 2\ x_i\ \mathcal{A}_i\ \xi_i + \mathcal{A}_i\ \eta_i\ \xi_i\right) - \right.$$
$$\left.\left.\xi_i\ \left(-2 + 2\ a_i + 2\ \beta_i + 3\ x_i\ \mathcal{A}_i\ \xi_i + 2\ \mathcal{A}_i\ \eta_i\ \xi_i\right)\right)\right)$$
$$R_{i,j} \to a_j\ b_i + x_j\ y_i - \frac{1}{4} \in x_j^2\ y_i^2$$
$$P_{i,j} \to \alpha_j\ \beta_i + \eta_i\ \xi_j + \frac{1}{4} \in \eta_i^2\ \xi_j^2$$