$$
\begin{aligned}
p_{x2} &= \exp(a)p_{x1}\,,\\
p_{y2} &= \exp(-a)p_{y1}\,,\\
x_2 &= \exp(-a)x_1 + bp_{x1}\,,\\
y_2 &= \exp(a)y_1 - bp_{y1}\,,\\
z_2 &= z_1 + (ax_1 - b(1-a/2)p_{x2})p_{x1} - (ay_1 - b(1+a/2)p_{y2})p_{y1}\,,
\end{aligned}
$$

where

$$
\begin{aligned}
a &= -\mathtt{K1F1}\frac{|\mathtt{F1}|}{24p_1\mathtt{L}}\,,\\
b &= \frac{\mathtt{K1F2}}{\mathtt{L}}\,.
\end{aligned}
$$