

According to P 67, the transition function for S^* is given by

$$g_{II'}^*(\Lambda) = {}^t g_{II}(\Lambda)^{-1}$$

$$= {}^t \left(({}^t \Lambda_{I'}^I)^{-1} \right)^{-1} = \Lambda_{I'}^I \Rightarrow$$

$$g_{I'I}^* = (\Lambda_{I'}^I)^{-1}$$

For $G(2,4)$, and $I = \{1, 2\}$, $I' = \{1, 3\}$,

$$g_{I'I}^*(\Lambda) = \begin{pmatrix} 1 & z_1 \\ 0 & z_3 \end{pmatrix}^{-1} = \begin{pmatrix} 1 & -\frac{z_1}{z_3} \\ 0 & \frac{1}{z_3} \end{pmatrix}$$

Given a holomorphic section $\tau: G(2,4) \rightarrow S^*$,

we get $\tau_1: U_{12} \rightarrow \mathbb{C}^2$
 $\tau_2: U_{13} \rightarrow \mathbb{C}^2$ where

$$\begin{array}{ccc} \tau_1: U_{12} & \longrightarrow & \mathbb{C}^2 \\ \downarrow & \nearrow & \\ \mathbb{C}^4 & & (f_1(z_1, \dots, z_4), f_2(z_1, \dots, z_4)) \\ (z_1, z_2, z_3, z_4) & \nearrow & \end{array}$$

$$\begin{array}{ccc} \tau_2: U_{13} & \longrightarrow & \mathbb{C}^2 \\ \downarrow & \nearrow & \\ \mathbb{C}^4 & & (g_1(w_1, w_2, w_3, w_4), g_2(w_1, w_2, w_3, w_4)) \\ (w_1, w_2, w_3, w_4) & \nearrow & \end{array}$$