

If V_{q+1} intersects with E' at p ,

we have to show that $T_p E' + \text{im } V_{q+1*} = T_p \mathbb{C}^{2n}$.

$$\text{im } V_{1*} = \begin{pmatrix} (1, 0, \dots, 0, \dots, 0, \alpha_{11} - \alpha_{10}, 0, \dots, 0) \\ (0, 1, \dots, 0, \dots, 0, \alpha_{12} - \alpha_{10}, \dots, 0) \\ \vdots \\ (0, 0, \dots, 0, 1, 0, \dots, \alpha_{1n} - \alpha_{10}) \end{pmatrix}$$

$$\text{im } V_{2*} = \begin{pmatrix} (1, 0, \dots, 0, \alpha_{21} - \alpha_{20}, 0, \dots, 0) \\ (0, 1, \dots, 0, \alpha_{22} - \alpha_{20}, \dots, 0) \\ \vdots \\ (0, 0, \dots, 1, 0, 0, \dots, \alpha_{2n} - \alpha_{20}) \end{pmatrix} \text{ everywhere.}$$

Since

$$V_1: \mathbb{C}^n \longrightarrow \mathbb{C}^n \times \mathbb{C}^n$$

$$(x_1, \dots, x_n) \longmapsto (x_1, \dots, x_n, (\alpha_{11} - \alpha_{10})x_1, \dots, (\alpha_{1n} - \alpha_{10})x_n)$$

$$V_2: \mathbb{C}^n \longrightarrow \mathbb{C}^n \times \mathbb{C}^n$$

$$(x_1, \dots, x_n) \longmapsto (x_1, \dots, x_n, (\alpha_{21} - \alpha_{20})x_1, \dots, (\alpha_{2n} - \alpha_{20})x_n).$$

\Rightarrow By the assumption that all $\ell \times \ell$ minors ($\ell \geq 2$) are distinct, $\alpha_{1i} - \alpha_{10} \neq \alpha_{2i} - \alpha_{20}$ for $i = 1, \dots, n$.

\Rightarrow The determinant of the following matrix