" $\dim(V_{n-x_\alpha} \cap L^\circ) = n - x_\alpha - 1$.

$\mathbb{C}^n = L \oplus L^\circ$. $\quad L = \langle v_1 \rangle$. $\quad V_k = \langle v_1, v_2 \cdots v_k \rangle$

$\Rightarrow v_i = \alpha_i v_1 + w_i$, $\quad w_i \in L^\circ$. uniquely $i = 2 \cdots k$.

$\Rightarrow v_i - \alpha_i v_1 = w_i \in L^\circ$.

Obviously $V_k = \langle v_1, w_2, \cdots w_k \rangle$

$\Rightarrow V_k \cap L^\circ$ has dim. $k-1$. "

Thus define $V_{n-x_\alpha-1} = V_{n-x_\alpha} \cap L^\circ$.

$\Rightarrow \pi(V_{n-x_\alpha-1}) = \pi(V_{n-x_\alpha}) = \pi(V_{n-x_\alpha-1} \oplus L)$.

Then $\bar{V} = \{\bar{V}_i\}$, $\bar{V}' = \{\bar{V}_i'\}$, and $\bar{V}'' = \{\bar{V}_i''\}$ are transverse flags in L°, and for any $(k-1)$-plane $\bar{\Lambda} \subset L^\circ$, we see that

$$\Lambda = \overline{L, \bar{\Lambda}} \in \sigma_a(V) \cap \sigma_b(V') \cap \sigma_c(V'')$$

$$\Leftrightarrow \bar{\Lambda} \in \sigma_{a_1 \cdots \hat{a}_\alpha \cdots a_k}(\bar{V}) \cap \sigma_{b_1 \cdots \hat{b}_\beta \cdots b_k}(\bar{V}') \cap \sigma_{c_1 \cdots \hat{c}_\gamma \cdots c_k}(\bar{V}'').$$

Pf $\quad V_{n-x_\alpha} = \langle v_1, w_2, \cdots w_{n-x_\alpha} \rangle$

$L = \langle w_2, \cdots w_{n-x_\alpha}, \cdots w_n \rangle$

$\Rightarrow V_{n-x_\alpha-1} = \langle w_2, \cdots w_{n-x_\alpha} \rangle \supset V_{n-x_\alpha-2} = \langle w_3, \cdots w_{n-x_\alpha} \rangle$

$V_{n-x_\alpha+1} = \langle v_1, w_2, \cdots w_{n-x_\alpha}, w_{n-x_\alpha+1} \rangle \cdots$

$V_n = \langle v_1, \cdots w_n \rangle$

If $v \in \pi(V_{n-x_\alpha}) \cap \pi(V'_{n-y_\beta}) \cap \pi(V''_{n-z_\gamma})$,

then $\pi^{-1}(v) \subset V_{n-x_\alpha} \cap V'_{n-y_\beta} \cap V''_{n-z_\gamma} = L$.

$\Rightarrow$ Since $\pi^{-1}(v) = L \oplus v \subset L \oplus L^\circ$, $\quad v$ must be zero.

$\Rightarrow \pi(V_{n-x_\alpha}) \cap \pi(V'_{n-y_\beta}) \cap \pi(V''_{n-z_\gamma}) = \bar{V}_{n-x_\alpha-1} \cap \bar{V}'_{n-y_\beta-1} \cap \bar{V}''_{n-z_\gamma-1}$

$= (0)$.