Suppose $\overline{\Lambda} \in \sigma_{\underset{a'_i}{a_1} \cdots \hat{a}_\alpha \cdots \underset{a'_{k-1}}{a_k}}(\overline{V}) \cap \sigma_{b_1 \cdots \hat{b}_\beta \cdots b_k}(\overline{V}') \cap \sigma_{c_1 \cdots \hat{c}_\gamma \cdots c_k}(\overline{V}'')$.

$\dim(\overline{\Lambda} \cap \overline{V}_{n-1-(k-1)+i-a_i}) \geq i$. $\quad i < \alpha$

$\dim(\overline{\Lambda} \cap \overline{V}_{n-k+\alpha+j-a_{\alpha+j+1}}) \geq \alpha + j \quad j \geq 0$

$$\overline{V}_{n-1-k+1+i-a_i} = \pi(V_{n-k+i-a_i})$$

$\Rightarrow \dim(\pi(\Lambda) \cap \pi(V_{n-k+i-a_i})) = \dim(\Lambda \cap V_{n-k+i-a_i}) \geq i$.
for $i < \alpha$, since $V_{n-k+i-a_i} \cap L = (0)$.

But if $\dim(\overline{\Lambda} \cap \overline{V}_{n-k+\alpha+j-a_{\alpha+j+1}}) \geq \alpha + j$. $\quad j \geq 0$,

$\dim(\pi(\Lambda) \cap \pi(V_{n-k+\alpha+j+1-a_{\alpha+j+1}})) + 1 = \dim(\Lambda \cap V_{n-k+\alpha+j+1-a_{\alpha+j+1}})$ since $\Lambda \supset L$ and $V_{n-k+\alpha+j+1-a_{\alpha+j+1}} \supset L$.

Clearly $(\Lambda \cap V_{n-k+\alpha-a_\alpha})$ has $\dim \geq \alpha$ since $\dim(\overline{\Lambda} \cap \overline{V}_{n-k+\alpha-a_{\alpha-1}}) \geq \alpha - 1$, ($\because$ $\dim(\overline{\Lambda} \cap \overline{V}_{n-k+\alpha-1-a_{\alpha-1}}) \geq \alpha - 1$ and $n-k+\alpha-a_{\alpha-1} \geq n-k+\alpha-1-a_{\alpha-1}$) and $\Lambda \cap V_{n-k+\alpha-a_\alpha} \supset L$.

Conversely, if $\Lambda = \overline{L.\overline{\Lambda}} \in \sigma_a(V) \cap \sigma_b(V') \cap \sigma_c(V'')$, we will show that $\overline{\Lambda} \in \sigma_{a_1 \cdots \hat{a}_\alpha \cdots}(\overline{V}) \cap \cdots$.
To show this, if $\Lambda \in \sigma_a(V)$, we have only to show that $\overline{\Lambda} \in \sigma_{a_1 \cdots \hat{a}_\alpha \cdots a_k}(\overline{V})$.