For any two points $x \neq x' \in L$, let $p = l_x \cap l_{x'}$ be the point of intersection of the corresponding lines and $h = \overline{l_x, l_{x'}}$ the plane they span; the line $\sigma_{2,1}(p, h)$ in G then contains x and x', and so equals L.

「 $\overline{x, x'} = L \subset G \Rightarrow$ By the result above, $l_x \cap l_{x'} \neq \phi \quad \Rightarrow \quad p = l_x \cap l_{x'}$

Since $\sigma_{2,1}(p, h) = \{$ all lines passing p and contained in $h = \overline{l_x, l_{x'}}\}$, $\quad \sigma_{2,1}(p,h)$ is a line, and $\sigma_{2,1}(p, h) \ni x, x'$, $\quad \sigma_{2,1}(p, h) = \overline{x, x'} = L$.

」

Finally, to see that

Every 2-plane $V_2 \subset \mathbb{P}^5$ contained in G is a Schubert cycle $\sigma_2(p)$ or $\sigma_{1,1}(h)$.

Observe that for any point $x \in V_2$ the tangent plane section $T_x(G) \cap G$ contains V_2; thus for x_1, x_2, x_3 any three noncollinear points of V_2,

$$V_2 \subset G \cap T_{x_1}(G) \cap T_{x_2}(G) \cap T_{x_3}(G) = \{ x \in G : l_x \cap l_{x_i} \neq \phi, \ i = 1, 2, 3 \}.$$

「 By the result above, $T_x(G) \cap G$ is the