$p_0 \in h_i$, $i = 1, \cdots 6$.

and

$P_{ij} \in h_i, h_j, h_{ijk}$, $k \neq i, j$.

$\because$ $\overline{P_{i1}} = L_i \cap L_1$, $\cdots$ $\overline{P_{i6}} = L_i \cap L_6$ $\Rightarrow \{P_{ij}\}_{j \neq i}$.

By the same argument above,

$h_{emn} = \overline{P_{em}, P_{mn}, P_{ne}} \ni P_{ij}, P_{jk}, P_{ik}$

$\Rightarrow h_{emn} \supset \{P_{em}, P_{mn}, P_{ne}, P_{ij}, P_{jk}, P_{ik}\} \Rightarrow h_{emn} = h_{ijk}$ by the result on P775.

$\lrcorner$

3. Lines On The Quadric Line Complex.

The Variety of Lines on the Quadric Line Complex

We now introduce a central variety in our study: the variety $A = \{L \subset \mathbb{P}^5 : L \subset X\} \subset G(2,6)$ of lines lying on the quadric line complex X. To show that A is smooth, we first compute its cohomology class in $G(2,6)$. Recalling from Section 1 of Chapter 6 that the cycle $\tau(F) \subset G(2,6)$ of lines in $\mathbb{P}^5$ lying on a quadric hypersurface is homologous to the Schubert cycle

$$\tau(F) \sim 4 \cdot \sigma_{2,1},$$

we see that the variety $A = \tau(F) \cdot \tau(G)$ repre-