

This process, moreover, is self-dual: the tetrahedron associated to  $T^*$  is  $T$  again.

¶ Let  $h_i''$  be the plane of  $X_{p_i'} = \sigma(p_i) \cap H$ .

$\Rightarrow h_i'' = h_i$ , since  $h_i$  is the plane of lines passing  $p_i'$ . Similarly,  $p_i'' = p_i \Rightarrow (T^*)^* = T$ .

$\Rightarrow$  The process is self-dual.

$\Rightarrow$

We now claim that conversely any such configuration of two tetrahedrons  $T$  and  $T'$  inscribed in and circumscribed about each other determines uniquely a smooth linear line complex in  $\mathbb{P}^3$ : if  $T$  has sides  $\{h_i\}$  and vertices  $\{p_i\}$ ,  $T'$  sides  $\{h_i'\}$  and vertices  $\{p_i'\}$  as above, then  $T'$  will be the dual tetrahedron of  $T$  with respect to the complex  $X$  exactly when the lines

$$L_i = \sigma(p_i, h_i'), \quad i = 1, 2, 3, 4,$$

and

$$L_i' = \sigma(p_i', h_i), \quad i = 1, 2, 3, 4,$$

in  $G$  all lie in  $X$ .

¶ A 'minor' change of the definition of 'inscribe' (Refer to P892 note).

Let  $T$  be a tetrahedron with sides  $\{h_i\}$  & vertices  $\{p_i\}$ . Let  $T'$  be a tetrahedron with