

Dually, of course, for  $p \in S$  any point,  $L$  and  $L' = \iota(L)$  the two pencils of  $X$  confocal at  $p$ .

The tangent plane to  $S$  at  $p$  is swept out by the two coplanar pencils of  $X$  containing the singular line  $h_L \cap h_{L'}$ .

$$\text{① } p \in S - R \quad L = \sigma(p, h_L) \quad L' = \sigma(p, h_{L'})$$

Let  $h = T_p(S)$ , and  $l_x = h_L \cap h_{L'}$ .

$$T_x(X) \cap X = \sigma(p, h_L) \cup \sigma(p, h_{L'}) \cup \sigma(p_1, k) \cup \sigma(p_2, k).$$

$\Rightarrow$  Since  $k \in S^*$ , by the argument above,  $k$  is tangent to  $S$  at  $p$ .  $\Rightarrow k = h = T_p(S)$ .

$$\text{② } p \in R$$

$$T_x(X) \cap X = \sigma(p, h_L) \cup \sigma(p, h_{L'}) \cup \sigma(p_1, k) \cup \sigma(p_2, k)$$

$\Rightarrow h_L = h_{L'} \Rightarrow$  Since  $k$  contains  $p$ ,  $k$  is a tangent plane of  $S$  at  $p$ . Clearly,  $k$  contains the singular line  $l_x = \overline{p_1 p_2}$ .

Still, I do not know what the tangent plane of  $S$  at  $q \in R$  is.

□

Note in particular that the map

$$j: B_L \longrightarrow C_L$$

is one-to-one at  $p_L$ , and that