

— $\mathbb{P} \quad \tilde{S} = \Sigma \longrightarrow S$ is the desingularization of S .

— See P786.

— \cup

— The curves $\tilde{C}_i = \pi^{-1}(C_i)$ are rational curves with $C_i^2 = -1$; blowing them down gives the Abelian surface A .

— \mathbb{P} P786. Uniqueness of desingularization. $\Rightarrow \tilde{S} = \Sigma$

— \Rightarrow By P786, $C_i = E_i \Rightarrow C_i \cdot C_i = -1$, and since π is locally one to one generically. $\Rightarrow \pi^{-1}(C_i)$.
 — $\pi^{-1}(C_i) = \tilde{C}_i \cdot \tilde{C}_i = -1. \Rightarrow$ By P786, \tilde{A} is the
 — 2-sheeted, branched (at E) ^{cover} of A .

— \cup

References

— The quadric line complex and its associated Kummer surface were extensively studied in the last century; a classic source is

— F. Klein, Zur Theorie der Liniencomplexe des ersten und zweiten Grades, Math. Ann. Vol. 2 (1870), pp. 198–226.

— It has reappeared in connection with the