

and again, by the Riemann Conditions III, w positive of type (1,1) implies that $Z = {}^t Z$, $\text{Im } Z > 0$.

$$\Gamma \quad (\lambda_1, \dots, \lambda_{2n}) = \begin{bmatrix} e_1 \\ \vdots \\ e_n \end{bmatrix} \Omega \quad \Leftrightarrow \quad \lambda_i = \sum \omega_{\alpha i} e_\alpha$$

\uparrow
 bad notation

$\Omega = (\omega_{\alpha i})$

See p304 and p305~p306.

'dual to' means 'with respect to'. \Rightarrow

Our fundamental calculation is the

Lemma. The line bundle $L \rightarrow M$ given by multipliers
 $e_{\lambda_\alpha} \equiv 1$, $e_{\lambda_{n+\alpha}}(z) = e^{-2\pi i z_\alpha}$, $\alpha = 1, \dots, n$,
 has Chern class $c_1(L) = [\omega]$.

Proof. We first check that the multipliers given do indeed satisfy the relations (*) above. Clearly (*) is satisfied for α or $\beta \leq n$; and writing $Z = (Z_{\alpha\beta})$, we have

$$\begin{aligned} e_{\lambda_{n+\beta}}(z + \lambda_{n+\alpha}) \cdot e_{\lambda_{n+\alpha}}(z) &= e^{-2\pi i (z_\beta + \overset{\rightarrow \text{symmetric}}{Z_{\beta\alpha}} + z_\alpha)} \\ &= e^{-2\pi i (z_\alpha + Z_{\alpha\beta} + z_\beta)} \\ &= e_{\lambda_{n+\alpha}}(z + \lambda_{n+\beta}) \cdot e_{\lambda_{n+\beta}}(z) \end{aligned}$$

as required.