

a convex proper cone since for $h_1 > 0, h_2 > 0, \phi_1 \in E_+^p, \phi_2 \in E_+^p$ we have

$$h_1 \phi_1 + h_2 \phi_2 \in E_+^p.$$

$$\begin{aligned} \Gamma \quad & (h_1 \phi_1 + h_2 \phi_2) \wedge (\bar{i} \alpha_1 \wedge \bar{\alpha}_1) \wedge \dots \wedge (\bar{i} \alpha_{n-p} \wedge \bar{\alpha}_{n-p}) = \ell(h_1 \phi_1 + h_2 \phi_2, L^{n-p}) \\ \tau_n = & \{ \ell(h_1 \phi_1, L^{n-p}) + h_2 \ell(\phi_2, L^{n-p}) \} \tau_n \quad \Rightarrow \end{aligned}$$

One has $E_+^n = \{ a \tau_n \}, a \in \mathbb{R}^+$.

Let us put

$$E_+ = \sum_{p=0}^n E_+^p.$$

(2) In order that ϕ belong to E_+^1 it is necessary and sufficient that there is an admissible basis $(\omega, \bar{\omega})$ in which ϕ can be expressed as follows:

$$\phi = \bar{i} \sum_1^q s_j \omega_j \wedge \bar{\omega}_j, \quad 1 \leq j \leq n, \quad s_i \in \mathbb{R}^+ \quad (6).$$

$\Gamma(\Rightarrow)$ Let $\{\omega_1, \dots, \omega_n, \bar{\omega}_1, \dots, \bar{\omega}_n\}$ be a basis for E_{2n} .

$$\Rightarrow \phi = \bar{i} \sum s_j \omega_j \wedge \bar{\omega}_j$$

$$\Rightarrow \phi \wedge (\bar{i} \omega_1 \wedge \bar{\omega}_1) \wedge \dots \wedge (\bar{i} \omega_{n-1} \wedge \bar{\omega}_{n-1})$$

$$= \bar{i}^n s_n \omega_1 \wedge \bar{\omega}_1 \wedge \dots \wedge (\omega_{n-1} \wedge \bar{\omega}_{n-1}) \wedge (\omega_n \wedge \bar{\omega}_n)$$

$$= s_n \bar{i} (\omega_1 \wedge \bar{\omega}_1) \wedge \dots \wedge (\bar{i} \omega_n \wedge \bar{\omega}_n) = s_n \tau_n$$

$$\Rightarrow s_n \in \mathbb{R}^+ \Rightarrow \dots \text{ Similarly, we get } s_i \in \mathbb{R}^+.$$

(\Leftarrow) If $\phi = \bar{i} \sum s_j \omega_j' \wedge \bar{\omega}_j'$ for some admissible basis $(\omega', \bar{\omega}')$, then $\omega_k' = \sum c_k^j \omega_j$.

$$\Rightarrow \phi = \bar{i} \sum s_j \omega_j' \wedge \bar{\omega}_j' = \bar{i} \sum s_j c_j^k \omega_j \wedge \bar{c}_j^k \bar{\omega}_j =$$