$\alpha =$
$\{\alpha_i\}_{i1} \in$
$\ell^\infty(C)$
$D_\alpha \in$
$B(\ell^2(C))$
$D_\alpha(x_1, x_2, \ldots) := (\alpha_1 x_1, \alpha_2 x_2, \ldots).$

$\sigma_p(D_\alpha) =$
$\{\alpha_i\}_{i1}$
$\{\alpha_i\} \subset$
$\sigma_p(D_\alpha)$
α_i
$e^{(i)}$
$\alpha_i I)(e^{(i)}) =$
$\sum_{n1}(\alpha_n -$
$\alpha_i)e_n^{(i)} =$
$0 bute^{(i)} \neq$
$0.$
$\sigma_p(D_\alpha) \subset$
$\{\alpha_i\}$
$\lambda \notin$
$\{\alpha_i\}$
$(D_\alpha -$
$\lambda I)(x) =$
0
$x \neq$
0
$(\alpha_1 x_1, \alpha_2 x_2, \ldots) = (\lambda x_1, \lambda x_2, \ldots).$

$x \neq$
0
$n \in$
N
$\alpha_n x_n =$
$\lambda x_n \lambda =$
$\alpha_n \in$
$\{\alpha_i\}$
$\sigma_p(D_\alpha) =$
$\{\alpha_i\}$
$\overline{\sigma(D_\alpha) =}$
$\sigma_p(D_\alpha)$
$\sigma_p(D_\alpha) \subset$
$\sigma(D_\alpha)$
$\sigma(D_\alpha)$
$\overline{\sigma(D_\alpha) \subset}$
$\sigma_p(D_\alpha)$
$\overline{\lambda \notin}$
$\sigma_p(D_\alpha)$
$\lambda \notin$
$\sigma(D_\alpha)$
$\lambda \in$
$S(D_\alpha)$
λ
$D_\alpha -$
λI
$(D_\alpha -$
$\lambda I)(x) =$
$(D_\alpha -$
$\lambda I)(y)$
$((\alpha_1 - \lambda)x_1, (\alpha 2 - \lambda)x_2, \ldots) = ((\alpha_1 - \lambda)y_1, (\alpha_2 - \lambda)x_2, \ldots)(x_1, x_2, \ldots) = (y_1, y_2, \ldots).$

$y =$
$\{y_n\} \in$
$\ell^2(C)$

$$x := \left(\frac{y_1}{\alpha_1 - \lambda}, \frac{y_2}{\alpha_2 - \lambda}, \ldots\right).$$

$\overline{\lambda \notin}$
$\{\alpha_i\}$
$\inf_{i1} \alpha_i -$
$\lambda =$
d
$d >$
0
$x \in$
$\ell^2(C)$
$\|x\|_{\ell^2}^2 =$
$\sum \ldots \frac{y_i^2}{} \ldots \sum \ldots \frac{y_i^2}{}$