symmetric space V (irreducible or not) is again Hermitian symmetric and is isomorphic to V.

PROOF. Since $H^1(V, \theta)=0$ [2], we see that the set of points $t\in B$ for which V_t is isomorphic to V is an open set in B [3]; it is also closed by Theorem 2.

REFERENCES

1. K. Srinivasacharyulu, Thesis to appear in Séminaire Ehresmann, Paris.
2. R. Bott, *Homogeneous vector bundles*, Ann. of Math. (2) **66** (1957), 203–248.
3. K. Kodaira and D. C. Spencer, *On deformations of complex structures*. I, II, Ann. of Math. (2) **67** (1958), 328–465.

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ON THE BEST APPROXIMATION FOR SINGULAR INTEGRALS BY LAPLACE-TRANSFORM METHODS

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1. **Introduction.** Let $f(t)$ be a Lebesgue-integrable function in $(0, R)$ for every positive R. We denote by

$$J_\rho(t) = \rho\int_0^t f(t-u)k(\rho u)du \qquad (t \geqq 0)$$

a general singular integral with parameter $\rho>0$ and kernel k having the following property (P): $k(u)\geqq 0$ in $0\leqq u<\infty$, $k\in L(0,\infty)$, and $\int_0^\infty k(u)du=1$.

If we restrict the class of functions $f(t)$ such that $e^{-ct}f\in L_p(0,\infty)$, $1\leqq p<\infty$, for every $c>0$, and if k satisfies (P), then the following statements hold:

(i) $J_\rho(t)$ exists as a function of t almost everywhere, $e^{-ct}J_\rho \in L_p(0,\infty)$ for every $c>0$, and $\|e^{-ct}J_\rho\|_{L_p(0,\infty)}\leqq\|e^{-ct}f\|_{L_p(0,\infty)}$;

(ii) $\lim_{\rho\uparrow\infty}\|e^{-ct}\{f-J_\rho\}\|_p=0$.

Furthermore, we denote by

$$\hat{f}(s) = \int_0^\infty e^{-st}f(t)dt \qquad (s=\sigma+i\tau,\ \mathrm{Re}\, s>0)$$

the Laplace-transformation of a function f belonging to one of the classes described above, and the Laplace-Stieltjes-transform of a