CORRECTION TO THE PAPER "THE f-STRUCTURE INDUCED ON SUBMANIFOLDS OF COMPLEX AND ALMOST COMPLEX SPACES"

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The paragraph from 21st line to 28th line on p. 145 of our paper "The f-structure induced on submanifolds of complex and almost complex spaces", vol. 18 (1966), pp. 120–160 should be replaced by the following:

We now consider an f-submanifold V in an almost Hermitian space W. We suppose that there exists a subspace N_{P} in the holomorphic extension $T_{\mathrm{P}}^{H}(V)$ of tangent space $T_{\mathrm{P}}(V)$ at each point P of V such that N_{P} is orthogonal to $T_{\mathrm{P}}(V)$ and $T_{\mathrm{P}}^{H}(V)=T_{\mathrm{P}}(V)+N_{\mathrm{P}}$ (direct sum), $F(N_{\mathrm{P}})\subset T_{\mathrm{P}}(V)$. Then N_{P} is $(n-r)$-dimensional if dim $H=r$ and dim $V=n$. If this is the case, we call the given f-submanifold V a *metric f-submanifold* in the almost Hermitian space W. For the sake of simplicity, we call sometimes a metric f-submanifold simply a *f-submanifold* in an almost Hermitian space. When V is a metric f-submanifold, there exists uniquely a subspace $\bar{N}$ of $N-2n+r$ dimensions in each tangent space $T_{\mathrm{P}}(W)$ of the enveloping space W such that $F(\bar{N}\ )=\bar{N}_{\mathrm{P}}$ and $\bar{N}_{\mathrm{P}}$ is orthogonal to $T_{\mathrm{P}}^{H}(V)$ at each point P of V, where dim $W=N$, dim $V=n$ and dim $H_{\mathrm{P}}=r$. Thus we have an f-surface $\{V, N(V), \bar{N}(V)\}$ corresponding uniquely to the given metric f-submanifold V and denote it simply by V.

Remark. We shall give an example of submanifolds of a Hermitian space, which are f-submanifolds in the sense of § 3 and are not metric f-submanifolds in the sense of this section. Let W be the space of all m complex numbers $(z^1, z^2, \cdots, z^m)$ and put $z^\alpha=x^\alpha+\sqrt{-1}x^{\alpha+m}$ $(\alpha=1, 2, \cdots, m)$, where x^α and $x^{\alpha+m}$ are real numbers. Then W is a Hermitian space with the natural metric

$$ds^2=dz^1d\bar{z}^1+dz^2d\bar{z}^2+\cdots+dz^md\bar{z}^m.$$

We consider in W a $(2m-2)$-dimensional submanifold $\tilde{V}$ defined by equations

$$(x^1)^2+\cdots+(x^{2m-1})^2=1, \qquad x^{2m}=0.$$

If we denote by V the open submanifold $\tilde{V}-\mathrm{P}_+-\mathrm{P}_-$ of $\tilde{V}$, P_+ and P_- being respectively the points $(0, \cdots, 0, +1, 0)$ and $(0, \cdots, 0, -1, 0)$ belonging to $\tilde{V}$, then V is an f-submanifold of W in the sense of § 3. It is easily verified that V is not a metric f-submanifold of W in the sense of this section.

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