Erratum to

“LOCAL HOLOMORPHIC ISOMETRIC EMBEDDINGS ARISING FROM CORRESPONDENCES IN THE RANK-1 CASE”

Ngaiming Mok

Theorem 1.1 in “Local holomorphic isometric embeddings arising from corres-
pondences in the rank-1 case” (Mok [Mk]) was proven only for the case of $n \geq 2$.
The corrected statement reads

**Theorem 1.1 (Corrected).** For $n$ a positive integer write $B^n_r = \{ z \in \mathbb{C}^n, \|z\| < r \}$ for $r > 0$. Assume now $n \geq 2$. Let $\varepsilon$ be a real number such that $0 < \varepsilon < 1$; $p, q$ be positive integers; and $f : (B^n_\varepsilon, qds^2_{B^n_\varepsilon}) \to ((B^n)^p, ds^2_{(B^n)^p})$ be a holomorphic
isometric embedding. Writing $f = (f^1, \ldots, f^p)$, assume that for each $k$, $1 \leq k \leq p$, $f^k : B^n_\varepsilon \to B^n$ is of maximal rank at some point. Then, $q = p$ and $f$ is the
restriction to $B^n_\varepsilon$ of a holomorphic totally-geodesic embedding $F : (B^n, pds^2_{B^n}) \to ((B^n)^p, ds^2_{(B^n)^p})$.

Here for a bounded domain $\Omega \Subset \mathbb{C}^n$ we denote by $ds^2_{\Omega}$ the Bergman metric on $\Omega$.

For the case of $n = 1$ we referred in [Mk] to a preprint of Clozel-Ullmo. In
the published version [CL] of the article of Clozel-Ullmo, there is no Théorème
2.2. In its place, the analogous statement for [Mk, Theorem 1.1] in the case
of $n = 1$ was only stated in [CL] as Conjecture 2.2, and only the special case
of Conjecture 2.2 for local holomorphic isometries arising from commutators of
modular correspondences ([CL, 2.2.1-2.2.3]) was established there. The author
has recently found counter-examples to Conjecture 2.2 of [CL].

References

[CL] L. Clozel and E. Ullmo, Correspondances modulaires et mesures invariantes,

[Mk] Local holomorphic isometric embeddings arising from correspondences in the
rank-1 case, in Contemporary Trends in Algebraic Geometry and Algebraic
Topology, ed. S.-S. Chern, L. Fu and R. Hain, Nankai Tracts in Mathematics,