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CORRECTION TO "SINGULARITIES OF A SIMPLE ELLIPTIC OPERATOR"

H. P. McKEAN

B. Ruf of the Università di Milano has pointed out that the evaluation $ZI_{n+1} = 1$ on p. 161, line 25 is wrong. The proof that each of the loci L_n $(n = 1, 2, 3, \cdots)$ is nonvoid and connected then falls apart, though it is easy to check it by other methods for $n = 1, 2,$ and 3. This failure means that the map $f \to -f'' + f^2/2$ may have the predicted singularities with normal form

$$x \to (x_1 x_2 = x_1^2 x_3 \cdots + x_1^{n-1} x_n + x_1^{n+1}, x_2, x_3, \cdots)$$

(fold, cusp, swallow-tail, etc.) only up to a certain degree $n \geq 3$—and then *stop*, whereas my claim had been that they are presented in every degree without exception. I do not see how to repair this blunder except in very low degree, by trial and error.

References

[1] H. P. McKean, *Singularities of a simple elliptic operator*, J. Differential Geometry **25** (1987) 157–165.

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