

# ERRATUM TO "FINE AND PARABOLIC LIMITS FOR SOLUTIONS OF SECOND-ORDER LINEAR PARABOLIC EQUATIONS ON AN INFINITE SLAB"

BY  
 BERNARD MAIR

The paper *Fine and parabolic limits for solutions of second-order linear parabolic equations on an infinite slab*, by B. A. Mair, Trans. Amer. Math. Soc. **284** (1984), 583–599, contains an obvious technical error which does not alter any of the results contained therein. This note indicates the minor modifications needed in certain proofs.

The property (P5) (p. 585) that Lebesgue measure represents the constant function 1 is false for the general parabolic operator  $L$  considered (but is true if  $c = 0$  in  $L$ ).

Now, let  $u_0$  be the harmonic function which is represented by Lebesgue measure on  $R^n$ . Then,

- (a)  $u_0$  is a bounded, positive harmonic function which is bounded away from 0,
- (b)  $u_0$  approaches 1 continuously on  $R^n$ .

*Modifications:* (1) In the proof of Proposition 3.1 (p. 588) replace  $\hat{R}_{E_m} 1$  by  $\hat{R}_{E_m} u_0$  and use (a).

(2) The proof of the first part of Theorem 4.1 (p. 589) needs no modification. To deduce the second part, observe that  $u/u_0$  has limit 0 along  $S(b)$  restricted to  $P(b; \alpha)$  implies  $u$  has limit 0 along  $S(b)$  restricted to  $P(b; \alpha)$  which implies  $u(x, t)/u_0(x, t) \rightarrow 0$  as  $(x, t) \rightarrow b$  within  $P(b; \alpha)$ . Then the result follows by using (b).

(3) In the proof of Lemma 5.1 (p. 590), let  $v$  be as defined and replace  $v$  everywhere else by  $v/u_0$ .

(4) In the proof of Theorem 9.2 (p. 59)

(i) replace  $\mathcal{H}_s(W)$  by  $\{u/u_0 : u \in \mathcal{H}_s(W)\}$ ,

(ii) replace  $\mathcal{H}_+(W)$  by  $\{u/u_0 : u \in \mathcal{H}_+(W)\}$ ,

(iii) let  $\omega$  be the representing measure for  $u_0$  (instead of the constant function 1) on  $B_s(W)$ .

Then the proof implies that  $u/u_0$  has finite parabolic limits a.e. on  $E$ . The result follows for  $u$  by using (b).

DEPARTMENT OF MATHEMATICS, PENNSYLVANIA STATE UNIVERSITY, MONT ALTO,  
 PENNSYLVANIA 17237