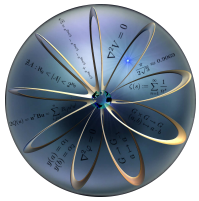

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polar set

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Definition. Let $G \subset \mathbb{R}^n$ and let $f\colon G \to \mathbb{R} \cup \{-\infty\}$ be a subharmonic function which is not identically $-\infty$. The set $\mathcal{P} := \{x \in G \mid f(x) = -\infty\}$ is called a *polar set*.

Proposition. *Let G and $\mathcal{P}$ be as above and suppose that g is a continuous subharmonic function on $G \setminus \mathcal{P}$. Then g is subharmonic on the entire set G.*

The requirement that g is continuous cannot be relaxed.

Proposition. *Let G and $\mathcal{P}$ be as above. Then the Lebesgue measure of $\mathcal{P}$ is 0.*

References

[1] Steven G. Krantz. , AMS Chelsea Publishing, Providence, Rhode Island, 1992.