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# THE NEW $\nu$–METRIC INDUCES THE CLASSICAL GAP TOPOLOGY

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*Abstract.* Let $\mathscr{A}_+$ denote the set of Laplace transforms of complex Borel measures $\mu$ on $[0,+\infty)$ such that $\mu$ does not have a singular non-atomic part. In [1], an extension of the classical $\nu$-metric of Vinnicombe was given, which allowed one to address robust stabilization problems for unstable plants over $\mathscr{A}_+$. In this article, we show that this new $\nu$-metric gives a topology on unstable plants which coincides with the classical gap topology for unstable plants over $\mathscr{A}_+$ with a single input and a single output.

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