Reverse Carleson embeddings in model spaces

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ABSTRACT: The classical embedding theorem of Carleson characterizes those positive measures μ on the unit disk for which H^2 — the classical Hardy space — embeds continuously into $L^2(\mu)$, or $\|f\|_{L^2(\mu)} \leq c\|f\|_{H^2}$ (*). On the other side, Lefèvre et al. examined measures for which moreover $\|f\|_{L^2(\mu)} \geq c\|f\|_{H^2}$ (**). Both inequalities arise naturally in different contexts related with so-called model spaces which play a prominent rôle in operator theory. From a rather function theoretic point of view, it can be noted that model spaces are a larger class of spaces including Paley-Wiener and which is related to de Branges spaces. Carleson type embeddings for model spaces were considered by many authors like Aleksandrov, Baranov, Cohn, Treil and Volberg. In this talk the inequality (**) will be discussed in model spaces.