On closing, we mention two conjectures concerning the maximal conjugate Fejér operators which we are unable to prove or disprove.

The first of them lies in the positive direction. We guess that $\widetilde{\sigma}_*^{(1,1)}(f)$ is bounded from $H^{(1,0)}(\mathbb{T}^2)\cap H^{(0,1)}(\mathbb{T}^2)$ into weak-$L^1(\mathbb{T}^2)$.

CONJECTURE 1. If $f\in H^{(1,0)}(\mathbb{T}^2)\cap H^{(0,1)}(\mathbb{T}^2)$, then we have

$$\sup_{\lambda>0}\lambda|\{(x,y)\in\mathbb{T}^2:\widetilde{\sigma}_*^{(1,1)}(f;x,y)>\lambda\}|\le C(\|f\|_{H^{(1,0)}}+\|f\|_{H^{(0,1)}}),$$

where the constant C does not depend on f.

If this conjecture were true, then (5.9) would hold for almost all $(x,y)\in\mathbb{T}^2$ under the assumption that $f\in H^{(1,0)}(\mathbb{T}^2)\cap H^{(0,1)}(\mathbb{T}^2)$, which is clearly less restrictive than the requirement $f\in H^{(1,1)}(\mathbb{T}^2)$.

The second conjecture lies in the negative direction. We guess that Corollary 4 is the best possible in a certain sense.

CONJECTURE 2. There exists a function $f\in H^{(1,0)}(\mathbb{T}^2)$ such that each of the relations (5.8) and (5.9) is no longer true at almost all points $(x,y)\in\mathbb{T}^2$.

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Erratum to "Operators on spaces of analytic functions"

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by

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The author wishes to add the reference: S. Axler and P. Bourdon, *Finite codimensional invariant subspaces of Bergman spaces*, Trans. Amer. Math. Soc. 306 (1988), 805–817, which has an overlap with his Lemma 1 and Theorem 2. Actually the reference was given in the author's lecture notes, Department of Mathematics, University of Calgary, 1991 (page 9 of Lecture 3), but has been inadvertently omitted during the preparation of the article.

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