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Paul S. Bourdon* (psb7p@virginia.edu). *Spectra of Composition Operators with Symbols in $\mathcal{S}(2)$.*

I'll begin by presenting some “spectral lemmas” developed by Trieu Le and me that describe spectra of sums of elements of a unital algebra over a field when certain pairwise products of summands are zero. Some of these lemmas are, no doubt, folklore. Then, I'll show how applying these lemmas in the context of the Calkin Algebra yields descriptions of essential spectra of certain composition operators—those acting on the Hardy space H^2 of the open unit disk whose symbols belong to the class $\mathcal{S}(2)$ introduced by Kriete and Moorhouse. For the composition operators considered, descriptions of the essential spectrum quickly lead to complete characterizations of the spectrum. (Received January 19, 2015)