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**David Eisenbud** and **Daniel Erman\*** ([derman@math.berkeley.edu](mailto:derman@math.berkeley.edu)), University of California, 970 Evans Hall, Berkeley, CA 94720, and **Frank-Olaf Schreyer**. *Beyond Numerics: The existence of pure filtrations.*

A recent result of Boij-Soederberg and Eisenbud-Schreyer proves that the Betti diagram of any graded module decomposes as a positive rational linear combination of pure diagrams. We consider the follow-up question of whether this numerical decomposition ever corresponds to an actual filtration of the minimal free resolution itself. Our main result is an affirmative answer to this question in many surprising cases. (Received January 25, 2010)