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Koszulness of multi-Rees algebras of the direct sum of strongly stable (0-Borel) ideals.

In this talk we will survey results concerning the koszulness of Rees and multi-Rees algebras of strongly stable (0-Borel) ideals. Particular attention will be given to (1) how the number, and degree, of the minimal Borel generators of the ideals involved affects the Koszulness, and (2) how combinatorial tools such as fiber graphs and Noetherian reduction relations allow us to detect Koszulness of these algebras. (Received September 14, 2020)