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Adam Nyman* (adam.nyman@wwu.edu). *A structure theorem for $\mathbb{P}^1 - \text{Spec } k$ -bimodules.*

Let k be an algebraically closed field. Using the Eilenberg-Watts theorem over schemes, we determine the structure of k -linear right exact direct limit and coherence preserving functors from the category of quasi-coherent sheaves on \mathbb{P}_k^1 to the category of vector spaces over k . As a consequence, we characterize those functors which are integral transforms. (Received November 22, 2011)