Abelianness of the "missing part" from coherent sheaf category to module category

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Abstract. We investigates the structure of the "missing part" from the category of coherent sheaves over a weighted projective line of weight type $(2, 2, n)$ to the category of finite dimensional right modules on the associated canonical tilted algebra. By constructing a t-structure in the stable category of the vector bundle category, we show that the "missing part" is equivalent to the heart of the t-structure, hence abelian, moreover, it is equivalent to the category of finite dimensional modules on an algebra of type A_{n-1}.