Filtrations determined by tilting objects of projective dimension two

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This is joint work with Bernt Tore Jensen and Xiuping Su. It is well known that a tilting object of projective dimension one in an abelian category determines a torsion pair $(\mathcal{T}, \mathcal{F})$. In this talk I will discuss the corresponding statement for tilting objectss of projective dimension two. A titling object of dimension two determines a triple $(\mathcal{E}_0, \mathcal{E}_1, \mathcal{E}_2)$ of disjoint extension closed subcategories such that every object X has a filtration $0 = X_0 \subseteq X_1 \subseteq X_2 \subseteq X_3 = X$ with $X_{i+1}/X_i \in \mathcal{E}_i$ for $i = 0, 1, 2$.