1057-18-370 **Ana Jeremías López*** (ana.jeremias@usc.es), Dep. de Álxebra Fac. de Matemáticas, Universidade de Santiago, Santiago de Compostela, SPAIN, E-15782 Santiago de Comp., Galicia, Spain. *Classifying t-structures in Commutative Algebra.*

In this talk we will present our results on t-structures on the derived category of modules over a commutative noetherian ring R, developed jointly with Alonso and Saorín. A theorem of Hopkins and Neeman classifies triangulated t-structures a.k.a. Bousfield localizations, they are in bijection with subsets of $\mathrm{Spec}(R)$. As it was shown by Stanley, this classification is impossible for general t-structures because they form a proper class already for $\mathbb{Z}$. We will treat the case of *compactly generated* t-structures. They are classified by decreasing filtrations by supports of $\mathrm{Spec}(R)$. All t-structures on $\mathsf{D}^b_{fg}(R)$, the subcategory of bounded complexes with finite type homology, is the restriction of a compactly generated t-structure on $\mathsf{D}(R)$. A decreasing filtration by supports $\phi\colon \mathbb{Z} \to \mathrm{Spec}(R)$ satisfies the weak Cousin condition (wCc) if $\phi(i)$ contains all immediate generalizations of the points of $\phi(i+1)$. Every t-structure on $\mathsf{D}^b_{fg}(R)$ is induced by a compactly generated t-structure on $\mathsf{D}(R)$ whose associated filtration by supports satisfies wCc and these are all if R has a dualizing complex. (Received January 26, 2010)