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Externally definable sets in simple structures

I will talk about the issue of quantifier elimination in the expansion of a simple structure with the traces of relations definable in some elementary extension. By Shelah's result, in the case of theories without the independence property, q.e. holds if we add all such traces (with parameters from a saturated extension). Since q.e. fails if we apply the same procedure to a random graph, in the simple case we restrict to parameters coming from a "lovely pair" extension. In this setting, in a joint work with Anand Pillay, we show that the expansion having q.e. is equivalent to a certain definability condition (weak lowness) on the base theory, and find an example of a non-weakly low simple theory. I will also discuss other possible ways of adding externally definable sets, such as expansions by "generic" traces.