Bringing DFT codes back to the testbench: what did we learn?

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We take it for granted that two independently written DFT codes make `identical\' predictions in identical situations. However, as soon as you look a bit closer on this assumption, many questions pop up: If this is really straightforward, why aren\'t there papers in the literature that document this? It\'s easy (?) to define `identical situations\', but how does one define `identical predictions\'? Which kind of disagreements are acceptable, and which not? Etc.

In this contribution, we will report about an ongoing community-wide effort to run the same benchmark set with different DFT codes, pseudopotential sets or PAW projectors. The overall trends and conclusions will be listed, and ways to make further progress will be discussed.