

## Full splitting Miller trees and ioe reals

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We investigate two tree forcings for adding infinitely often equal reals: the full splitting Miller forcing  $\mathbb{FM}$ , introduced by Rosłanowski in [1], and the infinitely often equal trees forcing  $\mathbb{IE}$ , implicitly introduced by Spinas in [2]. We prove results about Marczewski-type regularity properties associated with these forcings as well as dichotomy properties on  $\Delta_2^1$  and  $\Sigma_2^1$  levels, with a particular emphasis on a parallel with the Baire property. Furthermore, we prove that our dichotomies hold for all projective sets in Solovay's model, and that the use of an inaccessible is necessary for both.

### References

- [1] A. Rosłanowski, *On game ideals*, Colloq. Math., 59(2):159–168, 1990.
- [2] O. Spinas, *Perfect set theorems*, Fund. Math., 201(2):179–195, 2008.