In [1], Freitag and Scanlon showed that the algebraic differential equation satisfied by the $j$-function defines a non-$\omega$-categorical geometrically trivial strongly minimal set. This provided a counterexample to the $\omega$-categoricity conjecture in $\text{DCF}_0$. In this talk we will look at a weakening of the above conjecture; one arising from the work on the second Painlevé equations [2]:

**Conjecture 1.** In $\text{DCF}_0$ every geometrically trivial strongly minimal set is unimodular.

After recalling few facts about unimodularity in $\text{DCF}_0$, we will talk about whether the $j$-function also gives a counterexample to Conjecture 1.

**References**


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