Some further analysis on the implications of having two data roots, but some clients don’t verify one of the data roots.

Recall that Tendermint BFT halts if there’s a fork, so it’s fork-free. So in the case where one type of data root becomes invalid but the other remains valid, clients that only follow the valid root will still have a ‘canonical’ chain even though other clients may have halted. Data availability guarantees should still therefore be intact. When social consensus reboots the chain, they ought to keep the valid roots in the canonical but invalid chain.

This is also true if the light client doesn’t take an interest in the validity of state transitions of the Celestia proof of stake main chain via fraud or ZK proofs, which may not be possible anyway if they’re not following the correct data root where main chain transactions are posted.