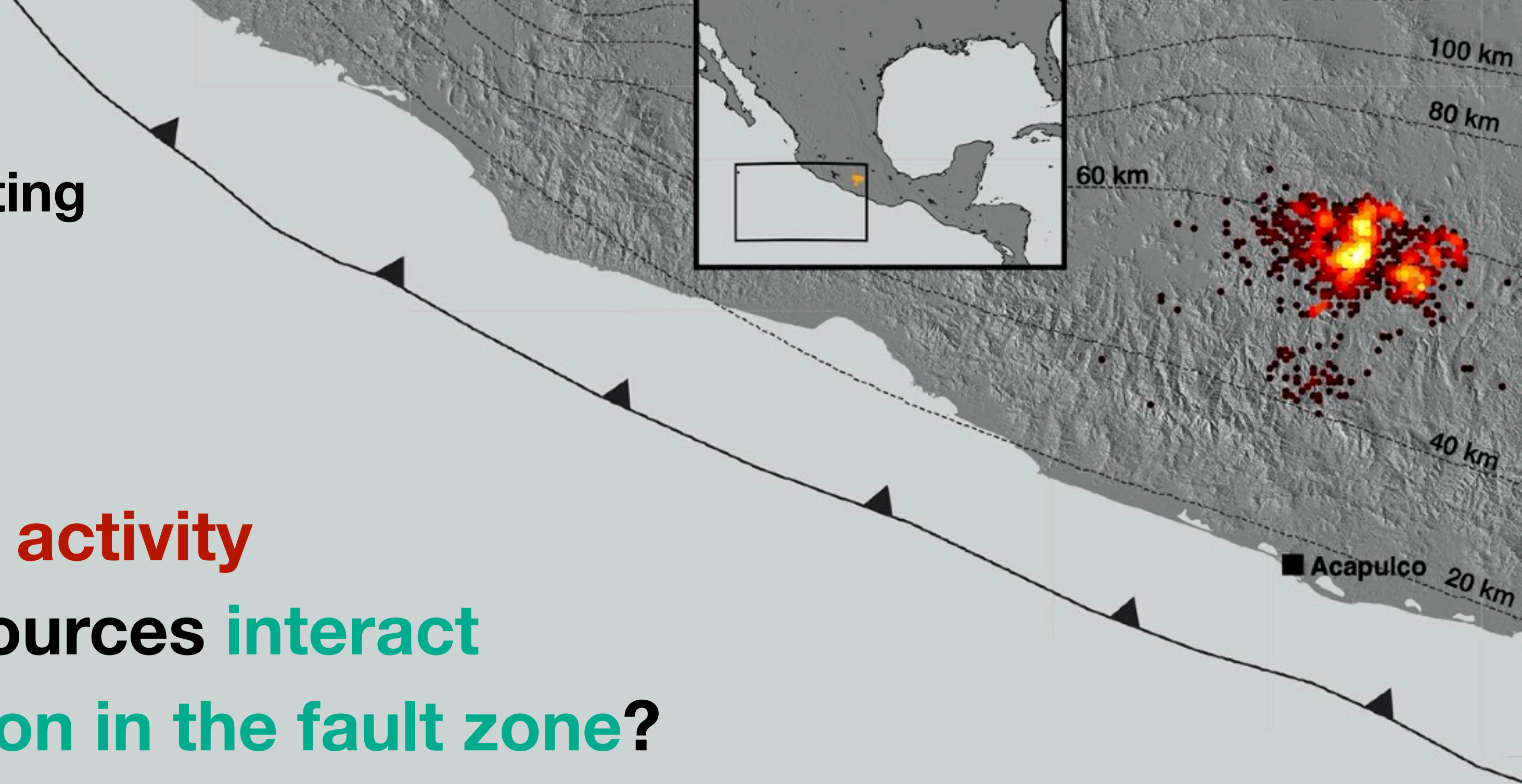


Cascading activity relies on events **interacting**


Can we simulate **this pattern of activity**
using a model where LFE sources **interact**
through fluid diffusion in the fault zone?

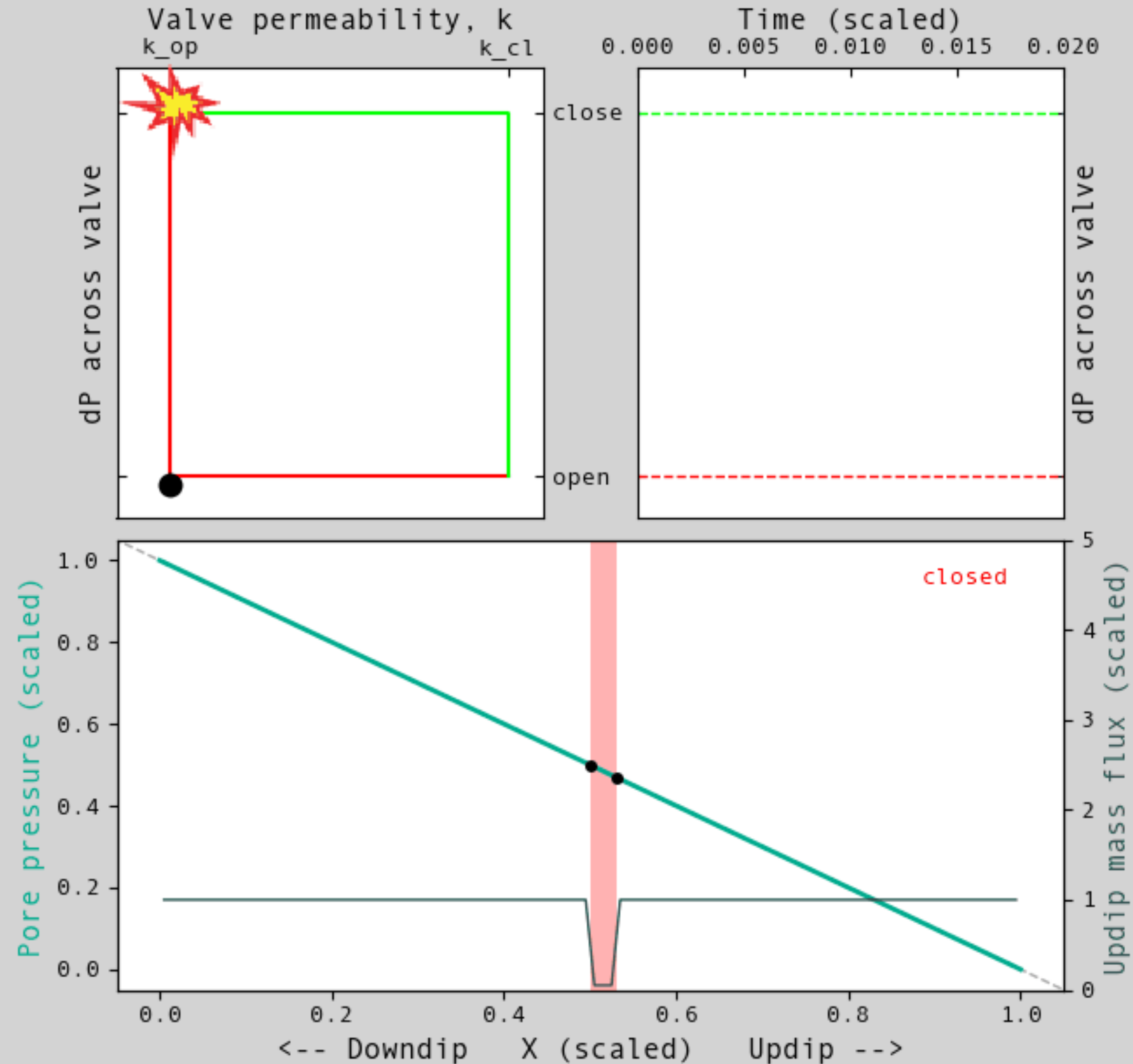
In turn, could we use **LFE activity patterns**
to **characterize fluid circulation** at depth?



Model LFEs sources: toy fault-valves*

Valve is **closed**:

- Acts as a low-permeability **barrier** to fluid circulation in the fault zone
- **Pore-pressure** differential across valve increases until...
- ...  the valve breaks **open**, generating an LFE



Valve is **open**:

- Accumulated pore-pressure gradient is released in a **flux pulse**
- **Pore-pressure** differential across valve decreases slowly until...
- ... valve heals, and is **closed** again

^ Click on the animation to run it! ^