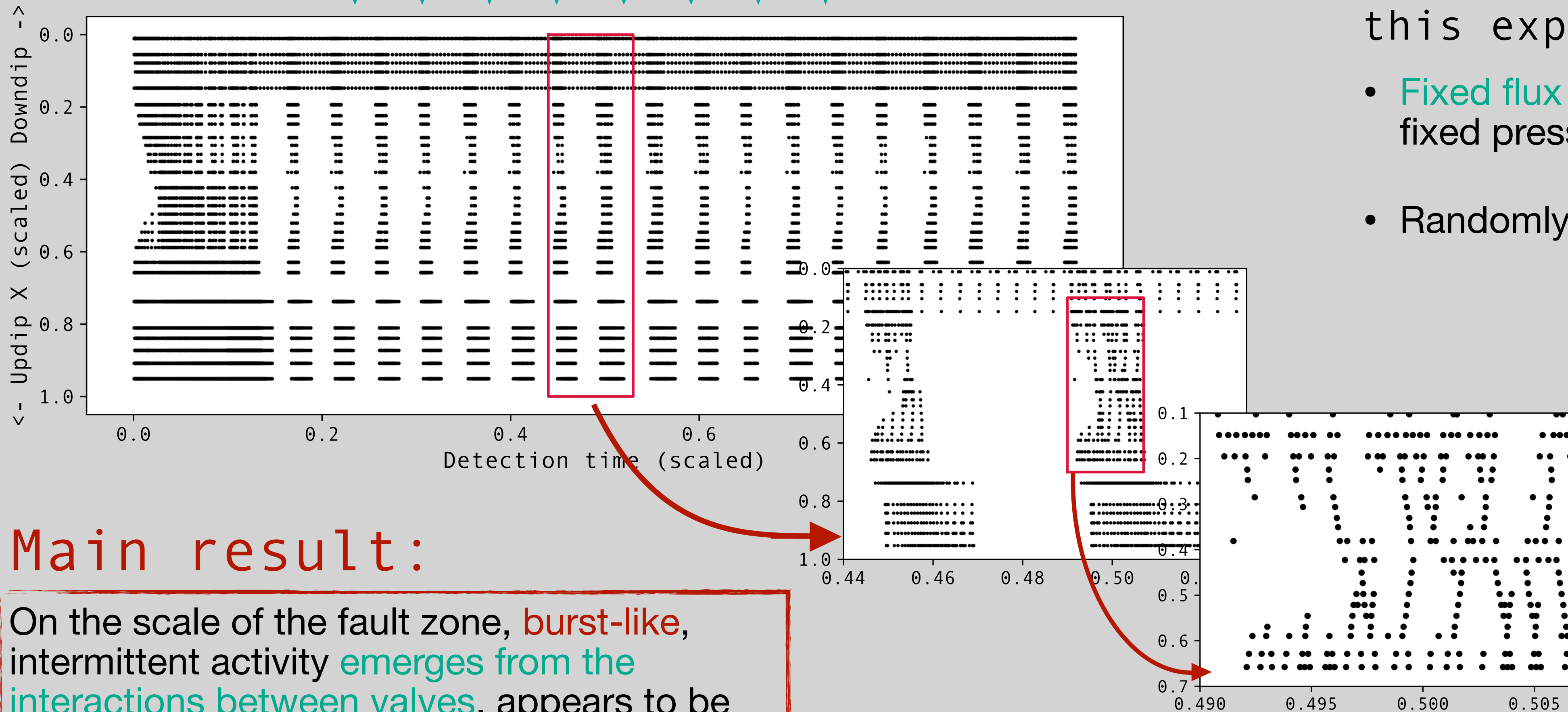


Burst-like patterns of activity emerge from interactions



Fault zone in this experiment:

- Fixed flux at the downdip end, fixed pressure at the updip end
- Randomly distributed valves

Main result:

On the scale of the fault zone, **burst-like**, intermittent activity **emerges from the interactions between valves**, appears to be quasi-periodic.

Take away:

In the data:

- LFE activity is intermittent, and happens in **bursts**, or cascades of events.

In this model:

- LFE sources are triggered and influence **pore-pressure** in their surroundings and thus **interact** with neighboring sources.
- Large-scale, intermittent, **burst-like activity emerges from this interaction, only based on pore-pressure diffusion.**

Perspectives:

- Refining the fault-valve, especially the healing phase.
- Exploring influence of **injected flux** (other control variables) on pseudo period.
- Linking **activity patterns** to **variations of permeability/flux variations** on the scale of a burst.