

file structure

entry-point.fcl

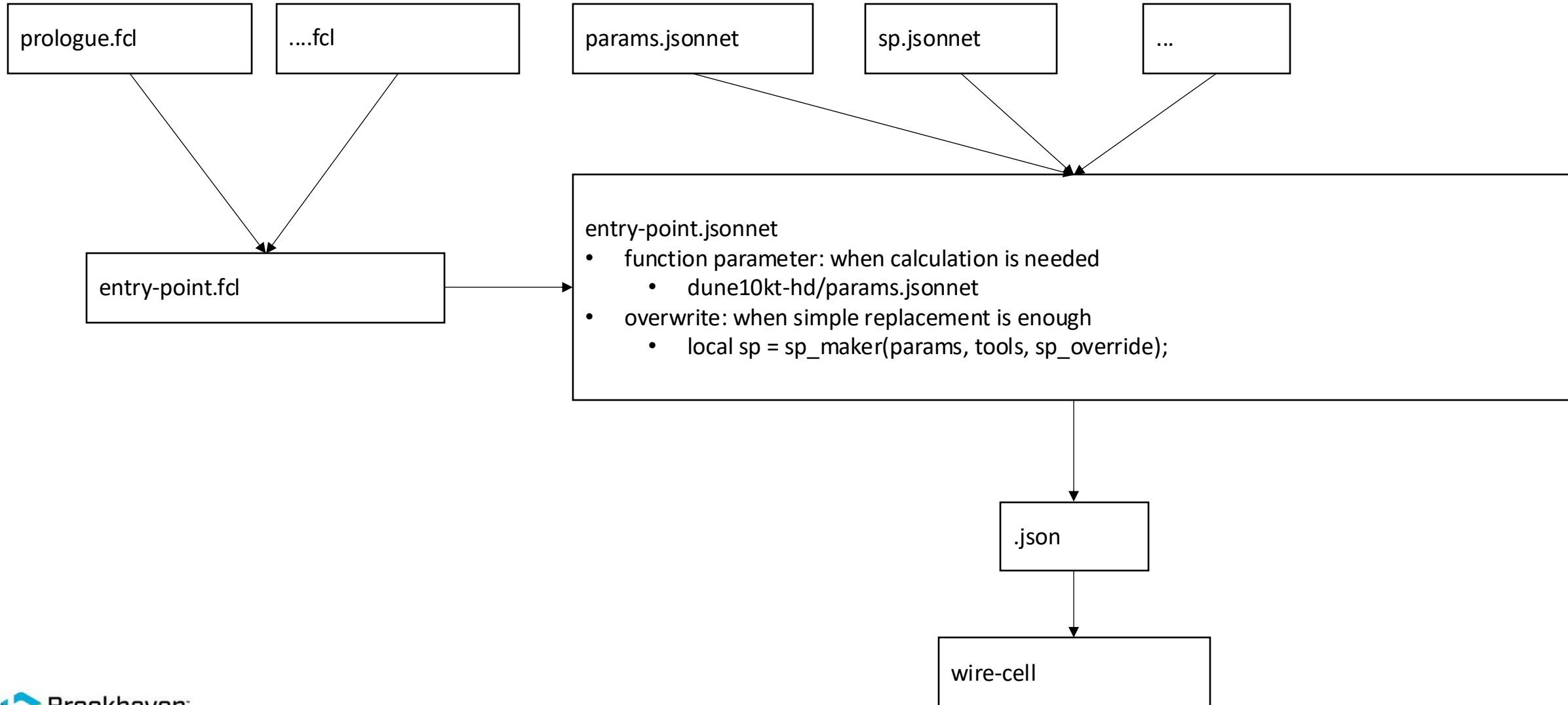
wirecell_dune.fcl

- wirecell_protodunespmc
- dune10kt_horizdrift_sim_nfsp
- ...

pgrapher/experiment/
pdsp/wcls-sim-drift-simchannel-priorSCE.jsonnet

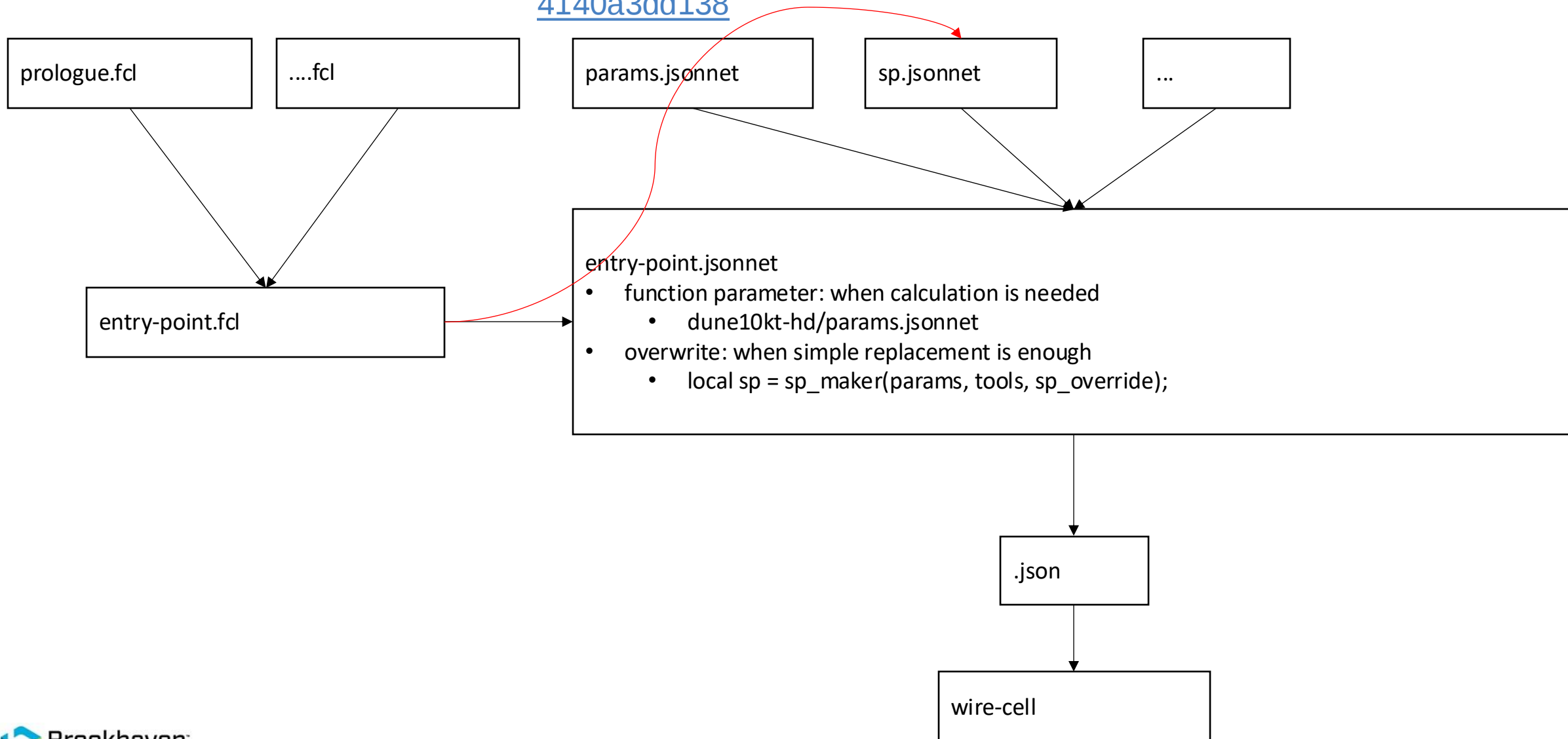
pgrapher/experiment/
dune10kt-hd/wcls-sim-drift-simchannel-nf-sp.jsonnet

information flow



information flow

<https://github.com/HaiwangYu/dunereco/commit/fe92ae9338ba204f4810bc5bc026b4140a3dd138>



dune10kt-hd/wcls-sim-drift-simchannel-nf-sp.jsonnet

```
local params_maker = import 'pgrapher/experiment/dune10kt-hd/simparams.jsonnet';
```

```
local fcl_params = {  
  G4RefTime: std.extVar('G4RefTime') * wc.us,  
  nticks: std.extVar('nticks'),  
  use_hydra: std.extVar('use_hydra'),  
};
```

```
local params = params_maker(fcl_params) {  
  lar: super.lar {  
    // Longitudinal diffusion constant  
    DL: std.extVar('DL') * wc.cm2 / wc.ns,  
    // Transverse diffusion constant  
    DT: std.extVar('DT') * wc.cm2 / wc.ns,  
    // Electron lifetime  
    lifetime: std.extVar('lifetime') * wc.us,  
    // Electron drift speed, assumes a certain applied E-field  
    drift_speed: std.extVar('driftSpeed') * wc.mm / wc.us,  
  },  
};
```

pdsp/wcls-sim-drift-simchannel-priorSCE.jsonnet

```
local base = import 'pgrapher/experiment/pdsp/simparams.jsonnet';
```

```
local params = base {
```

```
  lar: super.lar {
```

```
    // Longitudinal diffusion constant
```

```
    DL: std.extVar('DL') * wc.cm2 / wc.s,
```

```
    // Transverse diffusion constant
```

```
    DT: std.extVar('DT') * wc.cm2 / wc.s,
```

```
    // Electron lifetime
```

```
    lifetime: std.extVar('lifetime') * wc.ms,
```

```
    // Electron drift speed, assumes a certain applied E-field
```

```
    drift_speed: std.extVar('driftSpeed') * wc.mm / wc.us,
```

```
  },
```

```
};
```

Changes this round

- Dev branch:
 - <https://github.com/DUNE/dunereco/compare/develop...HaiwangYu:dunereco:dune-adc14?expand=1>
- pgrapher/common/params.jsonnet
 - dune/params.jsonnet -> adc : { resolution: 14}
 - pgrapher/experiment/dune10kt-hd/params.jsonnet
- sweeping change for jsonnet for this is easy
 - only manually overwrite pdsp back to 12
- remove the json files
 - I think those json files are NOT in use
 - reduce the maintenance workload
 - removing stuff that shows obvious breaking is helpful

Validation

<https://github.com/HaiwangYu/wct-ci/tree/main/dune-adc14>

```
$diff dune-vd-adc14.json dune-vd-v10_04_04d00.json | head
186578c186578
<         "resolution": 14
---
>         "resolution": 12
186709c186709
<         "ADC_mV": 8191500000,
---
>         "ADC_mV": 2047500000,
186811c186811
<         "resolution": 14
186811c186811
```

Digitizer

OmnibusSigProc

Validation

pgrapher/experiment/pdsp/wcls-sp.jsonnet runs OK