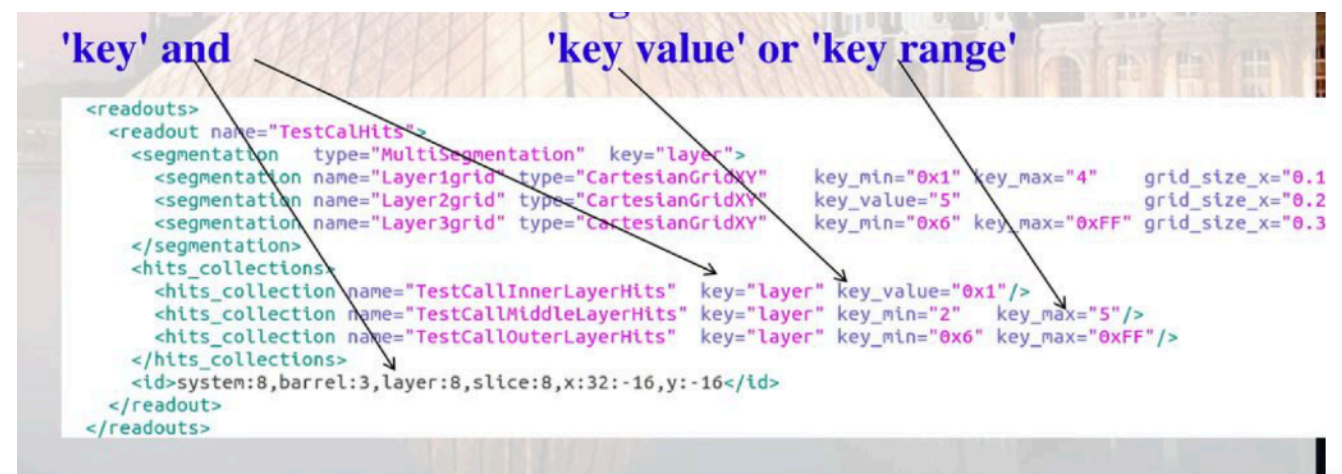


Recent LFHCal sims news

- **Steady progress on LFHCal implementations**
 - Fredi implementing nominal LFHCal towers in lfhcal-dev branch
 - Nicolas implementing alternative design (rotated absorber, to compare) in lfhcal-dev-2 branch
- **PAS still working on simpler geometry, mainly with implementing longitudinal cells properly**
 - Existing implementation is problematic on several levels
 - *We don't want to digitize each layer (50 for now, after truncation) and then recombine*
 - *The digitization should be based on the light from the combined set of scintillator slats, and only then digitized, to actually resemble the planned readout scheme*
 - Cannot find obvious template to copy, so exploring different options.
 - *One might be the "Multisegmentation" readout approach, which can group hits from a set of layers.*
 - Lack of documentation makes this more difficult than it should be



The image shows a snippet of XML code for LFHCal readouts. Two blue annotations with arrows point to specific parts of the code:

- 'key' and: points to the `key="layer"` attribute in the `<segmentation type="MultiSegmentation" key="layer">` tag.
- 'key value' or 'key range': points to the `key_value="0x1"/>` and `key_min="2" key_max="5"/>` attributes in the `<hits_collection>` tags.

```
<readouts>
<readout name="TestCalHits">
  <segmentation type="MultiSegmentation" key="layer">
    <segmentation name="Layer1grid" type="CartesianGridXY" key_min="0x1" key_max="4" grid_size_x="0.1" />
    <segmentation name="Layer2grid" type="CartesianGridXY" key_value="5" grid_size_x="0.2" />
    <segmentation name="Layer3grid" type="CartesianGridXY" key_min="0x6" key_max="0xFF" grid_size_x="0.3" />
  </segmentation>
  <hits_collections>
    <hits_collection name="TestCallInnerLayerHits" key="layer" key_value="0x1"/>
    <hits_collection name="TestCallMiddleLayerHits" key="layer" key_min="2" key_max="5"/>
    <hits_collection name="TestCallOuterLayerHits" key="layer" key_min="0x6" key_max="0xFF"/>
  </hits_collections>
  <id>system:8,barrel:3,layer:8,slice:8,x:32:-16,y:-16</id>
</readout>
</readouts>
```