

Geometry Streamlining

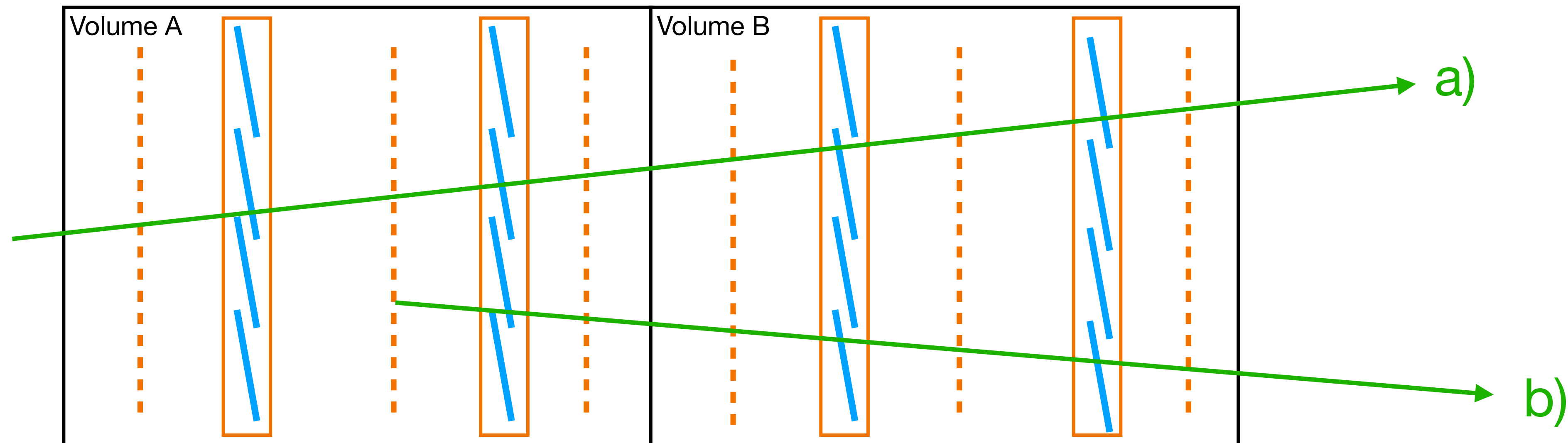
Input to ACTS Workshop / Developers discussion

A. Salzburger

Surface - Layer - Volume

Current Geometry/Navigation setup

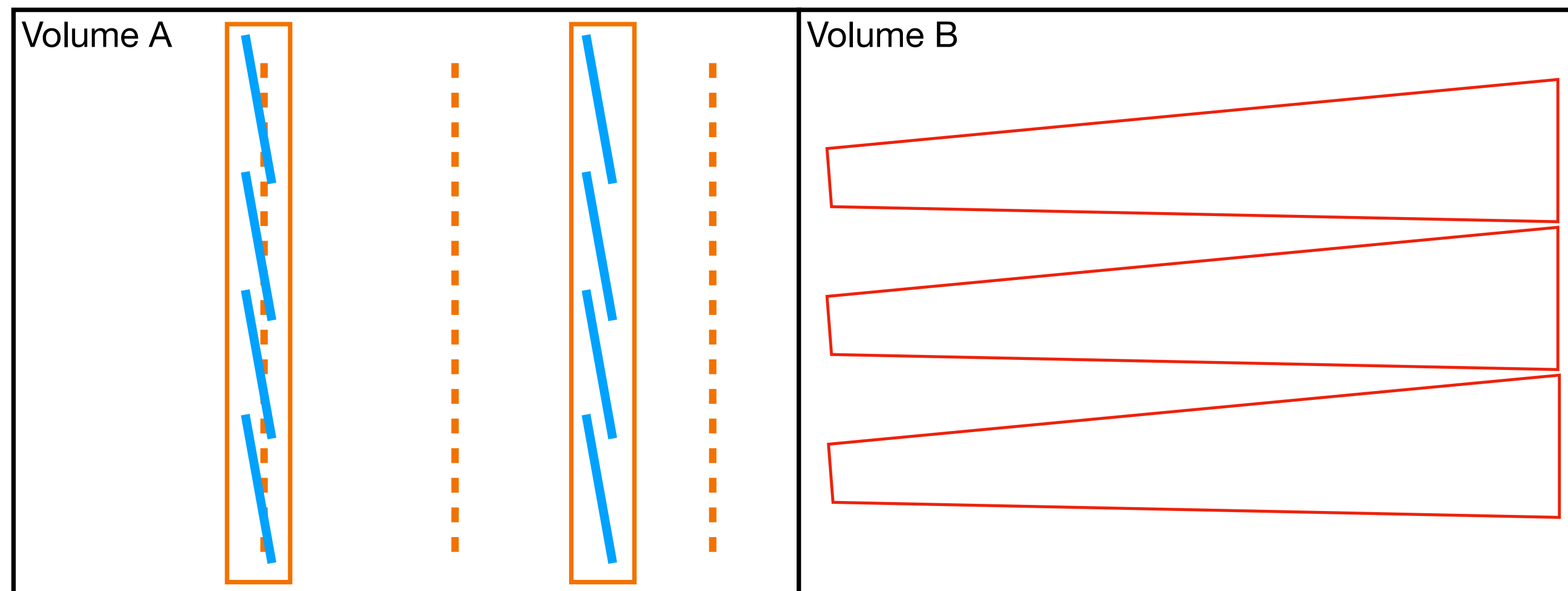
- Static geometry configuration



Surface - Layer/Cell - Volume

Current Geometry/Navigation setup

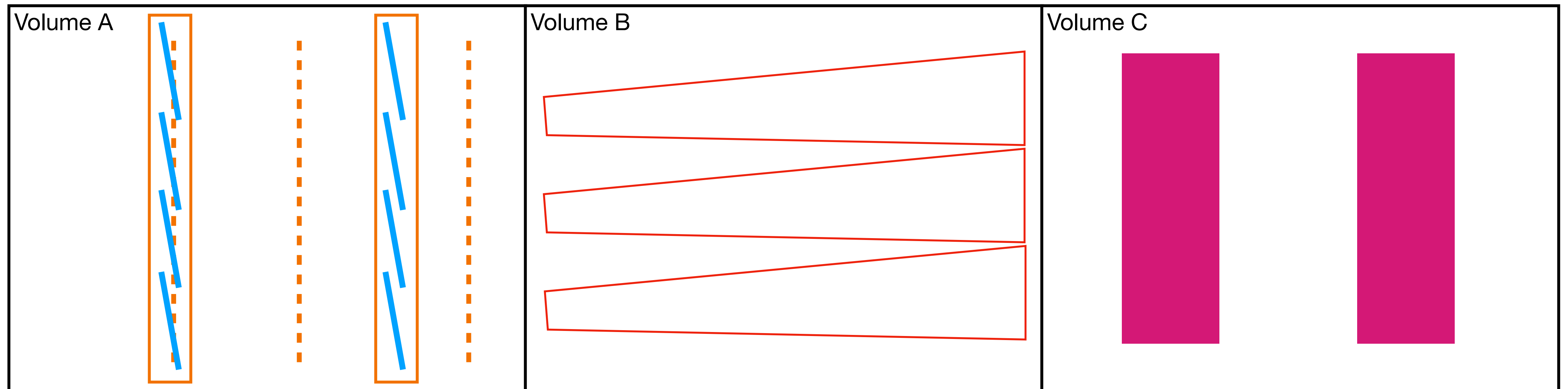
- Static / Calorimeter



Surface - Layer/Cell/MuonSystem - Volume

Current Geometry/Navigation setup

- Static / Calorimeter / Muon System



Surface - Layer/Cell/MuonSystem - Volume

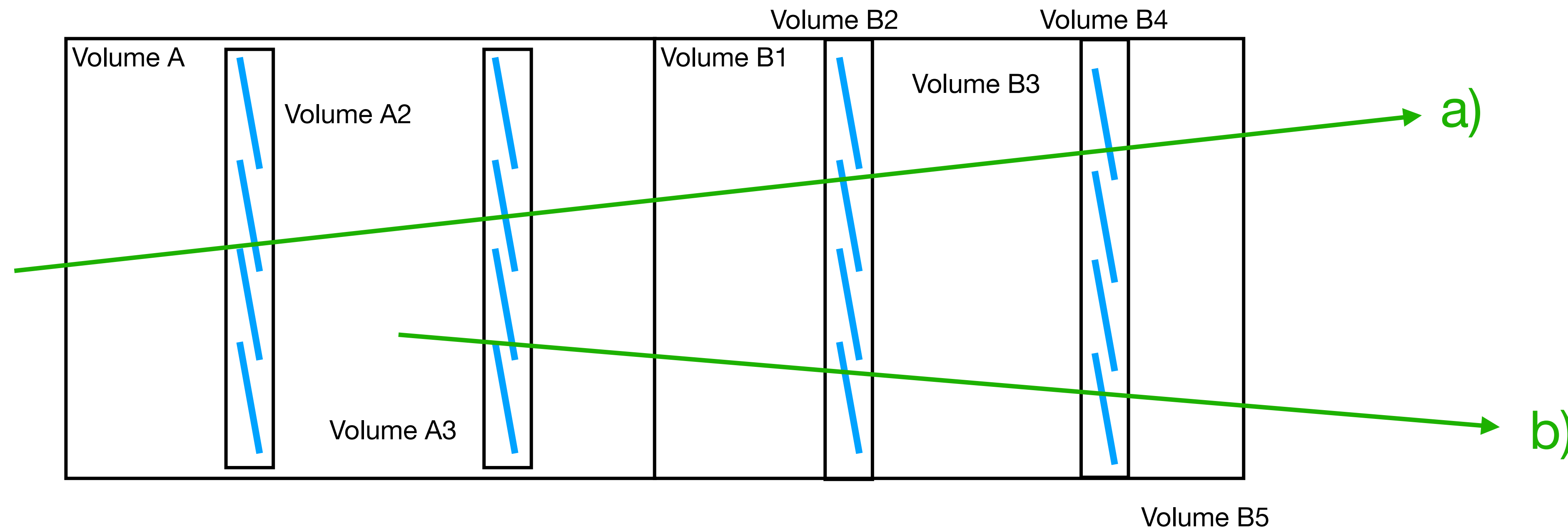
Consequence: Navigator

```
struct State {  
    // Navigation on surface level  
    // the vector of navigation surfaces to work through  
    NavigationSurfaces navSurfaces = {};  
    // the current surface iterator of the navigation state  
    NavigationSurfaceIter navSurfaceIter = navSurfaces.end();  
  
    // Navigation on layer level  
    // the vector of navigation layers to work through  
    NavigationLayers navLayers = {};  
    // the current layer iterator of the navigation state  
    NavigationLayerIter navLayerIter = navLayers.end();  
  
    // Navigation on volume level  
    // the vector of boundary surfaces to work through  
    NavigationBoundaries navBoundaries = {};  
    // the current boundary iterator of the navigation state  
    NavigationBoundaryIter navBoundaryIter = navBoundaries.end();  
  
    // Externally provided surfaces - these are tried to be hit  
    ExternalSurfaces externalSurfaces = {};
```

Surface - ~~Layer~~ - Volume

Layer-free navigation setup

- Layers are practically volumes already, let's use them as such



Surface - ~~Layer~~ - Volume

Layer-free navigation setup

- Layers are practically volumes already, let's use them as such

