

McStas McXtrace



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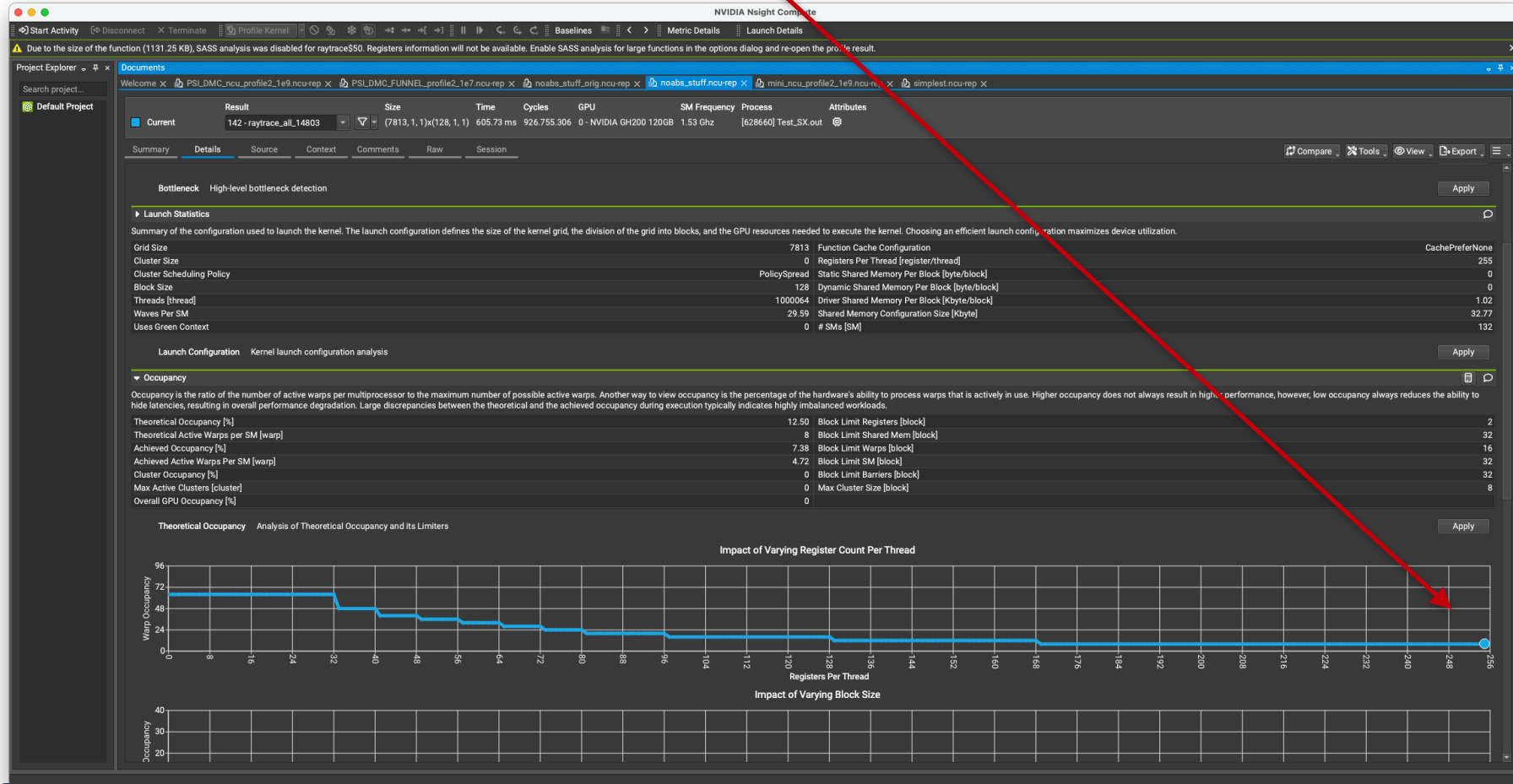


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Profiler Output

We are likely blocked by our “arrays of struct”

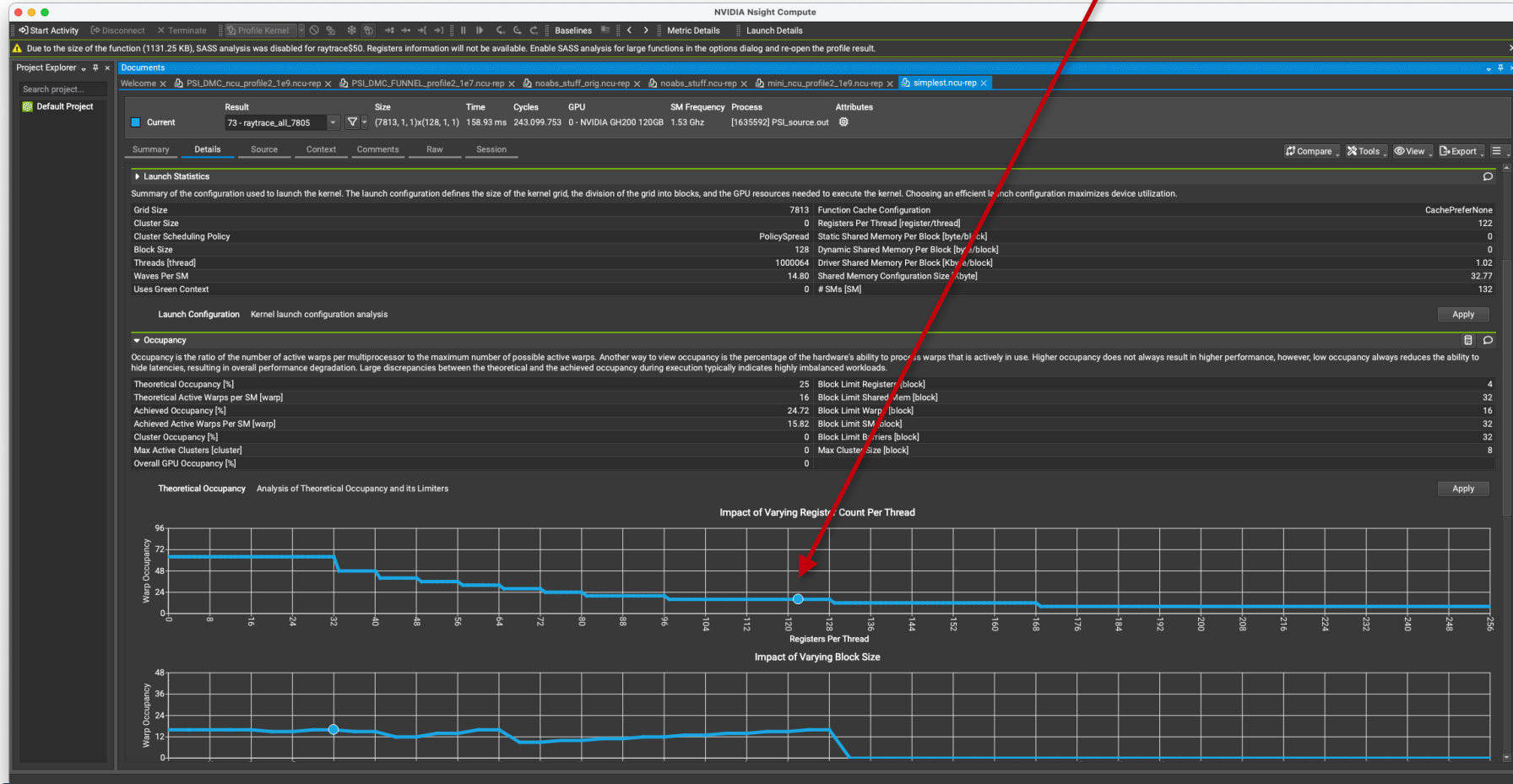
- Too many registers required pr. thread



Profiler Output

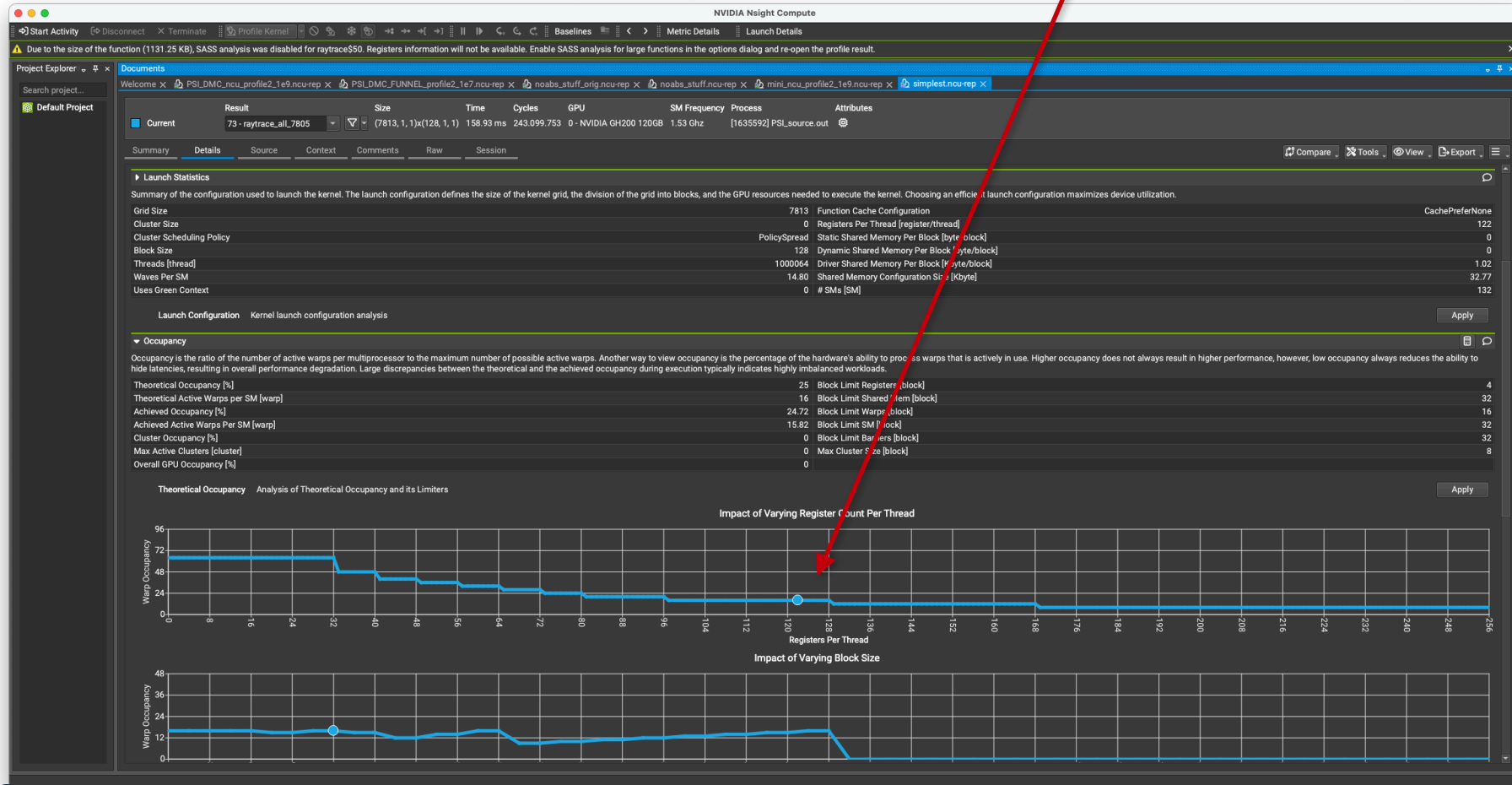
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- Even the ‘simplest of all cases’ is not great in this respect



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Progress and Goals

- Tobias identified and corrected a thread race condition in a specific instrument / component
- Emmanuel tried chatbot hints for potential missing #pragma's in key component codes... “Not so easy” ;-)
- Goals for today:
 - More profiling
 - Experiments with ‘struct with arrays’ approach
 - Take a look at alternative FUNNEL sorting algorithm (something readily provided in CUDA?)


Fixed race condition in resolution calculation #1929


 Merged willend merged 4 commits into [Helmholtz-hackathon-2025](#) from [hackathon25-tobias](#) 2 minutes ago









 Conversation 0  Commits 4  Checks 44  Files changed 3



 **tweber-III** commented 2 minutes ago Member 

No description provided.



 **tweber-III** added 4 commits 1 hour ago

-   Update cov-lib.h Verified ✓ 98bddab
-   cov-lib: a) changed linked list to arrays; b) added checks Verified ✓ bd8a351
-   Res_monitor.comp: fixed race condition Verified ✗ 198427e
-   Res_monitor.comp: showing number of events Verified ● 3dc5e24

  **willend** merged commit 5967230 into [Helmholtz-hackathon-2025](#) 2 minutes ago

3 of 44 checks passed View details Revert

Problems and Solutions

- Refactoring to try out a new overall code structure is challenging
 - Hack local c-file is error prone vs. lots of work needed to 'fully integrate'
 - Limit device-host-device transfers
(only some data need to be loaded back to host)