

GPU Kernel Instrumentation

Working Group Outbrief

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Attending members

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Instrumentation on MI300A

- Integrated memory - shared between device and host
- Memory management should be easier
- Packed wave id in a single register
- Flat scratch is read-only
- ALL the SGPRs are allocated for a single wave - no effect on occupancy
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Channels

- Rocprofiler-sdk provides a way to set callbacks for ATT (Advanced Trace Tracing)
- S_TTRACEDATA to send data to the host

Occupancy talk

- Instrumentation may affect occupancy
- Increased private memory & register usage
- Difficult to know how NVidia manages it (do registers affect it or is it just for shared memory ?)

Luthier Demo

- Much faster than NVBit for instruction counting!