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Fast W-Projection Gridding on GPUs

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In this talk, I will report on a novel way to implement W-projection gridding on GPUs.

This method is several times faster than existing GPU gridders, because it needs significantly fewer accesses to the relatively slow GPU memory.

I will show how gridding on an eight-GPU system is typically 250 times faster than on a regular dual-CPU server, and over 20 times more energy-efficient.

The algorithm is programmed in both CUDA and OpenCL, which I will briefly compare.

I will also compare and explain the enormous performance differences between GPUs from Nvidia and AMD.

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