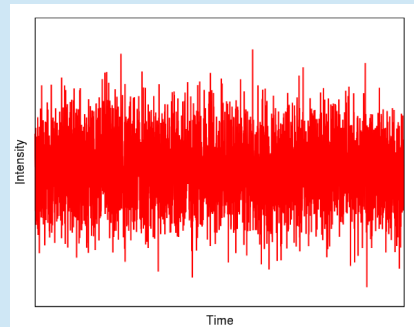
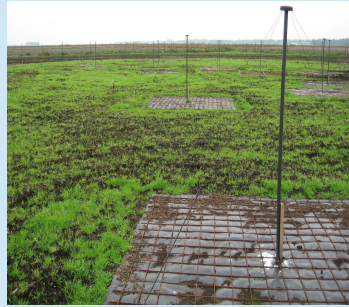
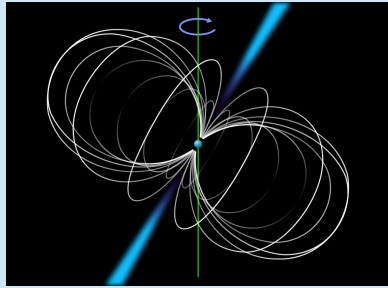


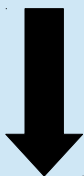
Pulsar Searching with Many-Cores

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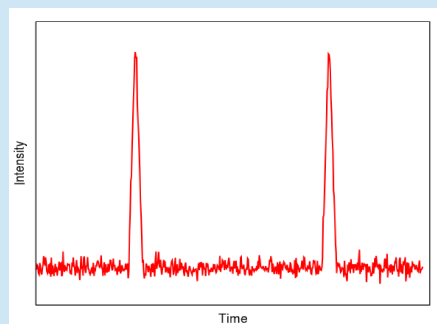
Dedispersion



Folding



**Signal to Noise
computation**



Pulsars

Pulsars are extremely important for astronomy, physics and other sciences

Finding new pulsars is difficult: it requires brute-force search with many parameters

Our Software

We designed a many-core implementation using OpenCL

To avoid expensive data movements we combine multiple kernels in a pipeline

Big Data

- Terabytes per observation
- Petabytes of intermediate results