

Optimizing Deep Searches for Gravitational waves from Binary Coalescence

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Abstract.

1. Introduction

2. Methods of the Inspiral Search

Stuff.. [\[1\]](#)

3. Improvements to the Search Algorithms

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3.2. Heirarchical FFT

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4.2. Implementation on NVIDIA GPUs

4.3. Implementation on Intel MICs

5. Sub-component Benchmarks

5.1. Various GPUs

5.2. Various CPUs/MIC

6. In-situ benchmarks

7. Conclusions

8. Acknowledgments

- [1] Bruce Allen, Warren G. Anderson, Patrick R. Brady, Duncan A. Brown, and Jolien D.E. Creighton. FINDCHIRP: An Algorithm for detection of gravitational waves from inspiraling compact binaries. *Phys.Rev.*, D85:122006, 2012.