

Contribution of IMPAN to MLDC Round 1B

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December 3, 2007

We have participated in Challenge 1B.1.1 - Single Galactic Binaries.

As in our previous entries our analysis method was matched-filtering using the F -statistic ([1]). For filters we have used the analytic formulas developed in [1]. The new tool is an improved grid of templates which is a constraint optimal hypercubic lattice. The constraint is that the nodes of the grid coincide with the Fourier frequencies so that we can use our grid together with the FFT algorithm to calculate the F -statistic.

References

- [1] A. Królak, M. Tinto, and M. Vallisneri, *Phys. Rev. D*, **70**, 022003 (2004).