

Abstract Submitted
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Astronomical Data Analysis on Graphics Cards¹ PETER MESSMER, Tech-X Corporation, PAUL MULLOWNEY, Tech-X Corp., MICHAEL GALLOY, DAVID FILLMORE, BRIAN GRANGER, KEEGAN AMYX, DAVID FILLMORE, Tech-X Corp, TECH-X CORPORATION TEAM — Increasing detector sizes and advanced algorithms make astronomical data analysis tasks computationally demanding. Tools are therefore needed that simplify the development of parallel data analysis algorithms. Modern graphics cards offer a large amount of processing power at low cost and therefore have the potential to benefit these analyzes. However, the massively parallel nature of these devices makes them difficult to develop for. In this talk, we present a library of general purpose vector operations that can run on graphics cards. Bindings to widely used data analysis tools, including IDL and Matlab are provided, enabling scientists to take advantage of the enhanced processing power from within a familiar environment. We will present the programming interface and performance results for example applications.

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