

The Follow-up Crisis: Optimizing Science in a Opportunity Rich Environment

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Abstract

Rapid follow-up tasking for robotic telescopes has been dominated by a one-dimensional uncoordinated response strategy developed for gamma-ray burst studies. However, this second-grade soccer approach is increasingly showing its limitations even when there are only a few events per night. And it will certainly fail when faced with the denial-of-service attack generated by the nightly flood of new transients generated by massive variability surveys like LSST. We discuss approaches for optimizing the scientific return from autonomous robotic telescopes in the high event range limit and explore the potential of a coordinated telescope ecosystem employing heterogeneous telescopes.