**Proposal for *Swift* GI Program** **Cycle 12**

Cover Page

**Title:** EARLY AND DEEP FOLLOW-UP OF SWIFT GRBS WITH P60 AND THE SED MACHINE


**Principal Investigator:** DR. JAMES D NEILL

**Institution:** CALIFORNIA INSTITUTE OF TECHNOLOGY

**Address:** PHYSICS MATH AND ASTRONOMY
1200 EAST CALIFORNIA BLVD, MC 278-17

PASADENA
CA
91125

**Country:** USA

**E-mail:** NEILL@SRL.CALTECH.EDU

**Phone:** 626-395-3963

**Fax:** 626-395-2810


**Proposal Type:** 3. Other correlative GRB and non-GRB investigations (funding only)

**Science Subject:** GAMMA-RAY BURSTS

**Total Time Requested (ksec):** 0.00

**Number of Targets:** 0


**Abstract:**

We propose to continue our successful program of rapid, deep, multi-filter follow-up of Swift gamma-ray bursts (GRBs) with the Palomar 60-inch telescope (P60). Our science goals are to: (A) provide an automated, early-time spectroscopic capability to enable immediate redshift measurement and sensitive constraints on the color evolution of GRBs with the SED Machine; (B) rapidly identify high-redshift and highly dust-obscured GRBs; (C) conduct multi-wavelength observations to identify reverse shocks and constrain the total energetics of GRBs; (D) build up large, high-quality, unbiased samples of optical light curves and host galaxies to enable demographic studies.

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General Form

**Title:** EARLY AND DEEP FOLLOW-UP OF SWIFT GRBS WITH P60 AND THE SED MACHINE

**Principal Investigator:** DR. JAMES D NEILL

**Co-Investigator(s):**

| Name | Institute | Country |
|---|---|---|
| NICK KONIDARIS | CALIFORNIA INSTITUTE OF TECHNOLOGY | USA |
| BRAD CENKO | NASA/GSFC | USA |
| DANIEL PERLEY | UNIVERSITY OF COPENHAGEN | DENMARK |
| SHRI KULKARNI | CALIFORNIA INSTITUTE OF TECHNOLOGY | USA |

| | |
|---|---|
| **Contact first Co-Investigator listed above?** | Yes |
| **Contact Telephone:** | 6263953293 |
| **Contact E-mail:** | NPK@ASTRO.CALTECH.EDU |

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|---|---|
| **Is this investigation part of a graduate student thesis?** | No |
| **Number of Undergraduates Involved:** | 0 |
| **Number of Graduate Students Involved:** | 0 |

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| **Is this a joint Swift/NRAO proposal?** | No |
| **Total NRAO Time Requested (hours):** | 0.0 |

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| **NASA FTE Commitment:** | 0.0000 |
| **Anticipated Total Budget:** | 40.0 |