

# Hands-on “Swift” session

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With grateful thanks to: Amy Lien, Sam Oates, Kim Page, Jamie Kennea and everyone else on the *Neil Gehrels Swift Observatory* team.

All mistakes in this presentation are by own.

- $T_0$  BAT triggers on the GRB; SMS alerts sent to on-call team.
- $T_0+2$  min On-call team convene telecon, log into web tools.
- ... Limited data products downlinked over TDRSS.
- $T_0+20-30$  min Initial GCN Circular produced.
- ...
- $T_0+2$  hr Full dataset downlinked via ground stations.
- $T_0+12-24$  hr “Refined analysis” circulars produced.
- ...
- Daily Reports on evolution and external follow up, decisions made about further observations.

Nowadays, much of this is automated for *Swift*. We will be practising the “olden days”!

Our training will involve 4 people.

- Burst Advocate (BA)
  - BAT Specialist (BBS)
  - XRT Specialist (XBS)
  - UVOT Specialist (UBS)
- Can be one of the below.

These work together to produce the initial circular: each instrument specialist responsible for one section. The BA is responsible for various checks and final sign-off.

**These are a team, not working in isolation; each instrument's results inform the others.**

The immediate responsibility of the on-call team when BAT triggers is to determine:

- Is this a GRB? If not, what is it?
- Where is it?
- Which instruments saw it, and roughly how bright.

Accuracy is vital; generally speed trumps precision.

The target audience are astronomers trying to decide whether and how to observe, not people trying to write a paper.

i.e. “~19 mag” is OK, if “19.21 mag” is going to take a while.

“~19 mag” is not OK if the source is actually 17th mag!

- 1) Get in to groups, ideally 4 to a group.
- 2) Fire up the VM.
- 3) Open a terminal, and make `work/swift/GRB1`
- 4) Open firefox, go to `file:///home/svomba/Swift/`
- 5) Open `materials` in a new tab
- 6) Open the “guides” and “templates” files in new tabs.
- 7) Open a google doc: `https://www.swift.ac.uk/svom.php` follow links.

- 1) We will run some faked-up GRB triggers.
- 2) Group members will take a role each (change with trigger)
- 3) First one will heavily guided by me.



SwiftGRB.sh 845443







I don't think it would be helpful for me, now, to go through a bunch of detailed commands to run: we will meet those in the session.

Have a look, on your machines, at `file:///home/svomba/swift/materials/guides.html` - this gives instructions for each team member, and each notice type.

There are also some template titles and paragraphs in `/home/svomba/swift/materials/templates.txt`

We will work through a few triggers (swapping roles), with Diego and me to offer support.