

detectormon_gui & detectormon_txt

First things – before diving into how one uses either the gui or command-line tools...

...let's briefly summarize the software components.

The ***detectormon*** service is a monitor for Lick Observatory detectors, with an emphasis on detector temperatures – but it's not called *ucamtempsmon* because we are optimistic that the UCAM's will be replaced, and there will be additional things to monitor beyond temperature.

Detectormon is one of several **mon* services at Lick (and Keck), all of which use the ***emir*** application. *Emir* takes a configuration file that tells it what to monitor and how to respond, and if you know how to use one *xxxmon* service, you know how to use all of them.

Detectormon's startup script simply invokes *emir* with the name of its configuration file, the dispatcher number, and the name of the service it implements:

```
emir -s detectormon.cfg -d 1 detectormon
```

Detectormon_gui is a small wrapper around *emir*'s all-purpose ***vis_emir*** gui, invoking it approximately as:

```
vis_emir detectormon
```

Detectormon_txt is a small wrapper around *emir*'s command-line tool, ***emirater***. *Emirater* is a general-purpose tool for inspecting *emir* services, and *detectormon_txt* invokes it as:

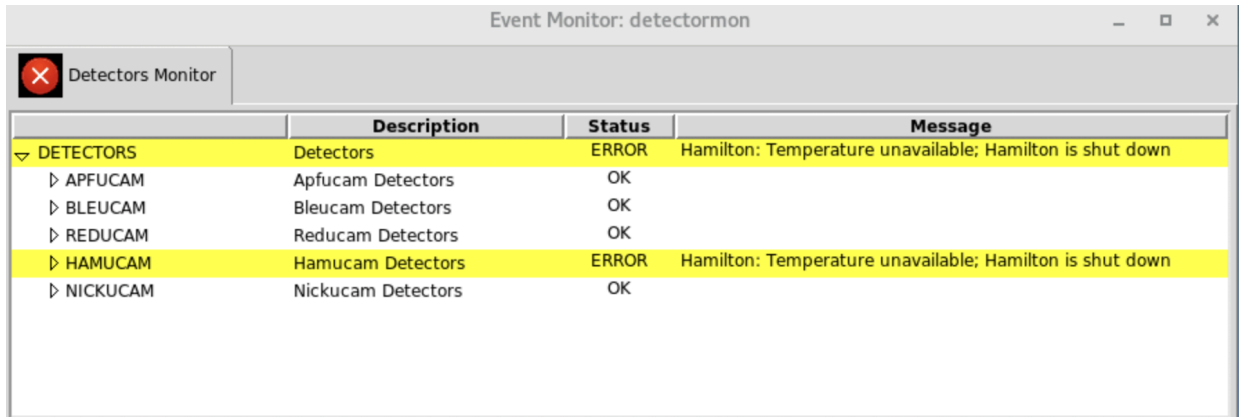
```
emirater -ok -cno [...] detectormon
```

With these options, *emirater* will print just the branches of the *detectormon* service whose status is not "OK".

Both *vis_emir* and *emirater* configure themselves by querying the keyword service, which is why there aren't additional configuration files needed for *detectormon_gui* and *detectormon_txt*.

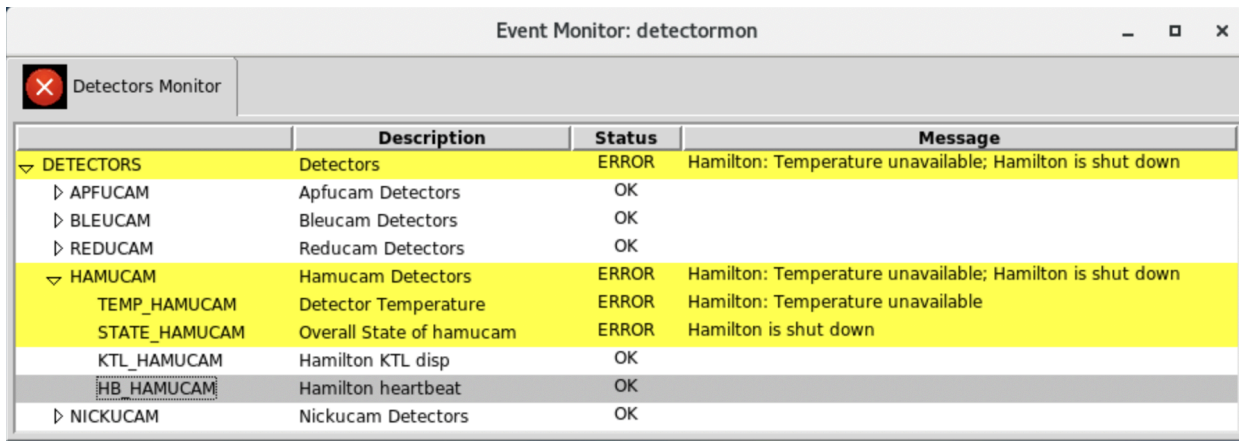
How to use *detectormon_gui* and *detectormon_txt*

Detectormon_gui starts out looking like the following. At the top level, DETECTORS is a *group* made up of individual, per-UCAM groups. Here, the HAMUCAM group is in an error state, so it's bright yellow, and its parent, the DETECTORS group, inherits that error state and is also bright yellow:



	Description	Status	Message
▼ DETECTORS	Detectors	ERROR	Hamilton: Temperature unavailable; Hamilton is shut down
▷ APFUCAM	Apfucam Detectors	OK	
▷ BLEUCAM	Bleucam Detectors	OK	
▷ REDUCAM	Reducam Detectors	OK	
▷ HAMUCAM	Hamucam Detectors	ERROR	Hamilton: Temperature unavailable; Hamilton is shut down
▷ NICKUCAM	Nickucam Detectors	OK	

If you click on the HAMUCAM triangle in the gui, it opens up to show that HAMUCAM is a group of entries made up of 4 individual *conditions*, which are reporting, respectively, on the state of the detector temperature; the overall state of the Hamilton ucam; the overall state of the associated *hamucam* KTL service (the KTL service that keeps running regardless of whether the UCAM software itself is shut down); and the “heartbeat” keyword’s status for *hamucam*. (Heartbeats are special: if a heartbeat keyword stops broadcasting, *emir* will flag all other conditions that depends on that service as being in an error state):



	Description	Status	Message
▼ DETECTORS	Detectors	ERROR	Hamilton: Temperature unavailable; Hamilton is shut down
▷ APFUCAM	Apfucam Detectors	OK	
▷ BLEUCAM	Bleucam Detectors	OK	
▷ REDUCAM	Reducam Detectors	OK	
▼ HAMUCAM	Hamucam Detectors	ERROR	Hamilton: Temperature unavailable; Hamilton is shut down
TEMP_HAMUCAM	Detector Temperature	ERROR	Hamilton: Temperature unavailable
STATE_HAMUCAM	Overall State of hamucam	ERROR	Hamilton is shut down
KTL_HAMUCAM	Hamilton KTL disp	OK	
HB_HAMUCAM	Hamilton heartbeat	OK	
▷ NICKUCAM	Nickucam Detectors	OK	

The *detectormon_txt* output shows the same information:

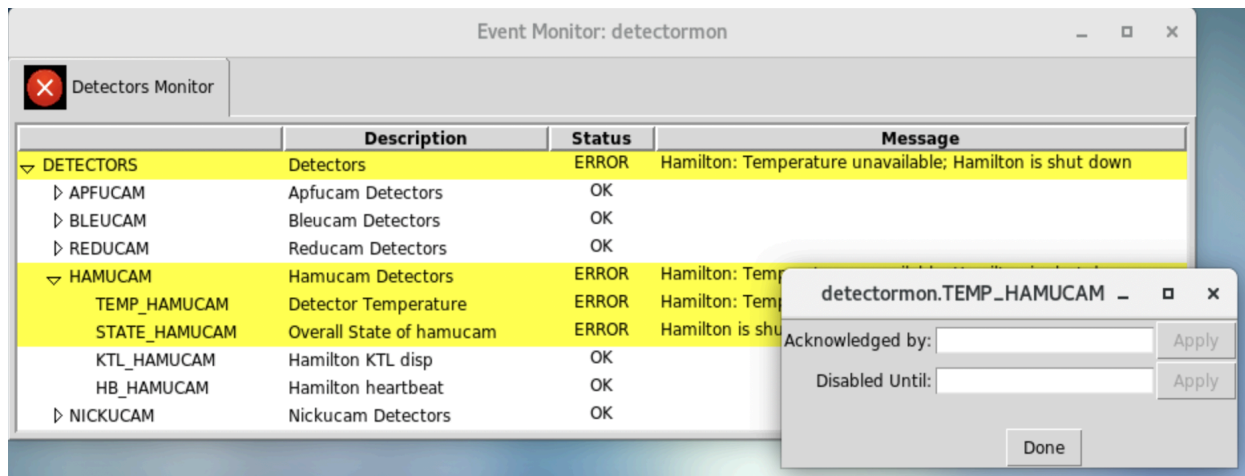
```
% detectormon_txt
DETECTORS: ERROR
    Hamilton: Temperature unavailable
    Hamilton is shut down
HAMUCAM: ERROR
    Hamilton: Temperature unavailable
    Hamilton is shut down
TEMP_HAMUCAM: ERROR
    Hamilton: Temperature unavailable
STATE_HAMUCAM: ERROR
    Hamilton is shut down
```

There are three ways you can respond to an error condition:

1. The best, of course, is to fix the underlying issue.
2. You can *acknowledge* the alarm, which tells *emir* – and your colleagues – that you’re taking responsibility for eventually dealing with it, and they don’t have to do anything else. The error state is still present, but it’s not going to send out emails or otherwise generate alerts to the staff. If you don’t do something to clear the error in 24 hours, or to extend it to the next day, it will revert to its regular error state.
3. You can *disable* the alert for an arbitrary amount of time. This replaces the ERROR state with the DISABLED state, and the condition or group won’t figure into any upstream computations of state.

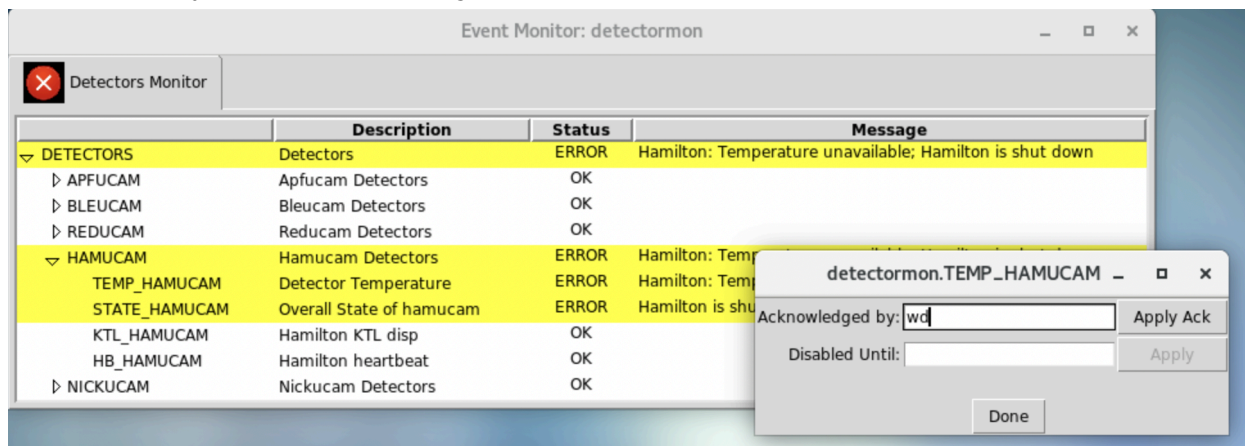
Acknowledging alarms:

From *detectormon_gui*, you can acknowledge an alarm by right-clicking on the condition entry. Here, we right-click on the TEMP_HAMUCAM entry:



*Note: the **Done** button simply makes the pop-up go away. It doesn't apply an acknowledgement or a disable action. It just makes the pop-up go away. Use the buttons to the right of the entry boxes to take an action.*

Here I enter my initials, press **Apply Ack**, and press **Done**...



...whereupon the TEMP_HAMUCAM line becomes a pale yellow – it's still yellow because there's still an error, but it's pale to tell you it's been acknowledged. As you'll learn momentarily, this particular error doesn't affect whether email is sent, so read on...

Event Monitor: detectormon			
Detectors Monitor			
	Description	Status	Message
▼ DETECTORS	Detectors	ERROR	Hamilton: Temperature unavailable; Hamilton is shut down
▷ APFUCAM	Apfucam Detectors	OK	
▷ BLEUCAM	Bleucam Detectors	OK	
▷ REDUCAM	Reducam Detectors	OK	
▼ HAMUCAM	Hamucam Detectors	ERROR	Hamilton: Temperature unavailable; Hamilton is shut down
TEMP_HAMUCAM	Detector Temperature	ERROR/ACK	Hamilton: Temperature unavailable
STATE_HAMUCAM	Overall State of hamucam	ERROR	Hamilton is shut down
KTL_HAMUCAM	Hamilton KTL disp	OK	
HB_HAMUCAM	Hamilton heartbeat	OK	
▷ NICKUCAM	Nickucam Detectors	OK	

The output of *detectormon_txt* also changes – the message text TEMP_HAMUCAM changes to show the acknowledgement by appending “**ack=wd**”:

Hamilton: Temperature unavailable ack=wd

You can also acknowledge the error at any higher level, such as the HAMUCAM group level. Let’s do that next. Notice that this pop-up has an “Email Silenced Until” entry. That’s because the HAMUCAM group is configured to send email, so there’s an entry to “silence” the email until a user-specified time:

Event Monitor: detectormon			
Detectors Monitor			
	Description	Status	Message
▼ DETECTORS	Detectors	ERROR	Hamilton: Temperature unavailable; Hamilton is shut down
▷ APFUCAM	Apfucam Detectors	OK	
▷ BLEUCAM	Bleucam Detectors	OK	
▷ REDUCAM	Reducam Detectors	OK	
▼ HAMUCAM	Hamucam Detectors	ERROR	Hamilton: Temperature unavailable; Hamilton is shut down
TEMP_HAMUCAM	Detector Temperature	ERROR/ACK	Hamilton: Temperature unavailable
STATE_HAMUCAM	Overall State of hamucam	ERROR	Hamilton is shut down
KTL_HAMUCAM	Hamilton KTL disp	OK	
HB_HAMUCAM	Hamilton heartbeat	OK	
▷ NICKUCAM	Nickucam Detectors	OK	

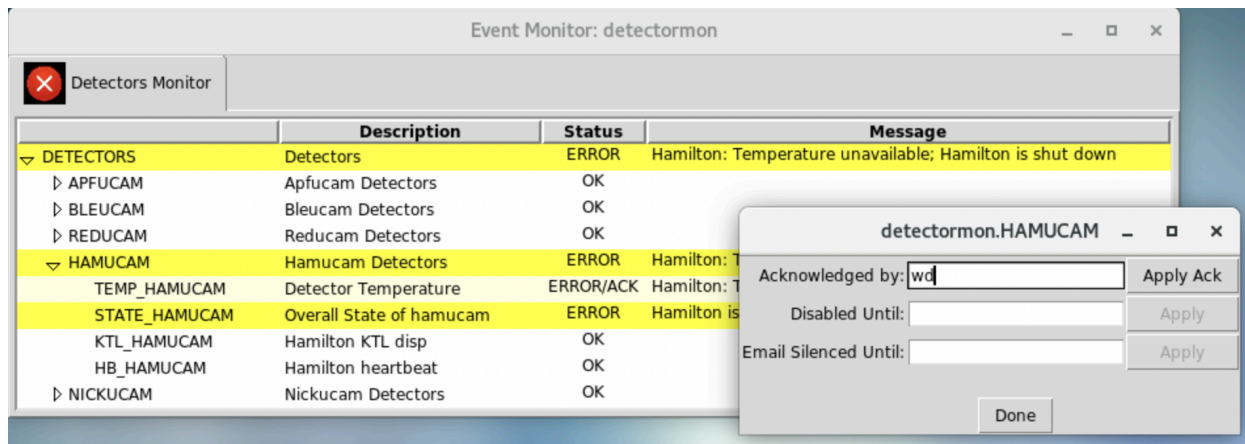
detectormon.HAMUCAM

Acknowledged by:

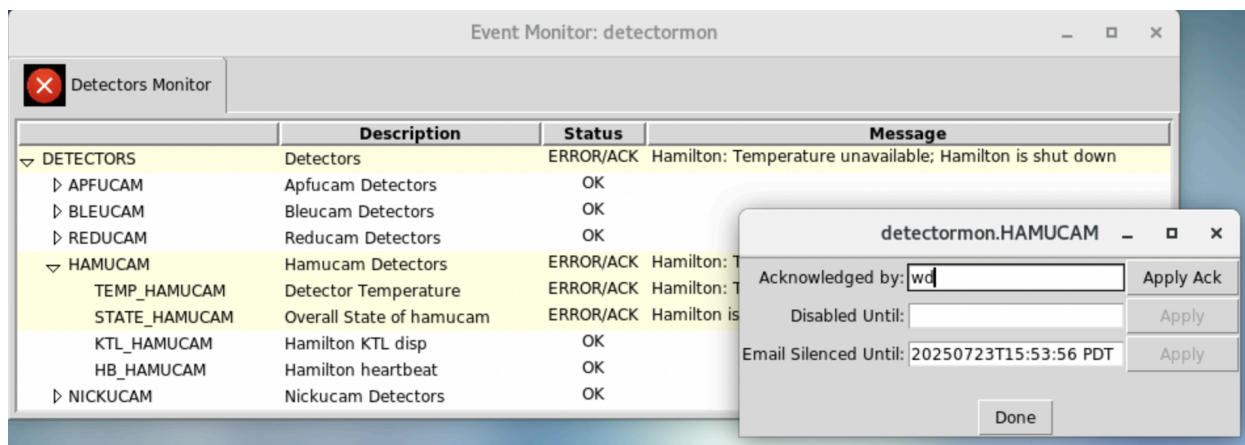
Disabled Until:

Email Silenced Until:

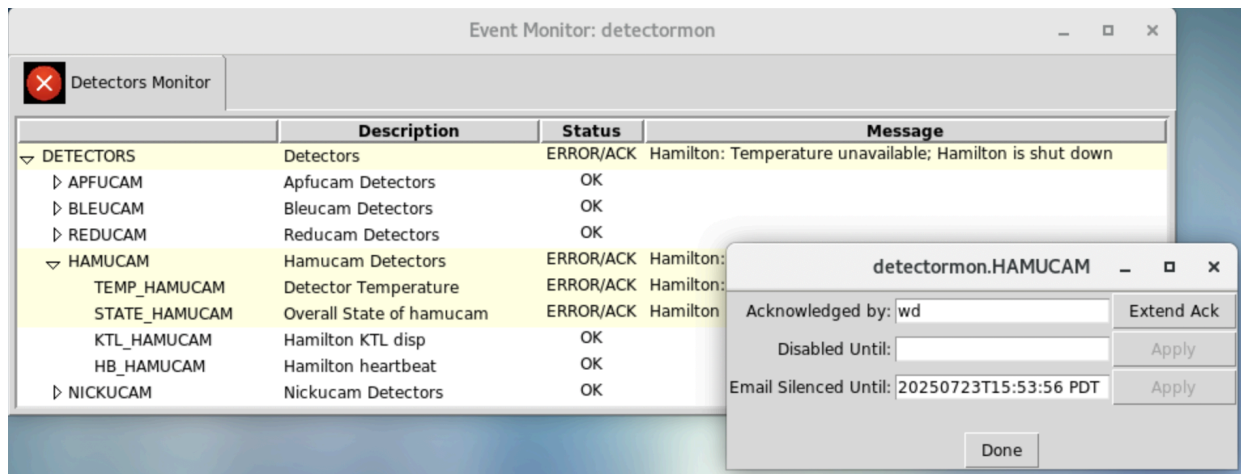
Let’s start by just acknowledging the alert:



When the acknowledgement is entered, the “email silenced until” is automatically filled in with 24 hours from now (but you can modify that field to be a different time, if desired):



By the way, when an ack is currently active, the button changes to **Extend Ack**, which would extend the ack time to 24 hours from whenever you next press the button (not interesting at the moment, but if you bring up the gui tomorrow, you could extend it for another 24 hours):



Note that all member conditions of HAMUCAM have inherited its ack, so they are all pale yellow. Furthermore, since all active alarms of the DETECTORS level are ack'd, DETECTORS itself is now in an ack'd state, and is pale yellow.

Detectormon_txt's output changes as follows:

```
% detectormon_txt
DETECTORS: ERROR
    Hamilton: Temperature unavailable
    Hamilton is shut down ack=(all alarms ack'd)
HAMUCAM: ERROR
    Hamilton: Temperature unavailable
    Hamilton is shut down ack=wd
TEMP_HAMUCAM: ERROR
    Hamilton: Temperature unavailable ack=wd
(inherited)
STATE_HAMUCAM: ERROR
    Hamilton is shut down ack=wd (inherited)
```

Here I've added boldface to show the acknowledgements. The HAMUCAM entry is directly ack'd, so it has a simple **ack=wd** appended, to show that it was appended by me (**wd**). Its children "inherit" that ack, so they have **ack=wd (inherited)**. And the parent, DETECTORS, is implicitly ack'd because all its active child alarms have been ack'd, and so it shows **(all alarms ack'd)**.

Ack's From the Command Line.

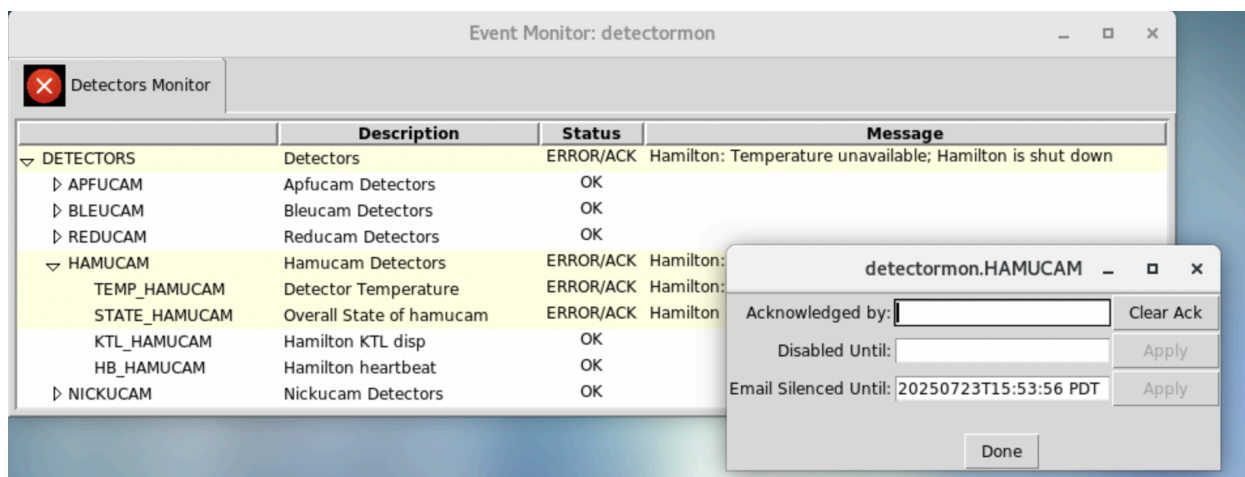
To ack an alarm from the command line, you use its *ACK keyword. For every *condition* or *group* named in the first column of the GUI, there is a set of keywords beginning with

that name and having a 3- or 4-letter suffix. To acknowledge the HAMUCAM alarm, you use its ACK keyword:

```
modify -s detectormon HAMUCAMACK="wd"
```

Clearing an ack.

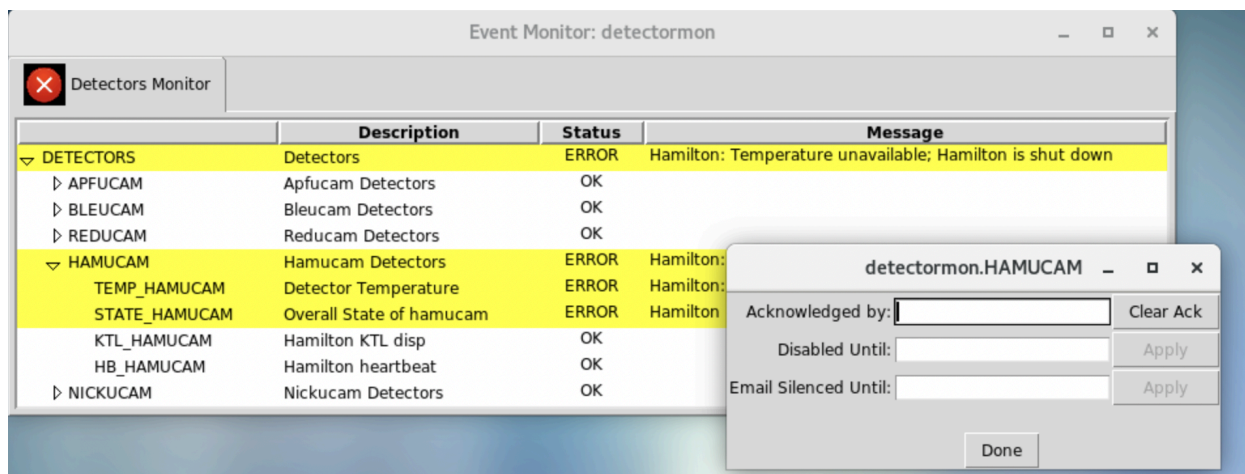
To clear an ack, just delete the **Acknowledged-by** entry, and press the **Clear Ack** button:



Voilà, it becomes a loud yellow again.

From the command line, you'd use:

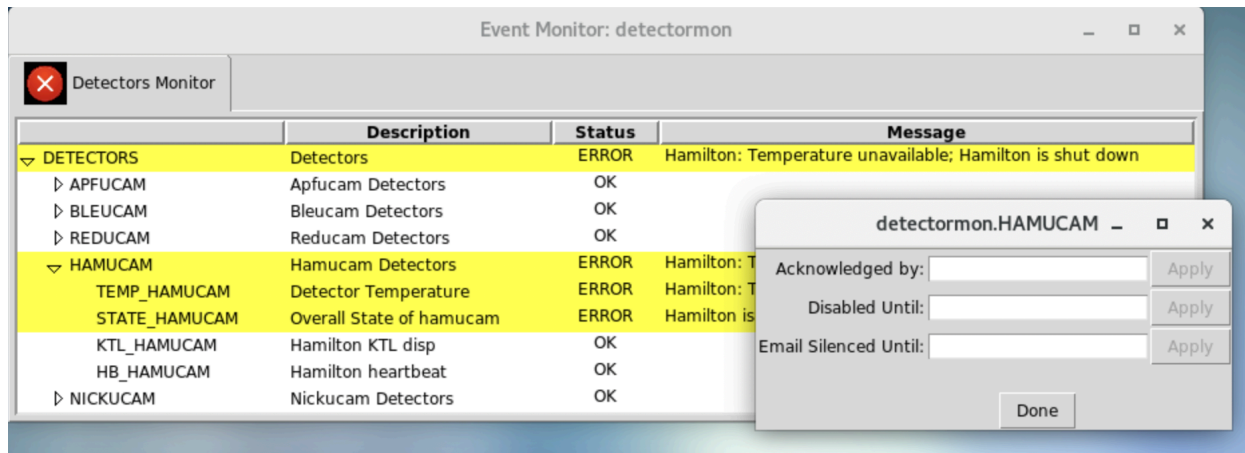
```
modify -s detectormon HAMUCAMACK=" "
```



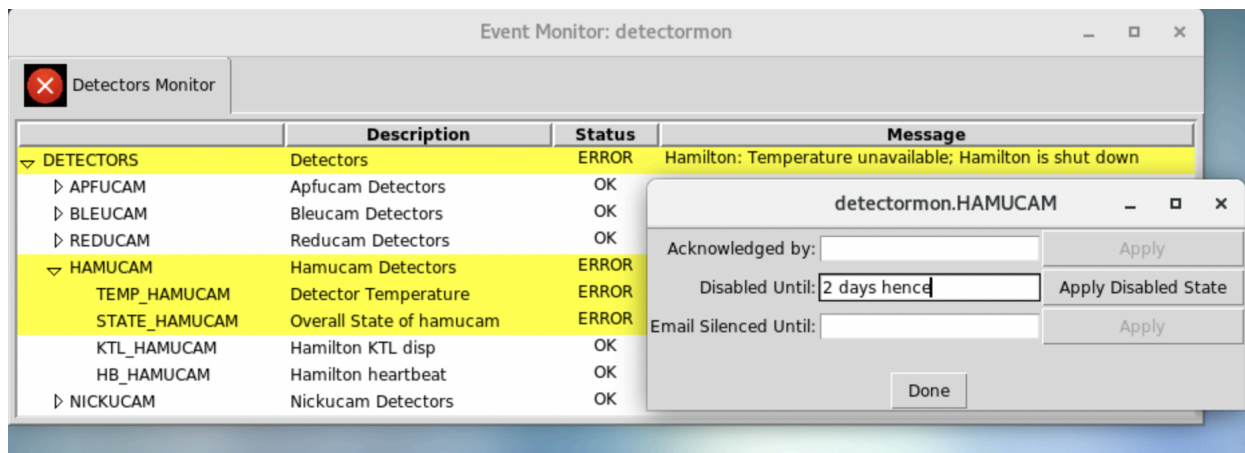
Disabling an Alarm

Let's move on to disabling an alarm.

Once again, right-click on an entry to get the pop-up. Here we right-click on HAMUCAM:

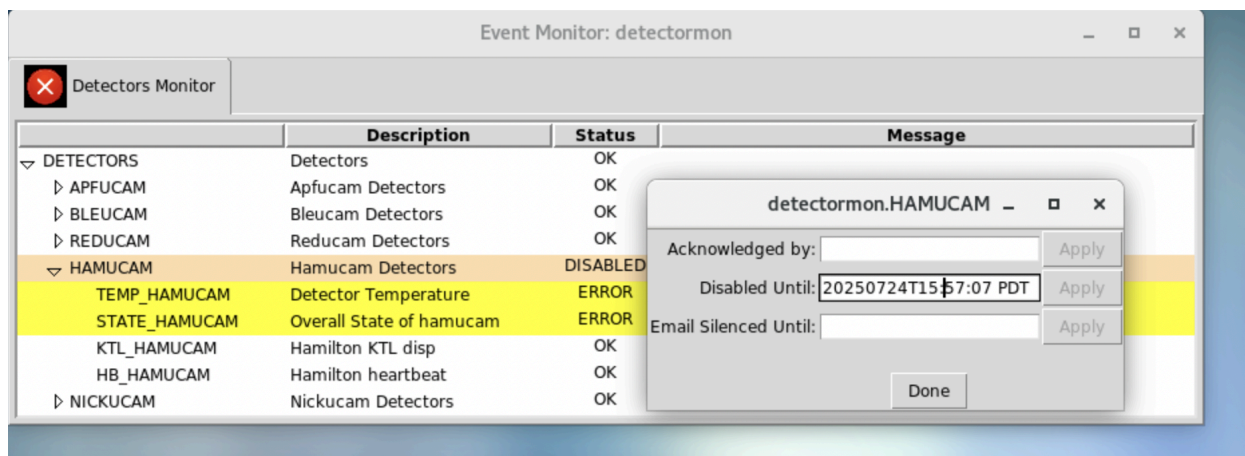


Enter a time in the **Disabled-until** entry box (examples: 2 days hence; tomorrow; now + 3 hours; 36 hours; December 1), and press **Apply Disabled State**.

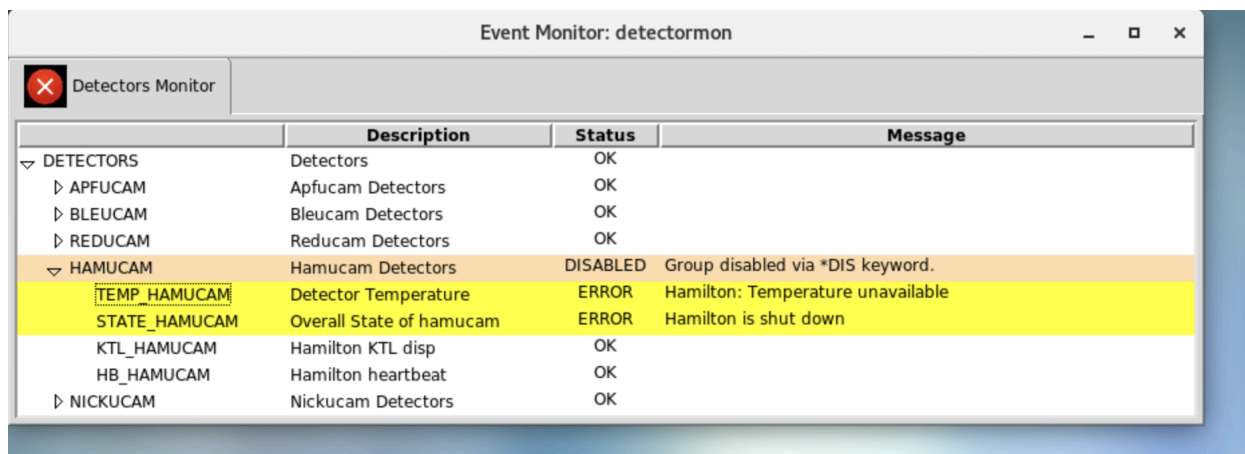


The value in the **Disabled Until** entry box is replaced with the absolute timestamp corresponding to the requested period, and the HAMUCAM group is now DISABLED. Note that its member conditions are still in an error state. The state of DETECTORS (or any group) is computed from its immediate child members, and since none of those

members are in an error state (DISABLED ≠ ERROR) DETECTORS isn't in an error state, either.



Press **Done**, and now we see that HAMUCAM's message has been changed to tell us that the *DIS keyword was used to disable it.



The *detectormon_txt* output shows this new state like so:

```
% detectormon_txt
HAMUCAM: DISABLED
    Group disabled via *DIS keyword.
TEMP_HAMUCAM: ERROR
    Hamilton: Temperature unavailable
STATE_HAMUCAM: ERROR
    Hamilton is shut down
```

Disable's From the Command Line.

To disable an alarm from the command line, you use its *DIS keyword. Append "DIS" to the alarm name from the first column, and set it to a time in the future:

```
modify -s detectormon HAMUCAMDIS="1 week hence"
```

To clear the alarm, set the DIS keyword to the empty string:

```
modify -s detectormon HAMUCAMDIS=""
```