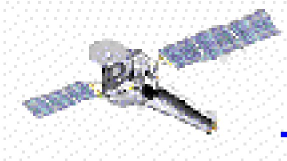
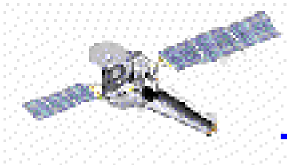


CIAO Software Survey Results

- Good response: 108 total
  - 27 *harvard.edu* - 25%
  - 17 *mit.edu* - ~16%
  - 64 other institutions - ~60%

- After-the-fact problems:
  - not always right questions asked
  - too many choices
  - need of a more complex database of answers to draw correlations etc.

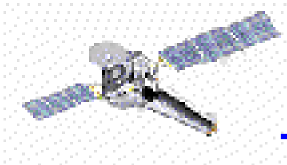
- Analysis performed:
  - 80+% ACIS Imaging Spatial/Spectral
  - 18% HRC Imaging Spatial
  - 53%, 30%, 28% respectively ACIS-HETG/ACIS-LETG/HRC-LETG grating
  - 30%,14% respectively ACIS/HRC Timing



A GLOBAL LOOK AT THE NUMBERS

- Large community of astronomers using CIAO as their data analysis system
  - A majority - 74% - considers using CIAO equal to or easier (34% somewhat or much easier) than other systems.
- Other large packages used to analyse Chandra data:
  - `FTOOLS` (73%) and `IDL` (64%)
- Fitting and modeling packages used:
  - `XSPEC` 74%, `SHERPA` 51%, `ISIS` 34%
- CIAO documentation well rated by users:
  - about 70% classify it as satisfactory or better (35% good or excellent) in all categories (completeness, ease of use technical content)

NOTE: the percentages are of those responding that their frequency of use is "sometimes", "often", or "always", as opposed to "never" or "rarely".GENERAL COMMENTS



GENERAL COMMENTS

- No major “surprises” from the numbers or the comments

- Pleased to find out that major issues of concerns are ones addressed in CIAO3 or planned for the future

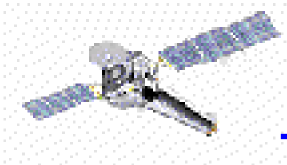
- somewhat contradictory answers on what is/is not liked.
  - ⇒ about 50-50 split between positive and negative comments on specific issues
  - ⇒ wide range of requirements
  - ⇒ very different approaches often requested

- platform support in CIAO well in line with current and future usage
  - ⇒ pre-Solaris 8 and Alpha disappearing *(no support post-ciao3)*
  - ⇒ very large Linux usage (Redhat more than all other combined)
  - ⇒ growing interest in MAC OS port *(will be in CIAO3)*
  - ⇒ little interest in a Windows port *(not planned in the near future)*
- available memory approaching ~1Gb in the next year

SOME DETAILS

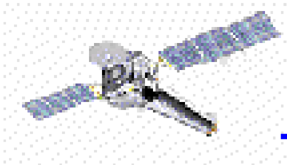
- CIAO Features liked the most:
  - DM philosophy (filtering on-the-fly, binning, uniform syntax)
  - scriptability
  - sherpa
  - running in native shell

  - threads, threads, threads
  - ahelp



- CIAO Features not easy to do/ not liked or that should be added improved:
  - ability to write scripts/access to architecture *(CIAO3)*
  - timing *(CIAO3, CIAO3.1)*
  - visualisation/graphics *(enabled by CIAO3 -> more to come)*
  - speed *(CIAO3 and more to come)*
  - syntax/interface *(future GUI development)*
  - calculation of fluxes *(better docs and L3 tool)*
  - very specific scientific projects

- Documentation features missing or needing improvements:
  - more examples in ahelp files
  - expansion and depth of threads (both in number and in content)



MEMORABLE QUOTES (i.e. how difficult it is to please everyone!)

☛ *Very frequent updating of CIAO. When is it going to be stable?*

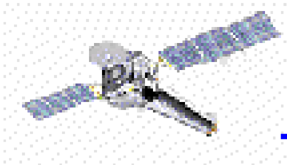
☞ *It's not about what I would like to be able to do. My issue with CIAO is that a patch should be made available immediately if/when bugs are identified.*

☛ *I think there is a danger in making complicated analysis software too easy.*
Scripts such as psextract which remove most (if not all) of the technical detail (and therefore knowledge of the system) from the user can promote bad science. People should be willing to put forth the effort to learn how the system works.

☞ *(I would like) more scripts to do repetitive processing tasks*

☛ *(I like the best) virtual filename syntax, the physical coord system, sherpa*

☞ *(I like the least) syntax is nonintuitive and awkward, sherpa - useless....*



☛ *The threads are very useful for unfamiliar tasks.*

☞ *Threads are great once you know what you're doing, but a terrible way to learn. There needs to be something that you can print and read on the john.*

● ***Maybe authors of good papers could be invited to write a thread, explaining how (and why) they did various procedures in their analysis (YES!!)***

● ****All* astronomical software is aggravating to use, although in different ways. I use ciao until I have a task which breaks. I switch to xspec or fun-tools for that task until something else breaks. I go back and see if ciao does any better now, ..***