Chandra X-ray Center

Caveat: HRC Telemetry Glitches

Return to: Data Caveats Index

Due to telemetry glitches, it occasionally happens that an out of sequence event is encountered. Those events should be considered bad; but they are not presently filtered. Affects very few observations and only very few events. The following warning is issued by hrc_process_events:

```
WARNING: Out of sequence events discovered in
<path>/<rootfname>_evt0a.fits[time=...:...]
```

Note also that there are occasional events that appear in the telemetry stream with time tags that make them seem to have occurred out of sequence. One special case where this has occurred has been documented (please see bad time tag memo), and other occurrences are most likely to be caused by hiccups in the HRC or by double bit errors in telemetry (single bit errors are corrected). It appears that the special case was recognized and corrected but that the event would still be flagged in the STATUS keyword.

All standard products are supplied in the decommed order, so this cannot be fixed by running dmsort. The best thing to do is to reject these events that have

```
status=xxxxxxxxxxxxxxxxxxxxxxxxx0xxxxxx
```

This would normally be done in the standard level 2 filter.