TRACE

Wavelengths, targets, frames, and sequences

Version XII.

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This document has not been finalized yet: targets, frame definitions, sequences, and the instructions and syntax used in the sequences are still subject to change.

1 Introduction

This document provides a summary and listing of targets, frames, and sequences that have been defined to carry out the 30–day plan (see the index to that document and Section 5 below for a complete listing of all sequences identified in that plan).

2 Wavelengths

For a current (updating) list of wavelengths, see the web at

`http://www.space.lockheed.com/TRACE/TRACE_wavelengths.html`

The TRACEFRAME tool at present (25 July 1997) assumes the default to be the positions marked by an asterisk.

3 Targets

Below is a list of targets that can be referenced by name. The figures 2 through 8 show the standard set on the disk. Fig. 7 shows an example of a 7 panel mosaic around, for instance, an active region.

```
 Fixed targets (fixed reference coordinates on the disk):
  activitybelt     - list of 16 pointings covering N&S activity belts
  diskcenter       - center on geometrical center of disk
  eastbox          - list of 6 pointings for extended eastern limb (2x3)
  eastcap          - list of 3 pointings for extended eastern limb (1x3)
  eastlimb         - center on equator at east limb
  equator          - list of 6 pointings covering equatorial band
  fullmosaic       - list of 24 pointings for full-disk mosaic
  limbring         - list of 14 pointings covering the limb
  innerring        - list of 18 pointings just off the limb
  mdicenter        - center on center of high-res. MDI f.o.v.
  meridian         - list of 5 pointings covering central meridian
  northbelt        - list of 5 pointings covering northern activity belt
  northbox         - list of 4 pointings for northern polar region (2x2)
  northcap         - list of 3 pointings for northern polar region (3x1)
  northswath       - list of 4 pointings covering far northern hemisphere (4x1)
  northpole        - center on apparent solar north pole
  outerring        - list of 24 pointings well above the limb
  southbelt        - list of 5 pointings covering southern activity belt
  southbox         - list of 4 pointings for southern polar region (2x2)
  southcap         - list of 3 pointings for southern polar region (3x1)
  southpole        - center on apparent solar south pole
  southswath       - list of 4 pointings covering far southern hemisphere (4x1)
  westbox          - list of 6 pointings for extended western limb (2x3)
  westcap          - list of 3 pointings for extended western limb (1x3)
  westlimb         - center on equator at west limb
```

Fig. 1 is a summary of all 42 of the pointing positions used in this set.

The following are fixed targets for calibration of the guide telescope and PZT signals. These take up eight distinct pointings in table entries 43 through 50. These need to be onboard all the time in the early part of the mission (first few weeks or first month – TBD) and then can be removed and reloaded only when necessary.

```
ISSx             - 2 ISS x-axis calibration positions
ISSz             - 2 ISS z-axis calibration positions
ISSa             - 2 ISS a-axis calibration positions
ISSb             - 2 ISS b-axis calibration positions
ISSc             - 2 ISS c-axis calibration positions
```

The target posisitions (accessible by the wedges) are 1: (-610, 753), 2: (-189, 821), 3: (189, 821), 4: (610, 753), 5: (892, 379), 6: (428, 399), 7: (-8, 456), 8: (-428, 399), 9: (-892, 379), 10: (-906, 0), 11: (-586, -10), 12: (-196, 3), 13: (196, 3), 14: (586, -10), 15: (906, 0), 16: (892, -379), 17: (428, -399), 18: (8, -456), 19: (-428, -399), 20: (-892, -379), 21: (-610, -753), 22: (-189, -821), 23: (189, -821), 24: (610, -753), 25: (0, 131), 26: (-410, 878), 27: (-15, 842), 28: (410, 878), 29: (-410, -878), 30: (15, -842), 31: (410, -878), 32: (-201, 1139), 33: (201, 1139), 34: (-201,-1139), 35: (201,-1139), 36: (-1231, 353), 37: (-1219, -21), 38: (-1231, -353), 39: (1231, 353), 40: (1219, -21), 41: (1231, -353), 42: (0, 0), 43: (-6, 65), 44: (6, 65), 45: (65, -6), 46: (65, 6), 47: (-59, 28), 48: (-54, 37), 49: (59, 28), 50: (54, 37), 51: (-1009, 788), 52: (1009, 788), 53: (-1009, -788), 54: (1009, -788), 55: (-679, 1086), 56: (679, 1086), 57: (-679,-1086), 58: (679,-1086), 59: (-1593, -397), 60: (-1582, -28), 61: (-1593, 397), 62: (-1421, 821), 63: (-1098, 1220), 64: (-772, 1514), 65: (-368, 1478), 66: (0, 1523), 67: (368, 1478), 68: (772, 1514), 69: (1098, 1220), 70: (1421, 821), 71: (1600, 400), 72: (1593, -28), 73: (1593, -397), 74: (1421, -821), 75: (1098,-1220), 76: (772,-1514), 77: (368,-1478), 78: (0,-1523), 79: (-368,-1478), 80: (-772,-1514), 81: (-1098,-1220), 82: (-1421, -821), 83: (-185, -185), 84: (185, -185), 85: (185, 185), 86: (-185, 185), 87: (-185, -185), 88: (185, -185), 89: (185, 185), 90: (-185, 185), 91: (-220, 370), 92: (220, 370), 93: (400, 0), 94: (0, 0), 95: (-400, 0), 96: (-220, -370), 97: (220, -370), given in arcseconds relative to disk center.

```
Changing targets (location on the Sun to be defined before observing):
 zerolonglat      - center on 0 longitude, 0 latitude
 top#             - target of opportunity
 ar#              - active region number #
 ar#.7panel       - 7 panel mosaic centered on active region number #
                    (ar#,the central position, is included)
 ar#.2x2          - 2 by 2 mosaic centered on active region number #
 ar#.3x3          - 3 by 3 mosaic centered on active region number #
 ar#.4x4          - 3 by 3 mosaic centered on active region number #
 qr#              - quiet region number #
 qr#.7panel       - 7 panel mosaic centered on quiet region number #
                    (qr#,the central position, is included)
 qr#.2x2          - 2 by 2 mosaic centered on quiet region number #
```

```
qr#.3x3          - 3 by 3 mosaic centered on quiet region number #
qr#.4x4          - 3 by 3 mosaic centered on quiet region number #
    where # is a number ranging from 1 up to (TBD)
```

These targets (generally) correspond to locations on the Sun. Corrections for solar rotation may be carried out by updates of the wedge positions (typically every six hours or so, corresponding to a rotation on 1/10th of the field of view at disk center) from the absolute time line (ATP) If you use the execute_list command, the revised pointings will be used automatically, but if you use the target command you should add extra target instructions in the sequence (which will cause no action or delay if the wedge positions for the target are the same as the current positions).

N.B.

- If a target consists of multiple pointings, the proper reference by name is "$ list$name", otherwise just use "name".
- To reference a single element of a predefined list of targets, use "named.pos# " where # is the number in the target list. For the ISS targets, use "ISS.pos# " with # the number as shown in Fig. 8 (noting that ISSz and ISSa are identical), e.g. "ISS.pos45." for ISSa target 1.
- All sequences must have "target_list", "frame_list", and "execute_list" instructions. "target_list(nomove)" is the instruction to remain at current target.
- Sequence writers should generally use AR1, QR1, or TOP1 in sequences. Only when multiple targets are needed should higher numbers be defined within the sequence or called subsequences. These variable targets will be defined (i.e. the target table will be modified) from the time line just prior to starting the relevant sequences.

4 Frames

4.1 Miscellaneous notes

N.B. Some conventions and reminders:

- "The camera is apparently oriented such that rows runs north-south. In other words, if one were to do a partial read of say 128 rows, one would get strip with 128 pixels running east-west and 1024 pixels running north-south." (Mike Levay, Wed Feb 12, 2:06pm -0800, trace_sci_ops)
- We distinguish between CCD "summing" of n×n CCD pixels and DHC "binning" of m×m image pixels (which may be "summed" CCD pixels). Note that "summed" values are divided by n^2 to maintain mean DN level.
- What used to be loosely called "(pre-)flare buffer" is now "small buffer". "Main buffer" has remained unchanged.
- By "Default/initial AEC" we mean the value to which the AEC tables are initialized by a "resetAEC" command. The precise value of the exposure time used is then ultimately determined by the target class given in the pointing table and set by the "target" command.

4.2 Frame naming convection

Naming convention: name is preceded by author's initials, which *must* be lower case, followed by a period.

```
caldc####           - frames defined to be used by the sequence
                      CJS.caldiskcenter.1x1.all; ##### contains the
                      wavelength; full camera frame, no summing or binning,
                      exposure at default/initial AEC setting,
                      no compression, output to main buffer only.
compress_2bin####   - 2x2 summed, highly compressed images, sent to
                      main buffer only, at default/initial AEC setting
compress_aec2bin####- 2x2 summed, highly compressed images, sent to
                      main buffer only, with AEC on
dark0               - take dark frame at shortest possible integration time
                      (0.002 sec); uncompressed, to main buffer
dark1               - take dark frame for 1 second integration;
                      uncompressed, to main buffer
```

```
flarewatch#####     - full frame, default/initial AEC exposure time, output
                      of full area, highly compressed, perhaps binned to
                      small buffer, only flare check with optimal
                      (TBD) thresholds; used for AEC.
longer2bin#####     - full camera frame, 2x2 summing, AEC exposure time offset
                      by 2, optimal JPEG compression (TBD), no subareas,
                      no event tests, output to main buffer only;
priocaldc####       - frames defined to be used by the sequence
                      CJS.priocaldiskcenter.1x1.all;
                      full camera frame, no summing or binning, default/init.
                      AEC exposure, no compression, output to next available
                      small buffer.
priodark0           - take dark frame at shortest possible integration time
                      (0.002 sec); uncompressed, to next available small
                      buffer
priodark1           - take dark frame for 1 second integration;
                      uncompressed, to next available small buffer
stdaecfull#####     - standard: full camera frame, no summing or binning,
                      using AEC and defining next AEC, optimal JPEG
                      compression (TBD), no subareas, no event tests, output
                      to main buffer only;
stdfull#####        - standard: full camera frame, no summing or binning,
                      default/intial AEC exposure time, optimal JPEG
                      compression (TBD), no subareas, no event tests,
                      output to main buffer only;
std2bin#####        - standard: full camera frame, 2x2 summing, default/init.
                      AEC exposure time, optimal JPEG compression (TBD), no
                      subareas, no event tests, output to main buffer only;
```

5 Sequences

5.1 Sequence naming convection

The Sequence Name can be any text string, of any length. This will make it easier to recognize what sequences are called by a higher–level sequence. The Sequence Name has to be unique, and will be finalized when the sequence is added to the sequence database. There will be an alias file linking the unique Sequence Identification number (see below) to a Sequence Name. Multiple Sequence Names can refer to a single Sequence Number (or Sequence ID), but not the other way around.

Naming convection: 1) author's initials (must be in capitals), 2) if the sequence consists ONLY of the triplet of commands "set_targ_list, set_frame_list, execute_lists", or if the sequence performs only an equivalent of that (possibly including AEC setup), without branching or looping, the second part of the name should be ".scene." (this allows easy identification of these basic building blocks that are likely to be used in multiple sequences – see examples in Appendix II), 3) summary of target and/or goal, 4) raster size (horizontal × vertical), 5) wavelength (set), 6) version number. But this is only a suggestion, because the use of the authors initials in the sequence name makes the definition of a name a purely local matter.

5.2 Sequence header layout

All sequences are to begin with a header like the following:

```
//name ***.******.***.***
//description: ****************************************
//revision: ***
//date: 1997****
//keywords: *****, ******, ******
//ID:          000.000.000.000
//Type:        ****
//Target:      ****
//Termination: ****
//Telemetry:   ****
```

N.B. The description can span multiple lines, but ONLY THE FIRST is extracted and searched by the database and search tools

5.3 Sequence number or ID

The definition of sequence number or ID is TBD. This is likely to be defined by the database software, and NOT to be entered/defined by the author/user.

5.4 Sequence keywords

For the purpose of indexing and searching the database, the sequence header will contain science keywords. These are to be selected from the following list (preferably, but not necessarily, including the category number):

0	Unknown/not specified	1	Active region
2	Arcades	3	Bright Points
4	Brightness Distribution	5	Calibration
6	CCD	7	Chromosphere
8	Chromospheric Network	9	Coronal Heating
10	Coronal Holes	11	Coronal Mass Ejection
12	Cosmic Rays	13	Data Compression
14	Data Processing	15	Emerging flux
16	Filaments	17	Flares
18	Flat Field	19	Flows
20	Ground-Based Coordination	21	Hardware tests
22	High Resolution Imaging	23	Large-Scale Structure
24	Limb	25	Loops
26	Magnetic Reconnection	27	Magnetohydrodynamics
28	Magnetosphere	29	Morphology
30	Nanoflares	31	Onboard Software
32	Photosphere	33	Pointing
34	Polar Regions	35	Prominences
36	Quiet Sun	37	Radiative Transfer
38	Rocket	39	Rotation
40	Scattering	41	Soft X-Rays
42	Software tests	43	Solar Cycle
44	Solar Eclipses	45	Solar-Terrestrial Relations
46	Solar Wind	47	Spicules
48	Sunspots	49	Synoptic
50	Telemetry	51	Temperature
52	Transients	53	Transition Region
54	Turbulence	55	Waves
...	...	...	...

100	JOP with SoHO	101	JOP with YOHKOH
102	JOP with ground-based obs.	103	JOP with multiple obs.

5.5 Sequence classification

5.5.1 Type

"Type" specifies the "level" of the sequence. Options are:

- "subroutine"
- "sub_sequence"
- "scene"
- "main program"

A sequence can have multiple options specified. For example: a full–disk "observation" can be called as a "main program". As a rule, only sequences defined to be a "main program" can be started from the time line.

5.5.2 Target

"Target" specifies target by name, explicit reference, or "current" if no repoint is specified. Predefined targets are shown in the appending figures.

5.5.3 Termination

"Termination" spells out how the sequence is terminated. Options are

- "by interrupt"
- "upon completion"
- "executes once"

5.5.4 Telemetry

"Telemetry" will contain an estimate of the telemetry (for observations) or telemetry rate (for subroutines and main programs).

6 List of sequences explicitly identified in the thirty–day plan:

The following is a list of sequences that have thus far (22 Jan. 1998) been defined in the 30–day plan. The index to that document can be used to find entries relating to these sequences. Some sequences listed in Appendix II are not listed below: these are eiter lower–level subroutines called by the sequences, or, for example, two added sequences CJS.failsafe.mdicenter and CJS.failsafe.norepoint which are meant to be used to gather useful data whenever a sequence ends prior to initiation of another sequence. Calls to these failsafe sequences can either be made explicitly in a sequence or in the timeline instruction.

```
CCK.arflareresp.1x1.all.1
CCK.arflareresp.1x1.all.2
CCK.arflarewatch.1x1.195
CCK.[east,west]limb.2x1.all1
CCK.[east,west]limb.3x2.Fe12Fe15.1
CCK.[north,south]polar.1x1.171
CCK.[north,south]polar.1x1.all
CCK.[north,south]polar.3x1.1wave.1
CCK.[north,south]polar.fan.multi
CJS.1x1.tracking.all2
CJS.armosaic.7panel.all.1
CJS.caldiskcenter.1x1.all
CJS.crosscaldiskcenter.1x1.all
CJS.deepquietsun.1x1.nowl
CJS.dynamics.1x1.lymancontext
CJS.fastdynamics.1x1.CIVcontext
CJS.qrflarewatch.1x1.euv.1
CJS.qrmosaic.7panel.all.1
CJS.qschinterface.1x1.all1
CJS.scene.CDSsynoptic
CJS.scene.equator.6x1.all
CJS.scene.northbelt.5x1.all
CJS.scene.northswath.4x1.all
CJS.scene.southbelt.5x1.all
CJS.scene.southswath.4x1.all
CJS.scene.[prio]fulldisk.allpanel.1wave
CJS.scene.[prio]fulldisk.allpanel.all
```

```
CJS.slowdynamics.1x1.CIVcontext
CJS.tracking.1x1.171
CJS.tracking.1x1.all1
CJS.tracking.1x1.all2
CJS.tracking.1x1.all3
CJS.tracking.1x1.all4
CJS.[scene.,prio]caldiskcenter.1x1.all
COM.ff1$\_$flats$\_$euv
DC.filament.1x1.HI
DC.filament.2x2.all1
DC.filament.mix.all1
RAS.dynamics.1x1.all.1
RAS.dynamics.1x1.all.2
RAS.dynamics.1x1.all.3
RAS.dynamics.1x1.all.4
RAS.movie.1x1.1EUV
RAS.testsnapshots.1x1.all
RAS.[east,west]limb.1x1.all1
TDT.trfast
```

7 Appendix I: defined frames

Frames defined thus far ...

Location: /hosts/diapason/data13/trace_egse_sw/obs_dev/cjs/frame

Tool: these listings have been made with Dick Shine's tool "show_frame".

cjs.aecoffset2.full1216.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:14:34
# estimated storage (bytes) = 161191, 0
Lyman alpha; opt JPEG; full CCD; full res; last AEC + 2; current ampl.; main buffer
ID:  0
wave: 1216 (13)
exp: current AEC, offset = 2, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.aecoffset2.full1550.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:14:42
# estimated storage (bytes) = 161191, 0
1550; opt JPEG; full CCD; full res; last AEC + 2; current ampl.; main buffer
ID:  0
wave: 1550 (21)
exp: current AEC, offset = 2, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.aecoffset2.full1600.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:14:51
# estimated storage (bytes) = 161191, 0
1600; opt JPEG; full CCD; full res; last AEC + 2; current ampl.; main buffer
ID:  0
wave: 1600 (16)
exp: current AEC, offset = 2, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.aecoffset2.full1700.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:15:02
# estimated storage (bytes) = 161191, 0
1700; opt JPEG; full CCD; full res; last AEC + 2; current ampl.; main buffer
ID:  0
wave: 1700 (18)
exp: current AEC, offset = 2, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.aecoffset2.full171.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:25:49
# estimated storage (bytes) = 185767, 0
Fe IX 171; opt JPEG; full CCD; full res; last AEC + 2; current ampl.; main buffer
ID:  0
wave: Fe IX 171 ao (2)
exp: current AEC, offset = 2, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.aecoffset2.full195.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:26:22
# estimated storage (bytes) = 185767, 0
Fe XII 195; opt JPEG; full CCD; full res; last AEC + 2; current ampl.; main buffer
ID:  0
wave: Fe XII 195 ao (6)
exp: current AEC, offset = 2, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.aecoffset2.full284.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:26:51
# estimated storage (bytes) = 185767, 0
Fe XV 284; opt JPEG; full CCD; full res; last AEC + 2; current ampl.; main buffer
ID:  0
wave: Fe IV 284 ao (10)
exp: current AEC, offset = 2, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.aecoffset4.full1216.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:27:17
# estimated storage (bytes) = 185767, 0
Lyman alpha; opt JPEG; full CCD; full res; last AEC + 4; current ampl.; main buffer
ID:  0
wave: 1216 (13)
exp: current AEC, offset = 4, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.aecoffset4.full1550.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:15:47
# estimated storage (bytes) = 161191, 0
1550; opt JPEG; full CCD; full res; last AEC + 4; current ampl.; main buffer
ID:  0
wave: 1550 (21)
exp: current AEC, offset = 4, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.aecoffset4.full1600.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:15:57
# estimated storage (bytes) = 161191, 0
1600; opt JPEG; full CCD; full res; last AEC + 4; current ampl.; main buffer
ID:  0
wave: 1600 (16)
exp: current AEC, offset = 4, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.aecoffset4.full1700.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:16:08
# estimated storage (bytes) = 161191, 0
1700; opt JPEG; full CCD; full res; last AEC + 4; current ampl.; main buffer
ID:  0
wave: 1700 (18)
exp: current AEC, offset = 4, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.aecoffset4.full171.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:37:25
# estimated storage (bytes) = 185767, 0
Fe IX 171; opt JPEG; full CCD; full res; last AEC + 4; current ampl.; main buffer
ID:  0
wave: Fe IX 171 ao (2)
exp: current AEC, offset = 4, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.aecoffset4.full195.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:37:46
# estimated storage (bytes) = 185767, 0
Fe XII 195; opt JPEG; full CCD; full res; last AEC + 4; current ampl.; main buffer
ID:  0
wave: Fe XII 195 ao (6)
exp: current AEC, offset = 4, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.aecoffset4.full284.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:38:02
# estimated storage (bytes) = 185767, 0
Fe XV 284; opt JPEG; full CCD; full res; last AEC + 4; current ampl.; main buffer
ID:  0
wave: Fe IV 284 ao (10)
exp: current AEC, offset = 4, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.aecoffset8.full1216.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:16:49
# estimated storage (bytes) = 185767, 0
Lyman alpha; opt JPEG; full CCD; full res; last AEC + 8; current ampl.; main buffer
ID:  0
wave: 1216 (13)
exp: current AEC, offset = 8, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.aecoffset8.full1550.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:16:57
# estimated storage (bytes) = 161191, 0
1550; opt JPEG; full CCD; full res; last AEC + 8; current ampl.; main buffer
ID:  0
wave: 1550 (21)
exp: current AEC, offset = 8, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.aecoffset8.full1600.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:20:15
# estimated storage (bytes) = 161191, 0
1600; opt JPEG; full CCD; full res; last AEC + 8; current ampl.; main buffer
ID:  0
wave: 1600 (16)
exp: current AEC, offset = 8, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.aecoffset8.full1700.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:20:22
# estimated storage (bytes) = 161191, 0
1700; opt JPEG; full CCD; full res; last AEC + 8; current ampl.; main buffer
ID:  0
wave: 1700 (18)
exp: current AEC, offset = 8, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.aecoffset8.full171.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:38:34
# estimated storage (bytes) = 185767, 0
Fe IX 171; opt JPEG; full CCD; full res; last AEC + 8; current ampl.; main buffer
ID:  0
wave: Fe IX 171 ao (2)
exp: current AEC, offset = 8, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.aecoffset8.full195.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:38:52
# estimated storage (bytes) = 185767, 0
Fe XII 195; opt JPEG; full CCD; full res; last AEC + 8; current ampl.; main buffer
ID:  0
wave: Fe XII 195 ao (6)
exp: current AEC, offset = 8, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.aecoffset8.full284.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:39:09
# estimated storage (bytes) = 185767, 0
Fe XV 284; opt JPEG; full CCD; full res; last AEC + 8; current ampl.; main buffer
ID:  0
wave: Fe IV 284 ao (10)
exp: current AEC, offset = 8, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.aecoffsetminus2.full1216.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:21:06
# estimated storage (bytes) = 161191, 0
Lyman alpha; opt JPEG; full CCD; full res; last AEC - 2; current ampl.; main buffer
ID:  0
wave: 1216 (13)
exp: current AEC, offset = -2, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.aecoffsetminus2.full1550.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:21:14
# estimated storage (bytes) = 161191, 0
1550; opt JPEG; full CCD; full res; last AEC +-2; current ampl.; main buffer
ID:  0
wave: 1550 (21)
exp: current AEC, offset = -2, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.aecoffsetminus2.full1600.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:21:21
# estimated storage (bytes) = 161191, 0
1600; opt JPEG; full CCD; full res; last AEC - 2; current ampl.; main buffer
ID:  0
wave: 1600 (16)
exp: current AEC, offset = -2, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.aecoffsetminus2.full1700.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:21:32
# estimated storage (bytes) = 161191, 0
1700; opt JPEG; full CCD; full res; last AEC - 2; current ampl.; main buffer
ID:  0
wave: 1700 (18)
exp: current AEC, offset = -2, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.aecoffsetminus2.full171.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:39:51
# estimated storage (bytes) = 185767, 0
Fe IX 171; opt JPEG; full CCD; full res; last AEC - 2; current ampl.; main buffer
ID:  0
wave: Fe IX 171 ao (2)
exp: current AEC, offset = -2, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.aecoffsetminus2.full195.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:40:05
# estimated storage (bytes) = 185767, 0
Fe XII 195; opt JPEG; full CCD; full res; last AEC - 2; current ampl.; main buffer
ID:  0
wave: Fe XII 195 ao (6)
exp: current AEC, offset = -2, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.aecoffsetminus2.full284.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:40:24
# estimated storage (bytes) = 185767, 0
Fe XV 284; opt JPEG; full CCD; full res; last AEC -2; current ampl.; main buffer
ID:  0
wave: Fe IV 284 ao (10)
exp: current AEC, offset = -2, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.caldc1216.ufrm:

```
TRACE camera frame definition, created Oct  8, 1997 08:21:34
# estimated storage (bytes) = 1572864, 0
Lyman; uncompressed; full CCD only; default exp.; current ampl.; main buffer
ID:  0
wave: 1216 (13)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, packed 12 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 1572864 bytes, SMALL storage = 0 bytes, total = 1572864 bytes
```

cjs.caldc1550.ufrm:

```
TRACE camera frame definition, created Oct  8, 1997 08:24:57
# estimated storage (bytes) = 1572864, 0
1550; uncompressed; full CCD only; default exp.; current ampl.; main buffer
ID:  0
wave: 1550 (21)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, packed 12 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 1572864 bytes, SMALL storage = 0 bytes, total = 1572864 bytes
```

cjs.caldc1600.ufrm:

```
TRACE camera frame definition, created Oct  8, 1997 08:25:04
# estimated storage (bytes) = 1572864, 0
1600; uncompressed; full CCD only; default exp.; current ampl.; main buffer
ID:  0
wave: 1600 (16)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, packed 12 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 1572864 bytes, SMALL storage = 0 bytes, total = 1572864 bytes
```

cjs.caldc1700.ufrm:

```
TRACE camera frame definition, created Oct  8, 1997 08:25:13
# estimated storage (bytes) = 1572864, 0
1700; uncompressed; full CCD only; default exp.; current ampl.; main buffer
ID:  0
wave: 1700 (18)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, packed 12 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 1572864 bytes, SMALL storage = 0 bytes, total = 1572864 bytes
```

cjs.caldc171.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:41:26
# estimated storage (bytes) = 1597440, 0
Fe IX 171; uncompressed; full CCD only; default exp.; current ampl.; main buffer
Safety check bit not set: frame for single exposure use only!
ID:  0
wave: Fe IX 171 ao (2)
exp: default AEC, offset = 0, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, packed 12 bits
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 1597440 bytes, SMALL storage = 0 bytes, total = 1597440 bytes
```

cjs.caldc195.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:41:46
# estimated storage (bytes) = 1597440, 0
Fe XII 195; uncompressed; full CCD only; default exp.; current ampl.; main buffer
Safety check bit not set: frame for single exposure use only!
ID:  0
wave: Fe XII 195 ao (6)
exp: default AEC, offset = 0, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, packed 12 bits
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 1597440 bytes, SMALL storage = 0 bytes, total = 1597440 bytes
```

cjs.caldc284.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:42:02
# estimated storage (bytes) = 1597440, 0
Fe XV; uncompressed; full CCD only; default exp.; current ampl.; main buffer
Safety check bit not set: frame for single exposure use only!
ID:  0
wave: Fe IV 284 ao (10)
exp: default AEC, offset = 0, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, packed 12 bits
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 1597440 bytes, SMALL storage = 0 bytes, total = 1597440 bytes
```

cjs.caldc_ wl.ufrm:

```
TRACE camera frame definition, created Oct  8, 1997 08:26:04
# estimated storage (bytes) = 1572864, 0
Visible; uncompressed; full CCD only; default exp.; current ampl.; main buffer
ID:  0
wave: white light fs (15)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, packed 12 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 1572864 bytes, SMALL storage = 0 bytes, total = 1572864 bytes
```

cjs.compress_ 2bin1216.ufrm:

```
TRACE camera frame definition, created Oct  8, 1997 09:24:52
# estimated storage (bytes) = 30728, 0
Lyman alpha; strong JPEG; full CCD only; 2x2 ccd sum; def. exp.; curr. ampl.; main buffer
ID:  0
wave: 1216 (13)
exp: default AEC, offset = 0, update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 2x2, bin = 1
save to main buffer, JPEG(8, 1, 1)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 30727 bytes, SMALL storage = 0 bytes, total = 30727 bytes
```

cjs.compress_ 2bin1550.ufrm:

```
TRACE camera frame definition, created Oct  8, 1997 09:25:21
# estimated storage (bytes) = 30728, 0
C IV; strong JPEG; full CCD only; 2x2 ccd sum; def. exp.; current ampl.; chron. buffer
ID:  0
wave: 1550 (21)
exp: default AEC, offset = 0, update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 2x2, bin = 1
save to main buffer, JPEG(8, 1, 1)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 30727 bytes, SMALL storage = 0 bytes, total = 30727 bytes
```

cjs.compress_ 2bin171.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:42:49
# estimated storage (bytes) = 55304, 0
Fe IX 171; strong JPEG; full CCD only; 2x2 ccd sum; def. exp.; curr. ampl.; main buffer
ID:  0
wave: Fe IX 171 ao (2)
exp: default AEC, offset = 0, update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 2x2, bin = 1
save to main buffer, JPEG(8, 1, 1)
area 1: 1024 x 1024, bin = 4, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 55303 bytes, SMALL storage = 0 bytes, total = 55303 bytes
```

cjs.compress_ 2bin195.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:43:59
# estimated storage (bytes) = 55304, 0
Fe XII 195; strong JPEG; full CCD only; 2x2 ccd sum; def. exp.; curr. ampl.; main buffer
ID:  0
wave: Fe XII 195 ao (6)
exp: default AEC, offset = 0, update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 2x2, bin = 1
save to main buffer, JPEG(8, 1, 1)
area 1: 1024 x 1024, bin = 4, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 55303 bytes, SMALL storage = 0 bytes, total = 55303 bytes
```

cjs.compress_ 2bin284.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:44:15
# estimated storage (bytes) = 55304, 0
Fe XV 284; strong JPEG; full CCD only; 2x2 ccd sum; def. exp.; curr. ampl.; main buffer
ID:  0
wave: Fe IV 284 ao (10)
exp: default AEC, offset = 0, update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 2x2, bin = 1
save to main buffer, JPEG(8, 1, 1)
area 1: 1024 x 1024, bin = 4, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 55303 bytes, SMALL storage = 0 bytes, total = 55303 bytes
```

cjs.compress_ aec2bin1216.ufrm:

```
TRACE camera frame definition, created Oct  8, 1997 09:25:50
# estimated storage (bytes) = 30728, 0
Lyman alpha; strong JPEG; full CCD only; 2x2 ccd sum; AEC; current ampl.; cmain buffer
ID:  0
wave: 1216 (13)
exp: current AEC, offset = 0, update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 2x2, bin = 1
save to main buffer, JPEG(8, 1, 1)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 30727 bytes, SMALL storage = 0 bytes, total = 30727 bytes
```

cjs.compress_ aec2bin1550.ufrm:

```
TRACE camera frame definition, created Oct  8, 1997 09:25:58
# estimated storage (bytes) = 30728, 0
C IV; strong JPEG; full CCD only; 2x2 ccd sum; AEC.; curr. ampl.; main buffer
ID:  0
wave: 1550 (21)
exp: current AEC, offset = 0, update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 2x2, bin = 1
save to main buffer, JPEG(8, 1, 1)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 30727 bytes, SMALL storage = 0 bytes, total = 30727 bytes
```

cjs.compress_ aec2bin171.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:44:49
# estimated storage (bytes) = 55304, 0
Fe IX 171; strong JPEG; full CCD only; 2x2 ccd sum; AEC; current ampl.; chron. buffer
ID:  0
wave: Fe IX 171 ao (2)
exp: current AEC, offset = 0, update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 2x2, bin = 1
save to main buffer, JPEG(8, 1, 1)
area 1: 1024 x 1024, bin = 4, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 55303 bytes, SMALL storage = 0 bytes, total = 55303 bytes
```

cjs.compress_ aec2bin195.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:45:09
# estimated storage (bytes) = 55304, 0
Fe XII 195; strong JPEG; full CCD only; 2x2 ccd sum; AEC; current ampl.; main buffer
ID:  0
wave: Fe XII 195 ao (6)
exp: current AEC, offset = 0, update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 2x2, bin = 1
save to main buffer, JPEG(8, 1, 1)
area 1: 1024 x 1024, bin = 4, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 55303 bytes, SMALL storage = 0 bytes, total = 55303 bytes
```

cjs.compress_ aec2bin284.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:45:29
# estimated storage (bytes) = 55304, 0
Fe XV 284; strong JPEG; full CCD only; 2x2 ccd sum; AEC; current ampl.; main buffer
ID:  0
wave: Fe IV 284 ao (10)
exp: current AEC, offset = 0, update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 2x2, bin = 1
save to main buffer, JPEG(8, 1, 1)
area 1: 1024 x 1024, bin = 4, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 55303 bytes, SMALL storage = 0 bytes, total = 55303 bytes
```

cjs.dark0.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:45:50
# estimated storage (bytes) = 1572864, 0
Dark; uncompressed; full CCD only; shortest abs. exp.; current ampl.; main buffer
ID:  0
wave: null, no move (31)
exp: DARK,    0.002 seconds
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, packed 12 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 1572864 bytes, SMALL storage = 0 bytes, total = 1572864 bytes
```

cjs.dark1.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:46:00
# estimated storage (bytes) = 1572864, 0
Dark; uncompressed; full CCD only; 1 sec. exp.; current ampl.; main buffer
ID:  0
wave: null, no move (31)
exp: DARK,    1.024 seconds
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, packed 12 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 1572864 bytes, SMALL storage = 0 bytes, total = 1572864 bytes
```

cjs.flaretest_ aec_ 171_ 120.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:46:39
# estimated storage (bytes) = 185767, 0
Fe IX 171; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe IX 171 ao (2)
exp: current AEC, offset = 0, update
events:  , FF(120, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 171_ 20.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:47:00
# estimated storage (bytes) = 185767, 0
Fe IX 171; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe IX 171 ao (2)
exp: current AEC, offset = 0, update
events:  , FF(20, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 171_ 200.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:47:16
# estimated storage (bytes) = 185767, 0
Fe IX 171; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe IX 171 ao (2)
exp: current AEC, offset = 0, update
events:  , FF(200, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 171_ 300.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:47:38
# estimated storage (bytes) = 185767, 0
Fe IX 171; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe IX 171 ao (2)
exp: current AEC, offset = 0, update
events: , FF(300, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 171_ 40.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:47:54
# estimated storage (bytes) = 185767, 0
Fe IX 171; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe IX 171 ao (2)
exp: current AEC, offset = 0, update
events: , FF(40, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 171_ 80.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:48:14
# estimated storage (bytes) = 185767, 0
Fe IX 171; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe IX 171 ao (2)
exp: current AEC, offset = 0, update
events: , FF(80, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 195_ 120.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:48:32
# estimated storage (bytes) = 185767, 0
Fe IX 195; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe XII 195 ao (6)
exp: current AEC, offset = 0, update
events: , FF(120, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 195_ 20.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:49:07
# estimated storage (bytes) = 185767, 0
Fe IX 195; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe XII 195 ao (6)
exp: current AEC, offset = 0, update
events: , FF(20, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 195_ 200.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:49:30
# estimated storage (bytes) = 185767, 0
Fe IX 195; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe XII 195 ao (6)
exp: current AEC, offset = 0, update
events: , FF(200, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 195_ 300.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:49:49
# estimated storage (bytes) = 185767, 0
Fe IX 195; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe XII 195 ao (6)
exp: current AEC, offset = 0, update
events: , FF(300, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 195_ 40.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:50:04
# estimated storage (bytes) = 185767, 0
Fe IX 195; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe XII 195 ao (6)
exp: current AEC, offset = 0, update
events: , FF(40, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 195_ 80.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:50:25
# estimated storage (bytes) = 185767, 0
Fe IX 195; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe XII 195 ao (6)
exp: current AEC, offset = 0, update
events: , FF(180, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 284_ 120.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:50:44
# estimated storage (bytes) = 185767, 0
Fe IX 284; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe IV 284 ao (10)
exp: current AEC, offset = 0, update
events: , FF(120, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 284_ 20.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:51:01
# estimated storage (bytes) = 185767, 0
Fe IX 284; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe IV 284 ao (10)
exp: current AEC, offset = 0, update
events: , FF(20, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 284_ 200.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:51:18
# estimated storage (bytes) = 185767, 0
Fe IX 284; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe IV 284 ao (10)
exp: current AEC, offset = 0, update
events: , FF(200, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 284_ 300.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:51:43
# estimated storage (bytes) = 185767, 0
Fe IX 284; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe IV 284 ao (10)
exp: current AEC, offset = 0, update
events: , FF(300, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 284_ 40.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:52:01
# estimated storage (bytes) = 185767, 0
Fe IX 284; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe IV 284 ao (10)
exp: current AEC, offset = 0, update
events: , FF(40, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.flaretest_ aec_ 284_ 80.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:52:23
# estimated storage (bytes) = 185767, 0
Fe IX 284; full CCD only; JPEG; default exp.; current ampl.; main buffer;
ID:  0
wave: Fe IV 284 ao (10)
exp: current AEC, offset = 0, update
events: , FF(80, 100)
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.full_171_aec_deep4.ufrm:

```
TRACE camera frame definition, created Jan  9, 1998 15:38:16
# estimated storage (bytes) = 185767, 0
Fe IX 171; compressed; full CCD & dosimeter; AEC exp. *4; current ampl.; main buffer
ID:  0
wave: Fe IX 171 ao (2)
exp: current AEC, offset = 8, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.full_171_aec_deep8.ufrm:

```
TRACE camera frame definition, created Jan  9, 1998 15:39:14
# estimated storage (bytes) = 185767, 0
Fe IX 171; compressed; full CCD & dosimeter; AEC exp. *8; current ampl.; main buffer
ID:  0
wave: Fe IX 171 ao (2)
exp: current AEC, offset = 12, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.high_transient_test_wl.ufrm:

```
TRACE camera frame definition, created Oct  8, 1997 14:29:27
# estimated storage (bytes) = 239834, 0
Transient test frame; WL; central half, compressed; test on 5-frame average, high thr.
ID:  0
wave: white light fs (15)
exp: current AEC, offset = 0, no update
events: T(200, 10000, bright)
subarea 1 used for events and I max, I min
I max generated
t avg: subarea 1, 5 image average
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 512 x 512, bin = 1, camera center, offset (0, 0)
time average save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 239834 bytes, SMALL storage = 0 bytes, total = 239834 bytes
```

cjs.longer2bin195.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:54:53
# estimated storage (bytes) = 64874, 0
Fe XII; opt. JPEG; full CCD; 2x2 ccd sum; default AEC+2; current ampl.; main buffer
ID:  0
wave: Fe XII 195 ao (6)
exp: default AEC, offset = 2, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 2x2, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 4, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 4, camera center, offset (0, 0)
not saved
MAIN  storage = 64873 bytes, SMALL storage = 0 bytes, total = 64873 bytes
```

cjs.low_ transient_ test_ wl.ufrm:

```
TRACE camera frame definition, created Oct  8, 1997 14:29:41
# estimated storage (bytes) = 357799, 0
Transient test frame; WL; central half, compressed; test on 2-frame average, low thr.
ID:  0
wave: white light fs (15)
exp: current AEC, offset = 0, no update
events: T(101, 1, bright)
subarea 1 used for events and I max, I min
I max generated
t avg: subarea 1, 2 image average
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 512 x 512, bin = 1, camera center, offset (0, 0)
time average save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 357799 bytes, SMALL storage = 0 bytes, total = 357799 bytes
```

cjs.priocaldc1216.ufrm:

```
TRACE camera frame definition, created Oct  8, 1997 08:24:17
# estimated storage (bytes) = 0, 2097152
Lyman; uncompressed; full CCD only; default exp.; current ampl.; small buffer
ID:  0
wave: 1216 (13)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to small buffer, packed 16 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 0 bytes, SMALL storage = 2097152 bytes, total = 2097152 bytes
```

cjs.priocaldc1550.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:55:42
# estimated storage (bytes) = 0, 1572864
C IV; uncompressed; full CCD only; default exp.; current ampl.; small buffer
ID:  0
wave: 1550 (21)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to small buffer, packed 12 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 0 bytes, SMALL storage = 1572864 bytes, total = 1572864 bytes
```

cjs.priocaldc1600.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:55:50
# estimated storage (bytes) = 0, 1572864
1600; uncompressed; full CCD only; default exp.; current ampl.; small buffer
ID:  0
wave: 1600 (16)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to small buffer, packed 12 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 0 bytes, SMALL storage = 1572864 bytes, total = 1572864 bytes
```

cjs.priocaldc1700.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:55:58
# estimated storage (bytes) = 0, 1572864
1700; uncompressed; full CCD only; default exp.; current ampl.; small buffer
ID:  0
wave: 1700 (18)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to small buffer, packed 12 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 0 bytes, SMALL storage = 1572864 bytes, total = 1572864 bytes
```

cjs.priocaldc171.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:56:20
# estimated storage (bytes) = 24576, 1572864
Fe IX 171; uncompressed; full CCD only; default exp.; current ampl.; small buffer
Safety check bit not set: frame for single exposure use only!
ID:  0
wave: Fe IX 171 ao (2)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to small buffer, packed 12 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
MAIN  storage = 24576 bytes, SMALL storage = 1572864 bytes, total = 1597440 bytes
```

cjs.priocaldc195.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:56:27
# estimated storage (bytes) = 24576, 1572864
Fe XII 195; uncompressed; full CCD only; default exp.; current ampl.; small buffer
Safety check bit not set: frame for single exposure use only!
ID:  0
wave: Fe XII 195 ao (6)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to small buffer, packed 12 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
MAIN  storage = 24576 bytes, SMALL storage = 1572864 bytes, total = 1597440 bytes
```

cjs.priocaldc284.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:56:34
# estimated storage (bytes) = 24576, 1572864
Fe XV 284; uncompressed; full CCD only; default exp.; current ampl.; small buffer
Safety check bit not set: frame for single exposure use only!
ID:  0
wave: Fe IV 284 ao (10)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to small buffer, packed 12 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
MAIN  storage = 24576 bytes, SMALL storage = 1572864 bytes, total = 1597440 bytes
```

cjs.priocaldc_ wl.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:56:48
# estimated storage (bytes) = 0, 1572864
Visible; uncompressed; full CCD only; default exp.; current ampl.; circular buffer
ID:  0
wave: white light fs (15)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to small buffer, packed 12 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 0 bytes, SMALL storage = 1572864 bytes, total = 1572864 bytes
```

cjs.priodark0.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:57:29
# estimated storage (bytes) = 0, 2097152
Dark; uncompressed; full CCD only; shortest abs. exp.; current ampl.; small buffer
ID:  0
wave: null, no move (31)
exp: DARK,    0.002 seconds
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to small buffer, packed 16 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 0 bytes, SMALL storage = 2097152 bytes, total = 2097152 bytes
```

cjs.priodark1.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:57:23
# estimated storage (bytes) = 0, 1572864
Dark; uncompressed; full CCD only; 1 sec. exp.; current ampl.; small buffer
ID:  0
wave: null, no move (31)
exp: DARK,    1.024 seconds
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to small buffer, packed 12 bits
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 0 bytes, SMALL storage = 1572864 bytes, total = 1572864 bytes
```

cjs.std2bin195.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:27:37
# estimated storage (bytes) = 64874, 0
Fe XII; opt. JPEG; full CCD; 2x2 ccd sum; default AEC; current ampl.; chron. buffer
ID:  0
wave: Fe XII 195 ao (6)
exp: default AEC, offset = 0, update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 2x2, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 4, camera center, offset (0, 0)
save to main buffer, packed 12 bits
MAIN  storage = 64873 bytes, SMALL storage = 0 bytes, total = 64873 bytes
```

cjs.stdaeccenterhalf1216.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:28:31
# estimated storage (bytes) = 40298, 0
Lyman alpha; opt. JPEG; center half CCD; no binning; AEC; current ampl.; main buffer
ID:  0
wave: 1216 (13)
exp: current AEC, offset = 0, update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
not saved
area 1: 512 x 512, bin = 1, camera center, offset (0, 0)
save to main buffer, JPEG(6, 1, 0)
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 40297 bytes, SMALL storage = 0 bytes, total = 40297 bytes
```

cjs.stdaeccenterhalf1550.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:28:40
# estimated storage (bytes) = 40298, 0
1550; opt. JPEG; center half CCD; no binning; AEC; current ampl.; main buffer
ID:  0
wave: 1550 (21)
exp: current AEC, offset = 0, update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
not saved
area 1: 512 x 512, bin = 1, camera center, offset (0, 0)
save to main buffer, JPEG(6, 1, 0)
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 40297 bytes, SMALL storage = 0 bytes, total = 40297 bytes
```

cjs.stdaeccenterhalf1600.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:28:54
# estimated storage (bytes) = 40298, 0
1600; opt. JPEG; center half CCD; no binning; AEC; current ampl.; main buffer
ID:  0
wave: 1600 (16)
exp: current AEC, offset = 0, update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
not saved
area 1: 512 x 512, bin = 1, camera center, offset (0, 0)
save to main buffer, JPEG(6, 1, 0)
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 40297 bytes, SMALL storage = 0 bytes, total = 40297 bytes
```

cjs.stdaeccenterhalf1700.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:29:04
# estimated storage (bytes) = 40298, 0
1700; opt. JPEG; center half CCD; no binning; AEC; current ampl.; main buffer
ID:  0
wave: 1700 (18)
exp: current AEC, offset = 0, update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
not saved
area 1: 512 x 512, bin = 1, camera center, offset (0, 0)
save to main buffer, JPEG(6, 1, 0)
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 40297 bytes, SMALL storage = 0 bytes, total = 40297 bytes
```

cjs.stdaeccenterhalf171.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:59:55
# estimated storage (bytes) = 64874, 0
171; opt. JPEG; center half CCD; no binning; AEC; current ampl.; main buffer
ID:  0
wave: Fe IX 171 ao (2)
exp: current AEC, offset = 0, update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
not saved
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 512 x 512, bin = 1, camera center, offset (0, 0)
save to main buffer, JPEG(6, 1, 0)
MAIN  storage = 64873 bytes, SMALL storage = 0 bytes, total = 64873 bytes
```

cjs.stdaeccenterhalf195.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 10:59:44
# estimated storage (bytes) = 64874, 0
195; opt. JPEG; center half CCD; no binning; AEC; current ampl.; main buffer
ID:  0
wave: Fe XII 195 ao (6)
exp: current AEC, offset = 0, update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
not saved
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 512 x 512, bin = 1, camera center, offset (0, 0)
save to main buffer, JPEG(6, 1, 0)
MAIN  storage = 64873 bytes, SMALL storage = 0 bytes, total = 64873 bytes
```

cjs.stdaeccenterhalf284.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 11:00:31
# estimated storage (bytes) = 64874, 0
284; opt. JPEG; center half CCD; no binning; AEC; current ampl.; main buffer
ID:  0
wave: Fe IV 284 ao (10)
exp: current AEC, offset = 0, update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
not saved
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 512 x 512, bin = 1, camera center, offset (0, 0)
save to main buffer, JPEG(6, 1, 0)
MAIN  storage = 64873 bytes, SMALL storage = 0 bytes, total = 64873 bytes
```

cjs.stdaeccenterhalf_ wl.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:29:36
# estimated storage (bytes) = 40298, 0
White light; opt. JPEG; center half CCD; no binning; AEC; current ampl.; main buffer
ID:  0
wave: white light fs (15)
exp: current AEC, offset = 0, update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
not saved
area 1: 512 x 512, bin = 1, camera center, offset (0, 0)
save to main buffer, JPEG(6, 1, 0)
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 40297 bytes, SMALL storage = 0 bytes, total = 40297 bytes
```

cjs.stdaecfull1216.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:29:45
# estimated storage (bytes) = 161191, 0
Lyman alpha; opt. JPEG; full CCD only; no binning; AEC; current ampl.; main buffer
ID:  0
wave: 1216 (13)
exp: current AEC, offset = 0, update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.stdaecfull1550.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:29:52
# estimated storage (bytes) = 161191, 0
1550; opt. JPEG; full CCD only; no binning; AEC; current ampl.; main buffer
ID:  0
wave: 1550 (21)
exp: current AEC, offset = 0, update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.stdaecfull1600.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:29:58
# estimated storage (bytes) = 161191, 0
1600; opt. JPEG; full CCD only; no binning; AEC; current ampl.; main buffer
ID:  0
wave: 1600 (16)
exp: current AEC, offset = 0, update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.stdaecfull1700.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:30:04
# estimated storage (bytes) = 161191, 0
1700; opt. JPEG; full CCD only; no binning; AEC; current ampl.; main buffer
ID:  0
wave: 1700 (18)
exp: current AEC, offset = 0, update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.stdaecfull171.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 11:01:01
# estimated storage (bytes) = 185767, 0
Fe XII; opt. JPEG; full CCD only; no binning; AEC; current ampl.; main buffer
ID:  0
wave: Fe XII 195 ao (6)
exp: current AEC, offset = 0, update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.stdaecfull195.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 11:01:20
# estimated storage (bytes) = 185767, 0
Fe XII; opt. JPEG; full CCD only; no binning; AEC; current ampl.; main buffer
ID:  0
wave: Fe XII 195 ao (6)
exp: current AEC, offset = 0, update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.stdaecfull284.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 11:01:44
# estimated storage (bytes) = 185767, 0
Fe XV; opt. JPEG; full CCD only; no binning; AEC; current ampl.; main buffer
ID:  0
wave: Fe IV 284 ao (10)
exp: current AEC, offset = 0, update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.stdaecfull_ wl.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:30:48
# estimated storage (bytes) = 161191, 0
Visible; opt. JPEG; full CCD only; no binning; AEC; current ampl.; main buffer
ID:  0
wave: white light fs (15)
exp: current AEC, offset = 0, update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.stdcenterhalf_ wl.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 11:02:53
# estimated storage (bytes) = 40298, 0
White light; opt. JPEG; center half CCD; no binning; def. exp; current ampl.; main buffer
ID:  0
wave: white light fs (15)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
not saved
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
area 2: 512 x 512, bin = 1, camera center, offset (0, 0)
save to main buffer, JPEG(6, 1, 0)
MAIN  storage = 40297 bytes, SMALL storage = 0 bytes, total = 40297 bytes
```

cjs.stdfull1216.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:30:38
# estimated storage (bytes) = 161191, 0
Ly alpha; opt. JPEG; full CCD only; no binning; default exp.; current ampl.; main buffer
ID:  0
wave: 1216 (13)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.stdfull1550.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:31:00
# estimated storage (bytes) = 161191, 0
1550; opt. JPEG; full CCD only; no binning; default exp.; current ampl.; main buffer
ID:  0
wave: 1550 (21)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.stdfull1600.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:31:06
# estimated storage (bytes) = 161191, 0
1600; opt. JPEG; full CCD only; no binning; default exp.; current ampl.; main buffer
ID:  0
wave: 1600 (16)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.stdfull1700.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:31:15
# estimated storage (bytes) = 161191, 0
1700; opt. JPEG; full CCD only; no binning; default exp.; current ampl.; main buffer
ID:  0
wave: 1700 (18)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

cjs.stdfull171.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 11:03:22
# estimated storage (bytes) = 185767, 0
Fe IX 171; opt. JPEG; full CCD only; no binning; default exp.; current ampl.; main buffer
ID:  0
wave: Fe IX 171 ao (2)
exp: default AEC, offset = 0, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.stdfull195.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 11:03:50
# estimated storage (bytes) = 185767, 0
Fe IX 195; opt. JPEG; full CCD only; no binning; default exp.; current ampl.; main buffer
ID:  0
wave: Fe XII 195 ao (6)
exp: default AEC, offset = 0, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.stdfull284.ufrm:

```
TRACE camera frame definition, created Jan  7, 1998 11:04:06
# estimated storage (bytes) = 185767, 0
Fe IX 284; opt. JPEG; full CCD only; no binning; default exp.; current ampl.; main buffer
ID:  0
wave: Fe IV 284 ao (10)
exp: default AEC, offset = 0, no update
events: NONE
subarea 1 used for events and I max, I min
I max,  I min generated
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 8, camera center, offset (0, 0)
save to main buffer, packed 12 bits
area 2: 1024 x 1024, bin = 8, camera center, offset (0, 0)
not saved
MAIN  storage = 185767 bytes, SMALL storage = 0 bytes, total = 185767 bytes
```

cjs.stdfull_ wl.ufrm:

```
TRACE camera frame definition, created Oct 20, 1997 08:31:43
# estimated storage (bytes) = 161191, 0
visible; opt. JPEG; full CCD only; no binning; default exp.; current ampl.; main buffer
ID:  0
wave: white light fs (15)
exp: default AEC, offset = 0, no update
events: NONE
full camera read area used for events and I max, I min
t avg: NONE
CCD: default amp, full camera 1x1, bin = 1
save to main buffer, JPEG(6, 1, 0)
area 1: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
area 2: 1024 x 1024, bin = 1, camera center, offset (0, 0)
not saved
MAIN  storage = 161191 bytes, SMALL storage = 0 bytes, total = 161191 bytes
```

8 Appendix II: defined sequences

Sequences written thus far ...

The sequences are sorted alphabetically.

Location: /hosts/diapason/data13/trace_egse_sw/obs_dev/cjs/seq

CJS.armosaic.7panel.all.1.useq:

```
//name          CJS.armosaic.7panel.all.1
//description: AR1 (E)UV of central field, EUV mosaic at 195 with 2x2 binning.
//
//              Point at an active region; take EUV+UV pictures of
//              central field, and EUV 7 panel mosaic (full-res center,
//              2x2 binned around center at 195 only)
//              To be paused during SAA passage, and ended on interrupt
//revision:     9
//date:         19980122
//status:       draft; checked by: (initials and date)
//keywords:     1: Active region, 25: Loops, 30: Nanoflares
//ID:           000.000.000.000
//Type:         main program
//Target:       ar1, ar1.7panel
//Termination: by interrupt
//Telemetry:    TBD
// setup of the AEC parameters upon starting this sequence (storing results)
              $type:main;
              $PRI=0;
              resetaec;
              call(STD.CCDsafe_init);      // initialize CCD safety check
              $L1=5;
while ($L1--) call(CJS.scene.ar1.allnoWL);
// start actual science sequence; sequence ends upon interrupt from time line
// Note: this sequence is not designed for photospheric tracking;
              $L0=300;                         // delay/cadence of 300 sec.
              cadence(0);                      // initialize delay
while {1==1} {                           // terminate on interrupt
              $L1=5;                           // mosaic every $L1-th set
while ($L1--) {call(CJS.scene.ar1.allnoWL); cadence($L0);}
if ($RTN==99) return(99); // CCD safety problem?
              $PRI=1;                          // prevent mosaic interrupt
              frame(cjs.caldc_wl); // for alignment
              frame_list(cjs.longer2bin195);   // binning + deeper around ar
              target_list($list$ar1.7panel);   // multiple targets as mosaic
              execute_list(0s,0s,@saa_pause);  // pause when in SAA
              $PRI=0;                          // lower priority
              }
              return(99);
```

CJS.crosscaldiskcenter.1x1.all.useq:

```
//name         CJS.crosscaldiskcenter.1x1.all
//description: Provide images at all wavelengths at disk center, low cadence.
//             Sequence developed for crosscalibration with CDS and SUMER.
//             Cadence is set to take one set of pictures every three minutes,
//             which should be sustainable indefinitely.
//revision:    1
//date:        19900108
//keywords:    5: Calibration
//ID:          000.000.000.000
//Type:        scene
//Target:      diskcenter
//Termination: by interrupt
//Telemetry:   66628 bytes per frame; 0.53Mbyte per set; for 1/3 Mbyte/min.
//             sustainable telemetry rate execute_list cadence should not
//             exceed one set of frames per 1.6 minutes. Cadence set to
//             3 minutes to accomodate unpredictability of compression.
              $type:scene;
              $PRI=0;
              resetaec;
              cadence(0);
              call(STD.CCDsafe_init);         // initialize CCD safety check
              set_frame_list(cjs.stdaecfull1216, cjs.stdaecfull1550,
                             cjs.stdaecfull1600, cjs.stdaecfull1700,
                             cjs.stdaecfull_wl);
              set_target_list(diskcenter);
while (1==1) {execute_list(0s,0s);            // no delays in list execution
    if ($SAA == 0 && $RTN != 99) {            // but don't do this in SAA
              safeframe(cjs.stdaecfull171);
              safeframe(cjs.stdaecfull195);
              safeframe(cjs.stdaecfull284);}
              cadence(180);}                  // delays for 3 min. cadence
              return(99);
```

CJS.deepquietsun.1x1.nowl.useq:

```
//name          CJS.deepquietsun.1x1.nowl
//description:  Take a range of exposures around optimal AEC in quiet Sun
//              Exposures taken sqrt(2) to short and sqrt(2),2,4 times too
//              long, and again at optimal. Because they're intentionally
//              overexposed, and the sequence runs only once, the ccd safety
//              is not built in.
//revision:     1
//status:       draft; checked by: (initials and date)
//date:         19980108
//keywords:     5: Calibration, 36: Quiet Sun
//ID:           000.000.000.000
//Type:         scene
//Target:       qr1
//Termination:  executes once
//Telemetry:    0.091Mbyte per exp. with dosimeter, 0.067Mbyte for others;
//              total: 0.61*10+1.67+1.37=9.14Mbyte
                $type:scene               // define sequence type
                $PRI=1;                   // lower priority to allow interrupts
                resetaec;
                set_frame_list(cjs.stdaecfull1216,cjs.stdaecfull1550,
                               cjs.stdaecfull1600,cjs.stdaecfull1700,
                               cjs.stdaecfull171,cjs.stdaecfull195,
                               cjs.stdaecfull284);
                set_target_list(qr1);
                $10=10;
while($10--)    {execute_list(0s,0s,@saa_pause);}  // settle to optimal exp.
                frame(cjs.aecoffsetminus2.full1216);
                frame(cjs.aecoffset2.full1216);
                frame(cjs.aecoffset4.full1216);
                frame(cjs.aecoffset8.full1216);
                frame(cjs.stdaecfull1216);
                frame(cjs.aecoffsetminus2.full1550);
                frame(cjs.aecoffset2.full1550);
                frame(cjs.aecoffset4.full1550);
                frame(cjs.aecoffset8.full1550);
                frame(cjs.stdaecfull1550);
                frame(cjs.aecoffsetminus2.full1600);
                frame(cjs.aecoffset2.full1600);
                frame(cjs.aecoffset4.full1600);
                frame(cjs.aecoffset8.full1600);
                frame(cjs.stdaecfull1600);
                frame(cjs.aecoffsetminus2.full1700);
                frame(cjs.aecoffset2.full1700);
                frame(cjs.aecoffset4.full1700);
                frame(cjs.aecoffset8.full1700);
                frame(cjs.stdaecfull1700);
                frame(cjs.aecoffsetminus2.full171);
                frame(cjs.aecoffset2.full171);
                frame(cjs.aecoffset4.full171);
                frame(cjs.aecoffset8.full171);
                frame(cjs.stdaecfull171);
                frame(cjs.aecoffsetminus2.full195);
                frame(cjs.aecoffset2.full195);
                frame(cjs.aecoffset4.full195);
                frame(cjs.aecoffset8.full195);
                frame(cjs.stdaecfull195);
                frame(cjs.aecoffsetminus2.full284);
                frame(cjs.aecoffset2.full284);
                frame(cjs.aecoffset4.full284);
                frame(cjs.aecoffset8.full284);
                frame(cjs.stdaecfull284);
                $PRI=0;                   // reset priority
                return(0);
```

CJS.dynamics.1x1.lymancontext.useq:

```
//name          CJS.dynamics.1x1.lymancontext
//description: Obtain a sequence of lyman alpha images at moderate cadence.
//revision:     0
//status:       draft; checked by: (initials and date)
//date:         19980106
//keywords:     7: Chromosphere; 8: Chromospheric Network; 25: Loops;
//ID:           000.000.000.000
//Type:         main program
//Target:       top1
//Termination: by interrupt
//Telemetry:    0.161Mb per ly frame, 0.185Mb per EUV frame; so about
//              1.66Mb per set of about 18 min., or 5.5Mb/hr
              $type:main            // define sequence type
              $PRI=0;               // lower priority to allow interrupts
              resetaec;             // reset aec parameters
              $L0=120s;             // delay/cadence of 2 min.
              delay(0);
              target(top1);
              call(STD.CCDsafe_init); // initialize CCD safety check
while (!($RTN==99)) {
              $L1=8;                // EUV context images at lower cadence
while ($L1--) {frame(cjs.stdaecfull1216); delay($L0);}
              safeframe(cjs.stdaecfull171);
              safeframe(cjs.stdaecfull195);}
              return(99);
```

CJS.failsafe.mdicenter.useq:

```
//name         CJS.failsafe.mdicenter
//description: EUV+UV at MDI fov, low cadence, high compression.
//
//             Point at center of MDI high--res field of view,and take
//             standard pictures at Fe XII, Ly alpha and CIV, highly
//             compressed (2x2 summed+JPEG), and a 5 min. cadence
//revision:    10
//date:        19980122
//keywords:    49: Synoptic, 100: JOP with SoHO
//ID:          000.000.000.000
//Type:        main program
//Target:      mdicenter
//Termination: by interrupt
//Telemetry:   TBD
              $type:main;
              $PRI=0;                         // lower priority
              target(mdicenter);
              resetaec;
              delay(0);
              call(STD.CCDsafe_init); // initialize CCD safety check
//Continue on AEC, terminate on interrupt or CCDsafety concern
while($RTN != 99){
if ($saa==0)  safeframe(cjs.compress_aec2bin195);
if ($saa==0)  frame(cjs.compress_aec2bin1216);
if ($saa==0)  frame(cjs.compress_aec2bin1550);
              delay(300s);}
              return(99);
```

CJS.failsafe.norepoint.useq:

```
//name         CJS.failsafe.norepoint
//description: EUV+UV at current pointing, low cadence, high compression
//
//             Without changing pointing, take
//             standard pictures at Fe XII, Ly alpha, CIV, highly
//             compressed (2x2 sum+JPEG), and at a 5 min. cadence
//revision:    10
//date:        19980121
//keywords:    49: Synoptic, 100: JOP with SoHO
//ID:          000.000.000.000
//Type:        main program
//Target:      current
//Termination: by interrupt
//Telemetry:   TBD
              $type:main;
              $PRI=0;                      // lower priority
              resetaec;
              delay(0);
              call(STD.CCDsafe_init); // initialize CCD safety check
//Continue on AEC, terminate on interrupt or CCDsafety concern
while($RTN != 99){
if ($saa==0)  safeframe(cjs.compress_aec2bin195);
if ($saa==0)  frame(cjs.compress_aec2bin1216);
if ($saa==0)  frame(cjs.compress_aec2bin1550);
              delay(300s);}
              return(99);
```

CJS.fastdynamics.1x1.CIVcontext.useq:

```
//name          CJS.fastdynamics.1x1.CIVcontext
//description: Obtain a sequence of C IV images (512x512) at highest cadence.
//              Take 1600 & 1700 images and EUV context images at lower cadence.
//revision:     0
//status:       draft; checked by: (initials and date)
//date:         19980106
//keywords:     30: Nanoflares; 53: Transition Region; 55: Waves
//ID:           000.000.000.000
//Type:         main program
//Target:       ar1
//Termination: by interrupt
//Telemetry:    0.040Mb per UV frame /min, 0.185Mb per EUV/Lyman frame /15min.;
//              so about 6Mb/hr
//N.B.          If full CCD is used: 18Mb/hr, not sustainable with overhead
              $type:main               // define sequence type
              $PRI=0;                  // lower priority to allow interrupts
              resetaec;                // reset aec parameters
              $L0=60s;                // delay/cadence exp. time limited
              delay(0);
              target(ar1);
              call(STD.CCDsafe_init); // initialize CCD safety check
while (!($RTN==99)) {
              $l2=5;                   // EUV context images at lowest cadence
while ($L2--) {
              $L1=3;                   // UV context images at lower cadence
while ($L1--) {frame(cjs.stdaeccenterhalf1550); delay($L0);}
              frame(cjs.stdaeccenterhalf1600);
              frame(cjs.stdaeccenterhalf1700); }
              safeframe(cjs.stdaecfull1216);
              safeframe(cjs.stdaecfull171);
              safeframe(cjs.stdaecfull195);}
              return(99);
```

CJS.priocaldiskcenter.1x1.all.useq:

```
//name         CJS.priocaldiskcenter.1x1.all
//description: EUV+UV+darks at diskcenter, full res., no compr.,small buffer
//
//             Provide images at all wavelengths and darks at disk center,
//             written into two small buffers to ensure downlink on next pass.
//             Small buffers are assumed to be 8Mbyte (12bit packing used),
//             so they can hold 5 image each
//             High priority is set to avoid interrupt.
//revision:    11
//date:        19980122
//keywords:    5: Calibration, 49: Synoptic
//ID:          000.000.000.000
//Type:        main program
//Target:      diskcenter
//Termination: execute once
//Telemetry:   7.5 Mbyte (2*3.75 in small buffers only)
              $type:main;
              $PRI=1;               // raise priority to prevent interrupt
// check whether at least two small buffers are available
if ($nbf > 1) {
              frame_list(cjs.priocaldc1216,cjs.priocaldc1550,cjs.priocaldc1600,
                         cjs.priocaldc1700,cjs.priocaldc_wl);
              target_list(diskcenter);
              execute_list(0s,0s,@saa_pause);   // no delay between pictures
              lockbuf;                          // lock first buffer
              frame_list(cjs.priocaldc171,cjs.priocaldc195,cjs.priocaldc284,
                         cjs.priodark0,cjs.priodark1);
              target_list(diskcenter);
              execute_list(0s,0s,@saa_pause);   // no delay between pictures
              lockbuf;                          // lock second buffer
              $PRI=0;                           // reset priority
              return 0;} else {
// if there are no more buffers available, use main buffer instead
              call(CJS.scene.caldiskcenter.1x1.all);
              $PRI=0;               // reset priority
              return(99);}
```

CJS.qrflarewatch.1x1.euv.1.useq:

```
//name          CJS.qrflarewatch.1x1.euv.1
//description: Test the flare check algorithm and Quiet Sun variability
//              by taking six series of 20 images at 171,195 and 284, while
//              lowering the flare thresholds from 300DN/sec down to 20DN/sec
//              for an area of 100 pixels
//revision:     2
//date:         19980109
//keywords: 17: Flares, 36: Quiet Sun, 31: Onboard Software, 42: Software tests
//status:       draft; checked by: (initials and date)
//ID:           000.000.000.000
//Type:         main program
//Target:       qr1
//Termination: executes once
//              Estimated duration: 20*6*(1min.exp. + 15 sec.) = 2.5hrs.
//Telemetry:    20.5*6*0.185Mbyte=22.8Mbyte
            $type:main;                     // define sequence type
            $PRI=0;                         // lower priority to allow interrupts
            $FEF=0;                         // reset the flare flag
            call(STD.CCDsafe_init);         // initialize CCD safety check
            target(qr1);
// Take some sets to settle do proper AEC
            $L1=10;
while($l1--){
            safeframe(cjs.stdaecfull171);
            safeframe(cjs.stdaecfull195);
            safeframe(cjs.stdaecfull284);}
// Take 6 sets of 20 images at 171,195 and 284, while lowering flare thresholds
            $L1=20;
while($l1--){
            safeframe(cjs.flaretest_aec_171_300);
            safeframe(cjs.flaretest_aec_195_300);
            safeframe(cjs.flaretest_aec_284_300);}
            if ($RTN==99) return(99); $L1=20;
            $FEF=0;                         // reset the flare flag
while($l1--){
            safeframe(cjs.flaretest_aec_171_200);
            safeframe(cjs.flaretest_aec_195_200);
            safeframe(cjs.flaretest_aec_284_200);}
            if ($RTN==99) return(99); $L1=20;
            $FEF=0;                         // reset the flare flag
while($l1--){
            safeframe(cjs.flaretest_aec_171_120);
            safeframe(cjs.flaretest_aec_195_120);
            safeframe(cjs.flaretest_aec_284_120);}
            if ($RTN==99) return(99); $L1=20;
            $FEF=0;                         // reset the flare flag
while($l1--){
            safeframe(cjs.flaretest_aec_171_80);
            safeframe(cjs.flaretest_aec_195_80);
            safeframe(cjs.flaretest_aec_284_80);}
            if ($RTN==99) return(99); $L1=20;
            $FEF=0;                         // reset the flare flag
while($l1--){
            safeframe(cjs.flaretest_aec_171_40);
            safeframe(cjs.flaretest_aec_195_40);
            safeframe(cjs.flaretest_aec_284_40);}
            if ($RTN==99) return(99); $L1=20;
            $FEF=0;                         // reset the flare flag
while($l1--){
            safeframe(cjs.flaretest_aec_171_20);
            safeframe(cjs.flaretest_aec_195_20);
            if ($RTN==99) return(99); safeframe(cjs.flaretest_aec_284_20);}
            return(0);
```

CJS.qrmosaic.7panel.all.1.useq:

```
//name          CJS.qrmosaic.7panel.all.1
//description: at QR1, UV single panel + mosaic 7 panels at 195A 2x2 binned
//
//              Point at a quiet region; take UV pictures of
//              central field, and EUV 7 panel mosaic (full-res center,
//              2x2 binned around center at 195 only)
//              Note: this sequence is not designed for photospheric tracking
//              A few WL pictures are taken for alignment purposes at full res.
//              To be paused during SAA passage, and ended on interrupt
//revision:     9
//date:         19980113
//status:       draft; checked by: (initials and date)
//keywords:     25: Loops, 30: Nanoflares, 36: Quiet Sun
//ID:           00.000.000.000
//Type:         main program
//Target:       qr1, qr1.7panel
//Termination: by interrupt
//Telemetry:    TBD
              $type:main;
              $PRI=0;
              resetaec;
              call(STD.CCDsafe_init); // initialize CCD safety check
              $L0=300;                        // delay/cadence of 5 min.
              cadence(0);
while(1==1)  {
              $L1=5;                          // mosaic every $L1-th set
while ($L1--) {call(CJS.scene.qr1.allnoWL); cadence($L0);}
if ($RTN==99) return(99); // CCD safety problem?
              $PRI=1;                         // prevent mosaic interrupt
              frame(cjs.caldc_wl); // for alignment
              frame_list(cjs.std2bin195);     // bin around target
              target_list($list$qr1.7panel);
              execute_list(0s,0s,@saa_pause);  // no delays in list exec.
              $PRI=0;                         // reset priority
              }
              return(99);
```

CJS.qschinterface.1x1.all1.useq:

```
//name         CJS.qschinterface.1x1.all1
//description: at top1, 90 sec. cadence for WL +1550+171+195 interleaved
//revision:    2
//date:        19980121
//status:      draft; checked by: (initials and date)
//keywords:    10: Coronal Holes, 15: Emerging flux, 19: Flows, 36: Quiet Sun
//ID:          000.000.000.000
//Type:        main program
//Target:      top1
//Termination: by interrupt
//Telemetry:   (0.161*6+0.185*3) per 6 min; 15.2Mbyte/hr
              $type:main;
              $PRI=0;
              resetaec;
              call(STD.CCDsafe_init);      // initialize CCD safety check
// setup of the AEC parameters upon starting this sequence (storing results)
              frame_list(cjs.stdaecfull1216,cjs.stdaecfull1550,
                         cjs.stdaecfull171,cjs.stdaecfull195,
                         cjs.stdaecfull284);
              target_list(top1);
              $L0=5;
while ($L0--) execute_list(0s,0s,@saa_pause);
// start actual science sequence; sequence ends upon interrupt from time line
// Note: this sequence is designed for photospheric tracking;
              $L0=90s;                       // delay for fixed cadence
              delay(0);
              $RTN=0;
while (!($RTN==99)){                         // terminate by interrupt
              target(top1);                  // update target information
              frame(cjs.stdfull_wl);
              frame(cjs.stdaecfull1550);     // 100 sec exp?
              delay($L0);
              frame(cjs.stdfull_wl);
if ($saa ==0) safeframe(cjs.stdaecfull171);  // not in SAA ; 25 sec exp.
              frame(cjs.stdaecfull1216);     // 14 sec exp?
              delay($L0);
              frame(cjs.stdfull_wl);
// N.B. Dangerous wavelength bit turned off on next exposure:
if ($saa ==0) safeframe(cjs.full_171_aec_deep4);// deep exp for CH; 100 sec.
              delay($L0);
              frame(cjs.stdfull_wl);
if ($saa ==0) safeframe(cjs.stdaecfull195);  // 40 sec exp.
              delay($L0);}
              return(99);
```

CJS.scene.CDSsynoptic.useq:

```
//name         CJS.scene.CDSsynoptic
//description: Provide images at all wavelengths on central meridian
//             Because all exposures are taken only once, no CCD safety check
//             is performed. Uses std compressed frames at all but diskcenter,
//             and 12-bit packed frames for diskcenter.
//             Estimated duration: 15 min per set, 5 sets = 1 hr, 15 min.
//revision:    1
//status:      draft; checked by: (initials and date)
//date:        19980108
//keywords:    5: Calibration, 49: Synoptic
//ID:          000.000.000.000
//Type:        scene
//Target:      meridian
//Termination: executes once
//Telemetry:   15.8Mbyte at dc + 4*5*0.161 + 4+2*(0.161+0.025) = 23.4Mbyte
              $type:scene;
              $PRI=0;
              set_frame_list(cjs.stdfull1216,cjs.stdfull1550,cjs.stdfull1600,
                             cjs.stdfull1700,cjs.stdfull_wl, cjs.stdfull171,
                             cjs.stdfull195, cjs.stdfull284);
              set_target_list(named.pos27,named.pos07);
              execute_list(0s,0s,@saa_pause);  // no delays in list execution
                                               // but wait for saa to pass
              call(CJS.scene.caldiskcenter.1x1.all);
              set_frame_list(cjs.stdfull1216,cjs.stdfull1550,cjs.stdfull1600,
                             cjs.stdfull1700,cjs.stdfull_wl, cjs.stdfull171,
                             cjs.stdfull195, cjs.stdfull284);
              set_target_list(named.pos18,named.pos30);
              execute_list(0s,0s,@saa_pause);  // no delays in list execution
                                               // but wait for saa to pass
              return 0;
```

CJS.scene.ar1.allnoWL.useq:

```
//name         CJS.scene.ar1.allnoWL
//description: at ar1, take standard pictures at all wavel. but white light.
//revision:    8
//date:        19980121
//keywords:    1: Active region, 25: Loops, 30: Nanoflares
//ID:          000.000.000.000
//Type:        scene
//Target:      ar1
//Termination: executes once
//Telemetry:   TBD
              $type:scene;
              $PRI=0;
              frame_list(cjs.stdaecfull1216,cjs.stdaecfull1550,
                         cjs.stdaecfull1600,cjs.stdaecfull1700);
              target_list(ar1);
              execute_list(0s,0s,@saa_pause); // pause in SAA for next frames
              safeframe(cjs.stdaecfull171);
              safeframe(cjs.stdaecfull195);
              safeframe(cjs.stdaecfull284);
if ($RTN==99) return(99);
              return(0);
```

CJS.scene.caldiskcenter.1x1.all.useq:

```
//name         CJS.scene.caldiskcenter.1x1.all
//description: Provide images at all wavelengths and darks at disk center
//             Raise priority to avoid interrupts. Pause in SAA.
//revision:    10
//date:        19980106
//keywords:    5: Calibration, 49: Synoptic
//ID:          000.000.000.000
//Type:        scene
//Target:      diskcenter
//Termination: executes once
//Telemetry:   7*1.57Mb for darks and UV/WL, 3*(1.57+0.024) for EUV: 15.8Mbyte
             $type:scene;
             $PRI=1;
             set_frame_list(cjs.dark0,      cjs.dark1,      cjs.caldc1216,
                            cjs.caldc1550,  cjs.caldc1600,  cjs.caldc1700,
                            cjs.caldc_wl,   cjs.caldc171,   cjs.caldc195,
                            cjs.caldc284);
             set_target_list(diskcenter);
             execute_list(0s,0s,@saa_pause);  // no delays in list execution
                                              // but wait for saa to pass
             $PRI=0;
             return 0;
```

CJS.scene.equator.6x1.all.useq:

```
//name         CJS.scene.equator.6x1.all
//description: northern act. belt of a full-disk mosaic at all wavelengths
//revision:    0
//date:        19970718
//keywords:    43: Solar Cycle, 49: Synoptic
//ID:          000.000.000.000
//Type:        scene
//Target:      equator
//Termination: executes once
//Telemetry:   0.07Mbyte * 8 wave * 6 pointings = 3.36Mbyte
             $type:scene;
             $PRI=0;
             frame_list(cjs.stdfull1216,cjs.stdfull1550,
                        cjs.stdfull1600,cjs.stdfull1700,
                        cjs.stdfull_wl,cjs.stdfull171,
                        cjs.stdfull195,cjs.stdfull284);
             target_list($list$equator);
             execute_list(0s,0s,@saa_pause);
             return 0;
```

CJS.scene.fulldisk.allpanel.1wave.useq:

```
//name CJS.scene.fulldisk.allpanel.1wave
//description: make a full-disk mosaic at only one wavelength (Lyman alpha)
//revision: 8
//date: 19970814
//keywords: 49: Synoptic
//ID:          000.000.000.000
//Type:        main program
//Target:      fullmosaic
//Termination: executes once
//Telemetry:   1.6Mbyte (estimated, using JPEG compression)
              $type:scene;
              $PRI=0;
              set_frame_list(cjs.stdfull1216);
              set_target_list($list$fullmosaic);
              execute_list(0s,0s,@saa_pause);
              return 0;
```

CJS.scene.fulldisk.allpanel.all.useq:

```
//name         CJS.scene.fulldisk.allpanel.all
//description: make a full-disk mosaic at all wavelengths
//revision:    8
//date:        19970718
//status:      draft; checked by: (initials and date)
//keywords:    49: Synoptic
//ID:          000.000.000.000
//Type:        scene
//Target:      fullmosaic
//Termination: executes once
//Telemetry:   (0.161Mbyte * 5 + 0.185*3)* 24 pointings = 32.6Mbyte in ~105min.
//             or 18.7/hr.
              $type:scene;
              $PRI=0;
              frame_list(cjs.stdfull1216,cjs.stdfull1550,
                         cjs.stdfull1600,cjs.stdfull1700,
                         cjs.stdfull_wl,cjs.stdfull171,
                         cjs.stdfull195,cjs.stdfull284);
// The following target list
              target_list($list$northswath,$list$northbelt,$list$equator,
                          $list$southbelt,$list$southswath);
// is equivalent to
//            target_list($list$mosaic);
// but the former is used to a) test software, b) prepare for swathwise mosaics
              execute_list(0s,0s,@saa_pause);
              return 0;
```

CJS.scene.northbelt.5x1.all.useq:

```
//name          CJS.scene.northbelt.5x1.all
//description: northern act. belt of a full-disk mosaic at all wavelengths
//revision:     0
//date:         19970718
//keywords:     34: Polar Regions, 49: Synoptic
//ID:           000.000.000.000
//Type:         scene
//Target:       northbelt
//Termination: executes once
//Telemetry:    0.07Mbyte * 8 wave * 5 pointings = 2.8Mbyte

              $type:scene;
              $PRI=0;
              frame_list(cjs.stdfull1216,cjs.stdfull1550,
                         cjs.stdfull1600,cjs.stdfull1700,
                         cjs.stdfull_wl,cjs.stdfull171,
                         cjs.stdfull195,cjs.stdfull284);
              target_list($list$northbelt);
              execute_list(0s,0s,@saa_pause);
              return 0;
```

CJS.scene.northswath.4x1.all.useq:

```
//name          CJS.scene.northswath.4x1.all
//description: northernmost swath of a full-disk mosaic at all wavelengths
//revision:     0
//date:         19970718
//keywords:     34: Polar Regions, 49: Synoptic
//ID:           000.000.000.000
//Type:         scene
//Target:       northswath
//Termination: executes once
//Telemetry:    0.07Mbyte * 8 wave * 4 pointings = 2.24Mbyte

              $type:scene;
              $PRI=0;
              frame_list(cjs.stdfull1216,cjs.stdfull1550,
                         cjs.stdfull1600,cjs.stdfull1700,
                         cjs.stdfull_wl,cjs.stdfull171,
                         cjs.stdfull195,cjs.stdfull284);
              target_list($list$northswath);
              execute_list(0s,0s,@saa_pause);
              return 0;
```

CJS.scene.priofulldisk.allpanel.1wave.use:

```
//name CJS.scene.priofulldisk.allpanel.1wave
//description: make a full-disk mosaic at only one wavelength (195A)
//             Same as CJS.scene.fulldisk.allpanel.1wave, but at high prio.
//revision: 1
//date: 19970820
//keywords: 49: Synoptic
//ID:          000.000.000.000
//Type:        main program
//Target:      fullmosaic
//Termination: executes once
//Telemetry:   1.6Mbyte (estimated, using JPEG compression)
              $type:scene;
              $PRI=1;
              set_frame_list(cjs.stdfull195);
              set_target_list($list$fullmosaic);
              execute_list(0s,0s,@saa_pause);
              $PRI=0;
              return 0;
```

CJS.scene.priofulldisk.allpanel.all.useq:

```
//name CJS.scene.priofulldisk.allpanel.all
//description: make a full-disk mosaic at all wavelengths, at high priority
//revision: 6
//date: 19970310
//keywords: 49: Synoptic
//ID:          000.000.000.000
//Type:        scene
//Target:      fullmosaic
//Termination: executes once
//Telemetry:   TBD
              $type:scene;
              frame_list(cjs.stdfull1216,cjs.stdfull1550,
                         cjs.stdfull1600,cjs.stdfull1700,
                         cjs.stdfull_wl,cjs.stdfull171,
                         cjs.stdfull195,cjs.stdfull284);
              target_list($list$fullmosaic);
              $PRI=1;
              execute_list(0s,0s,@saa_pause);
              $PRI=0;
              return 0;
```

CJS.scene.qr1.allnoWL.useq:

```
//name CJS.scene.qr1.allnovis
//description: at qr1, take standard pictures at all wavelengths except WL
//revision:    9
//date:        19980113
//keywords:    25: Loops, 30: Nanoflares, 36: Quiet Sun
//ID:          000.000.000.000
//Type:        scene
//Target:      qr1
//Termination: executes once
//Telemetry:   TBD
              $type:scene;
              $PRI=0;
              frame_list(cjs.stdaecfull1216,cjs.stdaecfull1550,
                         cjs.stdaecfull1600,cjs.stdaecfull1700);
              target_list(qr1);
              execute_list(0s,0s,@saa_pause);
              safeframe(cjs.stdaecfull171);
              safeframe(cjs.stdaecfull195);
              safeframe(cjs.stdaecfull284);
if ($RTN==99) return(99);
              return(0);
```

CJS.scene.southbelt.5x1.all.useq:

```
//name         CJS.scene.southbelt.5x1.all
//description: northern act. belt of a full-disk mosaic at all wavelengths
//revision:    0
//date:        19970718
//keywords:    43: Solar Cycle, 49: Synoptic
//ID:          000.000.000.000
//Type:        scene
//Target:      southbelt
//Termination: executes once
//Telemetry:   0.07Mbyte * 8 wave * 5 pointings = 2.8Mbyte
              $type:scene;
              $PRI=0;
              frame_list(cjs.stdfull1216,cjs.stdfull1550,
                         cjs.stdfull1600,cjs.stdfull1700,
                         cjs.stdfull_wl,cjs.stdfull171,
                         cjs.stdfull195,cjs.stdfull284);
              target_list($list$southbelt);
              execute_list(0s,0s,@saa_pause);
              return 0;
```

CJS.scene.southswath.4x1.all.useq:

```
//name         CJS.scene.southswath.4x1.all
//description: northernmost swath of a full-disk mosaic at all wavelengths
//revision:    0
//date:        19970718
//keywords:    34: Polar Regions, 49: Synoptic
//ID:          000.000.000.000
//Type:        scene
//Target:      southswath
//Termination: executes once
//Telemetry:   0.07Mbyte * 8 wave * 4 pointings = 2.24Mbyte

             $type:scene;
             $PRI=0;
             frame_list(cjs.stdfull1216,cjs.stdfull1550,
                        cjs.stdfull1600,cjs.stdfull1700,
                        cjs.stdfull_wl,cjs.stdfull171,
                        cjs.stdfull195,cjs.stdfull284);
             target_list($list$southswath);
             execute_list(0s,0s,@saa_pause);
             return 0;
```

CJS.slowdynamics.1x1.CIVcontext.useq:

```
//name         CJS.slowdynamics.1x1.CIVcontext
//description: Obtain a sequence of C IV images at moderate cadence.
//revision:    1
//status:      draft; checked by: (initials and date)
//date:        19980115
//keywords:    25: Loops; 29: Morphology; 53: Transition Region
//ID:          000.000.000.000
//Type:        main program
//Target:      top1
//Termination: by interrupt
//Telemetry:   0.161Mb per UV frame, 0.185Mb per EUV frame; so about 10.6Mb/hr
              $type:main             // define sequence type
              $PRI=0;                // lower priority to allow interrupts
              resetaec;              // reset aec parameters
              $L0=150s;              // delay/cadence of 2.5 min. (exp. ltd.)
              delay(0);
              target(top1);
              call(STD.CCDsafe_init); // initialize CCD safety check
while (!($RTN==99)) {
              $L1=8;                 // EUV context images at lower cadence
while ($L1--) {frame(cjs.stdaecfull1550);
               frame(cjs.stdaecfull1600);
               frame(cjs.stdaecfull1700); delay($L0);}
               safeframe(cjs.stdaecfull171);
               safeframe(cjs.stdaecfull195);}
               return(99);
```

CJS.tracking.1x1.171.useq:

```
//name          CJS.tracking.1x1.171
//description: at top1, 90 sec. cadence for WL, 45 sec. for 171 interleaved
//              This version uses full fov (high telem. rate!)
//revision:     1
//      15 Dec. 97: added early target instr. + CCD safety instructions
//date:         19971215
//status:       modified for CCD safety; checked by: (initials and date)
//keywords:     3: Bright Points, 15: Emerging flux, 19: Flows, 36: Quiet Sun
//ID:           000.000.000.000
//Type:         main program
//Target:       top1
//Termination: by interrupt
//Telemetry:    0.067Mbyte/non-dangerous frame, 0.091Mbyte/dangerous frame
//              or 0.25Mbyte per set at 90 sec. cadence 0.17Mbyte/min.,
//              which is just over half the sustainable rate.
//N.B.: hardwired to use target of opportunity #1
              $type:main;
              $PRI=0;
      target(top1);
              call(STD.CCDsafe_init);    // initialize CCD safety check
// setup of the AEC parameters upon starting this sequence (storing results)
              resetaec;
              $L0=5;
while ($L0--) {frame(cjs.stdaecfull171);}     // no CCD safety check at first
// start actual science sequence; sequence ends upon interrupt from time line
// Note: this sequence is designed for photospheric tracking;
              $L0=45s;                        // delay for fixed cadence
              delay(0);
while (!($RTN==99)) {                         // terminate by interrupt
              target(top1);                   // update target information
              frame(cjs.stdfull_wl);          // 0.02 sec. optimal
if ($saa ==0) safeframe(cjs.stdaecfull171);   // not in SAA; 25 sec. optimal
              delay($L0);
if ($saa ==0) safeframe(cjs.stdaecfull171);   // not in SAA; 25 sec. optimal
              delay($L0);}
              return(99);
```

CJS.tracking.1x1.all1.useq:

```
//name         CJS.tracking.1x1.all1
//description: at top1, 90 sec. cadence for white light, + UV+EUV interleaved
//revision:    12
//date:        19980122
//status:      draft; checked by: (initials and date)
//keywords: 1: Active region, 15: Emerging flux, 19: Flows, 36: Quiet Sun
//ID:          000.000.000.000
//Type:        main program
//Target:      top1
//Termination: by interrupt
//Telemetry:   20.8Mbyte/hr

//N.B.: hardwired to use target of opportunity #1
              $type:main;
              $PRI=0;
              call(STD.CCDsafe_init);       // initialize CCD safety check
// setup of the AEC parameters upon starting this sequence (storing results)
              frame_list(cjs.stdaecfull1216,  cjs.stdaecfull1550,
                         cjs.stdaecfull1600,  cjs.stdaecfull171,
                         cjs.stdaecfull195,   cjs.stdaecfull284,
                         cjs.stdaecfull1700);
              target_list(top1);
              resetaec;
              $L0=5;
while ($L0--) execute_list(0s,0s,@saa_pause);
// start actual science sequence; sequence ends upon interrupt from time line
// Note: this sequence is designed for photospheric tracking;
              $L0=90s;                         // delay for fixed cadence
              delay(0);
              $RTN=0;
              $L1=4;
while ($RTN != 99){                            // terminate by interrupt
              target(top1);                    // update target information
              frame(cjs.stdfull_wl);
              frame(cjs.stdaecfull1550);       // 100 sec exp?
              delay($L0);
              frame(cjs.stdfull_wl);
              frame(cjs.stdaecfull1600);       // 5 sec exp?
if ($saa ==0) safeframe(cjs.stdaecfull171);    // not in SAA ; 25 sec. exp?
if ($saa ==0) safeframe(cjs.stdaecfull195);    // 40 sec exp?
              delay($L0);
              frame(cjs.stdfull_wl);
if ($saa ==0) safeframe(cjs.stdaecfull284);    // 20 sec exp?
              frame(cjs.stdaecfull1216);       // 14 sec exp?
// every 18 minutes, take a 1700 frame (too near telemetry limit)
if ($L1--)   {frame(cjs.stdaecfull1700); $L1=4;}       // 20 sec exp?
              delay($L0);}
              return(99);
```

CJS.tracking.1x1.all2.useq:

```
//name          CJS.tracking.1x1.all2
//description: at top1, 90 sec. cadence for WL, plus UV+EUV interleaved, + FDM
//
//              Point at some target location, and maintain 90 sec. cadence
//              for white light to enable tracking. Interrupt roughly
//              5 out of every 20 minutes to build a full--disk mosaic.
//              Sequence remains high priority until FDM is completed.
//revision:     12
//date:         19980122
//keywords:     1: Active region, 15: Emerging flux, 19: Flows, 36: Quiet Sun,
//keywords:     49: Synoptic
//ID:           000.000.000.000
//Type:         main program
//Target:       top1, 1-24 (fullmosaic)
//Termination: by interrupt
//Telemetry:    about 19.8Mbyte/hr.
//N.B.: hardwired to use target of opportunity #1
              $type:main;
              $PRI=0;
              resetaec;
              call(STD.CCDsafe_init);       // initialize CCD safety check
// setup of the AEC parameters upon starting this sequence (storing results)
              frame_list(cjs.stdaecfull1216,cjs.stdaecfull1550,
                         cjs.stdaecfull1600,cjs.stdaecfull171,
                         cjs.stdaecfull195, cjs.stdaecfull284,
                         cjs.stdaecfull1700);
              target_list(top1);
              $L0=5;
while ($L0--) {execute_list(0s,0s,@saa_pause);}
// start actual science sequence; sequence ends upon interrupt from time line
// Note: this sequence is designed for photospheric tracking;
              $L0=90s;                        // delay for fixed cadence
              delay(0);
              $L1=0;                          // mosaic counter
              $PRI=1;                         // no interrupt until FDM compl.
              $RTN=0;
while($RTN!=99) {
// observe primary target
              target(top1);
              $L2=4;
while ($L2--){                                // do for 18 minutes
              delay($L0);
              frame(cjs.stdfull_wl);          // opt. 0.02 sec.
              frame(cjs.stdaecfull1550);      // opt. 100 sec., assume <70!
              delay($L0);
              frame(cjs.stdfull_wl);
              frame(cjs.stdaecfull1600);      // 5 sec exp?
              frame(cjs.stdaecfull1216);      // opt. 14 sec. for QR
if ($saa==0)  safeframe(cjs.stdaecfull171);   // opt. 25 sec. for QR
              delay($L0);
              frame(cjs.stdfull_wl);
if ($saa==0)  safeframe(cjs.stdaecfull195);   // opt. 40 sec. for QR
if ($saa==0)  safeframe(cjs.stdaecfull284);   // opt. 20 sec. for QR
              }
// every 18 minutes, take a 1700 frame (too near telemetry limit)
              frame(cjs.stdaecfull1700);      // 20 sec exp?
// observe mosaic panel until mosaic completed
if ($L1<=24) {$L1=$L1+1;
              target($L1);
              frame(cjs.stdfull195);
              frame(cjs.stdfull1216);
              frame(cjs.stdfull1550);
              frame(cjs.stdfull_wl);}         // context images
if ($L1>=24)  $PRI=0;                         // lower prio if FDM complete
              }
              return(99);
```

CJS.tracking.1x1.all3.useq:

```
//name          CJS.tracking.1x1.all3
//description: at top1, 90 sec. cadence for WL, + UV and EUV interleaved
//              This version uses central half of fov only (low telem. rate!)
//              Use CJS.tracking.1x1.all4 for full field of view.
//revision:     3
//date:         19980122
//status:       tested, but revised ; checked by: (initials and date)
//keywords:     3: Bright Points, 15: Emerging flux, 19: Flows, 36: Quiet Sun
//ID:           000.000.000.000
//Type:         main program
//Target:       top1
//Termination: by interrupt
//Telemetry:    0.017Mbyte/non-dangerous frame, 0.041Mbyte/dangerous frame
//              or 0.24Mbyte per set at 270 sec. cadance 0.05Mbyte/min.,
//              which is six times below sustainable rate.
//N.B.: hardwired to use target of opportunity #1
               $type:main;
               $PRI=0;
               resetaec;
               call(STD.CCDsafe_init);       // initialize CCD safety check
// setup of the AEC parameters upon starting this sequence (storing results)
               frame_list(cjs.stdaeccenterhalf1216,cjs.stdaeccenterhalf1550,
                          cjs.stdaeccenterhalf1600,cjs.stdaeccenterhalf1700,
                          cjs.stdaeccenterhalf171,cjs.stdaeccenterhalf195,
                          cjs.stdaeccenterhalf284);
               target_list(top1);
               $L0=5;
while ($L0--) execute_list(0s,0s,@saa_pause);
// start actual science sequence; sequence ends upon interrupt from time line
// Note: this sequence is designed for photospheric tracking;
               $L0=90s;                        // delay for fixed cadence
               delay(0);
while ($RTN != 99) {                                 // terminate by interrupt
               target(top1);                   // update target information
               frame(cjs.stdcenterhalf_wl);    // 0.02 sec. optimal
               frame(cjs.stdaeccenterhalf1216); // 14 sec. optimal
if ($saa ==0) safeframe(cjs.stdaeccenterhalf171);  // not in SAA; 25 sec. opt.
if ($saa ==0) safeframe(cjs.stdaeccenterhalf195);  // not in SAA; 40 sec. opt
               delay($L0);
               frame(cjs.stdcenterhalf_wl);    // 0.02 sec. optimal
               frame(cjs.stdaeccenterhalf1550); // assumed no more than 80 sec.
               delay($L0);
               frame(cjs.stdcenterhalf_wl);    // 0.02 sec. optimal
if ($saa ==0) frame(cjs.stdaeccenterhalf1600); // 5. sec. optimal
if ($saa ==0) frame(cjs.stdaeccenterhalf1700); // 20 sec. optimal
if ($saa ==0) safeframe(cjs.stdaeccenterhalf284);  // not in SAA; 20 sec. opt
               delay($L0);}
               return(99);
```

CJS.tracking.1x1.all4.useq:

```
//name          CJS.tracking.1x1.all4
//description: at top1, 90 sec. cadence for WL, + UV and EUV interleaved
//              This version uses full fov (high telem. rate!)
//              Use CJS.tracking.1x1.all3 for central half of fov.
//revision:    2
//date:        19980122
//status:      tested, but revised ; checked by: (initials and date)
//keywords:    3: Bright Points, 15: Emerging flux, 19: Flows, 36: Quiet Sun
//ID:          000.000.000.000
//Type:        main program
//Target:      top1
//Termination: by interrupt
//Telemetry:   0.067Mbyte/non-dangerous frame, 0.091Mbyte/dangerous frame
//              or 0.74byte per set at 270 sec. cadance 0.164Mbyte/min.,
//              which is half the sustainable rate.
//N.B.: hardwired to use target of opportunity #1
              $type:main;
              $PRI=0;
              call(STD.CCDsafe_init);       // initialize CCD safety check
// setup of the AEC parameters upon starting this sequence (storing results)
              frame_list(cjs.stdaecfull1216,cjs.stdaecfull1550,
                         cjs.stdaecfull1600,cjs.stdaecfull1700,
                         cjs.stdaecfull171,cjs.stdaecfull195,
                         cjs.stdaecfull284);
              target_list(top1);
              resetaec;
              $L0=5;
while ($L0--) execute_list(0s,0s,@saa_pause);
// start actual science sequence; sequence ends upon interrupt from time line
// Note: this sequence is designed for photospheric tracking;
              $L0=90s;                         // delay for fixed cadence
              delay(0);
while ($RTN != 99) {                           // terminate by interrupt
              target(top1);                    // update target information
              frame(cjs.stdfull_wl);           // 0.02 sec. optimal
              frame(cjs.stdaecfull1216);       // 14 sec. optimal
if ($saa ==0) safeframe(cjs.stdaecfull171);    // not in SAA; 25 sec. opt
if ($saa ==0) safeframe(cjs.stdaecfull195);    // not in SAA; 40 sec. opt
              delay($L0);
              frame(cjs.stdfull_wl);           // 0.02 sec. optimal
              frame(cjs.stdaecfull1550);       // assumed no more than 80 sec.
              delay($L0);
              frame(cjs.stdfull_wl);           // 0.02 sec. optimal
if ($saa ==0) frame(cjs.stdaecfull1600);       // 5. sec. optimal
if ($saa ==0) frame(cjs.stdaecfull1700);       // 20 sec. optimal
if ($saa ==0) safeframe(cjs.stdaecfull284);    // not in SAA; 20 sec. opt
              delay($L0);}
              return(99);
```

CJS.transient_ test_ wl.useq:

```
//name CJS.transient_test_wl.useq
//description:  Test of the transient flag, using high and low thresholds
//              The high threshold is set so high that it should not allow
//              the transient event flag to be raised at all.
//              The low threshold for the brightening is set low enough that
//              the dark current should be able to trigger the flag if the CCD
//              is run warm. Once set, the sequence takes an exposure at
//              another wavelength and then returns
//              Tests for transient on central half of the CCD field.
//              No flare test required: white light and UV only.
//              N.B. Exposure times may not change for transient testing!!!
//revision:     2
//status:       being tested ; checked by: RAS 19971006/CJS&DPM 19971007
//date:  19971007
//keywords: 42: Software tests
//ID:  000.000.000.000
//Type:  main program
//Target: none specified
//Termination:  by interrupt
//Telemetry:    TBD
      $type:main;                        // define sequence type
      $PRI=0;                            // lower priority to allow interrupts
      $TEF=0;                            // reset the transient event flag
      startave;                          // reset time average construction
      resetaec;                  // initialize to default AEC
        $L0=20;
while($L0--) {frame(cjs.stdaecfull_wl);}  // settle to correct exposure time
                                          // start transient tests
      $L0=47;   // doesn't match n for t_ave
while($L0--) {frame(cjs.high_transient_test_wl);
              if ($TEF) goto _flagset0;}
_flagset0:
      $L0=47;
      $TEF=0;                            // reset the transient event flag
      startave;                          // reset time average construction
while($L0--) {frame(cjs.low_transient_test_wl);
              if ($TEF) goto _flagset1;}
        frame(cjs.stdaecfull1216);   // if no flag set, take pict. at 1216
      return 0;
_flagset1:
        frame(cjs.stdaecfull1600);   // if flag set, take picture at 1600
     return 0;
```

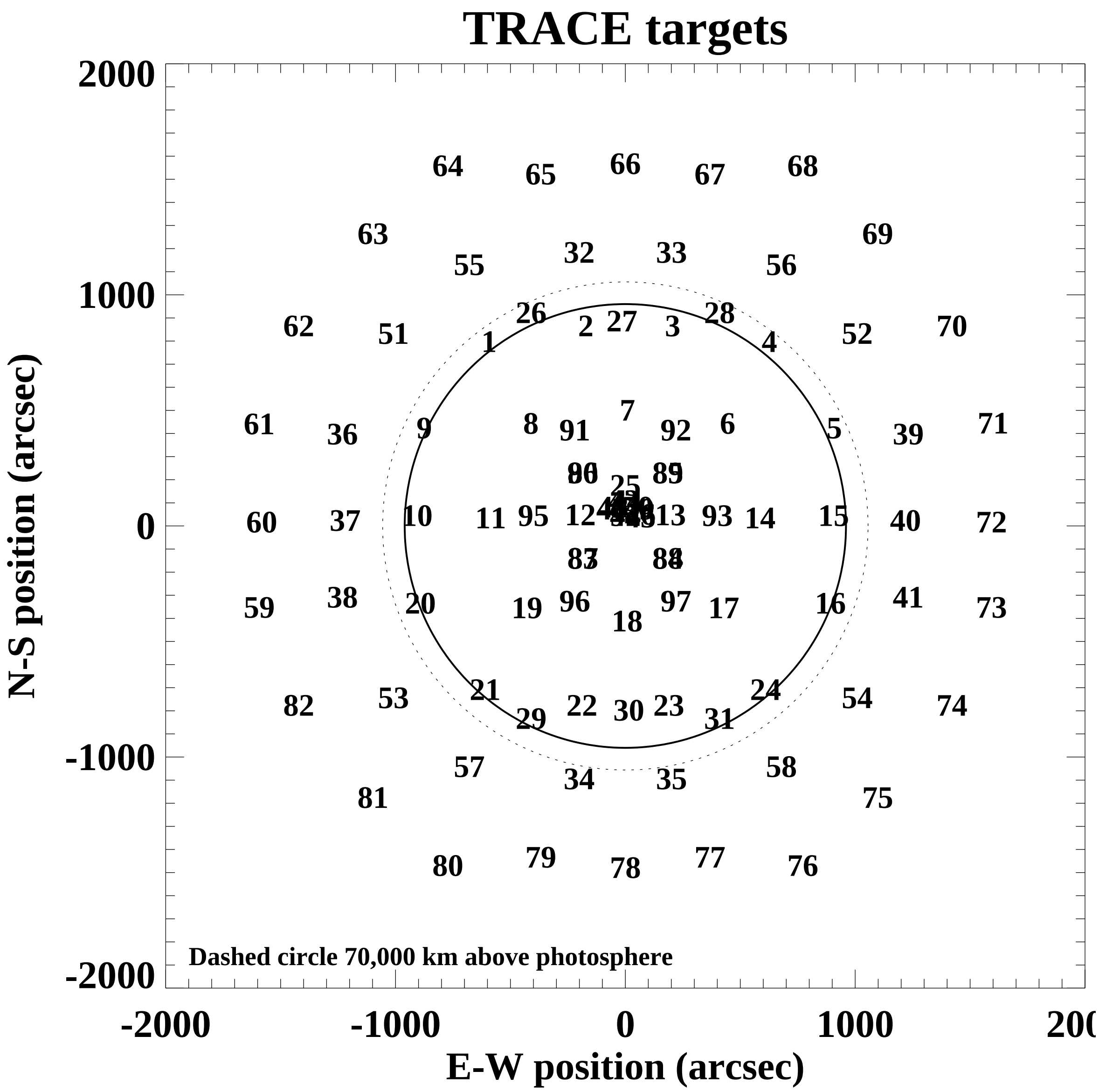

Figure 1: Identified target positions (82) used in named targets. Note that these are only approximate at the moment: they have been matched against the wedge–accessible positions (email from Ted Tarbell, Tue Feb 11, 7:32pm -0800, to trace_sci_ops

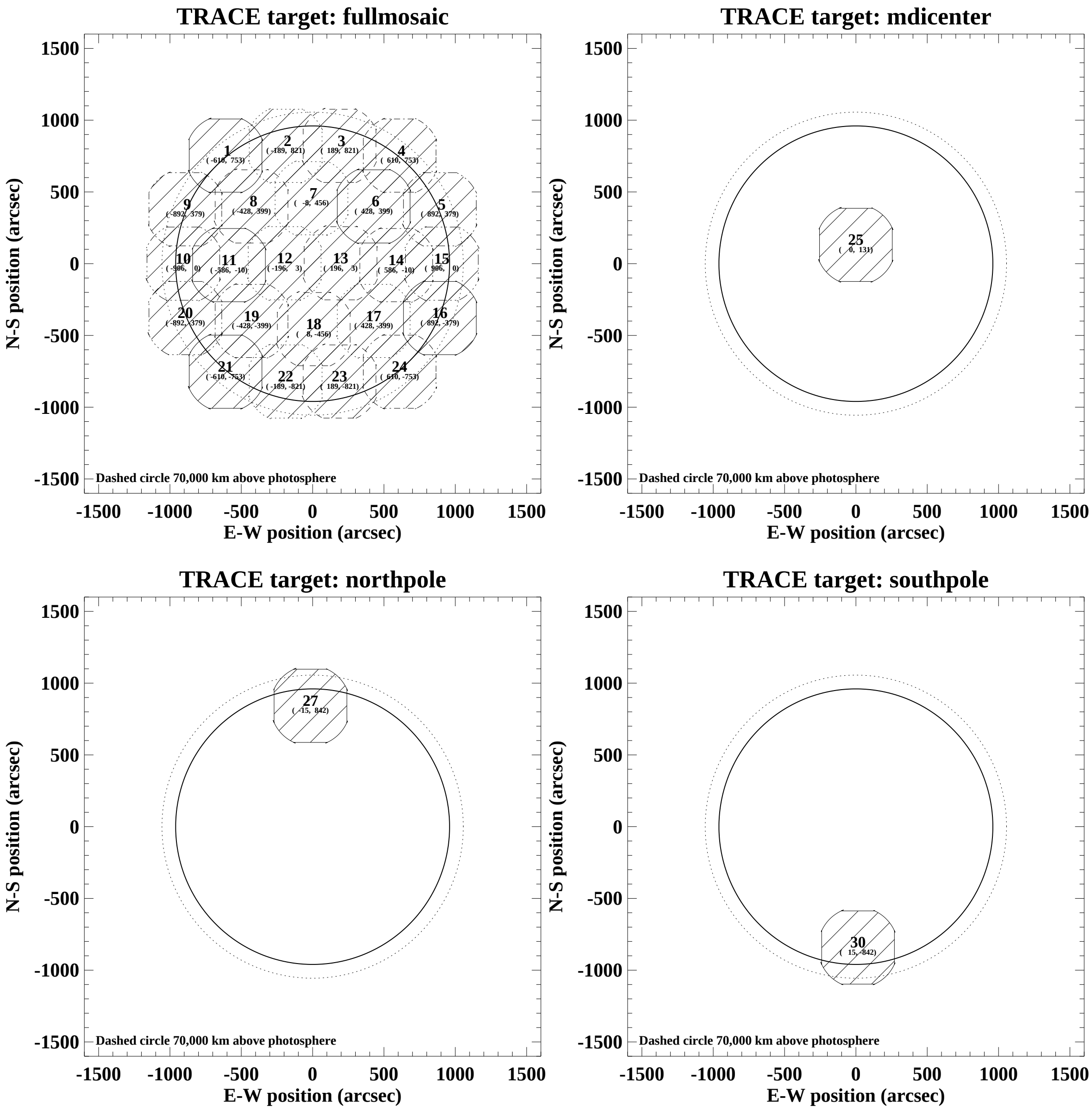

Figure 2: fullmosaic, mdicenter, northpole, southpole

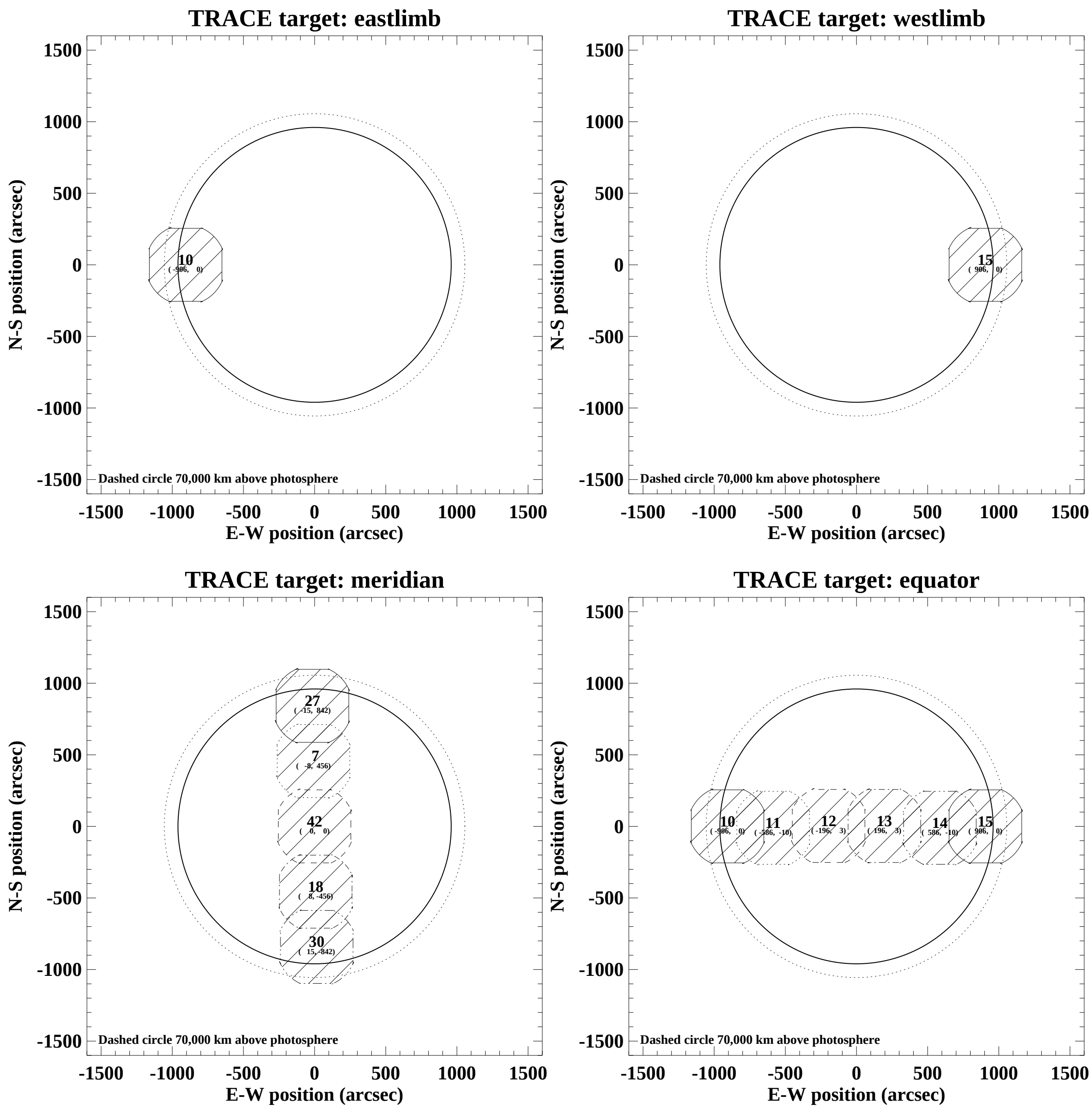

Figure 3: eastlimb, westlimb, meridian, equator

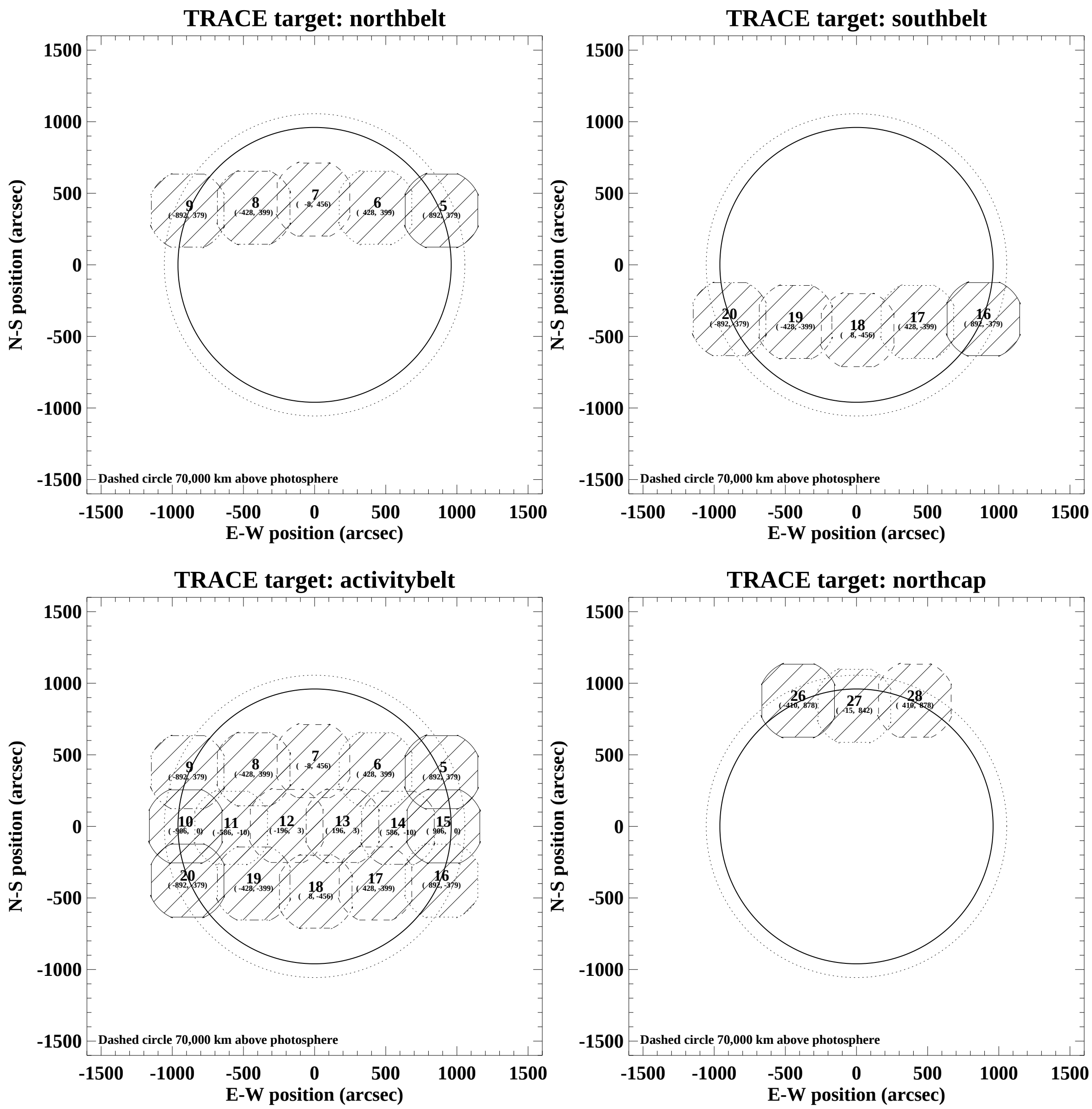

Figure 4: northbelt, southbeld, activitybelt, northcap

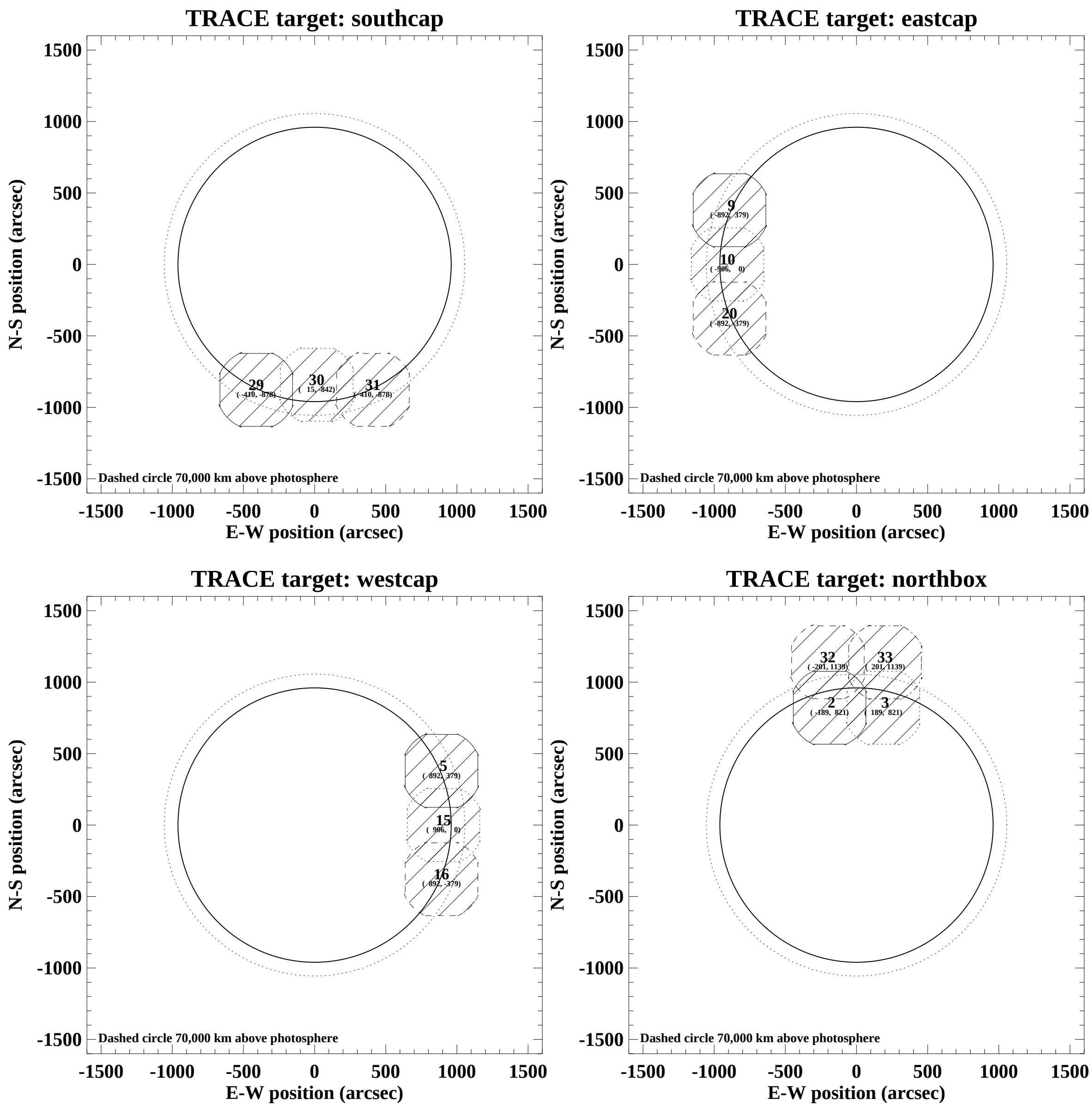

Figure 5: southcap, eastcap, westcap, northbox

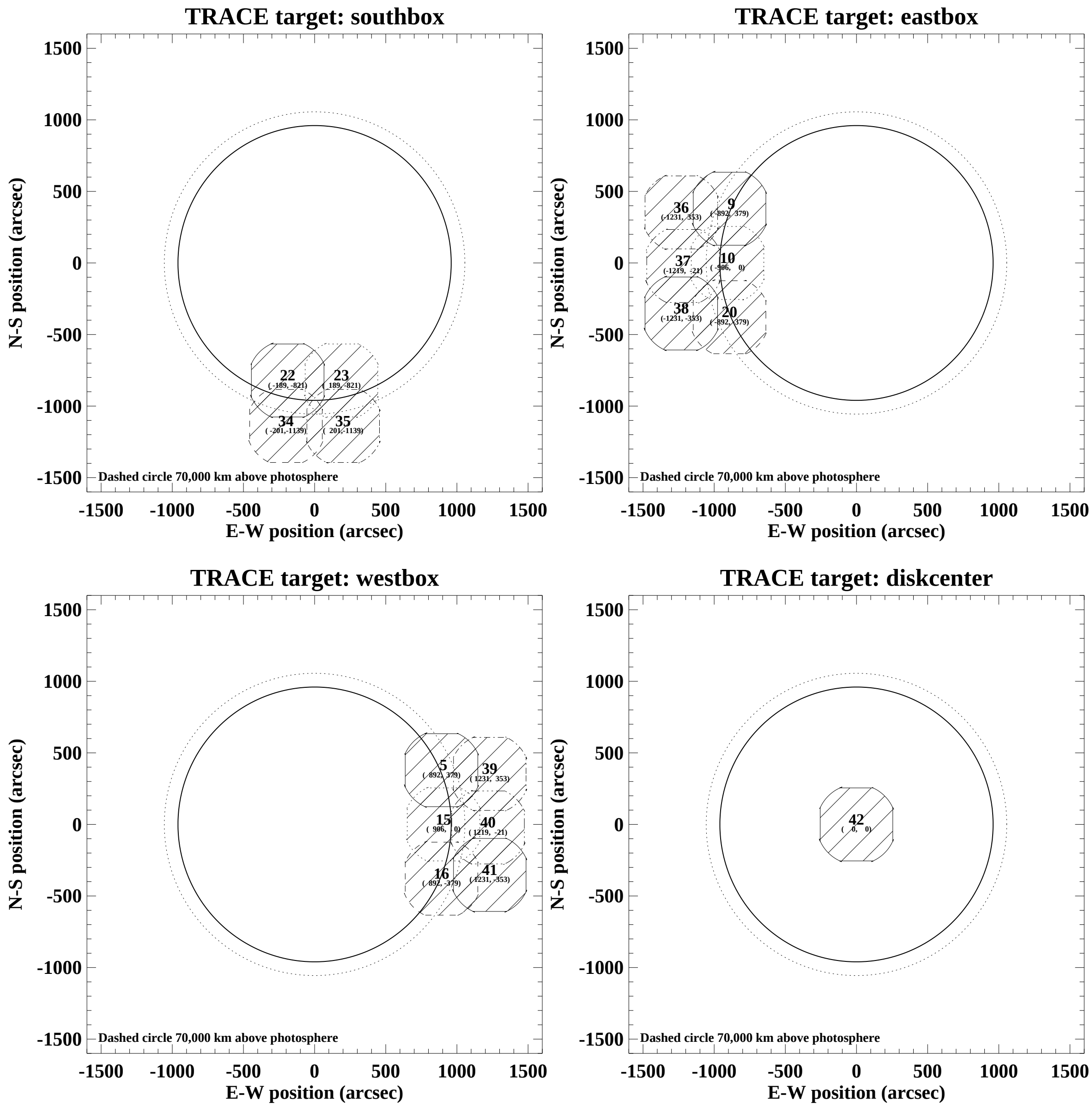

Figure 6: southbox, eastbox, westbox, diskcenter

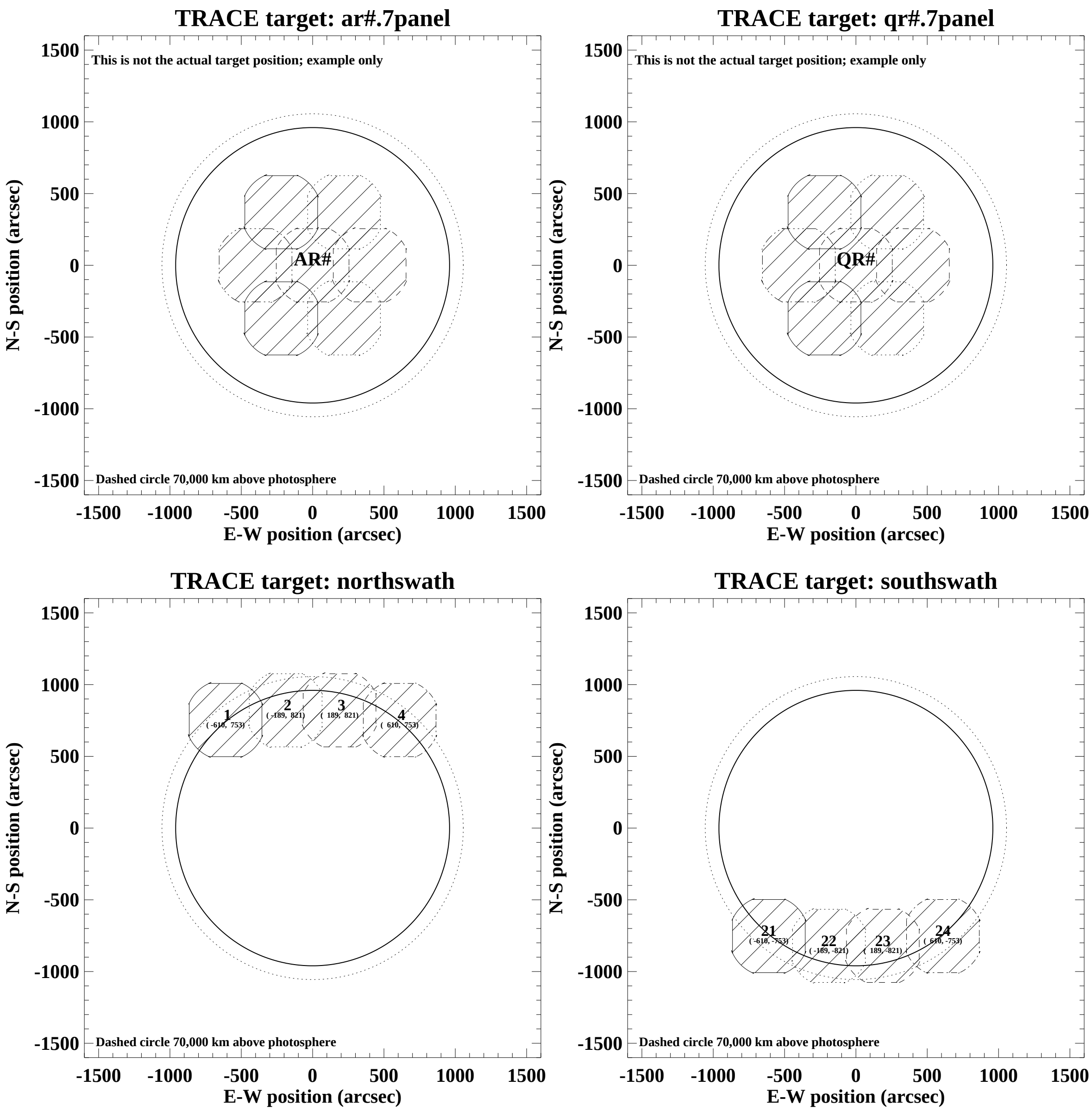

Figure 7: Example of ar# .7panel or qr# .7panel (central position to be defined prior to observation), and northswath and southswarth targets

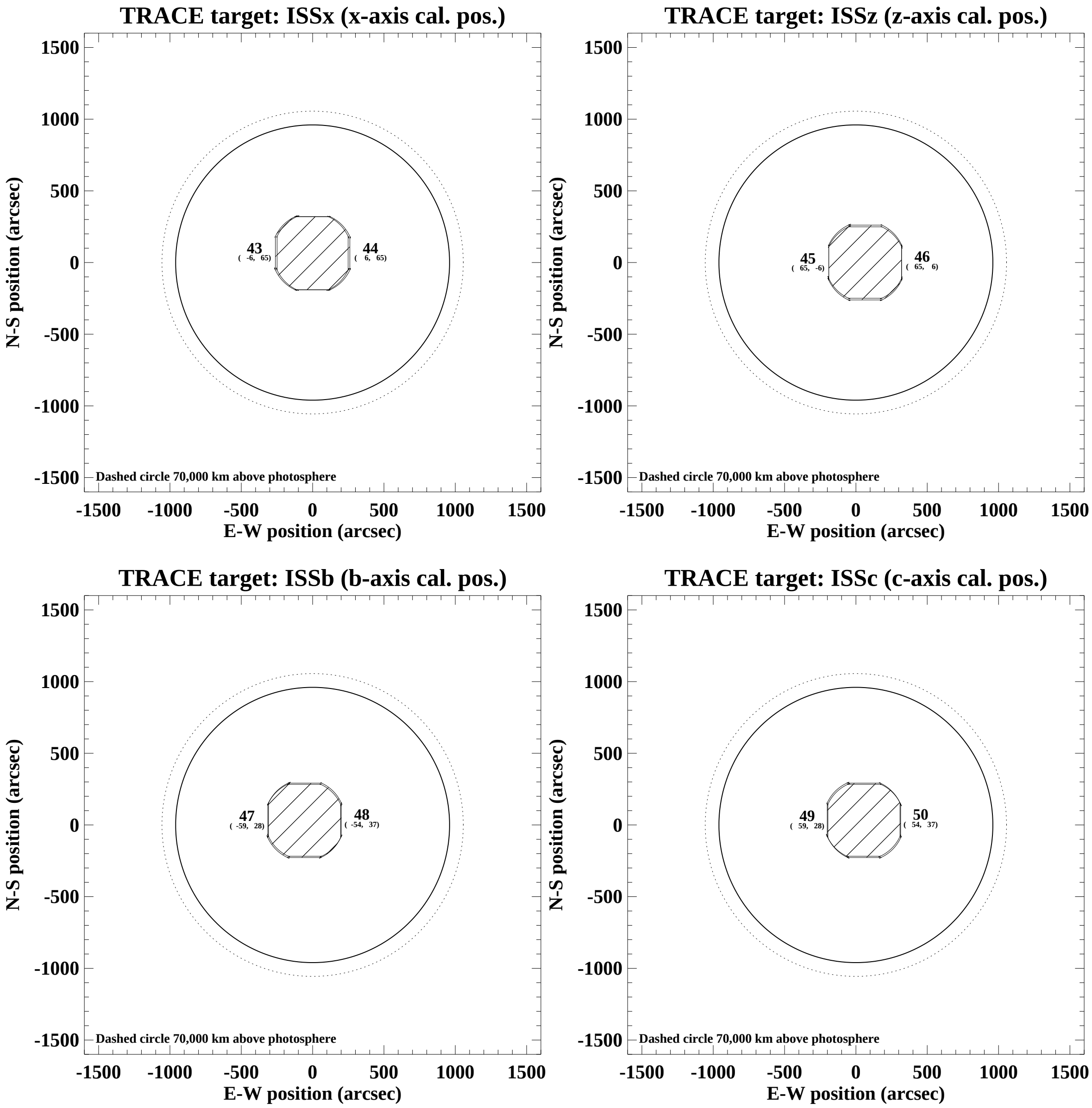

Figure 8: ISS targets: ISSx, ISSz (same as ISSa), ISSb, ISSc

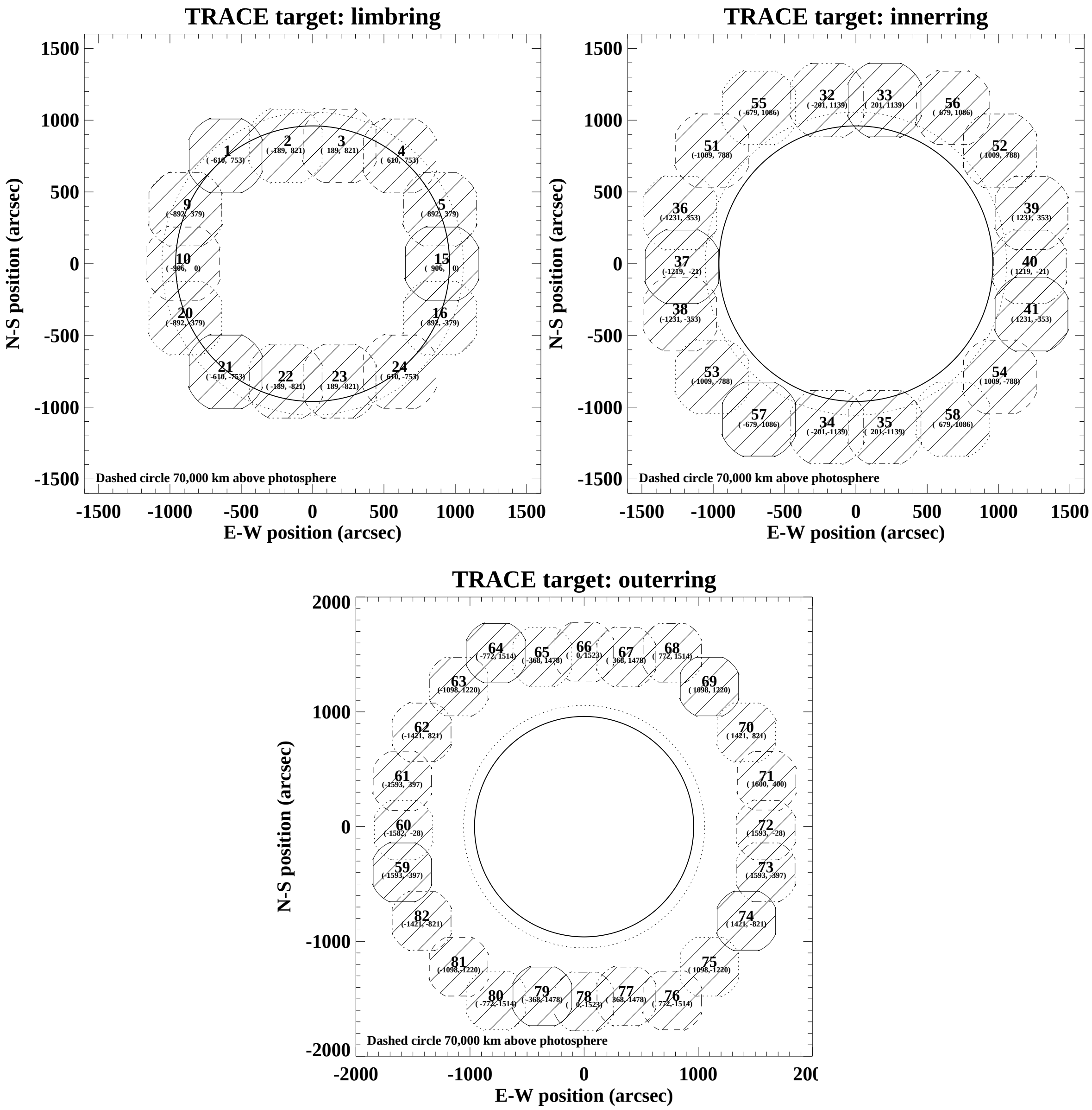

Figure 9: ISS targets: limbring, innerring, outerring