OBSERVING PLANS FOR THE HST ETA CARINAE TREASURY PROJECT

Merely to suggest how complex this project is, below are summaries of the provisional observing plan. T.R. Gull (NASA / Goddard Space Flight Center) has been preparing and updating the plans and this version is from January 2003. Various small changes are likely.

About 72 orbits are used altogether, but, unlike most HST programs, we get *many* observations in each orbit, some of them need to be very carefully optimized, and some are unconventional in nature. Hence the plan is more difficult than that of, say, a more normal large program with 300 orbits.

Eventually we hope to include the entire observing plan (HST "Phase II Proposal") at this site, containing the actual list of observations. It will be many, many pages long.

********** 1. List of HST "visits" through mid 2003: **********

VisitNum: 11
Visit Status: Scheduling
Targets: ETA-CAR-A ETA-CAR-D
Configs: STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA
Plan Windows:
Feb 12, 2003 - Feb 14, 2003 (2003.043 - 2003.045)

VisitNum: 12
Visit Status: Scheduling
Targets: ETA-CAR-A
Configs: STIS/CCD
Plan Windows:
Feb 12, 2003 - Feb 14, 2003 (2003.043 - 2003.045)

VisitNum: 1W
Visit Status: Scheduling
Targets: ETA-CAR-A
Configs: WFPC2
Plan Windows:
Feb 3, 2003 - Feb 27, 2003 (2003.034 - 2003.058)

VisitNum: 2A
Visit Status: Scheduling
Targets: ETA-CAR-HRC
Configs: ACS/HRC
Plan Windows:
Feb 3, 2003 - Feb 27, 2003 (2003.034 - 2003.058)

(January 2003 list of HST visits through mid-2003, continued)

VisitNum: 21
Visit Status: Implementation
Targets: ETA-CAR-A
Configs: STIS/CCD
Plan Windows:
Mar 24, 2003 - Apr 2, 2003 (2003.083 - 2003.092)

VisitNum: 31
Visit Status: Implementation
Targets: ETA-CAR-A
Configs: STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA
Plan Windows:
May 17, 2003 - May 31, 2003 (2003.137 - 2003.151)

VisitNum: 32
Visit Status: Implementation
Targets: ETA-CAR-A ETA-CAR-D
Configs: STIS/CCD
Plan Windows:
May 16, 2003 - May 29, 2003 (2003.136 - 2003.149)

VisitNum: 33
Visit Status: Implementation
Targets: ETA-CAR-A ETA-CAR-D
Configs: STIS/CCD
Plan Windows:
May 16, 2003 - May 29, 2003 (2003.136 - 2003.149)

VisitNum: 41
Visit Status: Implementation
Targets: ETA-CAR-A ETA-CAR-D
Configs: STIS/CCD
Plan Windows:
Apr 27, 2003 - May 10, 2003 (2003.117 - 2003.130)

VisitNum: 51
Visit Status: Implementation
Targets: ETA-CAR-A ETA-CAR-D
Configs: STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA
Plan Windows:
Jun 1, 2003 - Jun 4, 2003 (2003.152 - 2003.155)

(January 2003 list of HST visits through mid-2003, continued)

VisitNum: 52
Visit Status: Implementation
Targets: ETA-CAR-A ETA-CAR-D
Configs: STIS/CCD
Plan Windows:
Jun 1, 2003 - Jun 5, 2003 (2003.152 - 2003.156)

VisitNum: 61
Visit Status: Implementation
Targets: ETA-CAR-A ETA-CAR-D
Configs: STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA
Plan Windows:
Jun 17, 2003 - Jun 21, 2003 (2003.168 - 2003.172)

VisitNum: 62
Visit Status: Implementation
Targets: ETA-CAR-A ETA-CAR-D
Configs: STIS/CCD
Plan Windows:
Jun 17, 2003 - Jun 22, 2003 (2003.168 - 2003.173)

VisitNum: 63
Visit Status: Implementation
Targets: ETA-CAR-A ETA-CAR-D
Configs: STIS/CCD
Plan Windows:
Jun 17, 2003 - Jun 22, 2003 (2003.168 - 2003.173)

----- Other information begins on next page ----

January 2003 summary of provisional observing plan…

HST CYCLE 11 (mid-2002 to mid-2003):

Preparatory phase:
Visit 01: Two orbit to monitor Balmer alpha, scattered
Balmer alpha profiles in the SE lobe and Sr Patch 2 NOV 2002
Visit 1A: Single orbit for ACS/HRC test exposures
on inner region 1 OCT 2002
Before the minimum:
Visit 11: A 1175-2350 with E140M, E230M(1978) 2 CVZ FEB 10-25 2003
D Fe II 2507, 9 monitoring with E230H (2563)
Visit 12: A 1640-10300 with GXXXM settings 3 CVZ FEB 10-25 2003
Visit 2A: ACS/HRC imagery before minimum 1 FEB-APR 2003
Visit 1W: WFPC2 imagery before minimum 1 FEB-MAY 2003
Short sample:
Visit 21: A 1640-10300 with selected GXXXM 2 MAR27-APR10 2003
Just before:
Visit 31: A 1175-2350 with E140M, E230M(1978) 2 MAY25-31 2003
Visit 32: A, D(C) 1640-10300 with GXXXM settings 4 MAY25-31 2003
Visit 33: A, D(C) 1640-10300 with GXXXM settings, cont. 3 MAY25-31 2003
Short sample:
Visit 41: A 1640-10300 with selected GXXXM settings 2 Apr15-MAY15 2003
Begin the Minimum:
Predicted X-Ray drop:
Visit 51: A 1175-2350 with E140M, E230M(1978) 2 CVZ JUN 3-8 2003
D Fe II 2507, 9 monitoring with E230H (2563)
Visit 52: A, D 1640-10300 with GXXXM settings 4 CVZ JUN 3-8 2003
Just after the drop:
61: A 1175-2350 with E140M, E230M(1978) 3 JUN18-24 2003
D Fe II 2507, 9 monitoring with E230H (2563)
Visit 62: A, D 1640-10300 with GXXXM settings 4 JUN18-24 2003
Visit 63: A, D(C) 1640-10300 with GXXXM settings, cont. 3 JUN18-24 2003
Total 39 (28+ 11 CVZ)

(continued on next page)

(provisional summary, continued)

HST CYCLE 12 (mid-2003 to mid-2004):

Deep into the Minimum:
Visit 71: A 1175-2350 with E140M, E230M(1978) 2 JUN28-JUL13 2003
D Fe II 2507, 9 monitoring with E230H (2563)
Visit 72: A 1640-10300 with GXXXM settings 3 JUL1-10 2003
Visit 3A: ACS/HRC imagery during minimum 1 JUN13-25 2003
Visit 2W: WFPC2 imagery during minimum 1 JUL-AUG 2002
Late into the Minimum:
Visit 4A: ACS/HRC imagery during minimum 1 JUL20-AUG11 2003
Visit 81: A 1175-2350 with E140M, E230M(1978) 5 CVZ JUL27-AUG6 2003
D Fe II 2507, 9 monitoring with E230H (2563)
Visit 82: A, D 1640-10300 with GXXXM settings 4 CVZ JUL28-AUG7 2003
Visit 83: A 1640-10300 with SELECTED GXXXM settings 2 AUG12-AUG21 2003
Does it start to recover?
Visit 91: A 1175-2350 with E140M, E230M(1978) 3 CVZ SEP23-OCT1 2003
Visit 92: A 1640-10300 with GXXXM ORIENT197=ABD 3 CVZ SEP23-OCT1 2003
Visit 93: A 1175-2350 with E140M, E230M(1978) 3 CVZ MAR 2004
D Fe II 2507, 9 monitoring with E230H (2563)
Visit 94: A1640-10300 with GXXXM settings ORIENT17.1=ABD3 CVZ MAR 2004
Visit 5A: ACS/HRC imagery post minimum 1 SEP13-OCT10 2003
Visit 6A: ACS/HRC imagery post minimum 1 Nov13-Dec5 2003
Total 33 (12 + 21 CVZ)
