# 12347 - WFC3/UVIS internal CTE monitor

Cycle: 18, Proposal Category: CAL/WFC3  
(Availability Mode: RESTRICTED)

## INVESTIGATORS

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<tr>
<th>Name</th>
<th>Institution</th>
<th>E-Mail</th>
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</thead>
<tbody>
<tr>
<td>Dr. Vera Kozhurina-Platais   (PI)</td>
<td>Space Telescope Science Institute</td>
<td><a href="mailto:verap@stsci.edu">verap@stsci.edu</a></td>
</tr>
<tr>
<td>Dr. Sylvia M. Baggett       (CoI)</td>
<td>Space Telescope Science Institute</td>
<td><a href="mailto:sbaggett@stsci.edu">sbaggett@stsci.edu</a></td>
</tr>
<tr>
<td>Dr. Larry D. Petro          (CoI)</td>
<td>Space Telescope Science Institute</td>
<td><a href="mailto:petro@stsci.edu">petro@stsci.edu</a></td>
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## VISITS

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24 Total Orbits Used

**ABSTRACT**

WFC3/UVIS CCD detector Charge Transfer Inefficiency (CTI) will be measured with the EPER (Extended Pixel Edge Response) method using tungsten lamp flat field exposures. This CTE monitoring program is the second of multi-cycle program to monitor and establish CTE losses over time.

**OBSERVING DESCRIPTION**

The program consists of internal tungsten lamp flat field observations with short exposures through three filters F390M, F390W and F438W with different illumination levels of 200, 400, 800, 1600 and 5000 electrons. These observations will be used to monitor the CTE detector over time, by measuring the profiles into trailing over-scan region (EPER - extended pixel edge response), as described by Kozhurina-Platais (2009, ISR-WFC3-2009-10; 2010, "HST Calibration Workshop"). The internal observations with tungsten lamp are similar to exposures taken during Cycle 17 proposal (CAL_11924). Each visit consists of one orbit, and every 2 visits are grouped together so that all illumination levels are acquired in each pair of visits. Each group is repeated 12 times spaced approximately 4-6 weeks apart, for total of 24 internal orbits.
### Visit 01WFC3/UVIS internal CTE monitor

**Proposal 12347, Visit 01**, completed  
*Diagnostic Status: No Diagnostics*  
*Scientific Instruments: WFC3/UVIS*  
*Special Requirements: BETWEEN 01-NOV-2010:00:00:00 AND 01-DEC-2010:00:00:00; GROUP 01,02 WITHIN 1D*

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**Orbit Structure**  
*Unused Visibility = 3234, Reconfig Exp. 2, Exp. 3, Reconfig*  
*Occultation*  
*Server Version: 20100902*
Proposition 12347 - Visit 02WFC3/UVIS Internal CTE Monitor

Diagnostics

(Visit 02) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU

Exposures

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Orbit Structure

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Server Version: 20100902
Proposal 12347 - Visit 03WFC3/UVIS internal CTE monitor

Visit
 Proposal 12347, Visit 03, completed
 Diagnostic Status: No Diagnostics
 Scientific Instruments: WFC3/UVIS
 Special Requirements: BETWEEN 01-DEC-2010:00:00:00 AND 01-JAN-2011:00:00:00; GROUP 03,04 WITHIN 1D

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Orbit Structure

![Orbit 1 Diagram]

Unused Visibility = 3234

Server Version: 20100902
Proposal 12347 - Visit 04WFC3/UVIS internal CTE monitor

Visit

- Proposal 12347, Visit 04, completed
- Diagnostic Status: Warning
- Scientific Instruments: WFC3/UVIS
- Special Requirements: (none)

Diagnostics

(Visit 04) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU

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Orbit Structure

[Diagram showing orbit structure with labels and visibility data]

Unused Visibility = 3234

Exp. 1
Reconfig
Exp. 2
Exp. 3
Exp. 4
Reconfig
Occultation

Server Version: 20100902
Proposal 12347 - Visit 05WFC3/UVIS internal CTE monitor

Visit Proposal 12347, Visit 05, scheduling
Diagnostic Status: No Diagnostics
Scientific Instruments: WFC3/UVIS
Special Requirements: BETWEEN 01-JAN-2011:00:00:00 AND 01-FEB-2011:00:00:00; GROUP 05,06 WITHIN 1D

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Orbit Structure

Server Version: 20100902

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Experiment 1

Server Version: 20100902
Proposal 12347 - Visit 06WFC3/UVIS internal CTE monitor

Visit 06, scheduling
Diagnostic Status: Warning
Scientific Instruments: WFC3/UVIS
Special Requirements: (none)

(Visit 06) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU

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Orbit Structure

Server Version: 20100902

Unused Visibility = 3234

Exp. 1

Exp. 2

Exp. 3

Exp. 4

Reconfig

Occultation
Proposal 12347 - Visit 07WFC3/UVIS internal CTE monitor

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Orbit Structure

[Diagram of orbit structure with time scale and labels]

Server Version: 20100902
### Proposal 12347 - Visit 08WFC3/UVIS internal CTE monitor

**Proposal 12347, Visit 08, scheduling**

- **Diagnostic Status:** Warning
- **Scientific Instruments:** WFC3/UVIS
- **Special Requirements:** (none)

**Diagnoses**

(Visit 08) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU

**Exposures**

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**Orbit Structure**

Unused Visibility = 3234

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Proposal 12347 - Visit 09WFC3/UVIS internal CTE monitor

Visit Proposal 12347, Visit 09, scheduling
Diagnostic Status: No Diagnostics
Scientific Instruments: WFC3/UVIS
Special Requirements: BETWEEN 01-MAR-2011:00:00:00 AND 01-APR-2011:00:00:00; GROUP 09,10 WITHIN 1D

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Orbit Structure

Unused Visibility = 3234
Occultation

Orbit 1
Unexplored
Reconfig
Exp. 2
Exp. 3
Reconfig

Server Version: 20100902
### Proposal 12347 - Visit 10 WFC3/UVIS internal CTE monitor

#### Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS  
Special Requirements: (none)

(Visit 10) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU

#### Exposures

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#### Orbit Structure

[Image of the orbit structure]

Unused Visibility = 3234

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Proposition 12347, Visit 11, scheduling
Diagnostic Status: No Diagnostics
Scientific Instruments: WFC3/UVIS
Special Requirements: BETWEEN 01-APR-2011:00:00:00 AND 01-MAY-2011:00:00:00; GROUP 11,12 WITHIN 1D

Orbit Structure

Server Version: 20100902
Proposal 12347 - Visit 12WFC3/UVIS internal CTE monitor

Diagnostic Status: Warning
Scientific Instruments: WFC3/UVIS
Special Requirements: (none)

(Visit 12) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU

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Image: Orbit Structure

Server Version: 20100902
Proposal 12347 - Visit 13WFC3/UVIS internal CTE monitor

Visit Proposal 12347, Visit 13, scheduling
Diagnostic Status: No Diagnostics
Scientific Instruments: WFC3/UVIS
Special Requirements: BETWEEN 01-MAY-2011:00:00:00 AND 01-JUN-2011:00:00:00: GROUP 13,14 WITHIN 1D

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Orbit Structure

Orbit 1
Exp. 1
Unused Visibility = 3234
Reconfig
Exp. 2
Exp. 3
Reconfig
Occultation

Server Version: 20100902
Proposal 12347 - Visit 14 WFC3/UVIS internal CTE monitor

Visit
Proposal 12347, Visit 14, scheduling
Diagnostic Status: Warning
Scientific Instruments: WFC3/UVIS
Special Requirements: (none)

Diagnostics
(Visit 14) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU

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Orbit Structure

[Diagram showing orbit structure with Exp. 1, Exp. 2, Exp. 3, Exp. 4, Reconfig, and Occultation]

Server Version: 20100902
**Proposal 12347 - Visit 15WFC3/UVIS internal CTE monitor**

**Visit**
- Proposal 12347, Visit 15, scheduling
- Diagnostic Status: No Diagnostics
- Scientific Instruments: WFC3/UVIS
- Special Requirements: BETWEEN 01-JUN-2011:00:00:00 AND 01-JUL-2011:00:00:00; GROUP 15,16 WITHIN 1D

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**Orbit Structure**

*Orbit 1*
- Unused Visibility = 3234
- Reconfig
- Exp. 1
- Exp. 2
- Exp. 3
- Reconfig
- Occultation

*Server Version: 20100902*
**Proposal 12347 - Visit 16 WFC3/UVIS internal CTE monitor**

**Visit**
- Proposal 12347, Visit 16, scheduling
- Diagnostic Status: Warning
- Scientific Instruments: WFC3/UVIS
- Special Requirements: (none)

**Diagnostics**
- (Visit 16) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU

**Exposures**

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**Orbit Structure**

- Unused Visibility = 3234
- Exp. 1
  - Reconfig
  - Exp. 2
  - Exp. 4
  - Reconfig
- Occultation
**Proposal 12347 - Visit 17WFC3/UVIS internal CTE monitor**

**Visit**

* Proposal 12347, Visit 17, scheduling
* Diagnostic Status: No Diagnostics
* Scientific Instruments: WFC3/UVIS
* Special Requirements: BETWEEN 01-JUL-2011:00:00:00 AND 01-AUG-2011:00:00:00; GROUP 17,18 WITHIN 1D

**Exposures**

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**Orbit Structure**

![Orbit Structure Diagram](image_url)

Server Version: 20100902
Visit 12347, Visit 18, scheduling
Diagnostic Status: Warning
Scientific Instruments: WFC3/UVIS
Special Requirements: (none)

(Visit 18) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU

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Proposal 12347 - Visit 19WFC3/UVIS internal CTE monitor

Visit Proposal 12347, Visit 19, scheduling
Diagnostic Status: No Diagnostics
Scientific Instruments: WFC3/UVIS
Special Requirements: BETWEEN 01-AUG-2011:00:00:00 AND 01-SEP-2011:00:00:00; GROUP 19,20 WITHIN 1D

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Orbit Structure

Unreal Visibility = 3234

Exp. 1
Reconfig
Exp. 2
Exp. 3
Reconfig

Server Version: 20100902

22
Visit 20

Diagnosis Status: Warning
Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

(Diagnostic) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU

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Orbit Structure

Unused Visibility = 3234

Exp. 1

Exp. 2

Exp. 3

Exp. 4

Occultation

Server Version: 20100902
**Proposal 12347 - Visit 21 WFC3/UVIS internal CTE monitor**

**Visit**
- Proposal 12347, Visit 21, scheduling
- Diagnostic Status: No Diagnostics
- Scientific Instruments: WFC3/UVIS
- Special Requirements: BETWEEN 01-SEP-2011:00:00:00 AND 01-OCT-2011:00:00:00; GROUP 21,22 WITHIN 1D

**Exposures**

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**Orbit Structure**

![Orbit Structure Diagram]

*Server Version: 20100902*
Proposal 12347 - Visit 22WFC3/UVIS internal CTE monitor

Diagnostics

(Visit 22) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU

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Orbit Structure

Unused Visibility = 3234

Exposures

Exp. 1
Exp. 2
Exp. 3
Exp. 4
Reconfig
Occultation
Proposal 12347 - Visit 23WFC3/UVIS internal CTE monitor

Visit
---
Proposal 12347, Visit 23, scheduling
Diagnostic Status: No Diagnostics
Scientific Instruments: WFC3/UVIS
Special Requirements: BETWEEN 01-OCT-2011:00:00:00 AND 01-NOV-2011:00:00:00; GROUP 23,24 WITHIN 1D

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Orbit Structure
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Unused Visibility = 3234

[Diagram of orbit structure with labels and dates]

Server Version: 20100902

Wed Dec 15 13:38:36 GMT 2010
Proposal 12347 - Visit 24WFC3/UVIS internal CTE monitor

Visit 24, scheduling

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: (none)

(Visit 24) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU

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Orbit Structure

Server Version: 20100902