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Instrument Science Report COS 2017-23(v1)

Summary of Cycle 24 Program- COS Pure Parallel Observations of Geocoronal Lyα

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ABSTRACT

In this report we summarize the Cycle 24 program that obtained geocoronal Lyα observations with the FUV detector of the Cosmic Origin Spectrograph (COS).

Contents

1. Introduction

This program is designed to acquire geocoronal Lyα (airglow) observations for some of the most used COS FUV observing modes as a pure parallel program with the Space Telescope Imaging Spectrograph (STIS). The purpose of this program is to provide COS users with airglow data for use in customized calibrations and modeling of airglow features. All observations were successful.

2. Summary

The Cycle 24 airglow observations were taken as pure parallel observations with the STIS program 14833. Program 14833 contains one airglow observation with the G130M/1327 setting (see Figure 1 for an example).

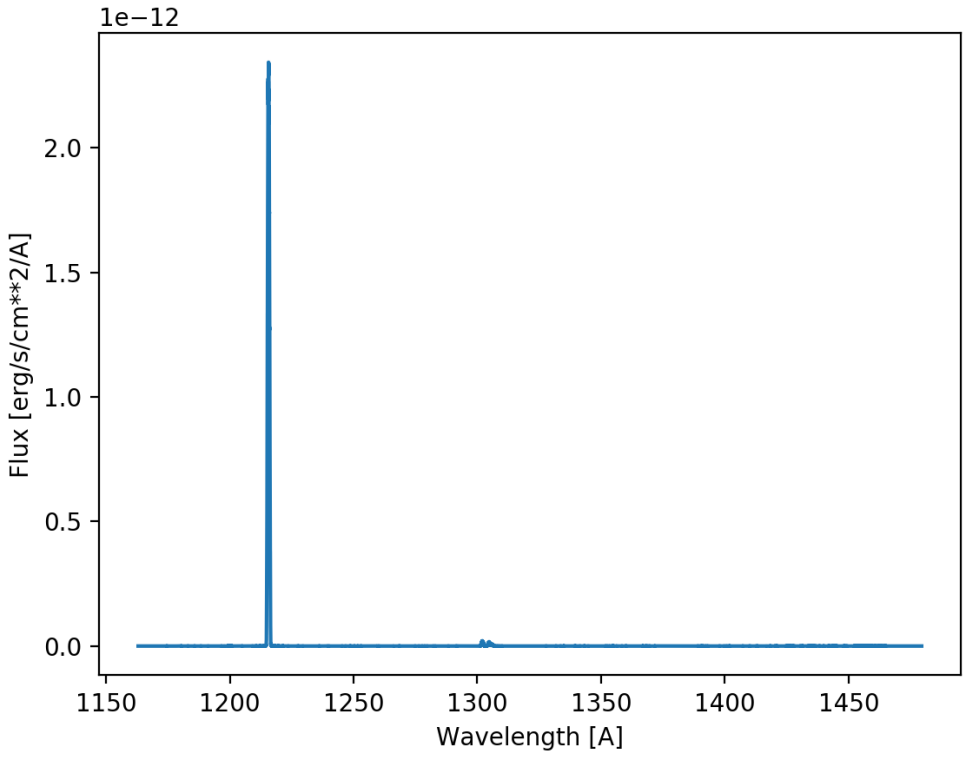

Figure 1. G130M/1327, LDBUE2060. Lyα airglow is seen at 1215.6702 Å, Nitrogen at ≈1200 Å, and Oxygen airglow is seen at 1302.1685 Å (O I), 1304.8576 Å (O I*) and 1306.0286 Å (O I**). Both segments are shown with the gap between the two at 1327 Å.

The data were successfully acquired, have been archived, and are available for download. For convenience to users, we have listed a link to the data set on the COS Airglow website:

`http://www.stsci.edu/hst/cos/calibration/airglow.html`

Change History for COS ISR 2017-23

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