# Robinson Observatory Website Recommendation Report

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## Table of Contents

# Website Content Audits

As its primary focus, this report summarizes findings from the Website team's content analyses performed on the Robinson Observatory (RO), Embry-Riddle (ERAU), Florida Tech (FIT), and the University of Florida (UF) websites. For a complete list of the pages that we included in the ERAU, FIT and UF content analyses, please reference Appendix A. A secondary focus of this report was to use information from the RO user survey and journey maps to inform website recommendations.

Our goal was to evaluate the website content from each of these sources to make recommendations on how to update the RO website with a user-centered design (UCD) focus. Based on our research from these three websites, this report highlights our recommendations for updates that will address website gaps and improve how content aligns with user needs.

## RO Website Content Audit

For the RO content analysis, we evaluated the main navigation and sub-navigation pages of the Observatory section (URL Observatory and Observatory/) of the Planetary Sciences Group (PSG) website (https://planets.ucf.edu/).

Although the RO displays the **Members** page as a sub-navigation page, we did not include it in this report. We omitted the Members page because we received feedback from the RO Director, Dr. Yan Fernandez, stating that the RO is not responsible for maintaining this page. The audited sections included the following seven pages:

| **Page name** | **URL** |
|---|---|
| Observatory | https://planets.ucf.edu/observatory/ |
| "Knights Under the Stars" Public Event Schedule | https://planets.ucf.edu/observatory/knights-under-the-stars-schedule/ |
| Weather | https://planets.ucf.edu/observatory/weather/ |
| FAQ | https://planets.ucf.edu/observatory/faq/ |
| Directions | https://planets.ucf.edu/observatory/directions/ |
| Safety | https://planets.ucf.edu/observatory/safety/ |
| History of Robinson Observatory | https://planets.ucf.edu/observatory/history/ |

The audit focused on the following three main categories:

- Content
- Target audience information
- Functional issues

The audit was a tool we used to document our findings and observations for each of these categories. Then, we analyzed the audit and compared it with the user survey and user research report. This report summarizes our key findings from these analyses, which includes our top observations and specific recommendations to improve the RO website.

## Content

This section discusses our analyses of the content for the website.This included analysis on the kind of content, the balance of images and words, and interactive features (Detzi) to evaluate the website's overall flow. To grasp a sense of the quality of the overall user experience, we evaluated how intuitive the categories in the navigation were and if the content was readable, relatable, and human (Buley 143). We also correlated the quality of the overall experience to user engagement. Therefore, we specifically focused on several content-related elements including content format, headings, and text hyperlinks. We used these elements to evaluate the strengths and opportunities for the RO to implement an effective UCD website product for its users.

### Summary of findings

Overall, we found that the balance of headings, hyperlinks, and word count of the text varied by page. The use of these elements directly impacts the readability of each page. The following table summarizes our findings for use of headings, hyperlinks, and word count:

| **Page name** | **Main Heading** | **Total # of hyperlinks** | **Total word count** |
|---|---|---|---|
| Observatory | Observatory | 40 | 570 |
| "Knights Under the Stars" Public Event Schedule | "Knights Under the Stars" Public Event Schedule | 15 | 643 |
| Weather | Weather | 37 | 0* |
| FAQ | FAQ | 26 | 2464 |
| Directions | Directions to Robinson Observatory | 4 | 119 |
| Safety | Safety at Robinson Observatory | 0 | 290 |

*We recorded the total word count as 0 for the **Weather** page because it did not include paragraph text. Instead, they only included text for the user to set filters and show descriptive labels for each member that was listed on the page.

The **FAQ** page had the highest total word count, while the **Directions** page had the lowest. The **Observatory** page had the most hyperlinks (40) and the **Safety** page had the least (0).

The **Safety** page had the third lowest word count of the Observatory pages. The relatively low word count on this page appears disproportionate to the importance that the RO places on visitor safety.

The **Directions** page contains three links to Google Maps using three different forms: an open location code, a basic hyperlink, and an embedded map. Having three identical links on a single page disrupts readability and adds complexity to a simple informational page.

The **Weather** page contains 37 outbound links. Although sections are separated by horizontal rules, the page lacks standard headings to help users find the data they're looking for. Instead, it appears that some of the links are used in place of headers, which is inconsistent formatting compared to other pages in the RO website.

The **Events** page has 8 unique links but many of these are repeated throughout the page, bringing the total number of links to 15.

While browsing the ERAU observatory website, one of the first observations we made was that the word count on its pages was much lower than the word count of many of the pages on the RO's website. The ERAU website has a minimalist design, as seen in its selective use of hyperlinks on each page. Very similar to the ERAU website, the **UF Campus Teaching Observatory** page (http://www.cleardarksky.com/c/UFCTOFLkey.html) is also organized minimally because it breaks up the sections clearly through the size and colors of the headers. Showing only the most essential information impacts readability and user satisfaction. Likewise, the FIT **Ortega Telescope** web pages (https://research.fit.edu/ortegatelescope/) feature minimal text interspersed with select photos and hyperlinks.

In terms of hyperlinks, it is important that we look beyond the total number of hyperlinks and consider the type of hyperlink. Inbound (internal hyperlinks) engage users differently because they reside within the PSG website. Outbound (links to external websites) not only add value in many cases, they also direct your target audience outside of the RO website. Links to RO Social Media, for example, are outbound links that keep the users engaged with the RO. Outbound links to external sites can engage users by leading them to their interests, but they ultimately redirect them away from the RO website.

Hypothetically, consider comparing two web pages with ten hyperlinks on each page. If one page had ten inbound links and the other had ten outbound links, the RO may have difficulty engaging users that visit the page that contains all of the outbound links. In this scenario, the

types of hyperlinks on each page directly affects how the user engages with the RO. A concrete example can be found in UF's **A Teaching and Public Observatory** page (https://astro.ufl.edu/outreach/teaching-public-observatory/), which displays thirteen inbound links. This allows users to engage and interact with UF's program alone, which can garner more support in the future.

Therefore, we documented various types of hyperlinks to allow us to evaluate how they may impact user traffic. Evaluating hyperlinks yielded the following results:

| Page name | # of Inbound links | # of Mail to links | Outbound links (UCF) | RO Social Media links | Outbound links (external sites) |
|---|---|---|---|---|---|
| Observatory | 15 | 2 | 10 | 3 | 10 |
| "Knights Under the Stars" Public Event Schedule | 5 | 3 | 1 | 6 | 0 |
| Weather | 0 | 1 | 0 | 2 | 37 |
| FAQ | 12 | 0 | 2 | 0 | 11 |
| Directions | 0 | 0 | 2 | 0 | 2 |
| Safety | 0 | 1 | 0 | 0 | 0 |
| History of Robinson Observatory | 0 | 0 | 5 | 0 | 15 |

### Recommended content updates

This section includes recommendations for updating content on the following pages:

- Observatory
- "Knights Under the Stars" Public Event Schedule
- FAQ
- History

As a general recommendation, we would like to share a content method that was implemented by the ERAU and FIT's websites. ERAU has an **Interesting Links** page (https://observatory.db.erau.edu/index.php/links), which is a text only page listing seventeen outbound links in a bulleted format. FIT has a similar page called **Resources and Links** (https://research.fit.edu/ortegatelescope/resources-and-links/); the page lists six outbound links to astronomical-related pages and one inbound PDF link to a telescope manual. We recommend this format as an option to create a separate page with all RO outbound links or to compliment pages with several links.

We also want to highlight some outbound links that ERAU provides because they directly correlate to the RO users and survey results. When asked about their astronomy-related interests, 95% of participants indicated their interest in planets and space/planetary exploration, atmospheric phenomena, the ISS, constellations, and astronomical theories. Therefore, we recommend that the RO consider integrating the following hyperlinked web pages (or similar) to their website:

**Space/planetary exploration web pages**

- **Solar System Live**: http://www.fourmilab.ch/cgi-bin/Solar
- **Juno Mission to Jupiter (NASA)**: https://www.nasa.gov/mission_pages/juno/main/index.html
- **Dawn Mission (NASA)**: https://solarsystem.nasa.gov/missions/dawn/overview/
- **New Horizons Missions to Pluto**: http://pluto.jhuapl.edu/
- **Gaia Galaxy Map**: https://sci.esa.int/web/gaia

**Astronomy-related web pages**

- **Astronomy Picture of the Day**: https://apod.nasa.gov/apod/astropix.html
- **Jim Kaler's Star of the Week**: http://stars.astro.illinois.edu/sow/sowlist.html

### Observatory page

One of the main areas that we recommend updating on the **Observatory** page are the hyperlinks. It is not because this page uses the highest number of total links on the site; rather, we think some minor changes could improve the readability of the page and user engagement with the RO.

Our primary recommendation is to reduce the total amount of hyperlinks on the page. The page uses 40 hyperlinks, many of which are duplicated several times. Half of these hyperlinks keep the user engaged with the RO (e.g. inbound hyperlinks, links to RO Social Media, email contact links) and the other half are outbound links. While the outbound links were only used once, other links were duplicated on the page. While using links more than once in itself is not inherently an issue, overuse of the same links can create redundancy and become a distraction; therefore impeding readability. Overuse consists of using the same hyperlinks in close proximity on the page or excessive hyperlinks to the same URL.

As a general guideline, we recommend that the RO display each external hyperlink once per page and two at most as an exception to the rule. Rewording some of the hyperlink instances on the page is one way to reduce duplicate hyperlinks. As a best practice, we suggest that the RO web developers update the following **Observatory** hyperlinks so they are only used at the first mention on the page:

| Hyperlink description | URL | Total times used |
|---|---|---|