| Use Case Name: Login to the system | ID: 1 | Importance Level: High |
|---|---|---|
| Primary Actor: User | | Use Case Type: Detail, Essential |
| Stakeholders and Interests<br><br>User - wants to login to the system. | | |
| Brief Description: The user needs to login before using the Gemini system. | | |
| Trigger: The user wants to use the Gemini system.<br><br>Type: external | | |
| Relationships:<br><br>Association:User<br><br>Include:<br><br>Extend:<br><br>Generalization: | | |
| Normal Flow of Events:<br><br>1. The user enters the login page.<br><br>2. The user has an account in the Gemini system.<br><br>If the user does not have an account.<br><br>The S-1 : create a new account subflow is performed.<br><br>3. User input username. | | |

4. User input password.

If User inputs wrong password

The S-2 : forget password subflow is performed.

5.User enter to system

Subflows:

The S-1 : create a new account

1.User input username.

2.User input password.

3.User input email

The S-2 : forget password

1.User request OTP

2.User input OTP

4.User set new password

Alternate/Exceptional Flow:

| Use Case Name: Submit a Science Plan | ID: 2 | Importance Level: High |
|---|---|---|
| Primary Actor: Astronomer | | Use Case Type: Detail, Essential |
| Stakeholders and Interests<br><br>Astronomer - wants to submit their science plan | | |
| Brief Description: This use case describes astronomer who wants to submit their science plan | | |
| Trigger: The astronomer wants to submit a science plan<br><br>Type: External | | |
| Relationships:<br><br>Association: Astronomer<br><br>Include:<br><br>Extend:<br><br>Generalization: | | |
| Normal Flow of Events:<br><br>1. Astronomers create a science plan.<br>2. Astronomers test a science plan via the virtual telescope.<br>3. Astronomers submit science plans to the system. | | |
| Subflows: | | |
| Alternate/Exceptional Flow: science plan has not been tested and the interactive observation | | |

| Use Case Name: Create an observing program | ID: 3 | Importance Level: high |
|---|---|---|
| Primary Actor: Science Observer | | Use Case Type: Detail, Essential |
| Stakeholders and Interests:<br>Science Observer: wants to create observing program | | |
| Brief Description:This use case describes how a science observer transforms a science plan to an observing program | | |
| Trigger:Science Observer received A created science plan from Astronomer<br>Type: | | |
| Relationships:<br>Association: Science Observer<br>Include:<br>Extend:<br>Generalization: | | |
| Normal Flow of Events:<br>1. Science observer gets a create science plan<br>2. Validate a science plan<br>3. Create a observing program from science plan<br>4. Submit an observing program to the system | | |
| Subflows: | | |

| |
|---|
| Alternate/Exceptional Flow: |

| Use Case Name: Validate an Observing Program | ID: 4 | Importance Level: HIGH |
|---|---|---|
| Primary Actor: Telescope Operator | | Use Case Type: Detail, Essential |
| Stakeholders and Interests:<br><br>Telescope Operator: wants to validate an observing program | | |
| Brief Description: This use case describes how a telescope operator validates an observing program | | |
| Trigger: Telescope Operator want to validate an observing program<br><br>Type: External | | |
| Relationships:<br><br>Association: Telescope Operator<br><br>Include:<br><br>Extend:<br><br>Generalization: | | |
| Normal Flow of Events:<br><br>1. Telescope Operator get an observing program for the system<br>2. Telescope Operator validate an observing program<br>3. Submit an observing program to the system | | |
| Subflows: | | |
| Alternate/Exceptional Flow: | | |

| | | |
|---|---|---|
| Use Case Name: Install new configurations to the system | ID: 5 | Importance Level: High |
| Primary Actor: Supporter | | Use Case Type: Detail, Essential |
| Stakeholders and Interests:<br><br>Supporter–wants to install new configurations to the system | | |
| Brief Description: This use case describes the process of installation and configuration with support. | | |
| Trigger: new or updated configurations.<br><br>Type: Internal | | |
| Relationships:<br><br>Association: Supporter<br><br>Include:<br><br>Extend:<br><br>Generalization: | | |
| Normal Flow of Events:<br><br>1. Proposal to special equipment to Gemini<br>2. Support validated installation and configuration<br>3. Install new configurations to the system | | |
| Subflows: | | |

Alternate/Exceptional Flow:

1. The installation is unable to be installed; the installation is rejected