

1. Create a science plan

Use Case Name: Create a science plan	ID: 1	Importance Level: High
Primary Actor: Astronomer		Use Case Type: Detail, Essential
Stakeholders and Interests: <ul style="list-style-type: none">• Astronomer - wants to create a science plan		
Brief Description: The use case describes the process of an astronomer creating a science plan		
Trigger: An astronomer wants to create a science plan Type: External		
Preconditions: The astronomer must successfully log in to the system.		
Relationships: Association: Astronomer Include: - Extend: - Generalization: -		
Normal Flow of Events: <ol style="list-style-type: none">1. The astronomer creates a science plan.2. The system shows “Success Create”.		
Subflows:		
Alternate/Exceptional Flow: <ul style="list-style-type: none">- Exception for event 1: If the input is incomplete or invalid input format.<ol style="list-style-type: none">a. If the input is incomplete.<ol style="list-style-type: none">i. The system displays “Invalid input format”.b. If the input is invalid.<ol style="list-style-type: none">i. The system displays “Incomplete input”.		

2. Validate a science plan

Use Case Name: Validate a science plan	ID: 2	Importance Level: High
Primary Actor: Science Observer		Use Case Type: Detail, Essential
Stakeholders and Interests: <ul style="list-style-type: none">Science Observer - wants to validate a science plan.		
Brief Description: This use case describes how the science observer validates a science plan.		
Trigger: The astronomer submits a science plan and the science observer receives the science plan to validate it. Type: External		
Preconditions: The science observer must successfully log in to the system.		
Relationships: Association: Science Observer Include: Extend: Generalization:		
Normal Flow of Events: <ol style="list-style-type: none">The system presents a list of tested science plans.The science observer selects the science plan by a number he or she wants to validate.The science observer validates the science plan.The science observer updates the status of the validated science plan to be VALIDATED.The system displays "Update Successful".		
Subflows:		

Alternate/Exceptional Flow:

- Exception for event 1: If the system cannot find any science plan.
The system displays “Not Found”.
- Exception for event 3: If the science plan is invalid.
The science observer updates the status of the science plan to be
INVALIDATED.
- Exception for event 4: If the status of the validated science plan fails to update
The system displays “Update Failed”.

3. Create an observing program

Use Case Name: Create an observing program	ID: 3	Importance Level: High
Primary Actor: Science Observer		Use Case Type: Detail, Essential
Stakeholders and Interests: <ul style="list-style-type: none">Science Observer – wants to create an observing program.		
Brief Description: This use case describes the process of how the science observer transforms a science plan into an observing program.		
Trigger: After the science observer validates a science plan, a science observer will transform a science plan into an observing program.		
Type: External		
Preconditions: <ul style="list-style-type: none">1. The science observer must log in to the system first.2. The science observer must have validated the science plans.		
Relationships: Association: Science observer Include: - Extend: - Generalization: -		
Normal Flow of Events: <ul style="list-style-type: none">1. The system presents a list of VALIDATED science plans.2. The science observer selects a validated science plan he or she wants to create.3. The science observer creates an observing program from the validated science plan.4. The system records the created observing program.		
Subflows:		
Alternate/Exceptional Flow: <ul style="list-style-type: none">- Exception for event 1: If the system cannot find any validated science plan data. The system displays “Not Found”- Exception for event 3: If the input is invalid or incomplete<ul style="list-style-type: none">c. If the input is incomplete.<ul style="list-style-type: none">i. The system displays “Incomplete input”.		

- d. If the input is invalid.
 - i. The system displays “Invalid input”.