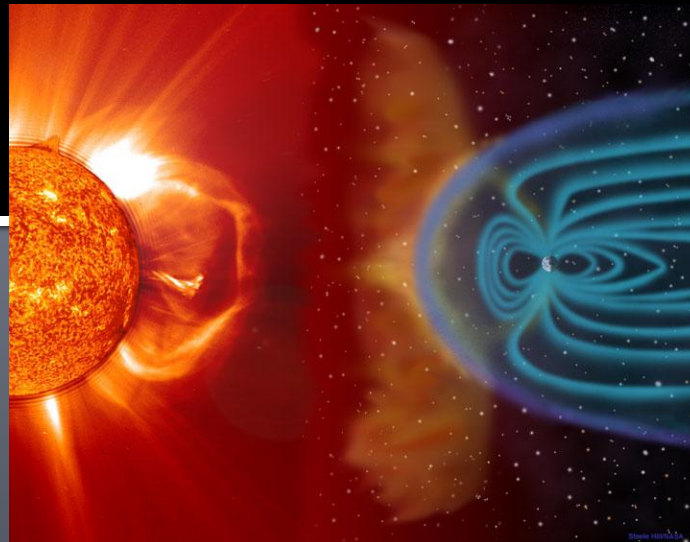


# Space Weather Observatory

Concept Selection



# Process

- Look through all generated concepts
- Identify selection criteria
- Rate each concept based on selection criteria
- Evaluate Pros and Cons of each concept
- Select concept

# Antenna Cover

<b><i>Selection Criteria</i></b>
RF Safe
Cost
Durability
Resistance to Elements
Implementation Time
Design Time
Material Lead times

# Antenna Cover

	Heating Cover	Heating Environment	Conical Shape	Spherical Shape	Salting	Going onto Roof to Clean Antenna off	Articulating Arm	Windshield Wiper	Umbrella
Selection Criteria	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate	Rate
RF Safe	1	1	1	1	1	0	0	0	0
Cost	1	0	1	1	1	0	0	1	1
Durability	0	0	1	0	0	0	1	0	0
Resistance to Elements	0	0	1	1	0	1	1	1	0
Implementation Time	1	0	1	1	1	0	0	0	1
Design Time	0	1	1	1	0	1	0	0	1
Material Lead times	1	1	0	0	1	0	1	1	1

# Antenna Cover

Concept for Cover	Pros	Cons
Salt	Melts snow and ice	Don't know how it will affect equipment
Umbrella	Covers antenna and area	Wind, wear and tear
Heating Option		
Conical Shape	Everything falls of	
Wiper		Wear and tear
Go clean it off		Responsibility
Articulating Arm		

# Mounting Technique

<b>Selection Criteria</b>
Durability
Cost
Minimize Movement
Accessibility
Ease of Accommodation
Implementation Time
Design Time
Lead Times

# Mounting Technique

	On Top of Wall	Branch off Existing Antenna	Build up on Platform	Build Table for Antenna to Sit On
<b>Selection Criteria</b>	Rating	Rating	Rating	Rating
Durability	1	1	1	1
Cost	1	1	0	1
Minimize Movement	1	1	0	1
Accessibility	1	1	0	1
Ease of Accommodation	1	1	1	1
Implementation Time	0	0	0	0
Design Time	0	0	0	0
Lead Times	0	0	0	0

# Mounting Technique

Concept for Mounting	Pros	Cons
Bracket off existing antenna on wall	Already have some hardware	
Mount separately		
Building up off platform	Platform there to use	Has to be high



# Locations

<b>Selection Criteria</b>
Acquiring Permission
180 degree view
Accessibility
Triangulation Measurements
Internet Access and Power

# Locations

	On RIT Campus	On RIT Properties	In Rochester Area	Schools in Area	On a Hillside
<b>Selection Criteria</b>	Rate	Rate	Rate	Rate	Rate
Acquiring Permission	1	1	0	0	1
180 degree view	1	1	0	1	0
Accessibility	1	1	0	0	0
Triangulation Measurements	1	1	1	1	1
Internet Access and Power	1	0	0	1	0

# Locations

Concept for Location	Pros	Cons
On RIT campus	We're here	Co linearity
On any RIT owned properties	Triangulation	
In Rochester Area	Triangulation	Accessibility
High schools, other Colleges	Triangulation	Accessibility
On top of a high hill somewhere		Accessibility, internet, power

# Selected Concept

- Antenna Cover
  - Conical Shape with possible heating option
- Mounting Technique
  - On the wall above the roof
- Location
  - TBD in MSD II
  - Going through decision making process