

**CONTROLLED COMMUNICATIONS BANDS - ALLOWED SUB-BAND USAGE BY TASK STATION**

South Site			Hab Site			North Site			Town Hall	
Station 1	Station 2	Station 3	Station 1	Station 2	Station 2	Station 1	Station 2	Station 3	N/A Not Regulated	
<b>900 MHz:</b> Low Sub-Band (902-910 MHz) ----- <b>2.4 GHz:</b> Channels 1, 2, 3	<b>900 MHz:</b> Mid Sub-Band (911-919 MHz) ----- <b>2.4 GHz:</b> Channels 5, 6, 7	<b>900 MHz:</b> High Sub-Band (920-928 MHz) ----- <b>2.4 GHz:</b> Channels 9, 10, 11	<b>900 MHz:</b> Low Sub-Band (902-910 MHz) ----- <b>2.4 GHz:</b> Channels 1, 2, 3	<b>900 MHz:</b> Mid Sub-Band (911-919 MHz) ----- <b>2.4 GHz:</b> Channels 5, 6, 7	<b>900 MHz:</b> High Sub-Band (920-928 MHz) ----- <b>2.4 GHz:</b> Channels 9, 10, 11	<b>900 MHz:</b> Low Sub-Band (902-910 MHz) ----- <b>2.4 GHz:</b> Channels 1, 2, 3	<b>900 MHz:</b> Mid Sub-Band (911-919 MHz) ----- <b>2.4 GHz:</b> Channels 5, 6, 7	<b>900 MHz:</b> High Sub-Band (920-928 MHz) ----- <b>2.4 GHz:</b> Channels 9, 10, 11		

Team	144 MHz	433 MHz	900 MHz	1.3 GHz	2.4 GHz	5.8 GHz	UAS/Registration
#next team			Yes		Yes	Yes	
AIUB Robotic Crew					Yes		
Continuum			Yes		Yes		
Cornell Mars Rover					Yes		
Husky Robotics Team					Yes		
Interplanetar			Yes		Yes	Yes	
IUT Mars Rover			Yes		Yes		
KMC Robo Physicists					Yes		
Legendary Rover Team		Yes		Yes	Yes	Yes	
Mars Rover Design Team	Yes	Yes	Yes	Yes	Yes		
Mars Rover Manipal					Yes	Yes	
MAVRIC			Yes	Yes	No		FA3FHTTRAC, Gabe Gatmaitan
McGill Robotics			Yes		Yes		
Michigan Mars Rover Team					Yes		
PCz Rover Team		Yes			Yes		
Pharaohs			Yes		Yes		
Project Pioneer		Yes		Yes	Yes		
Project Scorpio			Yes		Yes		
Queen's Space Engineering Team					Yes		
Raptors					Yes		
Robotics for Space Exploration		Yes	Yes		Yes		
ROVATA			Yes		Yes		
RUDRA		Yes	Yes	Yes		Yes	
SJSU Robotics		Yes	Yes				David Collier FA3RW4RNER.
SKA Robotics					Yes		
Titan Rover		Yes			Yes	Yes	
University of Saskatchewan Space Design Team		Yes		Yes		Yes	
Wisconsin Robotics		Yes	Yes				
WSU Everett Engineering Club		Yes	Yes	Yes			
Yale Undergraduate Rover Association					Yes		

<b>Team Name</b>	<b>Abbreviation</b>	<b>Semi-Finals Start Time</b>
#next team	#next	9:05
AIUB Robotic Crew	AIUB	12:35
Continuum	Continuum	12:40
Cornell Mars Rover	Cornell	13:45
Husky Robotics Team	Husky	11:30
Interplanetar	Interplanetar	10:20
IUT Mars Rover	IUT	12:40
KMC Robo Physicists	KMC	10:20
Legendary Rover Team	Legendary	10:30
Mars Rover Design Team	MRDT	9:20
Mars Rover Manipal	Manipal	12:45
MAVRIC	MAVRIC	9:15
McGill Robotics	McGill	11:25
Michigan Mars Rover Team	Michigan	10:10
PCz Rover Team	PCz	12:50
Pharaohs	Pharaohs	10:15
Project Pioneer	Pioneer	11:40
Project Scorpio	Scorpio	12:30
Queen's Space Engineering Team	QSET	9:00
Raptors	Raptors	11:20
Robotics for Space Exploration	RSX	13:50
ROVATA	ROVATA	8:05
RUDRA	RUDRA	8:10
SJSU Robotics	SJSU	11:30
SKA Robotics	SKA	8:00
Titan Rover	Titan	9:10
University of Saskatchewan Space Design Team	USST	13:40
Wisconsin Robotics	Wisconsin	9:10
WSU Everett Engineering Club	WSU	11:35
Yale Undergraduate Rover Association	YURA	10:25

**Times listed are when your 20 minute setup begins!**

**All times listed in 24 hour format (23:59)**

Hab Site		
Thursday		
Semi-Finals		
Station 1	Station 2	Station 3

North Site		
Thursday		
Semi-Finals		
Station 1	Station 2	Station 3

7:00			
7:10			
7:20			
7:30			
7:40			
7:50			
8:00	Setup (20)	Setup (20)	Setup (20)
8:10			
8:20	SKA	ROVATA	RUDRA
8:30			
8:40			
8:50			
9:00	Teardown (10)	Teardown (10)	Teardown (10)
9:10	Setup (20)	Setup (20)	Setup (20)
9:20			
9:30	Titan	MAVRIC	MRDT
9:40			
9:50			
10:00			
10:10	Teardown (10)	Teardown (10)	Teardown (10)
10:20	Setup (20)	Setup (20)	Setup (20)
10:30			
10:40			
10:50	Interplanetar	YURA	Legendary
11:00			
11:10	Teardown (10)	Teardown (10)	Teardown (10)
11:20	Setup (20)	Setup (20)	Setup (20)
11:30			
11:40			
11:50			
12:00	SJSU	WSU	BYU
12:10			
12:20	Teardown (10)	Teardown (10)	Teardown (10)
12:30	Setup (20)	Setup (20)	Setup (20)
12:40			
12:50			
13:00			
13:10	IUT	Manipal	PCz
13:20			
13:30	Teardown (10)	Teardown (10)	Teardown (10)
13:40			
13:50			

7:00			
7:10			
7:20			
7:30			
7:40			
7:50			
8:00			
8:10			
8:20			
8:30			
8:40			
8:50			
9:00	Setup (20)	Setup (20)	Setup (20)
9:10			
9:20	QSET	#next	Wisconsin
9:30			
9:40	Teardown (10)	Teardown (10)	Teardown (10)
9:50	Setup (20)	Setup (20)	Setup (20)
10:00			
10:10	Michigan	Pharaohs	KMC
10:20			
10:30	Teardown (10)	Teardown (10)	Teardown (10)
10:40	Setup (20)	Setup (20)	Setup (20)
10:50			
11:00			
11:10			
11:20	Raptors	McGill	Husky
11:30			
11:40	Teardown (10)	Teardown (10)	Teardown (10)
11:50	Setup (20)	Setup (20)	Setup (20)
12:00			
12:10			
12:20			
12:30	Scorpio	AIUB	Continuum
12:40			
12:50	Teardown (10)	Teardown (10)	Teardown (10)
13:00	Setup (20)	Setup (20)	Setup (20)
13:10			
13:20			
13:30			
13:40	USST	Cornell	RSX
13:50			
14:00	Teardown (10)	Teardown (10)	Teardown (10)

**Semi-Finals Task Structure:**  
**20 minute setup window**  
**5 minute course run**  
*10 minutes off course (repairs, etc.)*  
**5 minute course run**  
*10 minutes off course*  
**5 minute course run**  
**10 minute teardown window**

15:00			
15:10			
15:20			
15:30			
15:40			
15:50			
16:00			
16:10			
16:20			
16:30			
16:40			
16:50			
17:00			
17:10			
17:20			
17:30			
17:40			
17:50			
18:00			

	South Site			Hab Site		North Site		Hanksville Town Building	
	Friday - 8			Friday - 10		Friday - 12		Friday	
	Ares Finals Sample Cache Task & Phobos Science Task			Ares Finals Terrain Traversing Task		Ares Finals Astronaut Assistance & Equipment Servicing Tasks		Ares Finals Sample Cache Task Analysis	
	Station 1	Station 2	Station 3	Station 1	Station 2	Station 1 - AAT	Station 2 - EST	Station 1	Station 2
7:00	Setup (20)								
7:10									
7:20	Team A15 (25)	Setup (20)				Setup (20)			
7:30	Teardown (10)					Team A13 (30)	Setup (20)		
7:40		Team A14 (25)				Teardown (10)	Team A11 (30)		
7:50	Setup (20)	Teardown (10)			Setup (20)		Teardown (10)		
8:00	Team A12(25)	Setup (20)			Team A5 (45)				
8:10	Teardown (10)	Team A10 (25)			Teardown (10)	Setup (20)			
8:20	Setup (20)	Teardown (10)				Team A3 (45)			
8:30	Team A2 (25)	Setup (20)				Teardown (10)	Team A4 (30)		
8:40	Teardown (10)	Team A1(25)				Teardown (10)	Teardown (10)		
8:50	Setup (20)	Teardown (10)				Setup (20)	Team A6 (30)		
9:00	Team A13 (25)	Setup (20)				Team A9(30)	Teardown (10)		
9:10	Teardown (10)	Team A11 (25)				Teardown (10)	Setup (20)		
9:20	Setup (20)	Teardown (10)				Setup (20)	Team A8 (30)		
9:30	Team A14 (45)	Setup (20)				Team A5 (30)	Teardown (10)		
9:40	Teardown (10)	Team A12 (45)				Teardown (10)	Setup (20)		
9:50	Setup (20)	Teardown (10)				Setup (20)	Team A3 (30)		
10:00	Team A15 (45)	Setup (20)				Teardown (10)	Setup (20)		
10:10	Teardown (10)	Team A14 (45)				Setup (20)	Teardown (10)		
10:20	Setup (20)	Team A12 (45)				Team A10 (30)	Setup (20)		
10:30	Team A11 (30)	Teardown (10)				Teardown (10)	Teardown (10)		
10:40	Setup (20)	Setup (20)				Setup (20)	Setup (20)		
10:50	Phobos Sci Team P15 (30)	Setup (20)	Setup (20)			Team A1 (30)	Team A2 (30)		
11:00	Results/Teardown (20)	Phobos Sci Team P14 (30)	Phobos Sci Team P13(30)			Teardown (10)	Teardown (10)		
11:10	Setup (20)	Results/Teardown (20)	Setup (20)			Setup (20)	Setup (20)		
11:20	Phobos Sci Team P12 (30)	Setup (20)	Results/Teardown (20)			Team A10 (30)	Setup (20)		
11:30	Results/Teardown (20)	Phobos Sci Team P11 (30)	Setup (20)			Teardown (10)	Setup (20)		
11:40	Setup (20)	Results/Teardown (20)	Phobos Sci Team P10 (30)			Setup (20)	Team A2 (30)		
11:50	Phobos Sci Team P9 (30)	Setup (20)	Results/Teardown (20)			Team A1 (30)	Teardown (10)		
12:00	Results/Teardown (20)	Phobos Sci Team P8 (30)	Setup (20)			Teardown (10)			
12:10	Setup (20)	Results/Teardown (20)	Phobos Sci Team P7 (30)			Setup (20)			
12:20	Phobos Sci Team P6 (30)	Setup (20)	Results/Teardown (20)			Team A6 (45)			
12:30	Results/Teardown (20)	Phobos Sci Team P5 (30)	Setup (20)			Teardown (10)			
12:40	Setup (20)	Results/Teardown (20)	Phobos Sci Team P4 (30)			Setup (20)			
12:50	Phobos Sci Team P3 (30)	Setup (20)	Results/Teardown (20)			Team A8 (45)			
13:00	Results/Teardown (20)	Phobos Sci Team P2 (30)	Setup (20)			Teardown (10)			
13:10	Setup (20)	Results/Teardown (20)	Phobos Sci Team P1 (30)						
13:20	Phobos Sci Team P9 (30)	Setup (20)	Results/Teardown (20)						
13:30	Results/Teardown (20)	Phobos Sci Team P8 (30)	Setup (20)						
13:40	Setup (20)	Results/Teardown (20)	Phobos Sci Team P7 (30)						
13:50	Phobos Sci Team P6 (30)	Setup (20)	Results/Teardown (20)						
14:00	Results/Teardown (20)	Phobos Sci Team P5 (30)	Setup (20)						
14:10	Setup (20)	Results/Teardown (20)	Phobos Sci Team P4 (30)						
14:20	Phobos Sci Team P3 (30)	Setup (20)	Results/Teardown (20)						
14:30	Results/Teardown (20)	Phobos Sci Team P2 (30)	Setup (20)						
14:40	Setup (20)	Results/Teardown (20)	Phobos Sci Team P1 (30)						
14:50	Phobos Sci Team P9 (30)	Setup (20)	Results/Teardown (20)						
15:00	Results/Teardown (20)	Phobos Sci Team P8 (30)	Setup (20)						
15:10	Setup (20)	Results/Teardown (20)	Phobos Sci Team P7 (30)						
15:20	Phobos Sci Team P6 (30)	Setup (20)	Results/Teardown (20)						
15:30	Results/Teardown (20)	Phobos Sci Team P5 (30)	Setup (20)						
15:40	Setup (20)	Results/Teardown (20)	Phobos Sci Team P4 (30)						
15:50	Phobos Sci Team P3 (30)	Setup (20)	Results/Teardown (20)						
16:00	Results/Teardown (20)	Phobos Sci Team P2 (30)	Setup (20)						
16:10	Setup (20)	Results/Teardown (20)	Phobos Sci Team P1 (30)						
16:20	Phobos Sci Team P9 (30)	Setup (20)	Results/Teardown (20)						
16:30	Results/Teardown (20)	Phobos Sci Team P8 (30)	Setup (20)						
16:40	Setup (20)	Results/Teardown (20)	Phobos Sci Team P7 (30)						
16:50	Phobos Sci Team P6 (30)	Setup (20)	Results/Teardown (20)						
17:00	Results/Teardown (20)	Phobos Sci Team P5 (30)	Setup (20)						
17:10	Setup (20)	Results/Teardown (20)	Phobos Sci Team P4 (30)						
17:20	Phobos Sci Team P3 (30)	Setup (20)	Results/Teardown (20)						
17:30	Results/Teardown (20)	Phobos Sci Team P2 (30)	Setup (20)						
17:40	Setup (20)	Results/Teardown (20)	Phobos Sci Team P1 (30)						
17:50	Results/Teardown (20)	Phobos Sci Team P9 (30)	Setup (20)						
18:00		Results/Teardown (20)	Phobos Sci Team P8 (30)						

Setup/Analysis (20)	Setup/Analysis (20)
A15 Field Briefing (10)	A14 Field Briefing (10)
Setup/Analysis (20)	Setup/Analysis (20)
A12 Field Briefing (10)	A10 Field Briefing (10)
Setup/Analysis (20)	Setup/Analysis (20)
A2 Field Briefing (10)	A1 Field Briefing (10)
Setup/Analysis (20)	Setup/Analysis (20)
A13 Field Briefing (10)	A11 Field Briefing (10)



<b>Team Seed</b>	<b>Sample Cache Task</b>	<b>Terrain Traversing Task</b>	<b>Astronaut Assistance Task</b>	<b>Equipment Servicing Task</b>	<b>Sample Cache Task Analysis &amp; Field Briefing</b>
A1	Fri 9:15	Sat 8:40	Fri 12:55	Sat 13:50	Fri 14:25
A2	Fri 8:50	Sat 9:20	Sat 14:35	Fri 12:40	Fri 14:10
A3	Sat 9:15	Fri 8:25	Sat 7:00	Fri 11:25	Sat 14:25
A4	Sat 9:45	Fri 12:00	Fri 8:25	Sat 7:20	Sat 14:25
A5	Sat 8:50	Fri 7:45	Fri 10:45	Sat 11:40	Sat 14:10
A6	Sat 8:20	Fri 12:40	Sat 10:15	Fri 9:05	Sat 13:50
A7	Sat 7:55	Fri 9:05	Fri 14:00	Sat 10:35	Sat 13:35
A8	Sat 7:00	Fri 14:00	Sat 9:10	Fri 10:15	Sat 13:00
A9	Sat 7:25	Fri 13:20	Fri 9:35	Sat 9:50	Sat 13:15
A10	Fri 8:20	Sat 7:20	Fri 11:50	Sat 9:30	Fri 13:50
A11	Fri 10:10	Sat 8:00	Sat 12:25	Fri 7:45	Fri 15:00
A12	Fri 7:55	Fri 11:05	Sat 11:20	Sat 8:45	Fri 13:35
A13	Fri 9:45	Sat 10:00	Fri 7:15	Sat 7:40	Fri 14:45
A14	Fri 7:25	Fri 10:25	Sat 8:05	Sat 12:45	Fri 13:15
A15	Fri 7:00	Fri 9:45	Sat 13:30	Sat 8:25	Fri 13:00

**Times listed are when your 20 minute setup begins!**

**All times listed in 24 hour format (23:59)**

<b>Team Seed</b>	<b>Phobos Science Task</b>	<b>Phobos Obstacle Course Task</b>
P1	Fri 16:40	Fri 16:50
P2	Fri 16:15	Fri 16:40
P3	Fri 15:50	Fri 16:30
P4	Fri 15:25	Fri 15:35
P5	Fri 15:00	Fri 15:25
P6	Fri 14:35	Fri 15:15
P7	Fri 14:10	Fri 14:20
P8	Fri 13:25	Fri 14:10
P9	Fri 13:20	Fri 14:00
P10	Fri 12:55	Fri 13:05
P11	Fri 12:30	Fri 12:55
P12	Fri 12:05	Fri 12:45
P13	Fri 11:40	Fri 11:50
P14	Fri 11:15	Fri 11:40
P15	Fri 10:50	Fri 11:30

**Times listed are when your 20 minute setup begins!**

**All times listed in 24 hour format (23:59)**