

2018 Mars Ice Challenge Scoring Matrix



Team: _____

Total Possible Points = 240					
Water Extraction (Max 120 points) – 50% of overall score	"x"	Team Water Volume	Max Points	Actual Points	Comments/Notes
Number of points assigned on Day 1			30		
Number of points assigned on Day 2			90		
Water volume will be measured at the end of each day. Silt that has settled to the bottom of the container will also be measured and subtracted from the water volume to give each team their total water volume for that day. <u>The most volume collected by any one team = "x" for that day.</u> Day One Scoring: The team with the most water collected is given a score of 30. Other teams' points are scaled linearly: $[(\text{Team volume}/x) * 30]$ Day Two Scoring: Water collection on Day 2 is worth 3 times the water collected on Day 1. The team with the most water collected is given a score of 90. Other teams' points are scaled linearly: $[(\text{Team volume}/x) * 90]$					
Technical Paper (Max 96 points) – 40% of overall score			Max Points	Actual Points	Comments/Notes
Quality of Path-to-Flight description (including rationale behind various trades and critical modifications made to the Mars-based system)			40		
Technical quality, feasibility, innovation of design for the Mars-based system			30		
Quality of summary of production and testing approach			16		
Adherence to Technical Paper guidelines			10		
Poster Presentation (Max 24 points) – 10% of overall score			Max Points	Actual Points	Comments/Notes
Discussion of the Earth system (How team got from here to the Mars-based system). Note: the Poster should be a summary of the technical paper			10		
Technical Content, Style, Coherence			7		
Engagement with judges (all team members should participate) and quality of response to questions			7		
Penalty Points – Deducted from total score			Max Points	Points Deducted	Comments/Notes
Exceeding the Volume Limit (5 points off total score for every 1 cm over the size limit)			N/A		
Exceeding the Mass Limit (10 points off total score for every 1 kg of extra weight over the weight limit)			N/A		
Exceeding Current Limit (1 point per 1 amp for each minute over the established limit)			N/A		i.e. – if current is 10.1A for 10 minutes, 1 point is deducted
Exceeding Newton limit (0.5 points per Newton above the established limit of 150N averaged over the course of the 2-day competition)			N/A		Day 1 Average _____ Day 2 Average _____
Failure to provide a WOB data logger that can provide real-time data (40 points off total score AND disqualification for the top prize)			40		
Penalty if there is misalignment to what was proposed in the Mid-Project Review and/or Technical Paper and the system brought to the Mars Ice Challenge (up to 120 points off total score at the discretion of the judges)			120		
Debris (1 point per 10 grams)			N/A		# of grams: Day 1 _____ # of grams: Day 2 _____
Excessive dirt thrown outside of the 12' x 12' tarp under team test station (up to 20 points off the total score at the discretion of the judges)			20		

Water Extraction (120 pts): _____
 Technical Paper (96 pts): _____
 Poster Presentation (24 pts): _____
Sub-Total Score: _____

Sub-Total Score: _____
 Subtract Penalties: _____
Total Score: _____