

# 2017 Mars Ice Challenge Scoring Matrix



Team: \_\_\_\_\_

Water Extraction (Max 120 points) – 70% 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		
<p>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></p> <p><b>Day One Scoring:</b> The team with the most water collected is given a score of 30. Other teams' points are scaled linearly: <math>[(\text{Team volume}/x) * 30]</math></p> <p><b>Day Two Scoring:</b> 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: <math>[(\text{Team volume}/x) * 90]</math></p>					
Technical Paper (Max 34 points) – 20% 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)			16		
Technical quality, feasibility, innovation of design for the Mars-based system			8		
Quality of summary of production and testing approach			5		
Adherence to Technical Paper guidelines			5		
Poster Presentation (Max 18 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			9		
Technical Content, Style, Coherence			4		
Engagement with judges (all team members should participate) and quality of response to questions			5		
Penalty Points – taken off total score			Max Points	Actual Points (Deduct)	Comments/Notes
Penalty if there is misalignment to what was proposed in the Technical Paper and the system brought to the Mars Ice Challenge			30		
Exceeding Newton limit (2 points per Newton above the established limit of 101N averaged over the course of the 2-day competition)			N/A		Day 1 Average _____ Day 2 Average _____
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			30		

- Penalties will be given for the following conditions:**
1. Exceeding Newton limit
    - a. 2 points per average Newtons above 101 N limit (over the course of 2 days)
  2. Misalignment between the system brought to the competition and the system described in the Mid-Project Review and Technical Paper submissions.
    - a. Up to 30 points off the total score (at the discretion of the judges)
  3. Solid Debris collected in secondary filtration bag -
    - a. 1 point per 10 grams deducted from overall score
  4. Excessive dirt thrown outside of the 12'x12' tarp under team test station
    - a. Up to 30 points off the total score (at the discretion of the judges)

Competition Scoring (120 pts): \_\_\_\_\_  
 Technical Paper (34 pts): \_\_\_\_\_  
 Poster Presentation (18 pts): \_\_\_\_\_  
**Sub-Total Score:** \_\_\_\_\_  
 Subtract Penalties: \_\_\_\_\_  
**Total Score:** \_\_\_\_\_