

## **Panel Discussion: The Living and Working Environments of Commercial Space Systems**

October 11, 2017

1. What do consider to be the smallest practical crew size to Mars and return? Gender makeup also
2. For John Elbon: At what point do you think that Boeing will be looking to add a fifth paid seat to the four-person NASA/ISS crew?
3. What role do you see for 3D printed replacement parts instead of carrying spare parts on long missions, e.g., missions to Mars?
4. Is there any possibility or consideration for personal launch vehicles & space travel in vehicle design & life support?
5. What are some key challenges you feel are ripe for technology innovation that support water and air quality needs for crew support?
6. Is this panel's lesson that supporting human health will be a major obstacle to the expansion of commercial space?
7. What is the potential for separating O from Co<sub>2</sub>?
8. Is the panel's lesson that the cost of supporting human health will be a major obstacle to the expansion of commercial space?