

### **White paper for Artemis Science Definition Team**

How I visualize the Artemis expedition is with a human and a robot as an assistant. This robot has the function of helping the human anything that needs. This robot must to be conditioned with material that resist extreme climates such as heat, cold, wind, fire and water, it must also move easily on rough terrain and with many obstacles, like huge rocks, or a lot of sand, very similar to Atacama and Sahara desert, Antarctic and Greenland, in case that a tire is buried or punctured, it must have the ability to dig up or change its own tire or wheel with the right tools, when it's done has to return to its place inside the robot. This robot must to know all medical and affective history of this human for 2 important purposes: (1) to play role of doctor in case the human has any injury, fracture or medical need and, (2) to motivate the person and make he feels that he is not alone. The samples that they will collect can be of two types: drill and hand sample. You can get them with drills and hammer, these tools go inside the robot. When you obtain the samples, immediately the place where it was taken must be marked with a fingerprint and label, the sample must be labeled and get inside a bag immediately, so that the samples reach the earth as close to how they got it; and there must be many images and videos of the place and sample taken. For samples that are in very high or low places where the human being cannot reach, for that case there is the drone that will be the extra assistant that will come out from inside the robot and the most important thing will obtain the sample instead of the human. Additionally this drone will have a hammer, drill, compass, rule, high definition flashlights and cameras inside it to perform its functions, when this drone has the sample it will code it, put it inside the bag and take it to a box, which is a place to store all the collected samples, which is next to the spaceship. The robot also, collect all samples of the day, and then when they get to the box plays the same role as the drone. The images include all kind of HD photograph specially panoramic photographic.