Introduction: Machine intelligence is advancing to a paradigm shift point where extra planetary spacecraft that are robotic will, well before 2050, have artificial intelligence. They could be stationed at various points in the inner and outer solar system in a similar manner to how we presently have automated weather stations. We could set up a data collection system from various points around the solar system. Threats such as near Earth objects impacting the planet could be monitored directly on the body and through automated telescopes in orbit. One lesson that the rovers on Mars have shown us is that longevity of a mission can reduce tangible unpredictable results. With rovers on other planets and bodies, real time observations could be monitored by the anticipated artificial intelligence that is currently in research and development. Communication using meteor burst communication techniques might allow slow but accurate data downloads from various remote locations on other planets. Science fiction has long anticipated artificial intelligence being humanity’s first permanent representation off of Earth. Robotic tunneling devices might also construct subsurface human use facilities in an orderly fashion well before manned missions arrive at those celestial points.

Conclusion: With the lag time of communication with Earth, true artificial intelligence in outer space robots would increase efficiencies. If this is tied in with long duration of missions, data collection might occur for much longer periods of time than we currently see.