



Advanced Crew Medical System (ACMS)

St-Mary's Research Center and Neptec have developed an operational concept of an advanced fully integrated crew medical system (ACMS) for exploration class missions.

We have detailed the medical requirements, the concept of operations for potential mission scenarios (Moon, Mars) as well as system architecture and functional design features.

Future human spaceflight missions will extend considerably beyond Low Earth Orbit (LEO), this will mean reduced, if not zero, opportunity for the quick return of a sick or injured crewmember back home for medical treatment. Also, the missions will face considerable increased communications delays between the Crew Medical Officer (CMO) and the ground based Flight Surgeon (FS) and medical support will be at times impossible.

This isolation will require a change in medical support capabilities from dependence on home base to that of medical autonomy. Increased medical autonomy will be accomplished through the development of an integrated system of advanced technologies such as, onboard improved sensors, instrumentation and an autonomous medical platform.



302 Legget Drive, Suite 202
Kanata, ON K2K 1Y5
Canada
+1 (613) 599-7602

neptec.com



Harwell Innovation Center
Building 173, Curie Avenue
Didcot, Oxfordshire OX11 0QG
+44 (0) 1235 838544

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