

“Honorary Canadian” heals a broken space station

The old adage “if it ain’t broke, don’t fix it” has long been a guiding principle for doctors. But it seems it is just as apropos for repair jobs — in space.

Astronaut Dr. Scott Parazynski says the medical mantra was foremost in his mind when asked to make repairs last November on a solar panel array powering the International Space Station. The panels tore a few days earlier when the crew on board the station folded up the array, moved it to make room for a new module and then began to unfurl it again. The array is critical for generating power on the station. Until it was fixed, the station’s expansion was halted.

Observers pegged the repair as one of the space program’s riskiest, since the panels’ 160 volts of power could not be shut off during Parazynski’s work.

Speaking from Houston, Texas, a few weeks after the mission, Parazynski, who is certified as an emergency physician, said the muddy photos of the damage, taken from the safety of the station, made it difficult to see how bad the situation was before he donned his spacesuit and climbed upon the station’s robotic arm for a better look. The uncertainty of the repair job “weighed heavily upon me.”

“So much work had been going on on the ground — robotic trajectories, procedures, fabricating cufflinks,” he added. “All the [spacewalk] procedures were done with incredible professionalism. But the final analysis was up to me to deliver on a promise, and to do it well. So my biggest fear, in honesty, was just not knowing whether or not I could free up the snag.”

The Arkansas-born Parazynski elected to study emergency medicine so as to get a better shot at flying into space. He received a National Aeronautics and Space Administration (NASA) fellowship to study how body fluids shift in space, and graduated with honours from the Stanford School of Medicine in 1989.

“The call” came in 1992, when Parazynski was 22 months into a residency program in Denver, Colorado, which he cut short to join the astronaut corps. Parazynski has since flown into space 5 times and undertaken 3 spacewalks. During a 2001 mission in which Chris Hadfield became the first Canadian to work outside, Parazynski was dubbed an “honorary” Canadian.

As Chief of the Astronaut Office, Extravehicular Operations Branch at NASA, Parazynski was ideally trained to perform last November’s complex repair. His methodical approach was reminiscent of the way in which emergency physicians evaluate new patients. Attached to his spacesuit, in a small bag,

sat several “cufflinks” made by the crew to thread the torn parts together. He described the damage to Mission Control and patiently awaited their advice.

Parazynski carefully cut 2 wires snagging on the solar array. Using a hockey-stick shaped prodger to shield himself from the array, he placed 5 cufflinks into prefabricated holes on the torn panels to guide the panels into place when the crew unfurled the array. With the cufflinks in place, shuttle crew members used the robotic arm to steer Parazynski clear of the unfurling panels. — Elizabeth Howell, *CMAJ*

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Therapeutic help from man’s best friend

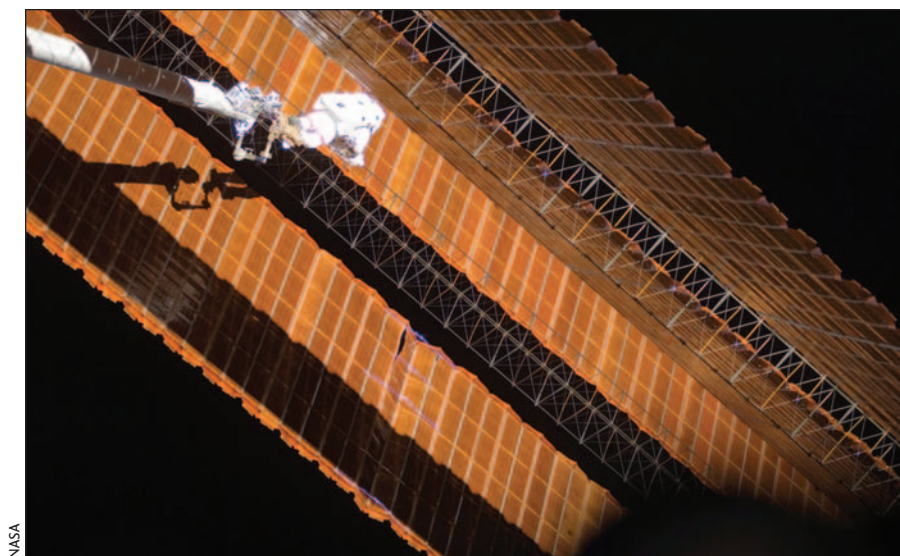
It’s tempting to say that organizers are hoping to orchestrate a nationwide, exuberant woof.

Or at least give a voice to a growing health care sector known as animal-assisted support services.

It’s the ambitious goal of a 3-day national conference this spring that organizers hope will elevate standards related to the use and accessibility of animal assistance, as well as awareness that the health of many patients, particularly seniors and people with disabilities, can benefit immeasurably from the ministrations and talents of the canine and other service animal communities.

Canadian Foundation for Animal-Assisted Support Services President Joanne Moss says there’s a need for more co-ordination and sharing of best practices within the community now providing services in 3 main areas: guide dogs and other specialized assistance dogs like hearing and seizure alert dogs; therapeutic riding programs; and other animal-assisted therapy programs.

Moss, a former child-care worker who branched off to become an animal-assisted therapy practitioner, created the organization, formerly known as the Canadian Alliance for Animal-Assisted Services, in 1998 in hopes it would lead to some manner of national accreditation and regulatory body (*CMAJ* 1998;159[3]:



Emergency physician and astronaut Dr. Scott Parazynski was asked to perform a complex International Space Station repair.