New dreams rise from Phoenix's ashes

November 18 2008, By Brian Murphy

Carlos Lang, an associate professor of mechanical engineering, helped design a wind-speed indicator on the recently terminated Phoenix mission.

(PhysOrg.com) -- Carlos Lange has some sentimental thoughts about the shut down of the Phoenix Mars Lander, but science never sleeps and he's set his sights on a new mission to the Red Planet.

Lange, an associate professor of mechanical engineering at the University of Alberta, helped design a wind-speed indicator on the recently terminated Phoenix mission.

The Phoenix lander has been on Mars for more than five months. NASA pulled the plug Nov.10, about a week earlier than scheduled. With Martian winter setting in, less sunlight was reaching the lander's solar panels, causing power and communications problems. At the landing site near the north pole of Mars, winter temperatures will plunge to -150 C.

"It's sad to think Phoenix will soon be frozen in ice for several months," said Lange.

But he adds that in its short operational life the lander developed a lot of fans. In an online contest, Wired magazine asked readers to write an epitaph for Phoenix. The most popular epitaph was written in Latin. "'Veni, vidi, fodi,' which Lange translates as, "'I came I saw, I dug.'"

And the lander did a lot of important digging, says Lange. "It found the ground frozen below the surface." But more importantly he says, "life, at least under the surface layer of Mars, seems possible; the lander did not find anything toxic to microbial life."

The efforts of Lange and other Canadians on the Phoenix lander were focused on weather-monitoring technology. Lange says their success speaks well for future assignments. "Canadian equipment detected snow falling above the planet and confirmed the presence of frost."

That kind of performance sparked the interest of the European Space Agency. The agency plans to send a rover mission to Mars in 2016. They call it ExoMars and Lange's name came up as a possible collaborator on technology to measure humidity. Lange is intrigued by the ultimate goal ESA has set for ExoMars: "This lander will be one of the few that is planning to test for life."

Lange definitely wants to be part of the team trying to solve the Red Planet's ultimate riddle. He's currently negotiating with the ESA his role

on the ExoMars project. But whether or not he signs on, Lange knows the new mission will benefit from the work he and his team have already done.

"When the question of life on Mars is answered the Phoenix Lander sitting silent like a monument; it will be a constant reminder of our contribution."

Provided by University of Alberta