Mars landing lifts UA confidence about the future of UA's Mars research.

The successful landing of the NASA rover Opportunity on Mars Saturday night was not only a relief to UA scientists who had a hand in the mission, but a needed boost for the upcoming UA-led Phoenix mission.

The Phoenix mission, which will look for signs of life on Mars by digging down into the soil several feet, will be the first Mars mission that searches for life below the surface of the planet. The project brought a $325 million NASA grant to the UA last year, the highest grant in UA history.

"If we were to fail on these recent missions, it will raise the question of whether the Phoenix mission can get down safely. With the number of successful landings on Mars, it will increase confidence," said Michael Drake, the director of the Lunar and Planetary Laboratory.

The Phoenix mission will be run by the UA, the first NASA planetary mission to be run out of Tucson.

Many UA scientists played a role in both the Spirit and Opportunity missions, including Ross Beyer, a doctoral candidate in planetary sciences, and former UA student Chris Lewicki.

Lewicki was involved in the entry and descent of the rovers into and through the Martian atmosphere.

Beyer was involved in the selection of the two landing sites on Mars. He designed a computer program that analyzed the smoothness and slope of the possible landing sites.

The landing sites were about 60 miles by 12 miles.

Opportunity landed at Meridiani Planum, a smooth area that scientists like Beyer hope will be composed of coarse-grained hematite.

Hematite is an iron oxide that is formed in the presence of water. For Beyer, the greatest hurdle in selecting the landing sites was the constant tug of war between the engineers who wanted a safe, flat site, and the geologists who wanted an interesting place.