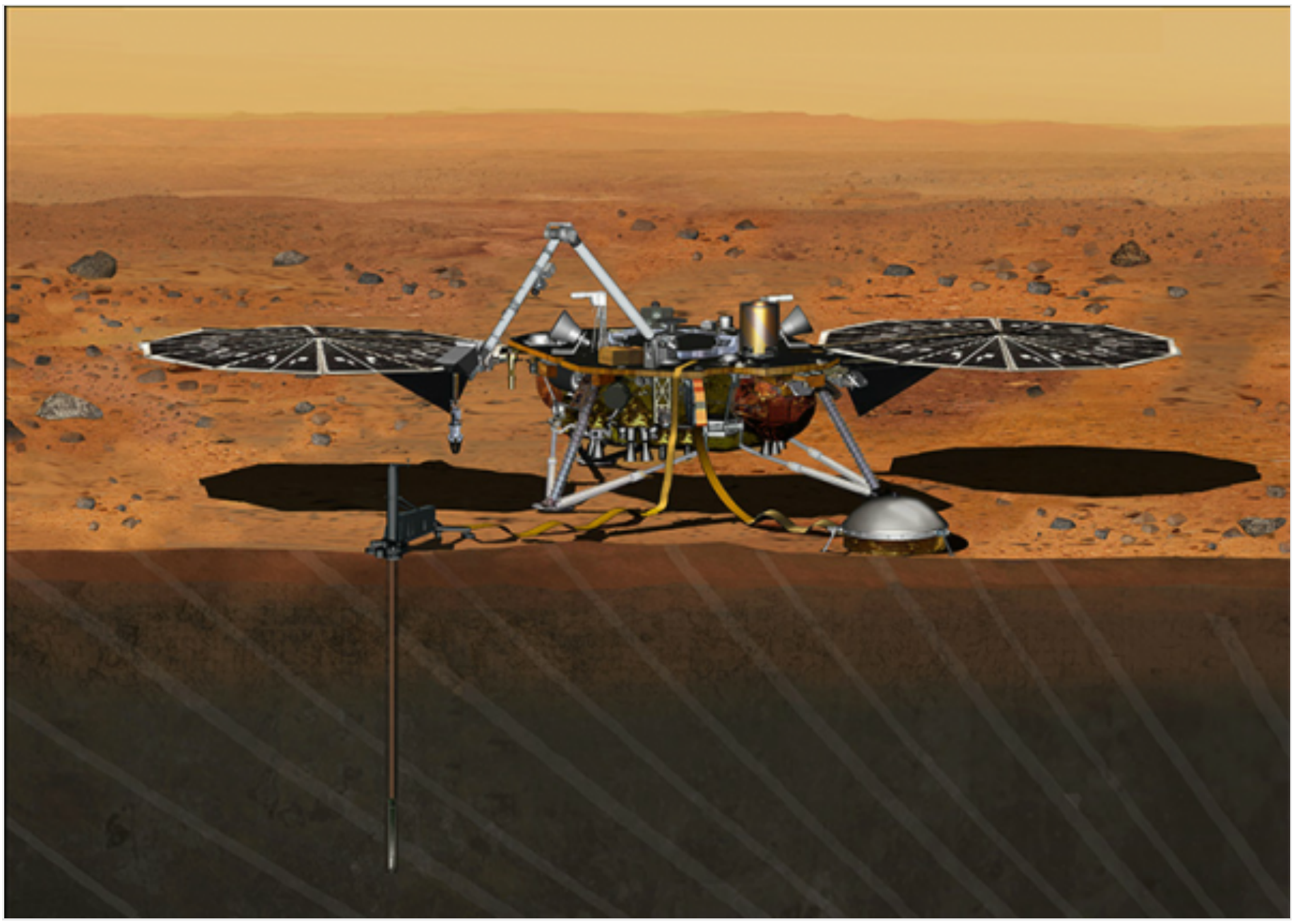
NASA limits foreign contributions to U.S. planetary missions



How much international collaboration is too much? When it comes to foreign instruments provided to NASA planetary science missions, the answer is anything more than 33%.

Earlier this month, NASA unveiled a draft set of rules for its next Discovery competition, which funds planetary science missions costing no more than $450 million. Today, at a meeting of asteroid and comet scientists in Washington, D.C., NASA officials explained some of the new rules for the next mission, to be selected in 2016. Among them was a stipulation that the principal investigator would not be allowed to recruit foreign instrument contributions in excess of one-third the value of the U.S. instruments on the payload, even though those contributions don't count against the $450 million cap.

The new rule is a response to a current Discovery-class mission with no major U.S.-made instruments. InSight, a Mars lander built at NASA's Jet Propulsion Laboratory in Pasadena, California, that will launch in 2016, carries a French-made seismometer and a German-made heat probe. "The American scientific instrument community was not happy with that," says Michael New, the lead Discovery Program scientist at NASA headquarters in Washington, D.C.

NASA wants to make sure that some of the $18 million a year the agency invests in developing planetary science instruments pays off, New says. He also points out that NASA has less ability to

enforce the on-time delivery of foreign instruments and ensure that data from those instruments get shared quickly with the public. “With foreign contributions come increased risk and increased potential problems with data archiving,” he says.

InSight is not the only Discovery mission with a science payload dominated by foreign scientists.

Dawn, en route to the asteroid Ceres after visiting Vesta, was designed to carry five instruments, three of which were U.S.-led. But two were cut from the mission before its 2007 launch. That left the spacecraft with a German camera, an Italian spectrometer, and a U.S. gamma ray and neutron detector.

Bruce Banerdt, the principal investigator for InSight, says he’s not surprised that NASA is cracking down with the new policy. “I’ve heard it described as the InSight rule.” But he defends his choice of foreign-made instruments. He says the teams he selected were the best providers of a seismometer and a heat probe necessary to study Mars’s interior. “I feel comfortable saying we picked the best and almost sole sources for these kinds of instruments,” he says.

Although Banerdt acknowledges the importance of spending U.S. tax dollars at home, he points out that InSight’s two instruments, valued at more than $50 million, will produce data to be shared globally. “National boundaries don’t apply to scientific knowledge.”