

## Interview with Alan Hale and Russell Schweickart

**Washingtonpost.com:** Welcome to today's discussion on Iran and the upcoming solar eclipse. We already have a number of questions so let's get started. Alan and Rusty, can you first tell us why you decided to go to Iran to see the solar eclipse? In terms of relations, what do you hope this trip will accomplish?

**Alan Hale and Russell Schweickart:** According to the weather data, the prospects for clear skies here for tomorrow were 96%. In terms of relations, I was standing in the Bazaar in Isfahan a couple hours ago and an Iranian family recognized me and asked me point blank through a translator; "Do the American people know that the Iranian people want better relations?" I'd say over the past week that the actions have matched the words.

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**Herndon, Virginia:** What is the one single memory would you bring back from Iran with you? What would you say is different about the Iranian people in Iran and those abroad?

**Rusty:** I guess the most powerful memory that I'll remember is the beauty of the country and the warmth of the people. The Iranian people I know in California where I live are also very warm, but it's wonderful to find them here in Iran. It's a very exciting place actually.

**Washington, D.C.:** Are we going to share the data collected with the Iranians? If we are sharing the data, are we going to exchange the results of research and analysis of the data collected?

**Alan:** Certainly. We're collecting data in their country. They certainly should be collaborators and co-contributors.

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**Springfield, VA.:** What are the scientific objectives of this trip? What are you hoping to learn from this eclipse in particular?

**Alan:** There are several scientists that are part of this. The Soho spacecraft has detected a number of dim comets that are visible near the sun that are not visible from the ground. A total eclipse affords the opportunity to observe these objects from the ground if there is one. My partner Doug Biesecker—he works at the Goddard Space Flight Center with the Soho project—it turns out the Soho detected one of these objects yesterday. We're hoping we can observe one of these objects from the ground at the same time that Soho is observing it

**Bethesda, MD:** Since this city in Iran is the best place to view the eclipse, are there astronomers from other countries there as well?  
Alan why don't you take this one...

**Alan:** Yes. I've heard that there are over 40,000 foreigners in Iran from places Britain, France and India. I heard that quite a few Japanese are coming. We actually have a couple of Australians in our group.

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**Washington, D.C.:** As scientists, what would you recommend to your respective representatives in the U.S. Congress about ways to break the stalemate in the relationship between the two countries?

**Alan:** A joking one would be to establish good Internet connections here. As we discovered, Internet connections are kind of slow and unreliable. A more serious answer—I'd say talk. I pointed out my earlier comment about the family I met. The reception here has been very warm. We've been mobbed and treated like rock stars wherever we've gone. The Iranian people have indicated that they want better relations. Perhaps we should take them up on it.

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**Washington, D.C.:** Mr. Schweickart, is there anything that you are particularly interested in when it comes to this eclipse, especially given your previous experience with the Apollo program?

**Rusty:** Actually, my main interest is the eclipse. This will be my fifth eclipse. We're also nearing solar maximum so it should be a brilliant eclipse. Finally, the opportunity to see it from an exotic place such as Iran was the clincher for me.

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**Washington, D.C.:** How are the kabobs and rice? I am in Iranian living in the U.S. and I MISS choleh-kabob!! Yah Abulfaz!!

**Rusty:** That's really an excellent question because every meal we ask our guide what the menu is and the answer is: lamb kabobs, chicken kabobs or choleh-kabobs. The food is delicious, but there is not a great deal of variety as you seem to understand.

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**Washingtonpost.com:** How are the students on your trip reacting to the conditions in Iran?

**Alan:** The students at the universities we've spoken at have treated us like rock stars. They've mobbed us, asked for autographs and contact information. It's pretty amazing.

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**Arlington, VA:** Mr. Hale: Was the Hale-Bopp discovery the high point of your career thus far? How does a fairly ordinary eclipse—aside from it being the last in the millennium—compare to that stunning discovery?

**Alan:** The discovery of Hale-Bopp was certainly one of the highlights thus far. This will be my fifth total eclipse. I hope that by being here in Iran I'm able to accomplish something beyond science. As for this being the last one of the millennium—to be truthful that's a fancy way for saying the next one is in 2001. Other than that, there's no real significance to this particular one.

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**Rockville, MD:** How long do you plan to stay in Iran and will you travel to other cities?

**Alan:** We have just a few more cities on our itinerary. We're actually leaving on the 14<sup>th</sup> so our stay here is fairly close to being over.

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**Washingtonpost.com:** We have about a half-hour remaining in our discussion with Alan Hale and Russell Schweickart. Keep those questions coming.

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**Washington, D.C.:** What is the state of Iranian science? I would guess that it is not always as advanced as the United States.

**Washingtonpost.com:** Alan? Rusty?

**Alan:** There's a lot of intelligent people here. We spoke at a graduate level institution. The students are very bright and the professors very well educated. The Iranians don't quite have as much equipment as in the U.S. because it's not as rich a nation.

**Rusty:** As Alan said, we've met many very bright scientists. We can't really judge the state of Iranian science, but certainly the quality of people is very high in terms of their technical ability—including people who are very proficient in using the Internet. Even though their connection isn't very good.

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**Washingtonpost.com:** Alan and Rusty, how do cultural trips like this get received by the U.S. State Department, which still considers Iran a terrorist state?

**Rusty:** I don't know personally what the State Dept has said about Iran. However, Search for Common Ground has coordinated this trip and other trips with the Dept. of State. It is not, however, an official trip

of the U.S. government. But, naturally both the White House and the Iranian president have publicly supported contact between the Iranian and American people.

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**Washingtonpost.com:** Following up on a previous question, is it simply the weather that determines the best viewing location? Or does it have to do with the location in the path?

**Rusty:** The best place to watch the eclipse ideally would be the best weather location which is where we are in Iran and the proximity to the center line for totality which we're pretty close to.

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**Rockville, MD:** I was wondering, were there any demonstrations or memorials in Iran to commemorate the 10-year anniversary of the end of the Iran-Iraq War?

**Rusty:** Nothing that I saw. None of us saw anything related to that.

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**Washington, D.C.:** What other things aside from the eclipse are you doing on this trip to promote U.S.-Iran relations?

**Washingtonpost.com:** A question for both of you...

**Alan:** We've given several talks to Universities and interacted with the students and public. Basically, interacting people-to-people—sharing what we know and getting to know them as people.

**Rusty:** We have met so far with two university groups—one graduate level—including a group of exceptional women students. The following night we met with a standing room only crowd of between 600-1000 people. We've just met a uniformly warm welcome. We've been going through the cities and meeting a number of people literally on the street. A surprising number speak English and are very forthcoming.

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**Washington, D.C.:** Are all the members of your group astronomers? Or was anyone else brought along on such a great cultural trip?

**Rusty:** There are three people that you could consider professional astronomers. There are probably another 7 or 8 that are considered amateur astronomers. I guess I fall somewhere between those groups. We all share an interest in the cultural aspects of the trip, of course. We also have a former diplomat here with us.

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**Washington, D.C.:** Comment: Can you please make it plain that Muslims that voluntarily pray during the eclipse do so not to worship the eclipse, but to follow the example set by our leader Prophet Muhammad—peace be upon him--. Muslims turn and face the same direction of prayer during an eclipse that they face while performing their 5 daily obligatory prayers—salat—toward the kabah in Mecca. And this prayer is considered sunnah or voluntary. Hopefully this will distinguish Al-Islam—the religion of Islam—from those rituals that are being followed by pagan religions, and beliefs or those who don't understand this tradition.

Thank you, in advance.

**Washingtonpost.com:** Alan and Rusty, have you been briefed in advance about how the Iranians tend to view the eclipse or any special practices they might have?

**Alan:** No.

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**Baltimore, MD:** Gentlemen, What are some of the most important unknowns that viewing of an eclipse will help address?

**Alan:** I may be a bit prejudiced, but I think the existence of comets that we didn't know about before the launch of Soho. We didn't know there were this many comets around the solar system. If we can collect that Soho data, it really will help us understand the solar system better.

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**Chantilly, VA:** Will the 2001 eclipse be such that viewers in North America will have a better chance?

Alan, would you like to try this one?

**Alan:** No. That eclipse will be total across parts of south central Africa.

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**Washington, D.C.:** What security precautions have you taken on your trip?

**Alan Hale and Russell Schweickart:** There really was no need to make much of anything, really. We let the State Dept. know we were coming. We let the Vice President's office know and we met with the Swiss ambassador here. Other than that, none in particular. We never really felt it was necessary.

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**Washington, D.C.:** With the exception of a few sporting events, ever since the Iranian president hinted at better relations with the U.S. through cultural, scientific, and athletic exchanges, your trip seems to be the best publicized one. Are you planning to use this as fuel and continue the sharing of knowledge and research you alluded to earlier beyond this eclipse? To that end, will you invite some Iranian scientist back home?

**Alan Hale and Russell Schweickart:** Yes. It's certainly a possibility. It's something that we have thought about in general terms. I met with some Iranian astronomers who have expressed interest in doing some collaborative projects. I think it would be possible to do something like that.

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**Phoenix, AZ:** Is this your first trip to Iran and do you see better relations between the two countries?

**Alan:** This is my first trip to Iran.

**Rusty:** This is also my first trip to Iran. So I can't speak to *improved* relations.

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**Washington, D.C.:** What are the major cultural differences you have noticed on your trip? What adjustments have you had to make—other than the time change--?

**Rusty:** I think the biggest cultural difference is being an Islamic state—and a fairly strong one—in that all of the women have to be covered all the time. That's the most obvious difference on the eye. That's the biggest adjustment on the American women that is with us. It's very hot here and having on that headpiece and covering over their clothes is pretty uncomfortable. The Iranian women appear to deal with it a little better than the women that are with us. Other than that is the obvious language difference. That's about it.

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**Silver Spring, MD:** We know that an eclipse can sometimes trigger behavior changes in animals. Are there any other effects of an eclipse on people, weather tides, etc?

**Rusty:** There are a number of phenomenon associated directly with the eclipse. If you look through the dapples of a tree, you see little crescents on the ground. I can't think of anything about people.

**Alan:** It will cool the temperature down somewhat. Sometimes the animals will come home to roost. Automatic lights may come on. People have a tendency to hoot and holler and enjoy the whole thing.

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**Alan:** I'd like to give one brief plug to my own Southwest Institute for Space Research. This is the biggest project we've undertaken so far. We do have a web page about the eclipse, the URL is: [www.swisr.org/iranecclipse.html](http://www.swisr.org/iranecclipse.html). We have tried to put updates there on a very regular basis. Internet

connections as I mentioned are very slow here. I was able to put up a whole lot of updates a few hours ago. We have our comments and observations, photos and images. So, check us out.

**Rusty:** I hope the weather holds here tomorrow. It was beautiful and clear here and I'm looking forward to a wonderful eclipse. I think I can speak for the rest of the party when I say that Iran is a beautiful country. They have spectacular mountains and incredible archaeological sites here. We've had a wonderful time as the guests of the Iranian people.

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**Washingtonpost.com:** Well, that's all the time we have. Thanks to all who participated and thanks to Alan Hale and Russell Schweickart, who joined us from Iran. Stay tuned for more discussions this week.