Richard C. Hoagland and Dr. Edgar Mitchell Debate

Art Bell Show Wednesday, May 15, 1996 1 AM to 4 AM PDT

Transcribed by G. Varano, Part 2 of 6

AB:Back to Richard C. Hoagland near New York and Dr. Edgar Mitchell in Florida. Gentlemen, you're back on the air.

EM:Ok. This is Ed. Go ahead, Dick, and finish up ...

RH:Well, you were in the middle of responding to what I was laying out as the model that can explain what we think we're seeing in these pictures, and you said something about should this not be in every picture. And we have dozens and dozens of pictures from Apollo 14 that we've been able to compare now against the current versions at NSSDC, which is the National Space Science Data Center outside Washington, and we were in Houston the other day at the Lunar Planetary Institute, and we have begun to look at versions of the images in that database, and I can say that some of the same things that we are seeing in Ken Johnston's 30 year old frames we are seeing on the modern version of the same frame, particularly 9301. When I put out numbers these are actual NASA official frame numbers in the archive, not the NASA headquarters numbers, but the Johnston numbers out of Johnson Space Center.

EM:Yeah. I can't relate to those. I don't have all of those numbers. I have NASA numbers.

RH:Well. Your mission would be...

EM:Let me ask this question: Which types of photos are you concurring with. It could really only be the originals here that are vital.

RH:These are the color prints that were made from the reversal film that all of you took to the moon during all the missions. All the color film was a transparency reversal film. It was equivalent to Ektachrome X, ASA 64, and the original transparencies, when the film was brought home and developed in Houston in a lab there by Underwood and his guys, this was then a slide, a 70mm slide in essence, and then from those slides, internegatives were produced. From the internegatives, prints were made, so we're down 3rd generation now. Johnston's prints are directly from those internegatives, so they're 3rd generation, pristine, you know, held in a vault for 30 years. The NSSDC prints are xnth. Unknown numbers of intermediate masters have been pulled from the archive originals in Houston, so there has been grain build-up. But, what's really remarkable, Ed, is that the same general features on this one photo we've had time to look at and compare, 9301, are there on both sets of prints, separated by 30 years. And on the second set of prints that we got from Bobby Tice at NSSDC on my way down about a month ago to a meeting with Sara McClendon. He literally sat in the parking lot to hand me these photos, and we got back a week later we compared them from the originals that Johnston had given me and from the copy that Tice had given me that's 30 years younger, and the same general features above the horizon, north of you putting up a TV camera, are present on both sets of images. Now, that is reaffirming to me that we're looking at physics and not something that we're doing in the computer or something that crept in in the lab in one batch. You know, it's the kind of checking that you want to do to make sure you're looking at science.

EM:I can't agree with that. I agree that is the physics of something. I'm not quite sure it's the physics of the moon. What would be far more telling, if we're looking at a physical object, that virtually every photograph taken with every camera in a particular direction of that object, would show it. Perhaps it would be in the frame 30 years later or a different generation, but regardless of which camera or which film, black and white or color, if it was of the same object and a physical object, then it should show up in that picture. And that's more a more important to me, than whether a different generation 30 years later is preserved.

RH:Ok. Let me stop you there. We're in the process of going through these photos, and what I did because of the very limited resources and manpower we have, is I did spot checking. I randomly took sets of the pictures that Johnston had given us and started looking at them. We must go systematically and do exactly as you're saying, look at every single frame, and there's lots of frame, Ed. That's where we're really data rich. And we're in the process of putting a lab facility together which will be ready by the summer, where we will have the analog photographic laboratory facilities, and the digital imaging facilities to do precisely that, and most important, the key manpower. Ultimately, by the end of the summer, we will have been able to do exactly what you're saying. I am heartened at the moment that the spot checking of some of these frames, looking at the same direction, from different vantage points, shows the same structure.

EM:Ok. Let me ask you another question here. What is the presumed density of such a structure, and I'm holding in mind here the geodesic dome structure, the Bucky Fuller dome structure, as kind of a basic model we're talking about. What is its density?

RH:You mean the physical density as opposed to the optical density.

EM:Well, they're related to each other. Go ahead.

RH:If I have thin glass panels. Let's say, for the sake of a model, I have glass buttressing, and I'm just going to throw some numbers out here, every 1000 feet something comes down to the surface, and then there's a 1000 foot gap before the next something comes down. And I look horizontally through this new stuff, and it is very transparent because it is new. It hasn't been scratched. There's no holes in it. There's no meteor strikes. You don't get the Colt 45 raying because of holes going through the stuff like that. You'd have to look through an awful lot of this to be able to see it, if it was new. If it's old, and it's got lots of holes in it, it's ratty stuff, then the density goes down and the optical depth goes with increasing distance, so again the actual physical density per cubic mile of this stuff could be pretty low, and yet you'd eventually be able to see it if you looked through enough of it horizontally. I don't have a good set of numbers yet for an actual physical density, but I know it's got to be low, and I'm working to get the right people to help us put that together, and a starting point was made with Fiertek and his architectural analysis, but we are a long way from coming with a definitive number. I know exactly where you're going with this, which is how did you guys ever get down and get back up without killing yourselves, if there is something sufficient to cause what we're seeing in the images, and that's a question on my mind. How did six missions successfully get down to the moon and get back up without killing somebody, by running into this stuff.

EM:Yeah, it's even more profound than you're suggesting here. That part's true but just scratches the surface. Let's go ahead and explore this. Is it a wall of a structure like a wall of a building? Is it a far more dense structure like a very thick wall of a fortress, but miles thick? Let's develop this idea here.

RH: Now, in terms of what we're seeing in the pictures, and our database, since we've not really had a chance to talk about this, this gives me an opportunity to, at least, tell you where we're coming from. We've now looked at unmanned data from lunar orbiter, unmanned data from Surveyor, particularly Surveyor VI, the after sunset photographs taken from the surface of Sinus Medi, looking west from Surveyor VI, were really striking. And we have six sets of images taken up to an hour, hour and a half after sunset looking west, with the sun well below the horizon, where this stuff can be seen on the Surveyor VI data in forward scattering. From the coronal light, you can see the scattering and geometry of this stuff extending up, and I will send you those if you're interested. We then go to the Lunar Orbiter material. We see evidence of this on Lunar Orbiter pictures, and the most complete and hi-res data, of course, is the Apollo data because the black and white stuff was shot on aerial reconnaissance film, very high resolution film, and physically returned to earth. The surface stuff was shot on black and white and color and physically returned. So we have a really broad cross section to integrate and to try to converge a model for this stuff and how dense it is and how it interacts with the surface in selected regions. And that's how I tell you that it's got to be low density, very ancient, very ratty, very degraded, and the best chance of seeing it is through the long path length, horizontally, as the ray goes from the surface out into space. I do not have a number yet on exactly physically how close the closest section of this stuff could have been to Antares or to some of the other missions. But, it's miles away. It's not feet or hundreds of feet, it's miles away which is why there's this window, given that you guys were wearing these gold helmets which filter out ultraviolet light, this really important window that you might have ... The stunning thing to me is that we might have sent six of men there, and they didn't even notice what was there.

EM:Now you're starting to really press the credibility issue now, Richard.

RH:Well, the alternative is...

EM:You are drawing conclusions that are not necessarily warranted.

RH:Well, you know what the alternative is?

EM:Let's just stick with data. Let's just stick with what we have without drawing conclusions. And at the moment what you're suggesting is physical structure of some sort that looks very transparent and even old and ratty. That's kind of an assumption. How do we know it's old and ratty. That didn't quite fit here. At least, it ... or not too dense. It transmits light. Apparently, you're trying to say that if we run into it with a spacecraft or with our bodies, we don't notice it, but light comes through it.

RH:No, I didn't say that. No, what I said was that it has to be a very low density so that the odds against running into it were very low. Otherwise, you guys wouldn't survive. But you did not say that we contact an...

EM:Now you're starting to sound like molecular, about molecular density, a very low molecular density, which means that it's more gas-like, gaseous than it is firm structure.

RH:No, no, no. You're not listening to what I'm saying. I'm saying that it's physical hard glass, but that if you did a number density, so many grams per cubic mile, there's so little of it left that you have to look through a long path length to see it, and the odds of physically contacting it, because there's so little left, is very small, particularly if you had any pre-knowledge of where the stuff is and how to come down through the holes.

EM:Ah-hah. Are you assuming that we have that preknowledge?

RH:Well, maybe you didn't, but maybe the guys that sent you there and picked the landing sites did.

EM:Ok. I'm glad we got that data straight, all right. I will reiterate, however, that the density you are describing is far more commensurate or close to the density of a molecular gas that it is to a physical hard structure. Now, you are getting down to density to where it has to be very, very, thin.

RH:All right, I agree with you in principle, although I would argue that if I come back to New York City in 10,000 years, we're living right next to it tonight, and it's pretty solid, steel, concrete, glass, whatever, and it's been eroded by all the forces of earth, the wind, oxygen in oxidation, stuff like that, you can have pretty solid structures now, that when you come back in 10,000 years, will be almost non-existent just because of physical forces. And if we're looking on the moon, the only erosive force on the moon that we understand is micrometeorite sand blasting. If you have a structure, and it's made of glass, and you erode it from sandblasting over literally millions of years, or even longer, and it's in a total vacuum, where there isn't a trace of air and the only operative force is the hyper-velocity shrapnel from each impact, what does the remaining structure look like, and how thin can it get and still maintain a configuration. I'm almost thinking of something that has the consistency of cigarette ash, where if you touch it, it will fall down, if you physically get close enough to touch some of this stuff. But, in the absence of physically touching it, it would stand there as an optical ghost of what it used to be and would interact with light like we're seeing on these images. It's a stunning picture of something so fragile, it cannot survive much shaking.

EM:And if we bumped it at all with our bodies or a spacecraft or anything else over the years, the whole thing might collapse.

RH:Or portions of it or whatever.

EM:Ok. Let's paint a picture. Let me paint a picture for a couple of minutes with our audience. Let's pin down exactly what we're talking about. If you look up at the full moon right in the center, both vertically and horizontally center, and just to the left and down, left 15 degrees, down about 3 degrees, you get the area that we're talking about. To the center of the moon, the Apollo 14 landing was the Fra Mauro area.

RH:South of the bright-ray crater Copernicus.

EM:Yeah. Just a bit south of Copernicus, and a little bit east of Copernicus, the Apollo 12 mission was almost directly south of Copernicus. We were just above to the east of that. We were a couple hundred miles apart, or make that a little more. The immediate location of Apollo 14, let's picture this. Picture a strip about a mile or a mile and a half running east to west slightly tilted northeast to southwest. It's about a mile and a half long and maybe a hundred yards wide. Now that little rectangular strip represents the area of investigation of the Apollo 14 crew.

RH:The area of the physical investigation.

EM:The area of physical investigation.

RH:Let me stop you there. If I take a picture horizontally looking north or west or east, that ray can go for tens or even a hundred miles before it encounters space, and what we're looking at may be so thin in terms of density that the stuff we're seeing, Ed, could be tens of miles away from you, and you had no hope of ever physically walking up to it and putting your glove on it. That's consistent with these surface pictures, which is why I was so excited when Johnston gave them to us, and we found what appears to be on them.

EM:Ok. Fine. Let me continue my description here. If we look to the east end of our little rectangular strip, the east of it goes to the edge of Cone Crater, which is the crater about five to six hundred feet above the surface that we climbed up to investigate. The west end of it is little bit past where the lunar module landed, about 150 yards beyond where the lunar module ? is sitting on the surface, and that's where ALSEP station, our scientific station, telemetry station, was set up. So it's that region that we physically traversed and did a lot of work. Now, Richard is relying rather heavily on the pan that we took in the vicinity of the lunar module. We took, actually, a pan about every 15 minutes or less, so there are dozens of pans.

RH:Right. We have the green books. We are in the process of acquiring those pans.

EM:Beg pardon.

RH: We have the green books. These are the USDS. The things were put out, and we know all the pans, and we ordered the others. We have two or three of those pans right now, but we don't have all of them, but we want all of them and want to do the same thing...

EM:Your whole case hinges virtually on every photograph looking in the directions you're talking about showing exactly the same thing.

RH:Exactly. That's where the correlating data should occur if we're looking at real stuff.

EM:If you're looking at real stuff. Now, if, indeed, you're looking at real stuff it should show up in every photograph, and maybe it will, maybe it won't.

RH:Let me stop you there. There are two pieces of data I can absolutely attest to tonight. The single frame photo AS14-669301, which you have. That's the single Hasselbladt showing you putting up the camera underneath some of this stuff looking north. And then the mosaic that Shepherd which has another frame of you taken a few seconds later, which are two separate pictures. We see a physical of this stuff west of you on the horizon between the two pictures. Shepherd stepped back. He took that picture right at the base of the LEM. Then he stepped back a few feet and began this mosaic. The stuff on the horizon physically moves relatively moves between these two pictures, indicating it's miles and miles and miles beyond you to the north.

AB:Richard and Doctor, hold on. We've got a break here. We're at the top of the hour. So we'll pick it up at that point when we come back. We will also talk about can and cannot be said by those people who went to the moon. Very interesting. Upcoming.
