

LightSpeed



VOL. 20 • SPRING 2005

LE BAS INTERNATIONAL

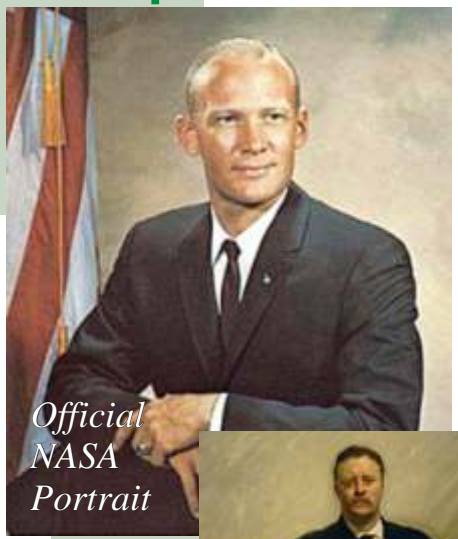
Coffee with
Buzz Aldrin:
The Vision
and the
**Ultimate
Space
Vacation**



PRIVATE CASTLES • SEEDS OF PEACE • SUPPLYING SUMATRA

www.lebas.com

A Cup of Coffee with Astronaut Buzz Aldrin



Official
NASA
Portrait



Buzz in
the Bahamas



Le Bas International's Chief Operating Officer Tracey Deakin spoke in January to famous astronaut Buzz Aldrin "over coffee" as it were, with Buzz vacationing in the Bahamas.

LightSpeed– I just want to say happy birthday.

Buzz Aldrin– I really appreciate that. My birthday is on the same day that we inaugurate Presidents.

LS– Are you running for office?

BA– Oh no. When I retired from the Air Force, after I was fighting the Korean War and shooting down MIG15s, that maybe 80% of the people approved of what I was doing. When I landed on the moon maybe that jumped up to maybe 90-95%. Why should I work 16, 20 hours a day just so that maybe, *maybe* 51% would approve, while the other 49% were trying to get rid of me.

LS– Remember the Gemini 12 spacewalk?

BA– How could I forget it? There were three different opportunities for me to open up the hatch to venture outward and then completely get out and move up forward to the Agena spacecraft and onto the back end of the Gemini spacecraft.

LS– Right. How would you compare that to the Apollo moonwalk?

BA– With a specific force that orients you and things around you, it's much easier to move around. In orbital flight, everything is floating relative to those things close by you, so moving around in orbital flight, like in *Gemini 12*, requires a lot more attention to the anchor point. In zero gravity you lose your balance all the time, drifting, and that is much more difficult than the force on the moon that holds you to the lunar surface. It's easy to fight the problem and become overheated and frustrated. That happened to quite a few on the *Gemini 12* mission. I was fortunate in being the first astronaut to train under water in neutral buoyancy in a tank full of water, stimulating the floating around in space.

LS– Like scuba diving almost?

BA– Yes. I was a seasoned scuba diver starting way back in 1957-58 when I first learned to scuba dive and I've been diving very actively ever since.

LS– Launching from Tranquility Base, Buzz, how was that?

BA– Well, I injected a little humor just at the tense period of departing the Moon when Houston said "Eagle, you're cleared for liftoff," I responded by saying, "Roger, Houston, we're number one on the runway!"

LS– Where do you see this space tourism going?

BA– People have said it's absurd, it's dangerous and it's expensive. Well, it's still dangerous and expensive, but it's becoming more accepted as something that will happen. The interest now is on jets going up to a certain altitude that's called *space*, 100 kilometers (62 miles) and then coming back down again safely. That's an experience that a lot of people would like to enjoy and it's relatively easy to do. Richard Branson with Virgin Galactic is going to be overseeing the development of an improved version of Bert Rutan's *SpaceShipOne* to be able to hopefully by '07 or '08 be able to carry five or more passengers up to experience space.

"People would stay for a week in an orbiting resort."

Now that's not really the same thing as being in orbit. Getting a spacecraft into orbit is far, far more difficult and hazardous both going up and coming down.

There are basically two ways of getting into orbit. One is to take off horizontally from a runway and then eventually gaining enough speed to eventually get into orbit. The other way is the more accepted vertical launch of rockets that penetrates the atmosphere, carries along the oxidizer and the fuel and using rockets from the very beginning to propel, in several stages, the spacecraft into orbit. I feel that the large spacecraft that's needed to economically carry enough passengers into orbit, whether it's four, five, ten or even larger, it's going to require vertical launch and recovery or reusable early stages.

My company, Starcraft Enterprises, is actively bringing together several other companies to form a very formidable, innovative alliance to bridge the gap between the tourism desires for orbital flight and the dreams to land on the Moon, and perhaps rove around with wheels on the surface of the Moon. Incidentally we're using as initial examples the fuselages of business jets to explain and demonstrate to people exactly how cost effective and how easy it is to be able to support space flight.

LS— I'd be very interested in being part of that team.

BA— Keep in touch with Starcraft Enterprises International. We hope to partner with Raytheon and also bring in Aviation Partners and Boeing Airlines. We hope to bring them together and also some experience from a retired chief of an airline that can help us approach the operation of these spacecraft in a very cost-effective, business-like manner.

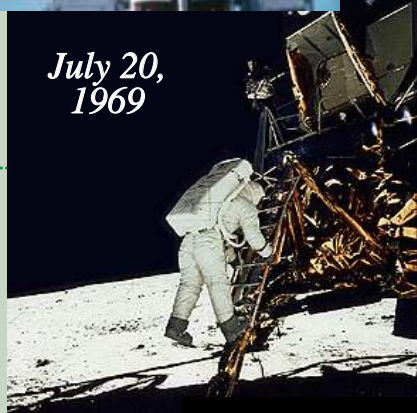
LS— Do you think there's a feasibility in years to come of actually having like a resort hotel orbiting the Earth for leisure?

BA— Absolutely. I feel that orbital tourism will be initially about a one-day trip, without the passengers really desiring to sleep during that one day, so that they can enjoy the brief opportunity.

Then the next available trip would be to a facility, a habitat, in low Earth orbit, several hundred miles up. People would stay for five days or a week and return in a similar spacecraft that came up bringing others up.

The next step I think would be to have a habitat that is continuously swinging by the Moon, and then coming back to the Earth and then back in a cycling fashion. Then instead of the launch spacecraft intercepting the orbiting hotel, it would then intercept cycling, lunar-cycling habitat or hotel and it would give the passengers a perhaps a two-week trip where they would swing by, for viewing up close, the Moon.

Entering an orbit around the Moon would be a very complicated, a risky step that I think would be a good bit further off into the future. The government in 20 to 30 years is going to be interested in visits to Mars.



*Buzz Aldrin
on the Moon
(photo by Neil
Armstrong)*





“Eight spacecraft can be **launched** on the same rocket.”

LS– I look at space flight as a whole universe of what we live on, the planet. How do we promote space flight again?

BA– Well that's a great question. We use the phrase “we came in peace for all mankind” to very ably describe the efforts of Apollo that brought together America's space efforts from the very beginning, following President Kennedy's challenge to the nation. Now Apollo was a national effort in response to Sputnik and the advances from the Soviet Union.

In the future I think we will rightly bring in as much international cooperation and mutual support and contributions as we possibly can. It is very difficult, time-consuming and complicated to make all the different international partners feel like they've been treated fairly. Very distinct and definite leadership, I feel, is required on the part of one entity or nation. The very recent *Cassini* mission is a great example of that kind of cooperation, where we separate distinct stages of the mission between entities and nations. *Cassini* went to the planet Saturn and employed a *Huygens* probe that penetrated the atmosphere of the moon Titan, landed and took very sensational and revealing photographs.

LS– We need a central governing body to heighten public awareness.

BA– Yes, that brings up an even greater challenge, closer in the future: How can the assets of the government be made available to the private sector through cooperative means? Dual use of Florida launch facilities and some of the rockets that will be used by NASA (to launch major heavy components to the Moon), can be used by the private sector in a different fashion.

For example, the government may use one rocket and one spacecraft to send people to the Moon or beyond, the private sector may want to use the same rocket and the same spacecraft just to go into lower orbit, but because of the excess capacity of the rocket, more than one spacecraft can be used. Six or eight spacecraft can be launched on the same rocket.

Putting people into space with one rocket also benefits the government by utilizing and further developing their equipment in a higher flight rate. Reusable components, rockets and spacecraft, always become more reliable. So the private sector is contributing to the benefit of the government by using the government's equipment. Since it's a general rule that the bigger the spacecraft the less the cost per pound into orbit, the private sector saves by not having to develop the rocket and the spacecraft and spend all that development time and money. It just uses what the government has developed and repackages it. Do you understand that?

LS– Now I've got it. In fact, do like Ariane Space does with their Ariane 5, but make it a partnership between the public and the government sectors.

BA– That's correct. *Ariane 5* takes several payloads on each launch and because of that, I over a year ago, obtained a general patent that covered multiple human passenger spacecraft on a single launch vehicle.



Buzz
with a
friend



“We go in peace for all mankind.”

LS– Would you be on the first space tourism flight, if possible?

BA– No, I don’t think so. I think my contributions can be much more useful by continuing to develop innovative concepts on the ground and leave the experiences up to other younger people. Anyone who’s flown in space would like to do it again, but I have already had the chance to get to the Moon and walk around there.

LS– I have my nine-year-old son here and he’s interested in space. He has a question for you. Ask the question, Connor.

BA– Sure.

Conner– Is Buzz your nickname or your real name?

BA– Well, it was a nickname and because I was a “junior” I would wait until after my father passed away and then I would make legal steps to change it to be my real name, and that’s my name now. Evidentially the Pixar and Disney people thought it was a pretty good name for them to use, for a *cousin* of mine, Buzz Lightyear.

LS– “To infinity and beyond!”

BA– Absolutely. “We come in peace.” Incidentally I mentioned where Apollo used the slogan “We came in peace for all mankind,” I’m using for my foundation the slogan “We go in peace for all mankind” and that includes the recognition of Global Space Travelers, the non-career people that have reached orbit.

And I’m embarking on a project called Space Flights for Peace. In the future, it might by the year 2010 involves carrying perhaps, after training, a Palestinian passenger and an Israeli passenger into space on the *Orbiter*, before we retire the shuttle *Orbiter*. And then that would be followed by the Russian spacecraft *Soyuz* carrying two people from opposite backgrounds on Earth, perhaps from Afghanistan and Pakistan, and the Chinese spacecraft would then consider carrying a Taiwanese and a North Korean along with the Chinese commander.

LS– We do a charter once a year for a camp up in New York. Teenagers from difficult areas spend a weekend at a retreat, to have a great time. They really see what everybody’s really like, all working together.

BA– I’d like to learn more about that, because where I’ve been describing orbital flight in the shuttle, the *Soyuz* and the *Shenzhou*, obviously this could be done by Branson’s Virgin Galactic in his improvements on *SpaceShipOne*. The model for all of it is exactly what you’re describing where we use aerospace or aircraft to bring together individuals from different parts of the Earth. I’d like to work with you and have your company become supporters of this very, very noble cause. It’s in the formative stages, but it’s going to require a long-term development and commitment and we need to maintain the interest right from the beginning. What you’re talking about can help that happen between now and when we can actually take people into orbit. ✕

On the Moon

