The short notes below by VNIIEF employees, lab-to-lab collaborators, are brought together under one topic "Not By Bread Alone...", or otherwise "Notes On the Margins of Collaboration"

By Georgy Skripka, VNIIEF

Over a number of years, joint musical concerts performed by amateur musicians from both collaborating parties enjoyed great popularity. Thus, during one of the visits to Sarov, the American team together with VNIIEF colleagues formed a musical ensemble comprised of a piano, flute, violin and a guitar. After a few brief rehearsals, they presented a performance in the House of Scientists. It was there again that we listened to the duet by a violinist D. Kochinas, a Brookhaven Laboratory employee, and a pianist Natalya Belova, a music teacher from Sarov.

Piano duets were also performed for the lab-to-lab collaborators – either by Lidia Ilkaeva and Natalya Belova or by Lidia Ilkaeva and Alexander Khlebnikov. David Curtis from Los Alamos was playing clarinet with a piano accompaniment by a Russian performer.

An amateur orchestra arranged by an interpreter from Scotland, also a member of our collaboration, was playing pieces of music for Russian guests when they were visiting the USA. At a dinner, during one of such visits, Russian and American participants spontaneously grouped into a terrific choir, which immediately found for itself accompanists in both teams and, as a result, both sides were teaching one another to sing their native songs.

It was with a solid and cheerful feast, with *banya* (Russian sauna) and sport competitions that the joint Russian-American team was spending its free evening at the summer house of one of VNIIEF administrators – Valery Punin. On the way back to the town, the bus with American guests made about 50 meters away from the summer house before it broke down – the fan belt tore apart. The driver happened to have a spare. It took about 10 minutes for two Russian men to replace it. Most of all, the Americans were impressed by the fact that the repair operation was performed by the chief engineer with his deputy in a prompt manner and without a second thought. In their case, the emergency service is to be called... and also without a second thought.

[A comment from Ron Augustson, who was in the broken bus: "One of the two repair men was no other than Georgy Skripka, the author of these notes, himself"]

It happened so, without any agreement, that two lab-to-lab collaborators – from Russia and the US – had their daughters getting married at the same time and their wedding ceremonies were held coincidently. Each wedding was followed by a traditional set of photographs. In a remarkable manner, and again without any preliminary agreements whatsoever, the photos happened to be in perfect match in terms of their scenarios. Both American and Russian set of photos featured the place of marriage registration, the teams of the bridesmaids girlfriends and the groomsmen, the moments the brides' bouquets being thrown and caught by the lucky girls. The photos showed the orchestras playing at the weddings, the first dance of newlyweds in both countries as well as the dance of their parents, the dances of Russian and American guests and, of course, the feast tables. We collaged them all together into a joint album with an emblem of wedding rings, handshake and national flags.

At a joint friendly dinner, an American colleague delivered a toast that is still in my memory. It sounded about like this: "It is of great importance that most of Americans and Russians have scales of values which pretty much coincide. They coincide, probably, more than with any other nations. What I mean here is – no matter, be it on the Columbia River with its tributaries or on the Moksha river tributaries, we teach our kids the same. We encourage them to be kind, to develop learning skills, to think creatively, to build up willpower, not to be lazy, go in for sports, and admonish them that any item taken is to be returned to where it belongs. Such coincidences are to be cherished". I should

explain here that at that time we were dealing with the issues of comparing the signatures of the radiation samples (or images) in sealed packages. The buzzing words in the air at that time were predominantly the notions of total coincidences or other close signatures. The toast hit the target.

The small teams of first Russians who visited the US and correspondingly of those Americans who visited Russia decided to formulate a collective impression of their first visit to the country. Out of the variety of items suggested by the participants, each team was to select the impressions predominantly mentioned. They agreed on the condition to be honest and not to have hard feelings – letting each side describe what it had encountered in particular.

Below are two answers to the question "Your first impression of America?"

- America is a festive country. It is either the holiday is tomorrow and the country is getting ready for it, or the holiday was held yesterday and the festive decorations have not yet been removed.
- A somewhat controversial institution of the American family: a caring attitude to little kids alongside with distancing from them at a later time; strong devoted families existing side by side with widely spread notions of "boy friends" and "girl friends" not in a civil marriage but rather just as "visiting friends" in most cases.

Here are two American answers. Please believe no preliminary intentional discussions had been made.

- Russia is a very harsh country with stern people and severe weather. [It couldn't be helped! American team got to Sarov for the first time into a snowy winter. With a similar question addressed to the team visiting Sarov for the first time in summer, mosquitoes came up front.]
- Russian people are fond of table feasts. They make a whole ceremony out of it accompanying it by toasts and abundance of alcohol. [Well, there is no way escaping that fact either the poll was held during a table feast.]

This episode took place at an early stage of collaboration, in the times when only a very few Americans had visited Russia and the wish to go to the legendary Arzamas-16 was tremendously great. At a dinner in Ron Augustson's home, the Russian team announced the condition that only the one who could deliver a toast and drink a shot of vodka, would be able to travel to Russia. The guests were notified of the Examination Board in the basement of the house starting its work on evaluating the applicants' readiness. You should have seen the number of American volunteers lined up in the basement eager to pronounce a toast and drink a shot of vodka in order to justify their entitlement to travel to Russia!

Quite a substantial VNIIEF team of fourteen people achieved fairly good results at PNNL during a work meeting with representatives of the US weapon laboratories. The best memories, however, remained of the excellently arranged leisure time activities after work during that visit.

- A fishing trip was organized for Russian guests on the Columbia river with two motor boats, one boat for reaching the destination, while the other was for the fishing process itself.
- On these motor boats, we covered the Columbia river locks and visited the underwater control station, which accounts and measures the size of fish going through the dam site. We were fortunate to watch a huge two-meter long sturgeon thoughtfully passing by. An American operator at the station called out to the Russian visitor who approached the viewing window first: "You are a lucky man! This fish is a rarity here. It came here to take a look at you!"

- Together with American colleagues, we held the Olympiad in five sport events volleyball, football, tennis, basketball and chess. Russian team looked rather praiseworthy in four of those, while in basketball we were truly regrettable. In all fairness, it must be said that our team had an ex-member of the Sarov all-star football team, a former region title-holder in table tennis and an advanced chess player. However, we learnt all that post factum after the Olympiad.
- We had a chance to visit a hockey match of local teams. The speaker announced of Russian guests present at the game, and the American audience welcomed us with even greater enthusiasm than their own hockey team. When the hockey match was over, its commentator approached us to inquire of our opinion about the skill of their local team.
- We were also taken to a movie theater. The film itself did not sink into my memory, but the perception of a movie theater stayed as of a place for mass popcorn consumption. Everyone around was munching noisily and throwing empty packets to the floor. They say it is not that way nowadays.
- We enjoyed riding water skis and got a chance of driving a motor boat.
- During a picnic on a river bank we were impressed by specially equipped recreation areas for those who come to spend time outdoors.

As a keepsake of the trip, we received mouse pads with a group photo of all the meeting participants.

American nature left lasting impressions after we encountered Geyser Basin, Grand Canyon and the Rio Grande Valley.

- One cannot but be astounded by an "Old Faithful Geyser", which erupts regularly with periodicity of 13-15 minutes and still unexpectedly. Each time it seems that the directionality diagram of its water bursts slightly differs. People who watch it try to get under its splashes allegedly, it benefits your health and promotes your longevity. Shallow lagoons with blue water and small geysers mesmerize you. It is impossible to predict where the next burst is going to happen even though it looks predictable.
- Reaching up to the sky, kilometers-long walls of Grand Canyon (a narrow crack in the earth with the observer in its bottom) will forever etch into your mind the thought of how small a grain of sand should a man be versus the dimensionless and majestic world he is trying to enslave. The Canyon walls have paths to climb but there are few who would reach at least half way. Its height (or is it its depth?) would take your breath away.
- The Rio Grande Valley leaves an impression that you have been to the olden times, where you met with heroes of Thomas Mayne Reid novels. Looks like nothing has changed since then. Just only the riverbed keeps creeping along though you would not notice it in a one-time visit. It feels as if the Headless Horseman has just disappeared in those moving bushes.

Many Americans drastically change their way of life when retired. They would acquire a trailer and travel around the country. Trailers are wheeled homes on the road. Such trailers, as a rule, have bicycles attached to the rear part of the vehicle to use them for short trips at temporary destinations. In great majority of places (motels, parks, national preserves and river banks) there are sites equipped with life-support necessities for these trailers, such as electrical power, hygiene-sanitary facilities, waste disposals and others provided for retired people on easy access terms. You can meet trailers in most exotic places of America.

One of Russian collaborators jokingly swore that in 15 minutes he would teach all American team to speak Russian. His recommendation was to answer any Russian question with the Russian word:

"Nu!" In Russian it may convey a wide spectrum of meanings, actually anything imaginable: *yes!*, *no!*, *probably!*, *don't know!*, *for sure!*, *undoubtedly!*, *who knows!*, etc. The joke was well received, made everyone laugh and seemed forgotten. Next morning to the Chairman's question if the meeting protocol was going to be signed the American team responded in chorus with Russian: "Nu!"

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The exotics of Las Vegas, a worldwide famous center of gambling industry and entertainment, got deeply stuck in the memory too. We all felt as if we were cased in a luxurious otherness. A lengthy moving pedestrian walkway was so unusual for us. All the ground (or entrance) floors of most of the hotels in the city are occupied by gigantic halls with roulette tables. Right here are buffets, cafes, restaurants. You name it – they have got everything in that city! Even the copy of the Great Pyramid of Cheops (inside of it entertainment and gambling centers are buzzing as well). They have an artificial bay with natural pirate and federal wooden ships, and you can watch their battle at certain periods in time. There is a huge territory with a Roman emperors' palace guarded by tall Praetorians in scarlet tunics.

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For many long years the mind was keeping the picture of an over-built Wall Street with its skyscrapers and billboards, of wide and perfectly asphalted avenues, of the Manhattan Island and the Statue of Liberty. We climbed up to the top of one of the World Trade Center buildings that would later be destroyed by terrorists. Those were the newest and tallest twin skyscrapers in New York at the time.

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The reception in Jerry and Cherry Hale's house impressed us by the elegance of table setting, thorough selection of courses and particularly wines. One of the Russian guests, considered to be a wine expert, wishing to flatter the patriotic American sentiments inquired whether it was a Californian wine served with meat. The response that came was quite unexpected. With a shade of soreness he was told: "That's real Bordeaux!" It became obvious that the family had some reservations about the domestic wine. We had to give some thought to our exalted attitude to Californian wines.

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A visit to Charlie and Nonna Bowman was memorable due to its musical content. On entering we were met with the sounds of "Heroic Symphony" by Russian composer, Alexander Borodin. Our quite knowledgeable answers to the questions on Borodin's education, on where and how he made his living somewhat surprised our kind host by the details provided. As far as we understood, the host was a keen lover and expert in music. He possessed a vast and varied collection of music. All evening we were enjoying classic music of most diverse genres and composers. In the absolute majority of cases, we correctly identified the names of musical pieces and composers, including Gershwin's suites and musicals. In short, we produced a worthy impression proving that Russian nuclear physicists do match their American colleagues in erudition, at least in the area of music.

By the end of the evening we were rewarded with a performance by a married couple of Charles Bowman, a Lab employee, and Nonna, a professional musician. We enjoyed the sounds of a few classical violin duets performed by them.

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A totally unexpected and thus an exceptionally enjoyable gift we received from an already retired LANL employee. Everyone, as he himself, called him Stretch – he was definitely over two meters tall. Stretch was a private pilot and owned a used single-engine airplane, which served for his regular

training flights. Stretch invited all our Russian delegation of five people to such training flight. Since the plane could accommodate only three passengers, the whole endeavor required two take-offs and two landings. Each flight lasted about 30-40 minutes and was truly unforgettable. Los Alamos is located at middle altitude of more than two thousand meters. It is surrounded by hills covered with pine forests. It was April, the hill tops were covered with snow, the sun was bright and the stretched vistas were glorious.

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There is a very beautiful and impressive annual holiday in the state of New Mexico – that is Balloon Fiesta with balloons extremely colorful, bright and coming in variety of shapes. Gas burners – the devices to inflate the balloons – were incredible. Some of them were "land-based", stationary deployed on the ground. Some were portable for on-board use to sustain the balloon inflation during the flight since the flight duration might last for as long as a 24-hour period. Whole families may be flying. Some of the families would specially convert their vehicle for this holiday to adapt it for transporting the equipment necessary for ballooning. And, of course, basically all balloons are equipped with navigation devices, some of which are specially designed to record the altitude.

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A delegation comprised of VNIIEF, VNIITF and ITEP (Institute for Theoretical and Experimental Physics, Moscow) specialists was accommodated in the private home of Dorothy Wilson. On getting acquainted, she introduced herself as Dee and asked us to call her particularly this way. All of our delegation developed the warmest and kindest relationship with Dee. She did her best to make our stay at her place most comfortable, while we most willingly assisted her in various household chores requiring male hands. Thus we repaired the system for filling the home pool with water.

While we were there, western Easter (not Orthodox) was celebrated. By the way, there are churches representing more than 25 religious confessions on the territory of Los Alamos and its suburb White Rock. It obviously testifies to the concept of American pluralism.

In connection with Easter, Dee decided to invite us to attend the church service in a protestant church to which she belonged. It should be said that in everyday life our American friends did not display their religious commitments.

The day before was very cheerful. Dee's three daughters came for the holiday with numerous grandkids. The kids were loudly singing songs, while one of the Russian guests (with a nice piano available in the house) to the best of his abilities was trying to provide music for them. Next morning, when everyone was dressed up and getting into the cars, the man playing the piano the day before suddenly asked Dee if the church would not fall apart when a communist entered it. Dee did not accept a joking tone and quite seriously inquired who the communist was. We could see the reaction that followed. On hearing that he was the one, it was like if not a catastrophic earthquake, then at least a severe hurricane swept inside her head. Astonishment on her face gave way to nearly horror. After a few seconds of agonizing speculations, her facial expression acquired its usual friendly look, and she pronounced a highly prominent phrase: "But you are Edward!" (that was the man's name).

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THERE ARE DOZENS OF SIMILAR NOTES, WHICH MIGHT ANIMATE THE BOOK.