

Simon Eidelman Aug.2, 1948 -June 28, 2021 In memory of a dear friend

E.Shuryak (In Confinement and hadronic structure, 2021)

I am deeply thankful to organizers who asked me to speak in his memory here in spite of the fact that I was his collaborator only long long time ago...

These days, when millions of families suffered losses, and "remembrance zooms" became a repeated custom, this event is one of many, tragic but unavoidable, sad stories. Simon had Covid at the end of 2020 and suffer a stroke six moths later...



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At zoom event for him June 30th, when the number of participants exceeded 250, the organizers start to worry what happens if it reaches 300, the official zoom limit. Many of the participants were speaking, from all corners of the globe, young and old. Surprisingly, all claimed that Simon was their close personal friend, not just a colleague.

Senya was proclaimed not just being a champion in publications/citations but a "champion of friendship".

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The year was 1963, in Odessa. I was (I hope) a normal kid going through normal school and then was moving to the 9th grade in a then-new "math-oriented" school. Here I met Senya Eidelman and also Viktor Krasnov. Two weeks after the beginning of school year, I knew I have two friends for life.

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Few months later Yura (Senya's older brother) send him problems one may as well solve them. Three of us were meeting in the evening and we added that three of us did it together. to summer school in Novosibirsk. But we did get the invitations.

- for Siberian Math Olympiad. None of us had math inclinations, but if there are problems,
- debated how to do it. After we had solutions, it was just natural to send them at the addr
 - Ve of course realized it was against the rules and not expected to be invited





Needless to say, we were about 15 and never went anywhere without parents, especially by thousands of miles to Siberia, so it was a big adventure. Here are parents putting us into notorious train Odessa-Novosibirsk, an ideally suited direct train, which however was slow and took 96 hours (4 days and 4 nights). It was used by us regularly since.



Senva and his parents are at the center. On the right is Viktor, with his mother giving the last instructions. we were going for two weeks (Summer school) none of the three returned to Odessa (other than on vocations)

Simon remained in Siberia till the end of his life





As I learned much later, one of fathers of Akademgorodok, Budker, asked a famous question: "Why only a summer school? Let us make a winter one", to (very young) University.

Senya is not seen very well on this photo, but I show it because of his mother Clara, coming to see how we are doing in Siberia...



we wanted to learn many things beyond University physics. Two occasions related with languages. Going through "aspirantura" (graduate school) one needs to pass en exam on foreign language. Normally it is done at the end, but few of us pass English exam right at the beginning. It might be the end of it, but it was not. Senya suggested to study French. We came as a group to office chair, and, to her surprise, announced, that while we fulfilled our obligation by passing an exam, they still need to make good on their obligation to teach us a foreign language. We formed a group wanted to learn French. We even insisted that, due to time limitation, it would be not so much French language by itself, but "differences between French and English". Stunned department head were able to find a brilliant philologist who new both and was willing to do this unusual course. Another event was to get trained as "synchronous translators", organized via "English club" of Academgorodok. (In late years Simon became its president, I was told)



Budker Institute for Nuclear Physics

Simon joined experimntal group which studied hadron production at electron-positron collider VEPP-2 and got his Ph.D. on it in 1975



Should I remind October 1974, discovery of J/psi in BNL, then SLAC, then Frascatti VEPP-4 had the energy and was working on luminosity: nobody knew that there is resonance cross section orders of magnitude larger...

here is Budker himself, from 1960' to late 70's his undegrad physics started with space-time and Einstein...









So, what made Simon Eidelman so special, to dedicate this conference to his memory?

Well, for last decades he was traveling the globe tirelessly, participating in experiments at b-factory in Japan, LHCb at CERN, PFG at Berkeley and QWG

it was always a kind of a miracle happening: he was coming, told by local leaders what is the current difficulty, which some subgroup is experiencing, joined with a bunch of old or young colleagues, worked with them though the problem days and nights, till its satisfactory concusion

Apart of "million mile" status on airlines, he got no particular benefits from all this work. Being a typical perfectionist, he just needed all be done as it should

Friends (and I guess the family) asked him to stop it, spend less time in the plane, hotels and guesthouses...



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> Here Simon is shown visting Marek Karliner, I guess working on higher quarkonia and X,Y,Z... (photo from Marek)

Apart of "million m Being a t Friends (and I gues



Simon was a key member of several major experimental collaborations: KEDR, CMD-2 and CMD-3 at Novosibirsk contribution by Simon.)

At Belle he served for many years as chair of the publication council The comparison of g-2/EDM data to Standard Model

with the GlueX experimental setup for strange hadron spectroscopy.

(in 1974, Simon moved to experiments with the OLYA detector at the upgraded collider VEPP-2M, where a comprehensive study of electron-positron annihilation into hadrons was performed up to 1.4 GeV. Later this detector was moved to VEPP-4 collider, where high precision measurements of the J/ ψ and ψ ' masses where performed with a large

- at J-PARC. he joined and contributed to the KLF proposal at JLab to build a secondary beam of neutral kaons to be use



Quarkonium Working Group

"He was a good part of the expertise of the QWG. Withoit him we will feel that there is no QWG." Nora Brambilla, private communication

Simon was a member of the Quarkonium Working Group (QWG) from its founding and was a convener of the subgroup on Standard Model Measurements for many years. Attendees of the QWG Workshops remember well his lucid presentations, his great enthusiasm for research, and his keen scientific insights. Moreover, he was greatly appreciated for his wisdom and calm counsel during intense discussions. He was lead editor of one of the most impactful documents on quarkonium physics as well as of another very influential paper on Strong QCD, always in collaboration between theorists and experimentalists. Simon has been a great source of inspiration and a bright guide for the QWG" **Obituary written for "CERN Courier"**

the field exploded lately, with X,Y,Z states and more...

we all know and use many times the ever-present volumous PDG editions, now traveling from one journal to another. PDG has about 2000 citations per year

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 - Physics is an experimental sience. We rely on numbers (and error bars) coming from experiments. Appearance of large-size collaborations only made a need in responsive and experience senior physicist to understand deeply the issues and the real error bars.
 - That was Senya's role

The Budker Institute of Nuclear Physics and the Novosibirsk State University co-hosted the first international school on the muon's dipole moments and hadronic effects in Novosibirsk, About 40 researchers from 20 institutions in Austria, China, Germany , Italy, Japan, Russia and South Korea ... For more than 10 years, the large excess (more than 3.5 standard deviations) of the muon's anomalous magnetic moment over the Standard Model prediction measured by the muon g-2 experiment at the Brookhaven National Laboratory (BNL and now FNAL) has caused great interest in the high-energy-physics community. ..

The muon g-2 collaboration has stirred numerous discussions ...

Second school to happen soon has already 120 registrations, I was told

whether the excess could be due to new physics is of course very important: see the special session But in any case we do need to know what SM predicts, for which one need to critically look at all experiments on hadronic polarization tensor and light-on-light scattering

Muon g-2 fans gather in Novosibirsk



from Simon's article in CERN COURIER

Here is a photo of Simon and his wife Lyuda during "Confinement..." inThessaloniki in an excursion to another "summer school", a place of the school of Aristotle, in which Alexander the Great was a student .





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It just left a void which cannot be filled





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