

April 13, 1961

Top Secret Report of Major Yuri Gagarin

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Full Report of Yury Gagarin to the State Commission after his mission, on April 13, 1961.

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**Ответы Ю. А. Гагарина на вопросы на заседании
Государственной комиссии после космического полета***

13 апреля 1961 г.
СОВ. СЕКРЕТНО
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ВОПРОСЫ к тов. Ю. А. ГАГАРИНУ
ОТВЕТЫ тов. Ю. А. ГАГАРИНА
(на Государственной комиссии 13.4.61 г.)

- Вопрос:** Когда корабль был в тени Земли и была включена система ориентации, было ли видно движение звезд от прибора к ногам? Это можно было заметить?
- Ответ:** Это именно так и было.
- Вопрос:** Слышна ли была работа клапанов системы ориентации?
- Ответ:** Не было слышно: ни работы клапанов, ни работы сопел ориентации.
- Вопрос:** Хорошо ли можно было понимать, ощущать нормальную работу ориентации при падении давления, если не было слышно работы клапанов и сопел ориентации?
- Ответ:** Так как работали обе системы, то такой критерий, как падение давления, не могло характеризовать правильную работу ориентации. И у меня возникло сомнение, правильно ли она работает.
- Вопрос:** Легко ли ориентироваться по «Взору»?
- Ответ:** Я считаю, что по «Взору» легко ориентироваться, вполне можно сориентироваться и над водой, и над сушей.
- Вопрос:** С теневой стороны Земли есть ли возможность наблюдать поверхность через «Взор» или она сливается и различить невозможно?
- Ответ:** Над теневой поверхностью Земли я Землю не видел: ни горизонта, ни Земли, потому что такого критерия, к чему бы привязаться, не было. Горизонт виден в искаженном виде. К тому же, резкого перехода от черноты Земли к черному небу не видно. Только звезды, и то трудно определить какие.
- Вопрос:** Как работали обычные часы с часовым механизмом, как бортовые, так и наручные?
- Ответ:** Часы работали отлично, нормально, как поставил, так и до сих пор идут. Есть еще одни часы у ПОПОВИЧА Павла Романовича.
- Вопрос:** Пользовались ли Вы бортовой таблицей или памяткой и считаете ли Вы ее полезной?

* Документ является приложением к докладу Ю. А. Гагарина на заседании Государственной комиссии после космического полета.

- Ответ: Считаю, что она нужна. Не стоит думать и вспоминать, так как там приходится производить и запись на магнитофон, и доклады.
- Вопрос: Было разработано нами значительное количество инструкций по связи, инструкции космонавту. В результате Вашего доклада у меня складывается впечатление, что в основном эти инструкции разработаны правильно. Так я понял?
- Ответ: Да, я считаю, что инструкции, которые мы разработали, очень правильны. Могут быть очень малые изменения, которые надо будет внести. И те положения, которые мы высказывали, все они оправдались. Я считаю, что инструкции правильно написаны, все положения этих инструкций отвечают тому, что я наблюдал в работе, отвечают работе системы этого корабля.
- Вопрос: Не попадало ли Солнце в кольцо «Взора» на активном участке?
- Ответ: На активном участке в кольцо «Взора» не попадало. По «взору» была видна Земля, Солнце было спереди, справа, выше. И затем оно перемещалось вдоль иллюминатора, налево, назад.
- Вопрос: Я хотел бы, чтобы Вы несколько подробно передали нам ощущения невесомости, в чем была разница?
- Ответ: Разница была в том, что когда человек находится в таком взвешенном состоянии, что он не сидит в кресле, не лежишь на спине, а получается такое чувство, ощущение, что как будто ты лежишь на груди. Координация движения полностью сохранилась. Я кушал, пил воду, писал, вел доклад, работал телеграфным ключом. Так что, по-моему, на координацию движения, на работоспособность та продолжительность невесомости, которую я испытал, не оказывает влияния, не затрудняет.
- Вопрос: Скажите, пожалуйста, в отношении изменения климатических условий, что Вам удалось заметить?
- Ответ: Я хотел об этом сообщить специально и поэтому в своем докладе выпустил. В корабле за время пребывания к концу отработки тормозной двигательной установки повысилась влажность воздуха с 65% до 71%, по прибору стрелки пошли к красной черте, и несколько был виден кончик этой черты. Температура с 19 градусов, как я сел в корабль, повысилась до 21–22 градусов по прибору. Давление в приборном отсеке, как я сел, было 1,1 атм. и к моменту запуска ТДУ давление в отсеке стало 1,25 атм.
- Вопрос: Пробовали ли Вы открыть иллюминатор первого люка?
- Ответ: Иллюминатор я пробовал открыть, когда был еще на старте, но я его не достал, он был закрыт все время.
- Вопрос: Мне хотелось бы знать следующее: переход от повышенной гравитации (в состоянии, когда действовали перегрузки) к состоянию невесомости. Вы ощутили его?

- Ответ: Ощутил. Перегрузка при работе третьей ступени была 0,3–0,4, всего-навсего в наших земных условиях, полвеса. И переход этот к невесомости был очень плавный. Разделение корабля и конец воздействия этого ускорения я почувствовал, но никакого затруднения не было.
- Вопрос: А переход от невесомости к повышенной весомости Вы ощутили?
- Ответ: Переход от невесомости к повышению гравитации я ощутил, очень плавный. Очень плавно, очень медленно нарастают перегрузки. Особенно до перегрузки единица, где она нарастает приблизительно в течение 2-х минут. И примерно в первой стадии спуска идет несколько быстрее рост перегрузки, а затем возникает быстро пик примерно с перегрузкой 6–7, а дальше до 10 и несколько больше. Она довольно-таки медленно повышалась, а потом быстрый спад ее.
- Вопрос: В условиях невесомости Вы пробовали делать резкие движения головой, когда работали там?
- Ответ: Резкие движения головой делать в этом скафандре просто невозможно, так как голова находится внутри шлема. А так пробовал резко изгибаться. Иллюзий не было. Все крутится, вращается.
- Вопрос: Достаточно ли обзора во всей системе иллюминаторов и всего, что есть, для того чтобы сознательно наблюдать местные предметы, и вполне определено, или этого не хватает?
- Ответ: На этот вопрос можно ответить, что та система, через которую осуществляется обзор, она, конечно, для таких целей не достаточна, так как угол зрения «взора» 7 градусов. А через правый иллюминатор небольшой угол зрения, так как он находится далеко, и если «взор» или этот иллюминатор направлен строго на какой-то участок Земли перпендикулярно к нему, то «привязать» местность очень трудно, так как перемещение этой Земли большое, и достаточно сказать, что от одного конца «взора» до второго происходит за 5 сек. Если же наблюдение осуществляется под углом, т.е. когда корабль как бы на боку лежит, то видна большая, обширная площадь, и тут можно «привязаться».
- Вопрос: Скажите, пожалуйста, какой участок активного полета Вы считаете наиболее спокойным с точки зрения вибрационных нагрузок на организм?
- Ответ: С точки зрения вибрационных нагрузок на организм это примерно так: до 70 сек. частота больше, амплитуда меньше, а после 70 сек., примерно до половины работы второй ступени, наоборот, частота меньше, амплитуда больше.
- Вопрос: Какой участок выведения Вы считаете наиболее трудным для человеческого организма?

- Ответ: Наиболее трудным для человеческого организма я считаю участок в конце, во второй половине работы первой ступени и во второй половине работы второй ступени, когда значительная перегрузка. И эта вибрация низкой частоты и со значительной амплитудой.
- Вопрос: Вот включались и выключались по программе телевизионные камеры и менялось освещение. Вы наблюдали это явление?
- Ответ: Я наблюдал это явление. Но я наблюдал, когда включили свет телевидения. И так и не выключили, пока я не ушел в тень, там я выключил сам, когда вошел в тень. Мне просто мешал этот свет. Я выключил его, а потом выключил свет во всем корабле.
- Вопрос: У вас были некоторые перерывы по связи. Какая связь лучше — по УКВ или КВ?
- Ответ: Ну, трудно мне судить о системах работы связи УКВ и КВ. Я только могу сказать, что УКВ-связь была очень надежная и очень хорошая от старта, при проходе над Колпашевым и над Елизово. И очень плохая связь была на коротких волнах до тех пор, пока я не пришел к апогею. Трудно судить какая связь лучше, но УКВ-связь работала хорошо: и я слышал хорошо и меня слышали хорошо.
- Вопрос: После выключения ТДУ какое время прохождения звезд через «взор» и через другие иллюминаторы?
- Ответ: После выключения ТДУ через «Взор» звезды буквально мелькали в виде полосочек. Очень быстрое перемещение.
- Вопрос: Какой, примерно, период появления Земли во «взоре»?
- Ответ: Период примерно секунд около 15.
- Вопрос: Было ли ослабление притяга после выхода на орбиту?
- Ответ: После выхода на орбиту притяг был ослаблен.
- Вопрос: Пытались садиться?
- Ответ: Я садился. Брался за одну, за другую ручку и садился. Я пытался братья за приемник, но настроить не мог, потому что большой шум в кабине и динамик не слышно. Потом после прохождения второй команды я притянул притяг и подтяг. И после отделения меня резко притянуло ремнями. В шлеме произошел выстрел на закрытие иллюминатора шлема.
- Вопрос: Вот Вы сказали о том, что угловые колебания чувствовали, а сравните Ваши ощущения, допустим, с полетом на самолете в различных условиях?
- Ответ: Критерий оценки колебаний такой: несмотря на то, что во «взоре» горизонт полностью не виден и он искажен, боковые колебания можно было определить. Во «Взоре» Земля идет строго по рискам, и боковые отклонения очень заметны. По тангажу отклонения очень трудно определить.

- Вопрос: Есть ли смысл детально, пока у Вас еще все свежо в памяти, рассмотреть осциллограммы, сличить собственные ощущения с ними?
- Ответ: Я не знаю, что я могу взять из этих осциллограмм, я могу только судить о собственных ощущениях. Мне помнится все то, что я доложил, и оно, наверное, надолго запомнится. Может быть, и есть смысл посмотреть, я не знаю.
- Вопрос: Какие ощущения при глотании пищи и воды в состоянии невесомости, отличаются ли они от земных?
- Ответ: При глотании воды и пищи особых ощущений я никаких не чувствовал, получается то же самое. Затруднений я никаких при глотании не ощущал. Что на Земле, то и там происходит: пища проходит через гортань в желудок и так далее.
- Вопрос: Во время спуска, когда Вы видели багровый свет, были ли какие изменения воздуха с точки зрения запаха, изменялось ли качество воздуха?
- Ответ: Я на этот вопрос сразу не ответил, потому что боялся быть необъективным. Мне кажется, что во время этих максимальных тепловых потоков появляется какой-то запах, воздух какой-то необычный, как гарь. И гарью нельзя назвать. Но запах, привкус какой-то был. Потом, когда прошли эти тепловые потоки, запах немного изменился. Кислород тот же самый. Концентрация кислорода та же самая. Может быть, это и необъективно, я не утверждаю.
- Вопрос: Падение давления чувствовалось после разделения?
- Ответ: Я не чувствовал падения давления, тут и так организм напряжен. То смотришь максимально тепловые потоки, то идет горизонт, потом перегрузки действуют, падение давления происходит совершенно незаметно.
- Вопрос: Вот в свете приобретенного Вами опыта по влиянию длительной невесомости на организм, считаете ли Вы возможным более длительное пребывание в состоянии невесомости для космонавта, ни разу еще не летавшего по орбите, т.е. неориентированного?
- Ответ: Мне кажется, по моим собственным ощущениям, полет в условиях невесомости может быть и более длительным по времени, но чтобы человек в этом полете был занят, вел какую-то активную работу и чтобы подвесная система была в более свободном положении, чтобы у человека не было ощущения, что он все время висит на лямках. И человек, по моему мнению, может находиться длительное время. Мне кажется, сутки выдержит.
- Вопрос: Вы заметили повышение температуры в процессе полета?
- Ответ: Повышение температуры с 19 град. до 21-22 град. по стрелке прибора, а так, физически, я не почувствовал, вентиляция хорошая.

- Вопрос: А вентилятор не очень гудит?
- Ответ: Вентилятор очень гудит, мешает.
- Вопрос: Нужен ли вам скафандр?
- Ответ: Скафандр в этом полете прошел хорошо. Я бы мог обойтись и без скафандра. А если что произойдет? С ним чувствуешь себя хуже, но при аварийном случае он, конечно, необходим. Но его нужно доработать. За все время на всех кораблях не было ни одного случая разгерметизации.
- Вопрос: Вопрос в отношении ручного управления. Как Вы считаете, как пилот-космонавт оцениваете: была бы у вас возможность вручную справиться, я имею в виду не моральный фактор, а приборы?
- Ответ: Я считаю, что справлюсь в ручную с управлением и вполне мог бы произвести спуск. Исходя из чего? Самочувствие мое было очень хорошее, реакция хорошая, работоспособность организма в это время была также хорошей, органы управления кораблем действовали хорошо, схемы отработаны хорошо и при управлении работали хорошо, ориентация по «Взору» осуществляется, я считаю, что можно очень надежно осуществить эту ориентацию. Я говорил в докладе, что осуществить эту ориентацию можно и над морем, и над сушей. Даже в моем поле зрения, когда вписывается искаженный горизонт во внешнее кольцо «Взора», видно хорошо. Ориентировать корабль можно хорошо по направлению движения земных ориентиров в системе «Взор».
- Вопрос: При торможении на участке работы ТДУ бежит Земля от ног к приборам, или Вы не обратили на это внимание?
- Ответ: Земля несколько двигалась не от ног к приборам, а от ног налево, в угол.
- Вопрос: Под каким углом?
- Ответ: Она двигалась под углом градусов около 30. Вначале ориентации, когда осуществлялось управление автоматически, Солнце было низко над горизонтом, то ориентация была точна, как при ручном управлении. Самое главное, что Земля двигалась точно по рискам в самом начале, когда только сориентировался.
- Вопрос: Все предметы двигались по рискам?
- Ответ: Все предметы двигались строго по рискам.
- Вопрос: Направление Вы сможете выбрать, а насколько хорошо Вы по этому «Взору» можете ориентироваться, правильно место выбрать?
- Ответ: Правильность места можно выбрать по глобусу, исходя из разрешающих способностей глобуса. Примерно километров 300 можно попасть.
- Вопрос: А если бы у вас был фотоаппарат, вы бы смогли сфотографировать?

Ответ: Вполне мог бы заснять, если бы цветная пленка была, вот этот голубой ореол вокруг Земли можно было заснять, потом при выходе из тени оранжевый цвет, очень красивый, поворот Земли, когда работала 3-я ступень и дальше, очень наглядные фотографии были бы. На Земле таких цветов не удавалось наблюдать.

Вопрос: А в отношении яркой окраски?

Ответ: Мне показалась только серой водная поверхность, а поверхность Земли обычная, лес видно зеленым, как тайга.

Вопрос: Как Вы прикидываете, какие минимальные размеры предметов Вы надежно можете различить своим глазом без прибора, без фотографий — смотришь и видишь: вот дорога идет, видно ее, а тропинку не видно, идет поезд, видно, а автомобиль, например, не видно?

Ответ: Ну, поездов я не видел, автомобилей тоже. Но вот, реки и притоки рек видно. Обычные пашни, они видны как квадраты, вспаханные или неспаханные. Это видно было с высоты, когда работала третья ступень и конец третьей ступени.

Вопрос: Вот Вы летите над городом, можно нарисовать схему улиц?

Ответ: Над городами я не пролетал, и таких, наверное, городов не было. Мне кажется, что предметы размером метров в сто можно наблюдать. Вот острова, потом притоки этих рек больших, они, по-моему, не такие большие, эти притоки, а их видно хорошо.

Вопрос: Скажите, во время работы ТДУ как сохранялась ориентация?

Ответ: Во время работы ТДУ ориентация сохранялась хорошо, вращение прекратилось, все замерло до конца работы.

Вопрос: Вы рассказывали о том, что Вы чувствовали, как колеблется ракета до старта. Вас качнуло два или три раза?

Ответ: Мне, конечно, трудно судить, так как я не видел, что отходит. До старта так раза два-три качнуло, незначительно, так чуть-чуть, но слышно, когда фермы уходят.

Вопрос: Скажите Ваше мнение о характере работы двигателя третьей ступени, о вибрации корабля: были колебания или нет?

Ответ: Третья ступень работала хорошо, вибрации были. Частота вибрации высокая. Амплитуда вибрации небольшая. Характер вибрации я заметил, именно характер вибрации третьей ступени.

Вопросы и ответы записаны со стенографического отчета и обработаны.

Генерал-майор авиации

ГОРЕГЛЯД

АП РФ. Ф. 3. Оп. 47. Д. 278. Л. 165–174. Подлинник. Подпись — автограф.

April 13, 1961

TOP SECRET

Copy № 1

The last pre-launch preparation was conducted in the morning.^[1] It began with an inspection of the state of my health and a determination of the reliability of the sensors which were attached the previous evening for recording physiological functions. Then a recording of physiological functions was made on a medical apparatus and a medical examination was conducted, and everything went well. In the opinion of the doctors who viewed and recorded the data of [my] organism the state of my health is good. I myself felt well since I rested and had a good night's sleep before this.

After this [came] the putting on of the suit by the flight crew. They put the spacesuit on me the right way, adjusted it, and was pressurized. Then they put me in a technological seat, tested how the external system rested on the suit, the ventilation of the suit, and the communications were checked. Everything worked well. Then came the departure for the launch site on a bus. I, along with my cosmonaut friends (my deputy was German Stepanovich TITOV) and the chiefs, went to the launch [site]. At the launch [site] I was taken to the craft's cabin on an elevator. Seating on the chair was done by the flight crew which was headed by Oleg Genrikhovich IVANOVSKIY. All the attachments and connections were done well. The inspection of the equipment also went well. Communications were bi-directional and stable. The communications were good.

[My] mood at this time was good and I felt well. I reported about the inspection of the equipment, readiness for launch, and how I felt. The whole time there were uninterrupted communications.

Then hatch № 1 was closed. I heard how they closed it and how the wrenches clanked. Then the hatch began to open again. I looked and they had removed the hatch. I understood that something was wrong. Sergey Pavlovich [Korolev] said to me, "Don't worry, one contact isn't tightened. Everything will be normal." The panels on which the limit switches were installed were soon rearranged by the crew. Everything was put right and the hatch cover was closed. Everything was normal.

One-hour readiness was announced, [then] 30 minutes, and [my] physiological functions were recorded. In general, everything went well. I felt well and my mood was also good.

Then 15-minute readiness was announced. I put on the pressure gloves. I closed the helmet. Five-minute readiness. One-minute readiness and launch. Until this it was audible how the arms were receding. This felt like soft shocks along the frame of the rocket. The rocket sort of rocked a little.

Then the purging began. I heard how the valves operated. Then the ignition occurred. The engines reached the preliminary stage. A light noise appeared. Then the noise increased at an intermediate stage. When the engines reached the main, primary stage the noise increased, but it was not so sharp which would deafen [me] and interfere with work. The noise was about that in an aircraft. I was ready for much greater noise. Then the rocket rose from its place softly and gradually. I didn't even notice when it went. Then I felt how a slight tremor went through the frame of the rocket. The nature of the vibration was that the frequency was large and the amplitude was small.

I prepared to eject. I was sitting and observing the process of liftoff. I heard how Sergey Pavlovich report that we were 70 seconds into the flight. In the area of 70 seconds the nature of the vibration changes gradually. The frequency of the vibration falls, but the amplitude grows. A sort of shaking appears. Then this shaking gradually grows softer and by the end of the operation of the first stage the vibration becomes the same as at the beginning of its operation. The G-forces grew gradually, but they are completely tolerable like in ordinary aircraft. Approximately five G's. I made reports and conducted communication with the launch site all the time with this G-force. It was somewhat difficult to talk since all the muscles of [my] face were tightened. I made somewhat of an effort. Then the G-forces began to increase and reached their peak and began to gradually diminish. Then I felt a sharp decline of the G-forces. The sensation was like something immediately being torn away from the rocket. It felt something like a pop. The noise fell sharply when this was happening. [It felt] like a state of weightlessness suddenly appeared, although at this time the G-force was approximately equal to one. Then the G-force again began to climb. It began to press [me] to the seat, and the noise level was considerably less. At second 150 the fairing separated. A jolt and a pop occurred. One half of the fairing was right up against the Vzor. My light filter of the Vzor was closed, but the shutter was open. The fairing slowly moved away from the Vzor, until it was behind the rocket.

At this time the Earth was very easily visible in the Vzor. Coincidentally, there were just no clouds. I saw terrain folds and a somewhat mountainous region. A forest, rivers, and ravines were visible. I could not lock onto what I was seeing since there was very little territory in the Vzor. I think the Ob' or the Irtysh [rivers] were there, but I could see that there was a big river and islands in it. One could see everything. I reported about this.

When the rocket was going one could observe through the Vzor that it was somewhat oscillating along the longitudinal axis around the roll, but the oscillations were insignificant. The rocket was sort of alive.

By the end of the operation of the first stage, when the nose fairing flew off, the horizon in the Vzor was not quite up to the top edge. The rocket was travelling with some angle of pitch. Then by the end of the operation of the second stage it laid along the horizon and was even somewhat below the horizon. There was some small gap in the Vzor.

At second 211 the G-forces began to grow again. The second stage shut down about the same as the first. When it happened the same sharp drop of G-forces and lowering of noise occurred, and the same feeling of weightlessness.

The weightlessness was about 10-15 seconds until the third stage ignited.

Then I heard a muffled pop, and the third stage ignited. It worked very smoothly. The rocket sort of came up and gently led everything from zero.

The G-forces very gradually began to appear. Then in the Vzor the horizon occupied all its ring. The pitch angle began to increase, and by the end of the operation of the third stage only about half of the outer ring of the Vzor was occupied by the horizon. Then I observed, transmitted, reported, saw cloudiness and the shadow of clouds on the Earth. The Earth was very visible through the Vzor. Objects on the Earth were very distinguishable. The shutdown of the third stage was sharp. The G-forces grew somewhat and I felt a sharp pop. Separation occurred after about 10 seconds. I felt a jolt when this happened. The craft began to slowly rotate.

Then the Earth began to go to the left, up, and then to the right, and down. The rotation was easily visible through the Vzor. I saw the horizon, stars, and the sky. The

sky was the blackest black. The magnitude of the stars and their brightness were somewhat clearer on this black background, and their speed of movement in the Vzor and in the right porthole was great. A very beautiful horizon was visible, as was the roundness of the Earth. The horizon had a beautiful light-blue color. The very surface of the Earth had a tender light-blue color, gradually darkening and shifting into a violet shade which gradually transitioned to a black color.

I maintained stable communications with Kolpashevo, Zarya-2, at this time.

Communications were normal during the overflight of Yelizovo. I repeated my reports several times. As soon as separation occurred cycle № 1 immediately turned on, the PKRS [pribor kontrolya rezhima spuska or "descent regime monitoring device"], the moving pointer [podvizhnyy indeks], and the clock started. Communications with Yelizovo halted when it was about 30 degrees north latitude on the globus [automatic ground position indicator]. I made a report on KV [HF] right after [my] report via UKV [VHF]. But I did not receive confirmation of reports and commands from anyone via KV at this time. There were no communications. At about 30 degrees north latitude I heard the "Amur waves" which Khabarovsk was transmitting. Against this background I heard the telegraph callsigns VSN, of Vesna. At this time I again began communications with Vesna, but no one responded. I made entries of [my] observations in the flight log.

When flying over the sea its surface seemed gray, and not light blue. The surface was uneven, like in the form of sand dunes in photographs. It seemed to me that it was completely possible for one to get your bearings over the sea. One can navigate, lock on to the terrain, and orient the craft so that the braking unit can be turned on.

I made the reports in accordance with the assignment in telegraph and telephone modes. I took water and food. I took the water and food normally; it was possible to do that. I did not feel any physiological difficulties in doing this. The sensation of weightlessness was somewhat unusual compared to ground conditions. Here a sensation arose like hanging horizontally on belts, as if in a suspended state. Evidently, the tightly-fitted harness system exerts pressure on the rib cage, and therefore creates the impression that you're hanging. Then you become accustomed and adapt to this. There were no bad sensations.

I made entries in the flight log, reports, and operated the [Morse] telegraph key. When I took food, drank water, let the tablet go and it "floated" in front of me with the pencil. Then I needed to write the next report. I took the tablet and the pencil was not in place. It had flown off somewhere. The handle was attached to the pencil by a screw, but evidently it needed to be glued or screwed in tighter. This screw was unscrewed and the pencil flew off. I folded the flight log and put [it] in [my] pocket. It was not useful anyway, there was nothing to write with.

I was in the Earth's shadow at this time, and I was making tape recordings all the time before entering the Earth's shadow. All the tape ran out before entering the Earth's shadow and the tape recorder did not work.

I decided to rewind the tape to make further recordings. I switched to manual operation and rewound [it]. In my opinion, I did not rewind it to the end. And then, when I was making reports, I made the recording to the tape recorder manually since in automatic operation the tape recorder was working almost non-stop and, naturally, much tape was wasted. This is caused by the high noise level in the cabin.

I entered the Earth's shadow before this. The entry into the Earth's shadow was very sharp. Before this at times I observed intense light through the illuminator. I had to turn away from it or hide so that the light did not hit my eyes. Then I saw in one

porthole that the horizon was not visible. It was dark. In the other (Vzor), it was also dark. I was thinking, what is this? I noticed based on the time that it was connected with the entry into the shadow.

At this time the craft was rotating, about two or three degrees per second. The horizon and the Earth were not visible, nor were the stars. But then I realized that the porthole was apparently facing the Earth. When the Vzor and porthole were facing the sky the stars were visible against the black background. Sometimes two or three stars of some constellations were in the porthole. But it was hard to identify the constellations because not all the constellation fit in in the porthole. The solar orientation system was turned on, which I reported via KV [HF] and telegraph.

I began to use the air. During the operation of the solar orientation the air was used from both systems at the same time. By the time I came out of the shadow the pressure in the orientation system was about 150-152 atmospheres. I felt that when the orientation system was turned on the angular displacement of the craft was changed and it became very slow, almost imperceptible. I made a report via KV [HF] at this time and via the Signal system in telegraph mode.

When approaching about 40 degrees southern latitude I did not hear the Earth. At about 40-45 [degrees] southern latitude music and callsigns became weakly audible. I was called on the telephone: "Kedr, I am Vesna" and they said something more but I could not make out the rest of the words. The callsigns were repeated three times. I immediately turned on the transmitter and began to send, "How do you hear me? Come in." The closer I was approaching the apogee the more the audibility improved. About when I passing Cape Horn (at apogee) I received the next report. They told me that they understood me and I understood this very well. They told me that the craft was travelling correctly, the orbit was the proper one, and all systems were operating normally. I continued the reports accordingly.

Before exiting the shadow I closely watched in the porthole of the Vzor which was at an angle to the horizon. The horizon was very visible. Along the horizon itself I observed an iridescent orange band reminiscent of the color of the suit. Then the coloring somewhat darkened and transitioned to rainbow colors and then to a light-blue color, and the light blue turned to black. Completely black. At this time the pressure in the orientation systems began to gradually fall. I felt a more regulated movement of the object along the pitch. Then the craft began to yaw. I understood that the Sun was "was being corralled" into the central sensor by the solar orientation system. Soon the craft took on a stable initial position for descent. The TDU was directed to the Sun and quite steadily. The orientation through the Vzor was very good at this time. In the outer ring the entire horizon was inscribed absolutely evenly. The objects visible to me moved strictly according to the pointers of the Vzor since, as is needed to accomplish orientation manually, the Earth then began to gradually go to the left corner, ahead (from the legs).

I made reports at this time. The pressure in the orientation system gradually fell and it was about 110 atmospheres by the moment the TDU was started. I made entries in the tape recorder, reports by telegraph and telephone and via KV [HF]. The KV [HF] communications were good at this time. Obviously the Moscow radio stations were working with me.

The first command was passed at minute 56. I immediately reported about this. The orientation was good, the craft had a roll rotation, but very little. During the time the craft left the shadow and until the TDU switched on it turned by about 30 degrees. Possibly, even somewhat less. Then the second command came. When this happened I again made a report by telephone and telegraph. I noted the pressure in the TDU bottle, the pressure in the orientation system, the readings of all the instruments, the time of the passage of the command, and entered it all on the tape recorder. I

prepared for descent. I closed the right porthole. I tightened the belts, closed the pressure helmet, and switched the lighting to work lighting. Then came the third command at exactly the set time. As soon as the light went out while the third command was being passed I started to observe the pressure in the TDU and in the orientation system.

It began to sharply fall from 320 atmospheres. The instrument indicator was moving toward a lowering of pressure. I felt the TDU start working. A small humming and noise was felt through the frame. I noted down the time that the TDU turned on. I set the stopwatch to zero before this. The TDU worked well. It switched on sharply. The G-forces increased somewhat, and then weightlessness appeared again. At this moment the arrows in the automatic orientation system and the TDU bottle jumped right to zero. The time of the operation of the TDU was exactly 40 seconds. During this period the following happened. As soon as the TDU switched off a sharp jolt occurred and the craft began to rotate around its axes with a very great speed. The Earth in the Vzor passed from above right, down and to the left. The speed of rotation was about 30 degrees per second, no less. A "corps de ballet" occurred: head-legs, head-legs with a very great speed of rotation. Everything spun. Now I saw Africa (it occurred over Africa), now the horizon, now the sky. I just managed to shield myself from the Sun so that the light didn't fall on my eyes. I put my legs toward the porthole, but didn't close the shutters. What was happening was very interesting to me. I awaited separation. There was no separation. I knew that according to the calculation that it ought to have occurred 10-12 seconds after the TDU shut down. When the TDU shut down all the windows in the PKRS [descent regime monitoring device] went out. According to my sensations more time passed, but there was no separation. "Spusk" [Descent] did not go out in the instrument [panel] and "prepare for ejection" did not light up. Separation did not occur. Then the windows on the PKRS [descent regime monitoring device] began to light up again: first, the window of the third command, then of the second, and then of the first command. The moving pointer stood at zero. There was no separation. The "corps de ballet" continued. I decided that not everything was in order here. I noted down the time on the clock. About two minutes passed and no separation. I reported via the HF channel that the TDU had worked normally. I figured out that I would land normally all the same, since it was about 6,000 to the Soviet Union, and the Soviet Union is about 8,000 km, which means I would land somewhere before the Far East. I didn't want to raise any "fuss." I reported by telephone that no separation had occurred.

I judged that the situation was not an emergency. I transmitted VN [vse normal'no or "everything normal"] via Morse that everything was normal. Through the Vzor I noted the north coast of Africa and the Mediterranean Sea. It was all clearly visible. The craft continued to rotate. Separation occurred at 1035, not at 1025, as I had expected, that is, about 10 minutes after the end of the operation of the braking device.

I felt the separation abruptly. There occurred a pop, then a jolt, and the rotation continued. All the windows on the PKRS [descent regime monitoring device] went out. Only one inscription remained lit: "prepare for ejection." I noted that the altitude of the flight had nevertheless become less than, let's say, at the apogee. Here objects on the Earth were more distinct. I closed the shutter of the Vzor. The rotation of the sphere continued on both axes with the previous speed (30 degrees per second). Then I began to feel a braking and some weak buzzing going along the craft's frame. The barely-perceptible buzzing which was felt through the legs standing on the chair. I took the posture for ejection. I sat and waited.

A slowing of the craft's rotation began, and on all three axes at that. The craft began to oscillate about 90 degrees right and left. It did not make a full turn. There were the same oscillating movements along the other axis which were slowing down. At this time the porthole of the Vzor was closed by the shutter. Suddenly a bright crimson light appeared along the edges of the shutter. The same crimson light was observed

in the small opening in the right porthole. I felt an oscillation of the craft and a burning of the plaster. I don't know from where the crackling sound was coming from: either the frame was crackling [or] the thermal shell was expanding during heating, but the crackling was audible. About one crackling per minute occurred. In general, it was felt that the temperature was high. Then the light in the Vzor became somewhat weaker. The G-forces were small, about 1-1.5. Then there began a gradual increase of G-forces. The oscillations of the ball continued on all the axes the whole time. By the moment maximum G-forces were reached I was observing the Sun all the time. It hit the cabin through the porthole opening of hatch № 1 or through the right porthole. From the sunbeams I could determine approximately how the craft was rotating. By the moment of maximum G-forces the oscillation of the craft had dropped to plus or minus 15 degrees. By this time I felt that the craft was travelling with some shuddering. It was notably braking in the dense layers of the atmosphere. According to my sensations the G-force was beyond 10g. There was a moment, for about two or three seconds, when the readings on the instruments began to "blurry." It began to turn gray in my eyes. Again I exerted myself and made an effort. This helped, everything went back in its place, so to speak. This peak G-force was not long. Then a drop of G-forces began. They fell gradually, but more quickly than they had risen. From this moment I switched my attention to the fact that ejection would soon occur. When the G-forces began to "press" the Sun was right on me in the rear porthole. When I began to prepare for ejection the craft turned about 90 degrees toward the Sun.

When the G-forces had fallen completely, which obviously coincided with crossing the sound barrier, a whistling of air began to be heard. It could clearly be heard in the ball how it was travelling in the dense layers of the atmosphere. The noise or whistling was audible just like one can usually hear in aircraft when the engines begin to throttle back or when the aircraft is diving.

Again I thought that ejection would be right then. My mood was good. It became clear that I would not land in the Far East, but somewhere near the calculated area.

I noted the moment of separation well. The globus stopped at about the middle of the Mediterranean Sea. It meant that everything was normal. At this time, approximately at the altitude of 7,000 meters, the hatch cover of hatch № 1 ejected. A bang, and the hatch cover left. I was sitting there and thinking was it me who had just ejected or not? So, I gently turned my head up. A burst occurred at this moment, and I ejected. This happened quickly, well, and softly. I didn't bump or bruise anything, everything was normal. I flew out with the seat. Then the gun fired, and the stabilizing parachute activated.

I sat very comfortably on the seat like on a chair. I felt that I was rotating to the right. I immediately saw a big river, and I thought that this was the Volga. There are no such big rivers in this area. Then I looked, something like a city. A big city on one shore, and on the other a considerable [one]. I thought that it is something familiar.

The ejection occurred over the shore in my estimation. Well, I think that obviously the breeze will waft me along, and I will have to splash down in water. Then the stabilizing parachute unhooked and the main parachute began operation. This all happened very softly, so I almost did not notice anything. The seat also imperceptibly left below me.

I began to descend on the main parachute. I was again turned toward the Volga. During parachute training we jumped right over this place many times. We flew there many times. I recognized the railroad, the railroad bridge across the river, and a long sandbar which protrudes far into the Volga. I thought that this was probably Saratov. I would land in Saratov.

Then the reserve parachute deployed, it deployed, and hung. So it did not open. Only the knapsack opened.

I sat down more tightly and began to wait for the NAZ [survival kit] separation. I felt how the pin assembly yanked. The NAZ opened and flew down. I felt a strong jerk through the harness and that was all. I understood that the NAZ had gone below by itself.

I could not look down to where it was falling since it was impossible to do this in a suit - it was fastened tightly to the back.

There was a layer of small clouds here. Inside a small cloud [the wind] blew a little and the second parachute deployed. I continued descending on two parachutes.

I was observing the area, and I saw where the ball had landed. A white parachute and next to it lay a black, charred ball. I saw this not far from the shore of the Volga, about four kilometers from my landing site.[\[2\]](#)

Descending, I noted how to the right of me, in the direction I was drifting, was a field camp. There were many people and machines on it. A road passed next to it. The highway leads to Engel's. Further I saw a stream flowing in a ravine. There was a hut to the left beyond the ravine. I saw some woman and a calf grazing, and I thought I would probably end up in this very ravine, but there was nothing to be done about it. I felt that everyone was looking at my pretty orange canopies. Then I was looking and thinking that I was just going to land on plowed land. I'm thinking to myself, I'm going to have a hell of a landing. As luck would have it, I was carried backwards [by the wind]. I tried to turn around: it's hard to turn around in this system, rather, it is impossible to turn around. About 30 meters before the ground I was gradually turned around facing the direction of the drift. As I determined, the breeze was about five to seven meters [per second]. Just as I was thinking this, the land appeared right in front of me. A "tap" [tuk] with my feet. The landing was very soft. The arable land turned out to be well plowed up, very soft, and it still was not dried up. I didn't even feel the landing. I didn't even have time to think and I was already standing on my feet. The rear parachute fell on me, and the front one fell forward. I gathered it up and removed the harness. I looked, everything was in one piece. It meant I was alive and well.

Yes, in the air I disconnected the adapter for the ORK [integrated oxygen connector], and opened the helmet when I was already on the ground. I landed with a closed face mask. I had difficulty with the opening of the breathing valve in the air. It turned out that when I was donning the suit, a little ball in the valve had gotten underneath the descreening jacket. Everything was so snug because of the harness that I couldn't reach it for about six minutes. Then I unhooked the descreening jacket and with the aid of a mirror pulled out the cable thread and opened the valve normally.

Then I took steps to report that the landing had gone normally. I had reached a hill and then saw a woman with a girl coming toward me. She was about 800 meters from me. I walked toward them, planning to ask where I could find a telephone. I went to her and see that the woman is slowing her steps, the girl separates from her and is heading back. At this moment I began to wave my arms and shout: "I'm one of you, a Soviet [citizen], don't be afraid, don't be frightened, come here." It's uncomfortable to walk in a suit, but I was doing so all the same. I could see that she wasn't sure either to believe what I said, so she was walking very tentatively as she approached me. I approached and said I was a Soviet man and had landed from space. We introduced ourselves and she told me that I could make a phone call from the field camp. I asked the woman not to let anyone touch the parachutes while I go to the field camp. We just approached the parachutes, and when about six men started walking toward us: tractor drivers and mechanics from this field camp. I introduced

myself. I told them who I was. They said that there was just a report about the spaceflight on the radio. In about three minutes a ZIL-151 truck approached. An artilleryman Maj. Comrade GALIMOV [sic]^[3] arrived in it from a battalion. We introduced ourselves to one another. I asked to report to Moscow as quickly as possible. They put a sentry at the parachutes and I went with him to the unit. We arrived at the unit. He called the division command post. Then we called the commanding general of the district. Then we reported to Moscow about everything through the commanding general of the district. An order came to remain at the location of the landing. I was photographed a couple of times to celebrate. By this time I had already taken off the outer layer of the suit. I had only light-blue clothing on me, but I was not photographed in the orange and gray outer layer and in the pressure helmet. We put the suit in the vehicle. When we were leaving I saw a helicopter which had come from the city of Engel's was approaching. By this time I had already asked and firmly knew that the city of Engel's was nearby. We went to the landing side. I knew that this was the search group that had arrived on the helicopter. We went along the highway and saw the helicopter lift off and go toward the military garrison. We jumped out of the vehicle and began to wave at it. The helicopter landed. The Lieutenant-General^[4] and the Colonel in it took me on board the helicopter. I said that General KAMANIN and General AGAL'TSOV were supposed to fly here and that I needed to be around the landing site. We landed around the place where my parachutes lay. I was passed a command to fly to Engel's. We immediately lifted off and flew there. As soon as I got out of the helicopter General YEVGRAFOV immediately handed me a telegram from N. S. KHRUSHCHEV, a congratulatory telegram. I broke into tears right there. A rush of feelings. Then we immediately got in touch with the Commander-in-Chief of the Air Force over the phone. I reported to Chief Marshal of Aviation Comrade VERSHININ about the completion of the mission. He congratulated me on the completion of the mission, thanked me, and congratulated me on promotion to the military rank of Major. I replied appropriately. He wished me all the best. The Commander-in-Chief said that right now they would connect me with N. S. KHRUSHCHEV and L. I. BREZHNEV. They connected me with L. I. BREZHNEV. I reported about the completion of the mission, that all systems had worked well, that the landing occurred in the designated area, and that I felt well. He congratulated me, wished me all the best and I expressed gratitude. He said that N. S. KHRUSHCHEV would soon call us. We went to the VCh [secure telephone system] with General AGAL'TSOV. Soon N. S. KHRUSHCHEV called us. I reported on the completion of the mission, the good operation of all the system, and that I felt well. He thanked me for the completion of the mission, congratulated me on finishing the flight, and asked about my family and parents. I thanked N. S. KHRUSHCHEV from the bottom of my heart for his attention, for his fatherly concern. He told me: "See you soon in Moscow." Then there were congratulations from the correspondent of Pravda^[5], the correspondent of Izvestiya^[6], and Comrade IL'ICHEV, the chief agitator and propagandist. I thanked them for the warm, friendly words which they said to me. They asked me to say a few words to the readers of Pravda. I replied to their congratulations on the heroic achievement, that the heroic achievement was no so much mine personally as of all the Soviet people, all the engineers, technicians, and representatives of Soviet science. After this Colonel-General AGAL'TSOV decided to fly to Kuybyshev.

We got in the aircraft. We made our way through the crowd which had formed there with difficulty. Everyone wanted to take a look. We go to the car, we flew. Well, that is all.

MAJOR GAGARIN

Archival source: APRF, f. 3, op. 47, d. 278, ll. 152-164. Original. Autograph signatures.

^[1] The text of Yuriy Alekseyevich Gagarin's report at the State Commission meeting

and the answers to the questions of Commission members were submitted to the Central Committee on April 19, 1961 by Marshal K. A. Vershinin (commander-in-chief of the Air Force) with a short accompanying note. There is a notation on the document: "Reported to Comrade Khrushchev. April 21, 1961. Shuyskiy." The meeting of the Commission was held in the city of Kuybyshev (now known as Samara).

[2] Gagarin's landing occurred around the village of Smelovka, Ternovsky Rayon (27 km south of Engel's), Saratov Oblast'.

[3] This was actually Major Akhmed Nikolayevich Gasiyev, commander of a missile battalion (military unit number 40218), located at the village of Podgor'ye.

[4] This was Lieutenant-General I. K. Brovko, Chief of the Aviation Weaponry Testing Directorate and Deputy Chief of the Air Force's State Scientific-Research Institute for Armaments.

[5] This was Nikolay Nikolayevich Denisov (1909-1983), the editor of the military department of Pravda.

[6] This was Georgiy Nikolayevich Ostroumov (1919-2001), an Izvestiya correspondent