After the war, Meitner described the events as "uncontrollably. "One can only do it in vain. If only things had been different..."

Meitner soon had a "fairly good idea of your misgivings," she later informed an "opportunist." "If only things had been different..."

All German soldiers tended to disparage their Austrian counterparts, Lise made sure Otto understood that all the male members of her family—brothers and brothers-in-law—were fighting too: in Cracow, in the Polish offensive, in the heavy fighting at the San River in Galicia.

By late spring, it was evident that the war would not soon be over. Fighting on the western front reached a stalemate, and Germany joined Austria in a major offensive against Russia in Galicia, from which Austria had retreated in the first weeks of the war. In May the Russians were forced back from the San; by the end of June the German-Austrian forces recaptured Lemberg (Lwow, Poland; now L'vov, Ukraine), capital of Galicia. The war widened. Turkey joined the Central Powers in 1914, and Italy finally declared war on Austria, its old enemy, in 1915 in the hope of redeeming Trieste, the Dalmatian coast, and the Sudtirol (Trentino).

Casualties mounted without end. That summer Meitner learned that Marie Curie had initiated an ambulance service with radiological equipment and was working in field hospitals with her eighteen-year-old daughter, Irène, behind the lines in France. In July 1915, Lise left for Vienna to volunteer as an x-ray nurse-technician with the Austrian army.

Within days Lise was accepted, trained, vaccinated, and assigned to a military hospital in Lemberg, not far from the Russian front. On 4 August she left Vienna with a unit of 220 men, 50 nurses, 10 physicians, and the complete facilities for a hospital, on an "endlessly long" train that slowly made its way to Budapest, skirted the Carpathians in northeastern Hungary, then wound north through the mountains to Poland. She wrote to Elisabeth,

We were underway for 60 hours, but it didn't seem that long. Naturally it was a very old third-class car with narrow wooden benches, but the doctors and nurses each had their own bench so one could stretch out at night, and during the day there was so much that was new and interesting to see that time went quickly. In Miskolcz [Miskolc], a little Hungarian town, a German doctor told us that Warsaw had been taken... [Y]ou can imagine how happy we were. Near Mezo-Loborcz [now Michalovce, Slovakia], as you may remember, there was very bitter fighting... There are houses that were shot to pieces, the front wall alone remains, sometimes even this is blown away, and the roof lies on the ground... The surroundings... are just beautiful, on one side the plains and to the north the Carpathian...
mountains with beautiful forests. From there until Lemberg we went through an uninterrupted war zone, always the same picture. All the railroad bridges were destroyed by mines, and the train crossings were temporary wooden bridges from which one could see the old bridge on the rocks below.

The suffering of the wounded came as a shock.

We are converting the local Technical Institute into a barracks hospital. Until now there was a field hospital here, with about 6,000 to 7,000 wounded who had to be transferred elsewhere as quickly as possible. Now as a barracks hospital at least some of the wounded can stay longer to make a recovery. . . . Oh, Elisabeth, what I have already seen—I never expected it to be as awful as it actually is. These poor people, who at best will be cripples, have the most horrible pains. One can hear their screams and groans as well as see their horrible wounds. Today we had a Czech who was severely wounded in his arms and legs who moaned in pain while tears ran down his face. . . . Since we are only about 40 km from the front we get only the most severely wounded here. I tell myself this for consolation. But one has one's own thoughts about war when one sees all this.56

Until the x-ray facilities were ready, Lise assisted in several operations each morning, cleaned operating tables and instruments, and bandaged the wounded.

27 August. Today we amputated the foot of a very young Hungarian, and it upset me that I could say nothing to him. . . . A young Polish soldier said quietly, "I know I will die," and he did.

24–26 September. It is already terribly cold. I work only with the very badly wounded. . . . It is impossible how much they suffer. We have so many wounded Hungarians, and far too few Hungarian nurses. Those with back wounds are often so badly wounded that nothing can be done for them, and they die very slowly. The Catholic priest here gives his time to Catholic, Protestant, and Jew alike. There are many good people here.

18 October. I have done over 200 x-rays. . . . The surgeon told me that x-rays have saved the life of at least one of the wounded, by identifying a hernia of the bladder and not a stomach wound as the doctors originally thought. . . . This is a small happiness among much that is very hard. I have seen young soldiers 18 or 19 years old who are operated on four or five times and die anyway.57

Writing to Otto, Lise omitted the medical details.

10 September 1915. Dear Herr Hahn! . . . We have many Russians among the wounded, and also prisoners who work for us. They are mostly good-natured, patient men, very caring to the sick ones. . . . It is difficult to understand them, of course. A few words that I picked up as a child, a few
Lemberg we went Polish or Russian words that I learned here, is my whole vocabulary. Hungarian is even more difficult.

19 October. At night when I lie in bed and cannot sleep right away I feel slightly homesick for physics, but during the day I think only of the patients. The gratitude that they show always makes me somewhat ashamed. My younger brother [Walter] is now a cadet at the Isonzo front [Italy].

28 November. The bitterness against the Italians is very great—the soldiers regard every single Italian as a personal enemy.

9 January 1916. I do sometimes have homesickness for physics, above all feel I hardly know what physics is anymore. My health is always very good. I don’t think I weigh as much as 50 kg [110 lb.], but after all I didn’t come here to get fattened up. When there are no x-rays needed, I help in the operating room—I have even done anesthesia, which I dislike—and in addition I am the hospital mechanic. I fix broken electrical cords and apparatus, make T-tubes, catheters, and so on.58

In Lemberg, Lise received a marriage proposal—perhaps not the first, or the last, but apparently the only one of which we have a record. Somehow she met a professor from Greece, who then wrote to her from Piraeus: “I would like to have the honor of marrying you. I admire you and your wonderful country. I hope you take my offer seriously. Also I would like your photograph. Please answer me. P.S. Greece is now all for the Germans.”59 One suspects Lise did not answer. But she did keep the note, flowery writing, purple ink, and all.

We have so many wounded. By early 1916 the eastern front reached a stalemate and there was very little to do.60 Lise requested a transfer to the south, the scene of heavy fighting near Trient (Trento) in the alpine Südtirol, a region Austria would eventually lose to Italy. The transfer took months; she visited Berlin and worked halfheartedly in Vienna for a while in Stefan Meyer’s Radium Institute.61 Assigned to Trient in June, Lise was again mostly idle and asked to be sent “any place there is work.”62 In July she was in Lublin at the height of a renewed Russian offensive in Poland, but the doctors were themselves too exhausted or ill to treat the many wounded and Lise could do little on her own. “I feel superfluous,” she wrote Elisabeth in August. “Without me things would go just as well. If this is true, then my duty is to go back to the Kaiser Wilhelm Institute. I say my duty because if I had followed my wishes, I would have gone back long ago.”63 In September: “My last card! I am coming back to Berlin. . . . I must work so I feel relieved already.”64
Lise returned to Dahlem in early October 1916. She found the KWI for Chemistry almost entirely converted to war research. After Willstätter left for Munich in March 1916, his section on the institute’s first floor had been requisitioned by the aerial photography command (Luftbildkommando) and others from Haber’s “military institute.” In a transparent attempt to do the same for Meitner and Hahn’s section, the Haber group offered Meitner a position with them, “with the special inducement,” she noted sardonically, “that I would be paid. They evidently thought that I live here—shall we say—on a private income.” She turned the Haber offer down, concerned about the fate of the radioactivity section she shared with Hahn.

25 October 1916. . . . I hope that the Lion [Haber] will not get his claws into our modest section, especially since our private laboratory with its physical apparatus would hardly be useful for the chemical studies in question. If I am not prevented from doing so, I will try to work. I would very much like to repeat Chadwick’s work, namely, to count the spectrum of beta radiation in a magnetic field. . . . What do you say about [the German] victory in Dobrodscha [Dobruja, Romania]? One must be glad about it, if one still has the capacity to be glad.

Like most Germans, Lise was exhausted by the war but by no means without hope for eventual victory.

Lise hastened to measure the preparations she had set aside before she left, in particular, the samples that had been monitored since 1913 for evidence of actinium precursor.

16 November 1916. Dear Herr Hahn! . . . The Haber people treat us of course like captured territory; they do not take what they need but what they like. . . . Who will guarantee that they won’t come over here, and then everything will really be lost. I will do everything to prevent it; we have measurements here that have been in progress for so long . . . but they have the arrogance of victory. . . . It really is very thoughtful of you to be concerned about what I eat; you imagine [the shortage of food] to be worse than it actually is. . . . Last night I was at Planck’s. They played two marvelous trios, Schubert and Beethoven. Einstein played violin and occasionally made amazingly naive and really quite peculiar comments on political and military prospects. That there exists an educated person in these times who does not so much as pick up a newspaper, is really a curiosity.

Einstein considered his views on German militarism and his hopes for the defeat of Germany to be so far removed from those of his friends that he
found the KWI after Willstätter’s first floor had (Luftbildkom- n a transparent he Haber group reduction,” she y thought that I the Haber offer she shared with

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d his hopes for the his friends that he
did not discuss them, except to ask questions “in the Socratic manner, to challenge their complacency.” He was quite aware that “people don’t like that very much.”

In January 1917, Otto Hahn was in Berlin for several weeks. With Lise’s permanent return, they were eager to resume their search for the actinium precursor. The tantalum group they had extracted from the old uranium nitrate salt in 1913 still gave not the slightest indication of actinium, its emanation or decay products. They abandoned it and turned to the silica residue they had first separated from pitchblende early in 1914. At the time they had determined that the residue included essentially all the tantalumlike substances in pitchblende and with them, presumably, the hoped-for “eka-tantalum,” mother substance of actinium. Under their electroscopes three years later, the residue was giving off their first glimmer of success: a tiny but unmistakable amount of actinium emanation.

It was hardly the ideal time for a major project. In this, Germany and Austria’s first “turnip winter,” food was scarce, fuel almost nonexistent, equipment expensive and hard to get, pitchblende unavailable. Perhaps the greatest difficulty was that students, assistants, and technicians had long since disappeared into the military. Lise would have to work alone.

And as much as Lise favored the war effort, she and Hahn were eager to protect their work and their section from Haber’s incursions. Support came, once again, from Emil Fischer: where Haber was glad to see the wall between academia and the military come down, Fischer was trying to shore it up. In January 1917, Lise Meitner was appointed head of her own section for physics, in effect dividing the Laboratorium Hahn-Meitner into the Laboratorium Hahn and the Laboratorium Meitner, with a pay increase of 1,000 to 4,000 marks (essentially equivalent to Hahn’s 5,000 marks, which included a marriage supplement). Perhaps more than any other appointment, Meitner took this as an expression of trust. Although the hiring and purchasing necessary to build her section would be deferred until after the war, she had been granted the administrative authority to direct her own work and the power to protect her section.

In February, Otto returned to his unit, impatient for news.

22 February 1917. Dear Herr Hahn! The pitchblende experiment is of course important and interesting but I cannot do it right now—don’t be angry, please. . . . I have ordered the [platinum] vessels for our actinium experiment . . . and will begin as soon as they arrive. . . . Yesterday I gave