NASDAQ:ATOM Q4 2025 Earnings Call Transcript

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Mike Bishop | Investor Relations:

Hello, everyone, and welcome to Adam Ayers' fourth quarter and fiscal year 2025 update call. I'd like to remind everyone that this call and webinar are being recorded, and a replay will be available on Adam Ayers' IR website for one year. I'm Mike Bishop with the company's Investor Relations. As in prior quarters, we are using Zoom, and we will follow a similar presentation format with participants in a listen-only mode. We will open with prepared remarks from Scott Bebo, Adam Ayers' president and CEO, and Frank Lorenzio, Adam Ayers' CFO. Then we will open the call to questions. If you are joining by telephone, you may follow a slide presentation to accompany our remarks on the events and presentation section of our investor relations page on our website. Before we begin, I'd like to remind everyone that during today's call, we will make forward-looking statements. These forward-looking statements, whether in prepared remarks or during the Q&A session, are subject to inherent risks and uncertainties. These risks and uncertainties are detailed in the risk factors section of our filings with the Securities and Exchange Commission, specifically in the company's annual report on Form 10-K filed with the SEC on March 4, 2025. Except as otherwise required by federal securities laws, Adam Ayer disclaims any obligation to update or make revisions to such forward-looking statements contained herein or elsewhere to reflect changes in expectations with regards to those events, conditions, and circumstances. Also, please note that during this call, we will be discussing non-GAAP financial measures as defined by SEC Regulation G. Reconciliations of these non-GAAP financial measures to the most directly comparable GAAP measures are included in today's press release, which is posted on our website. Now, I would like to turn the call over to our President and CEO, Scott Vivo. Go ahead, Scott.

Scott Bebo | President and CEO:

Thanks, Mike, and good afternoon to everyone. In Admiral's fourth quarter, we made great progress moving existing customers forward in our targeted segment, achieving very strong technical advancements, commencing new customer engagements in non-traditional areas, and made our first foray into the world of government-funded collaborative developments, all positioning us strongly for commercial execution in 2026. Today, I'll give you an update on all of our activities as we set the table for our business prospects in the new year. Technology news recently has been dominated by the rapid advancement of artificial intelligence and the associated semiconductor challenges that AI entails, from the allocation of limited GPU supply, the enormous stresses put on our energy infrastructure, and the associated surge in memory prices. Atomera's technology is positioned to assist with each of these industry issues as we deliver materials which help to relieve each pain point. So let me start off with our recent exciting progress on gate all around transistor technology, which is the foundational architecture used in AI GPUs, CPUs, and bleeding edge network components. The challenges with manufacturing these next generation transistor devices at two nanometer and below are widespread. And a concerted effort by the full ecosystem of industry players is required to manufacture them at scale with economically viable throughput and yield. This has been the focus of our recently announced strategic partnership with a large equipment OEM. Target customers are TSMC, Samsung, and Intel, who are in production, and Rapidus, a new Japanese manufacturer which is deep in development. Atomair's MST technology delivers some very compelling solutions in this space, in particular for diffusion blocking. These tiny gate-all-around transistors require extremely high phosphorus doping levels constrained to a very small area in the source and drain of the nanosheet. Under the intense semiconductor manufacturing environment, It's difficult to keep these dopant atoms in their proper positions, and just a small amount of migration into the channel can severely impact performance, efficiency, and yield. AtomAres MST is uniquely well-suited to hold these roving phosphorus atoms in place. Although this MST characteristic is well proven in older technologies, implementing MST in devices that are around 2 nanometers while

maintaining its efficacy is something that industry players insist must be validated on silicon at real-world scale, and we've been working hard to do so. Our target customers have been looking into two results to prove high-volume manufacturability. First, that MST can be effectively deposited into the actual nanosheet structure. And second, that the diffusion blocking characteristics are better than other methods the industry is currently evaluating or using. Obtaining these results is not straightforward and requires access to advanced structures that are not generally available, are very expensive, and frequently proprietary. but we've been able to make steady progress with the help of a gate all around customer and our strategic partner. Just in the last month, we obtained very exciting silicon results in both targeted areas, which we believe provides the definitive proof to drive adoption of MST at all four of the world's gate all around customers in the future. Not only can MST be deposited into those structures using existing tools and standard gases, But it is a far superior diffusion blocking material than those currently used by the industry. We anticipate that we will be able to implement this technology with leading industry players over the next few quarters. Of course, we're quite excited by these recent results since our advanced node, our gate all around business segment, has extremely high revenue potential. But we're also making convincing progress in our other customer areas. So let me provide a short update there. In DRAM, the technology roadmap is at a key inflection point as DRAM finally follows other logic and memory architectures in making better use of the vertical dimension. We are getting involved in offerings to enhance the performance of next-generation architectures, in addition to solutions for products currently in production by the major memory suppliers. During the last few months, we have had two major solution offerings that we're working hard to validate since their market potential is very high. Notably, these are both wafer-based solutions, which are easier to adopt and test, avoiding many of the integration complexities required in some of our other applications. And with the current robust market for memories, we believe our potential customers will have a generous R&D budget to pursue these ideas. Atomera is currently conducting many wafer runs with our various customers. Most of these are processing through their fabs, so we will expect more information soon. But one customer has just gotten preliminary results which look promising. But we will get a better view when the final data is available in about a month. If the results look good, we'll be pushing for a joint development agreement and a license to advance this technology to production. In the RF-SOI space, our offering is very strong, considering that it can provide performance improvements for multiple important areas, including for the RF switch and the low noise amplifier. Because we are working with so many of the key players in this industry, including foundry and fabless suppliers, we hope to drive adoption broadly. Again, in this space, our solution can be implemented with a wafer-based solution, meaning our customers can choose to deposit it on wafers themselves before starting their full manufacturing process, or they could even buy RFSOI MST wafers from a third-party supplier. Our license structure supports both of these approaches. In power, we are working with some very large players to ultimately be incorporated into their product offerings. Although we had a setback with ST last year, we continue to work with them on MST solutions across multiple business units. In addition to our traditional BCD business opportunities, this quarter we had several other inbound interest emerge for power applications. Through our own internal analysis and modeling, we have uncovered an opportunity for MST in trench vets, which are an important component in optimizing energy efficiency in AI data centers. Our simulations show the potential for MST to improve performance by more than 40%. We got this result after Christmas and already have a customer interested in kicking off development. Similarly, using our MST CAD simulation capability, we have demonstrated how MST can improve HVT devices, which are high-speed transistors frequently used for amplifying and switching signals in RF communication systems. Discussions are underway with a potential first customer in this application as well. In GAN, I'm happy to report that our first commercial customer has now started running wafers for GAN on silicon with MST technology. For many reasons, this is exciting. This large customer can grow their own GAN wafers and manufacture electrical devices on them, which means they can move even faster than our in-house work with Sandia National Labs and Texas State. So we expect that we will actually move ahead of our own internal development efforts over the next few quarters. Second, they are exploring GAN in both RF and power technologies. These independent efforts by multiple industry and scientific partners frequently can accelerate time to revenue, which is what we're hoping to accomplish. Last month, we announced that our GAN on silicon concept paper had been approved to move to the proposal stage for a project with Power America to advance the state-of-the-art on wideband gap materials. We announced this for a variety of reasons. First, we wanted to

show the widespread interest from customers, the science community, and industrial organizations for an MST solution for GAN on silicon. Indeed, we've already received several letters of support from multiple future customers showing interest in this solution. Second, this concept paper was our first application for outside development funding. And although the funds sought for this first effort are modest, they put us in the pathway for a variety of future material development funding opportunities, which can provide us assistance going down a path we were planning to travel anyway. By engaging in these joint development opportunities, we are promoting our technology, receiving financial assistance, and assuring a customer base all in one project. To summarize, the past few months have been an incredibly productive time in terms of technical development and the buildup of a variety of new customer opportunities that I believe will lead to business deal announcements later this year. Finally, as we close up 2025, let me give you a few thoughts on our accomplishments. Last year, we took our early development and simulation results on gate all around and converted it into what I now believe is our greatest company opportunity. We did that through working with a lead customer and with a strategic partner who's also a major equipment OEM. This is a significant departure from how we've approached the market in the past. The industry has a long history of relying on this OEM to deliver them material solutions for their problems. So we truly believe that their influence will help us to convert our recent strong technical results to licenses and revenue. We make technical breakthroughs in our other core markets to enable killer applications like LNA for RFSOI, a new architecture for BCD, and next-gen DRAM solutions. Using AI, our development team has gotten better results more efficiently than ever before. We kicked off a record number of wafer runs with our leading customers, initiated several new projects, and solidified the business talent on our team, which should lead to further contract announcements over the course of this year. And much of this work was done emphasizing wafer-based products, which we believe will result in faster time to revenue. In short, 2025 efforts have set us up well for commercial announcements later this year. With that, I'll turn the call over to Frank to review our financials.

Frank Lorenzio | Chief Financial Officer:

Thank you, Scott. At the close of the market today, we issued a press release announcing our fourth quarter and full year results for 2025. This slide shows our summary financials. Revenue in 2025 was $65,000 and consisted of NRE fees for wafer deliveries and MST CAD licensing. Our gap net loss for the year ended December 31, 2025 was 20.2 million or 65 cents per share compared to a net loss of $18.4 million or 68 cents per share in 2024. On a non-GAAP basis, 2025 net loss was $16.1 million or 52 cents per share. And 2024 net loss was 15.4 million or 57 cents per share. GAAP operating expenses were $20.9 million in 2025, which was an increase of approximately $1.5 million from $19.3 million of GAAP operating expense in 2024. The main driver of the increase in GAAP operating expense was a $1.1 million increase in stock compensation expense due to a change in our executive equity-based compensation. In Q1 2025, we implemented PSUs for executives, which vest based on the performance of our stock price as compared to the Russell 2000 Index. These PSUs vest over three years, whereas the options and time-based RSUs that had been granted to executives in prior years vested over four years. Although the vesting period is shorter, executives only vest in PSUs based upon our stock price performance. With the exception of stock compensation expense, the drivers of GAAP and non-GAAP expenses are substantially the same. And therefore, the rest of my remarks will only refer to non-GAAP results. Please refer to the slide presentation for a reconciliation between GAAP and non-GAAP expenses. Total operating expenses in 2025 were $15.9 million, an increase of $429,000 from $15.4 million in 2024. R&D expenses increased by $794,000 from $9.4 million in 2024 to $10.2 million in 2025, primarily due to a $676,000 increase in outsourced engineering as we utilize various new device fabrication vendors replacing TSI Semiconductor. G&A expenses decreased by $272,000 from $5.1 million to $4.8 million, primarily due to a $421,000 decrease in compensation expense, offset in part by $118,000 increase in professional fees for legal, IP, and audit fees. Sales and marketing expense decreased by $94,000, reflecting lower headcount, but offset by some recruiting fees. Company-wide, our compensation expense, again, on a non-GAAP basis, excluding stock compensation, declined by $582,000 in 2025 compared to 2024. The reduction in compensation expense reflects our board's pay for performance discipline. While we achieved important technical milestones in 2025, the compensation

committee determined that payout of the full executive bonus was not justified by commercial progress made during the year. Therefore, the committee withheld approximately $669,000 in executive bonus compensation affecting the full executive team. The withheld amount may be earned in 2026 based on achieving rigorous commercial objectives. Turning to our quarterly results, Fourth quarter 2025 non-GAAP net loss was $3.3 million or 10 cents per share compared to a net loss of $4.4 million or 14 cents per share in Q3 and a net loss of $3.9 million or 14 cents per share in Q4 2024. Non-GAAP operating expenses decreased by $1.1 million to $4.3 million sorry, from 4.3 million in Q3 2025 to 3.2 million in Q4, primarily due to the reversal of our bonus accrual, which occurred in Q4. Our balance of cash, cash equivalents and short-term investments on December 31 was $19.2 million compared to 26.7 million at the end of 2024 and 20.3 million at the end of Q3, 2024. We used $14.9 million of cash in operating activities during 2025, 3.2 million of which was used in Q4. During 2025, we sold approximately 1.6 million shares under our ATM facility at an average price per share of $5.15, resulting in net proceeds of approximately $7.6 million after commissions and offering expenses. As of December 31, 2025, we had 32.4 million shares outstanding. After year end, we've raised an additional $3.2 million of net proceeds by selling approximately 1.3 million shares at an average price of $2.47. For Q1, we expect to recognize revenue in the range of 50 to $100,000 from shipment of MST wafers to customers. Consistent with our usual practice, we are not providing revenue guidance beyond this quarter. Our 2025 non-GAAP operating expense was $15.9 million, which is well below the guidance range I provided last quarter. That's primarily due to reversing $669,000 of accrued bonus. For 2026, we will continue to aggressively control costs And we've limited our expense growth to those areas directly related to revenue and near-term commercial progress. Those increases mainly consist of adding two senior go-to-market leaders. The first of those was our VP of sales, who came on board in October. And the next will be a new head of marketing. The comparison of our planned spending in 2026 versus 2025 looks distorted by the potential payout this year of the executive bonus withheld from 2025, because the withheld amount will have to be accrued this year on top of accruing 2026 bonus. As a result, we expect our non-GAAP operating expense to be approximately $18.5 million in 2026. Now on paper, this is a 17% increase, but if normalized for the timing of the executive bonus accrual, it is more in the range of 8%. I would point out also that earning back deferred executive bonuses, as well as earning 2026 bonus will require us to execute against aggressive, commercially focused milestones. With that, I will turn the call back over to Scott for a few summary remarks before we open the call up to questions.

Scott Bebo | President and CEO:

Scott? Thank you, Frank. The entire focus of our efforts in 2025 is getting to commercial agreements. The work we've done up to now has positioned us well to close on those opportunities, and I look forward to sharing our successes with you as the year progresses. Mike, we will now take questions.

Mike Bishop | Investor Relations:

Thank you, Scott. If you wish to ask a question, please click the Q&A button at the bottom of the Zoom window, then feel free to type in your question. I will do my best to aggregate the incoming queries and relay them to management. Alternatively, you can click the raise hand button and we may call on you to ask your question live. And right now, our first question comes from Richard Shannon of Craig Helm. Richard, go ahead. Great, Mike. Can you hear me? Yes, yes, we can.

Richard Shannon | Analyst, Craig-Hallum:

Okay, great. I'm in the airport here. A little bit of noise, so apologies for that. I don't have a ton of time before I got to run to my plane here, but let me ask just a few questions here. Scott, some really interesting statements regarding gate all around here. If I caught your comments correctly here, you said that you're expecting some, I forgot the exact language you used, but some sort of important next steps here in the next

few quarters. Typically, you've been reticent to give somewhat definitive timeframes for getting to major milestones, and yet you are here. So maybe give us a sense of why you're saying this. Your confidence level is clearly quite high. So help us understand this level of confidence and why.

Scott Bebo | President and CEO:

Yeah, I would say on the gate all around technology, do you mind if I just share the slide to answer your question, Richard?

Richard Shannon | Analyst, Craig-Hallum:

Please do.

Scott Bebo | President and CEO:

Okay. Can't seem to share. Okay, here's the slide. On the right hand side, you can see where MST is deposited around these source and drain structures. that is an incredibly hard thing to do we've been talking with our our gate all around customers about using mst to block the dopant diffusion like where these little red arrows go in one of the biggest problems that people have is that the phosphorus dopants get into these channels here and the channels can only handle a couple of phosphorus atoms before they really start to grade very very significantly which affects yield and performance and so forth so All along, they've been saying, okay, that's interesting. We know MST can block phosphorus. But first of all, can you even deposit it in these tiny little structures that are, you know, they're two nanometers. And just to give you an idea, it takes about, 100 000 nanometers to get to the width of a hair that's how small these are and so we had to prove that and we spent a long time in the lab building uh devices like this to show that we can deposit mst with high quality there and we have done that second thing is when we put that tiny layer of mst does it really still block the phosphorus in that very very small space Because they're using something else right now that isn't very effective at blocking it, but are we better than that other thing? And the answer to that question is yes, as well. We've recently just gotten the technology gotten the test data to prove that. And so, you know, it's early days, we've gotten that in the last month, we haven't been able to get out and talk to each of the data all around customers yet. But with our partnership with our strategic partner, we really think we're going to talk to those guys, and they're going to immediately want to start testing this and trying it out. So I'd say that's why my confidence is much higher, we I would say we've rarely been as excited about some technology results inside the company as we are by what we have right now.

Richard Shannon | Analyst, Craig-Hallum:

Okay, great deal. I'm sure I'll follow up a little bit on that one. Second question here is, you mentioned two things you have to prove you're better than alternative solutions. We haven't really heard you talk about what your potential customers are considering here. Anyway, you can describe what those are, whether they're internal developments or something looking from other research organizations and to what degree you have visibility into how well those are doing as well.

Scott Bebo | President and CEO:

Yeah, so we're not really talking about some lineup of other technologies, but what the industry has tried using in the past is silicon arsenic. And silicon arsenic is effective at just putting a spacer between the phosphorus and the channel, but it doesn't really prevent the dopant diffusion very well at all. And so we've actually done a lot of testing of our MST technology against silicon arsenic. and proven that we have vastly

better diffusion blocking results. And the second thing is that the industry does not like to use arsenic in its manufacturing process, but it can help it. It's expensive to use and dangerous, and therefore offering a solution that removes that material is probably considered good by the industry.

Richard Shannon | Analyst, Craig-Hallum:

Okay, fair enough. Very interesting there. My last question before I've got to run here, Scott, is you talked about a number of inbound calls here in the power space, which I know it's a space that you've been pushing for for a while. And obviously STMicro was aiming towards that before it's, we'll call it a setback. You characterized this in the RFSOI space a few years ago about having significant coverage, I think more than half of the market share of the space here. Any way to characterize how much of the power space you're covering with when you add up all these new companies that are coming to you? Any way you characterize that?

Scott Bebo | President and CEO:

Yeah, it's a little bit harder. I think on the RFSOI, it's a pretty compact space. group of companies and we feel very confident that we're working with the vast majority of them on power. It's a much bigger market. It's a much more diverse customer base. So I wouldn't say we're working with most of the people. Of course, we talked a little bit about the work we've done on TrenchFed when we did do some work on TrenchFed. We reached out to the leaders in TrenchFed and some other folks that we know are interested in advancing their technology and started talking to them. And that worked well and the same thing with HVT. And so, yeah, I think we're expanding. And then, you know, a lot of the GAN work that we're doing is in power as well. So we're talking to a lot of companies working in the power space, but I can't really give you, I can't really say it's the vast majority in that case. Okay.

Richard Shannon | Analyst, Craig-Hallum:

I wasn't expecting the vast majority, but since the power space is very large, well, I thought if there was, I mean, if you even had 10 or 20%, that'd be pretty good coverage there. But appreciate that characterization. I've got to jump out of line, Scott. Thanks a lot. All right. Thank you, Richard.

Mike Bishop | Investor Relations:

All right. Thank you, Richard. We have some questions coming in on the Q&A line. I will start with one, Scott. Can you give an update on the progress for your vice president of sales, Wei Na?

Scott Bebo | President and CEO:

Sure. Wade joined in October and he's been coming up to speed and generally very, very helpful. I'm super enthusiastic about having someone that's pushing the team as hard as he is on the sales side. He's not only driving our ethics very specifically with existing customers and helping us find some new ones. He's also uh you know targeting a bunch of relationships that he's had in the past that he's bringing in with us and that does allow him to uh you know for us to engage with customers from kind of a different angle and that's been very positive so i think uh so far so good

Mike Bishop | Investor Relations:

Great, and thank you. And a number of questions about wafer activity at the fab and as it relates to general activity level, how would you characterize that?

Scott Bebo | President and CEO:

Yeah, so I think just starting earlier in the middle of 2025, we started to get a lot of customers coming in with wafer runs simultaneously, which is quite busy for us to get them into our fab and deposit the MST. on a very high quality basis and they get it back out so they can start running the wafers. Today, we're still running things in our own fab, but for the most part, we've shipped out a lot of that stuff out to our customers. And now we're kind of in a waiting game. It takes six to nine months for customers to run their wafers once we've sent them back to them and then get the test results. And then we'll review those and we'll figure out the next steps from there. But we really feel confident that what we have done in these runs is is good stuff we use mst cad simulation software to figure out what we expect the outcome of these runs to be and we're you know we're really hopeful that our tcad has been accurate and if we get the results that we hope for that our customers will want to move forward into a productization effort

Mike Bishop | Investor Relations:

Okay. And generally speaking, I had a question here and I think we've covered it on prior calls, but can you describe why selling blank wafers makes it easier to go to market?

Scott Bebo | President and CEO:

Yeah, absolutely. Okay. I just showed this graphic of a gate all around device, and that is a really, really hard device to integrate into. But you can imagine when, if we're trying to integrate into that device, the customer starts a starting wafer, they build up a whole bunch of structures. then at some point they make a hole in those structures and they say okay put your mst in here and then we'll have to figure out how to fill around it and all of the different layers that surround it affect it right that's that's called integration engineering it's very challenging but for many of our applications when we talk about wafer based products that would be when the customer buys a wafer And they put MST on immediately, the blank wafer. And then they start processing all of the rest of that process on top of it. Therefore, we don't have to work through all those challenging integration issues that we would have for something where MST gets deposited in the middle. So today I talked about a couple of applications we're looking at for DRAM that would be wafer-based products where we're shipping them the wafer. I mean, obviously, we won't be wafer manufacturers, but we would help them with a solution that would go right in the wafer. RFSOI are solutions that are wafer-based products, and also our gallium nitride, our GAN solutions are wafer-based products. So we've talked about it before. We're excited about those because they're easier to integrate, and therefore, we think faster time-to-revenue solutions. okay great uh here's another one can you please explain more about power saving in ai than how mst can help achieve that yeah so it's a lot of ways i just showed you the um the gate all around transistor so fundamentally in uh in semiconductor manufacturing like that, if you can bring a performance improvement, you could also probably trade that off to get lower power if you chose to do so. So that's one way. Another way is with our power solutions, like on our BCD products or our trench fed products or our GaN products. Those are targeted for the type of electronics that will be developed that go into an AI data center. to help lower the power in the racks. So I'll give you one industry dynamic that we're tracking in AI data centers. They have historically used the 12 volt power supply on the rack, but recently the industry is moving away from 12 volts and they're moving to 48 volts because 48 volts is four times more efficient That's saving power when you're providing power to the racks for all of those servers. The 48-volt power supplies use a lot of trench-fed devices. That's the primary device that they use in there. And so we are trying to offer solutions for trench-fed so we can help to address that. The other thing is gallium nitride is obviously a very power-efficient device.

uh, devices, those of you who have the small power supplies that go into your, uh, backpack or, or suitcase, like they weren't able to do before you understand that those are much more efficient. And that's why we're trying to engage in gallium nitride.

Mike Bishop | Investor Relations:

Interesting. Thank you. Okay. Um, can you give us an update on, uh, your JDA one and JDA two?

Scott Bebo | President and CEO:

Yeah. So, uh, JDA1 and JDA2, JDA1, I have to be careful that I'm not kind of divulging too much about what they're working on, but, you know, we continue to be working with JDA1, and I'm hopeful that some of the technologies that I talked about today will kick them into high gear. in a business unit to kind of move that forward towards a production development effort like we've been waiting for, honestly, for a little bit too long. JDA2 is one of the customers that is currently running wafers with us. And so I can't say too much about exactly where they are right now, but they're running wafers.

Mike Bishop | Investor Relations:

Great. Great. And going back to the gate all around, is MST being evaluated at the customer's fab at this point?

Scott Bebo | President and CEO:

Yeah, so we mentioned that we're working with one gate all around customer today who helped us. So when I showed that structure and I showed that we had to do deposits inside there, You really need to work with someone to get access to those wafers, to try out things on those structures. And the good news is we have been working with one of the gate all around potential customers to evaluate MST today. So yes, we are in one of them. I hope to be in all four of them.

Mike Bishop | Investor Relations:

Okay. And when do you expect, you know, an evaluation to be completed of, of the waivers?

Scott Bebo | President and CEO:

uh for gate all around or yeah for for gate all around ah okay for gate all around uh it's very hard to say with some of the customers we uh you know we're planning our visit to show them all this data that we have we believe that the data that we have is good enough that they may not even require us to do deposition inside their gate all around structure because we've proven that we can physically do it. And then what we'd be trying to do is to convince those customers to install MST in their fabs and have their R&D team take over and start implementing this. How fast that will happen is hard to say, but I will say the people that are working on Gait all around are working very fast. And if they adopt, they're going to be pushing us as hard as we've ever been pushed by a customer in the past.

Mike Bishop | Investor Relations:

OK, great. And just one last question here is on how MST can help or improve quantum computing.

Scott Bebo | President and CEO:

Uh, you know, it's interesting. That's something we're working on right now. I don't really, I can't really talk about the, uh, the way that our MST technology will, will address quantum, but I can tell you that's something we're working very hard on right now. Uh, in the past we had a theory about MST's ability to, um, improve the, the, uh, purity and availability at a cheaper price of silicon 28 which is a critical wafer type that's used for uh quantum wells but we yeah that really just didn't pan out so we're we're uh working on other technologies right now and i hope to be able to talk to you guys about that later this year thank you and scott you can uh proceed with with any closing comments All right. Well, I guess, thanks. I want to just thank you all for joining us to hear the progress being made here at Atomera. Continue to look for our news articles and blog posts, which are available along with investor alerts on our website, atomera.com. Should you have additional questions, please contact Mike Bishop, who will be happy to follow up. Thanks again for your support, and we look forward to our next update call.

Mike Bishop | Investor Relations:

Thank you. This concludes the Atom Air fourth quarter conference call.