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MKS Instruments, Inc.

Around the Process...

Around the World...

Strategic Acquisition of ASTeX, October, 2000

Slide # 1

Safe Harbor Passage

This presentation may contain forward-looking statements that are made under the safe harbor provisions of the Securities Litigation Reform Act of 1995. Such statements are estimates which involve risks and uncertainties. Actual results may vary significantly from those stated in forward-looking statements. Further information regarding risk factors can be found in the Companies filings with the Securities and Exchange Commission.

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MKS Instruments, Inc.

Around the Process...

Around the World...

Strategic Acquisition of ASTeX, October, 2000

Slide # 3

Transaction Summary

- [] \$300M acquisition of ASTeX
 - [] 100% Stock and assumption of debt/cash
- [] Ownership
 - [] 70% MKS Instruments
 - [] 30% ASTeX
- [] Exchange Ratio
 - [] 0.7669 MKSI shares per ASTeX common share
- [] Pooling of interests
- [] Expected Closing: December 2000

Slide # 4

Complementary Technologies ... Integrated Solutions

[MKS logo omitted]

- [] #1 supplier of gas process control instruments to semiconductor OEMs and Fabs
- [] Market Value ~\$700M
- [] 30 years of consecutive profitability, revenue CAGR 18% for 20 years
- [] World-class global infrastructure

[ASTeX logo omitted]

- [] #1 supplier of reactive gas solutions to semiconductor OEMs
- [] Market Value ~\$210M
- [] 5-year revenue CAGR 48% (3x industry growth rate)
- [] Broad, deep, technically experienced management team

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Strong Strategic Fit

Around the process

[Diagram of process chamber including the following MKS products:

- Mass-Flo(R) Gas Panel Instruments
- Gas Box Instruments
- Specialty Gases
- Materials Delivery System
- Control Valve
- Shut-off Valve
- Process Monitor
- Baratron(R) Pressure Measurement
- Adaptive Controller
- HPS(R) Vacuum Components/Subsystems]

[Diagram of process chamber described above, adding on each of the following ASTeX products:

- Power Generators
- ASTRON Reactive Gas Generators
- Ozone Generator]

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Strategic Rationale

- [] One-stop Solution Leader
 - [] Most comprehensive product offering

- [] Strengthens Competitive Positioning
 - [] Integrated solutions leader
 - [] Most comprehensive offering
 - [] Enhanced critical mass
 - [] Combines complementary core technologies
 - [] Builds on leading global infrastructure

- [] Revenue Synergy Upside
 - [] 100% complementary product offerings
 - [] Cross-selling opportunities

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Strategic Financial Position

- [] Strong Financial Position
 - [] \$388 million in revenues (combined Companies, LTM)
 - [] \$157 million cash (combined Companies, June 30, 2000)
 - [] Positioned for additional acquisitions
 - [] Accretive to MKS' earnings (without synergies)

- [] Cost Synergy Upside
 - [] Leverage global infrastructure
 - [] Leverage MKS' lean manufacturing
 - [] Leverage supply chain management
 - [] Leverage R&D investment

- [] Enhanced Growth Platform
 - [] Depth of combined management team and technology
 - [] Complementary core competencies
 - [] Strong geographical and cultural fit

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Established Global Infrastructure

[Diagram of world showing locations of MKS and ASTeX facilities.]

- [] 12 Manufacturing Facilities
- [] 22 Customer Support Centers
- [] Provides SG&A Leverage
- [] ASTeX Locations

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Leaders in Growing Market

[Pie chart showing total available market, served market and MKS and ASTeX shares of served market.]

Served Market ~ 750M (1999)
MKS ~ 25%

Served Market ~ \$1450M (1999)
[Pie chart indicates MKS and ASTEX portions of market]

Total Market Around the Process
~\$3.5bn (1999)
~\$5.5bn (2000) est.

Source: AVEM, Semi, Company Estimates

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ASTeX Growth Drivers

- [] Increased customer reliance on suppliers for value-add
- [] Higher level of integration
- [] Increased outsourcing by semiconductor equipment OEMs
- [] New etch and deposition systems increase available market

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Competition

Pressure Measurement & Control	Materials Delivery and Analysis		Vacuum Products	Reactive Gas Generators	Power Generators
	Flow Control	Gas Analysis			
<input type="checkbox"/> MKS	<input type="checkbox"/> MKS	<input type="checkbox"/> MKS	<input type="checkbox"/> MKS	<input type="checkbox"/> ASTeX	<input type="checkbox"/> ASTeX
<input type="checkbox"/> Millipore	<input type="checkbox"/> Aera	<input type="checkbox"/> Inficon	<input type="checkbox"/> Edwards	<input type="checkbox"/> AE	<input type="checkbox"/> AE
	<input type="checkbox"/> Millipore	<input type="checkbox"/> * Spectra	<input type="checkbox"/> Helix	<input type="checkbox"/> Ebara	<input type="checkbox"/> Analogic
	<input type="checkbox"/> STEC		<input type="checkbox"/> Inficon	<input type="checkbox"/> Sumitomo	<input type="checkbox"/> Daihen
	<input type="checkbox"/> Unit Instruments		<input type="checkbox"/> MDC		<input type="checkbox"/> ENI
			<input type="checkbox"/> Nor-Cal		
			<input type="checkbox"/> Varian		

* Acquired by MKS

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Transaction Summary

- [] \$300M acquisition of ASTeX
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- [] Pooling of interests

- [] Expected Closing: December 2000

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Key Financial Statistics
(LTM, June 30, 2000/\$M)

	MKS	ASTeX	Combined
Revenue	\$248.2	\$139.9	\$388.1
EBIT	50.7	19.4	70.0
Pro Forma Net Income	33.1	14.0	47.1
Shareholder's Equity	154.3	159.1	313.4

[] Slightly accretive without synergies

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Combined Capitalization
(June 30, 2000 /\$M)

	MKS	ASTeX	Combined
Debt	\$ 29.3	\$ 9.6	\$ 38.9
Equity	154.3	159.1	313.4
Cash	65.8	91.2	157.0
Current Market Value	700	210	910

Source: Financials as of June 30, 2000, Market Value as of September 29, 2000

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MKS Instruments, Inc.

Around the Process...

Around the World...

Questions & Answers

Slide # 16

MKS INSTRUMENT/ASTEX
MERGER ANNOUNCEMENT
MONDAY, OCTOBER 2, 2000

BETH LEWIS, THE FINANCIAL RELATIONS BOARD

Thank you for joining MKS Instruments to discuss its merger with Applied Science & Technology, commonly referred to as ASTeX, as announced in this morning's press release. By now you should have received a copy of the release. If for some reason you have not received the press release, please call Luiza Lopes at my office at 617-369-9240.

For today's conference call, from MKS Instruments we have John Bertucci, Chairman and CEO; Ron Weigner, Vice President and Chief Financial Officer; and, ASTeX Chairman and CEO Dr. Richard Post.

Before we begin, I need to remind you that during this conference call, our remarks will include forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 that are subject to risks and uncertainties that could cause actual results to differ materially from those anticipated or indicated, including statements concerning the merger of MKS Instruments and ASTeX.

For a more detailed discussion of the risks and uncertainties of the companies' business, please refer to companies' periodic reports and registration statements filed with the Securities and Exchange Commission, including the companies' annual reports on Form 10-K for the period ended December 31, 1999 for MKS and July 1, 2000 for ASTeX, and quarterly report on Form 10-Q for the period ended June 30, 2000 for MKS. Please note also, following this call, we will make available on both the MKS and ASTeX websites, about 16 slides that help illustrate the merger and why we think it's such a good strategic fit. And with that, I will turn the call over to John Bertucci.

John, would you like to begin?

JOHN BERTUCCI, CHAIRMAN, CEO, MKS INSTRUMENTS

Thank you very much, Beth. As Chairman and CEO of MKS Instruments, I'd like to thank all of you for participating on today's call, and, of course, your continuing interest and support for MKS Instruments.

As you know, MKS announced this morning that it has entered into a definitive merger agreement to acquire ASTeX. The purpose of the call this morning is to provide some details of the transaction and to give you the opportunity to ask any questions. I'm speaking with you today from our corporate office in Andover, Massachusetts. Joining me is Ron Weigner, CFO of MKS, and Dr. Richard Post, who is Chairman and CEO of ASTeX. At the close of the transaction, Dr. Post will assume the role of Corporate Vice-President of Business Development at MKS, and will be a valuable addition to our Executive Committee. ASTeX will become the ASTeX Products group of MKS and will continue to be managed by John Ross, who will report to Dr. Peter Younger, President and COO of MKS.

First allow me to summarize the transaction. Under the terms of the agreement, each outstanding share of ASTeX common stock will be exchanged for 0.7669 newly issued shares of MKS. This will result in the issuance of approximately 11 million shares of common stock of MKS, representing a purchase price of approximately \$300 million, based on the closing price of common stock of MKS on Friday, September 29, 2000.

The transaction is expected to close in the fourth calendar quarter of 2000 and is expected to be slightly accretive to EPS in 2001. The transaction is expected to be accounted for as a pooling of interests, and is expected to qualify as a tax-free reorganization. The merger is subject to the approval of both MKS and ASTeX stockholders, regulatory approval and other customary closing conditions.

I'd like to highlight some key points about the two companies:

- - MKS is the #1 supplier of gas process control instruments to semiconductor OEMs and Fabs. We have a market capitalization of roughly \$700 million a track record of 30 consecutive years of profitability; we have achieved a revenue growth rate averaging roughly 18% per year and have assembled a solid global operation with world class manufacturing, sales and marketing infrastructure.
- - ASTeX is the #1 supplier of reactive gas solutions to semiconductor OEMs. It has a market capitalization of roughly \$210 million. The company has achieved an impressive 5 year revenue compound average growth rate of 48%, which represents roughly a three times multiple of the industry's general growth rate. The company is well recognized in the industry as a technologically strong organization.

You've often heard me discuss our strategic objective to effectively surround the process chamber with MKS control instruments and subsystems. ASTeX is an ideal strategic fit for MKS. We serve virtually the same markets with zero product duplication; our product lines are fully complementary. Together we'll offer the most comprehensive line of process control solutions available. MKS products will monitor, control, and analyze critical variables related to advanced thin film processes - specifically pressure, gas flow, gas composition and energy. This represents a key

competitive advantage as our customers continue their trend of outsourcing highly specialized, integrated sub-system solutions to a few key global suppliers.

We believe the critical mass we will achieve with this combination enables us to enhance our customer relationships and leverage our complementary technologies and our worldwide sales, marketing and support infrastructure. This combined entity offers our customers the broadest range of best in class products and integrated solutions.

The combined entity maintains a strong financial position with a revenue base of approximately \$400 million for the four quarters ended June 30, 2000 and with cash of approximately \$150 million.

With the combined depth of technologies and complimentary core competencies, we believe that the new entity will have a substantially enhanced growth platform.

Before we go over the financial details of the transaction, I'll turn the call over to someone I have worked with for a number of years, and have a great deal of professional respect for, Dr. Richard Post, Chairman and CEO of ASTeX.

RICHARD POST, CHAIRMAN AND CEO OF ASTEX:

Thank you, John. You've outlined the strong strategic rationale for this merger. I just want to go on record as saying that our management team is equally enthusiastic about the future prospects of our combined company. Most definitely, ASTeX is eager to fully leverage the worldwide sales, marketing and support infrastructure of MKS. The new MKS will have significant operations in France, Germany, Japan, Korea, The Netherlands, Singapore, Taiwan, the United Kingdom and the United States.

I believe the most immediate benefit to ASTeX will be in the Asian markets. We believe that the substantial growth in the Pacific Rim is a major opportunity for ASTeX products. Currently approximately 10% of our business is derived from Asia including Japan. We have already established ASTeX at many accounts. In combination with MKS' established presence, we will be able to provide high level support and can accelerate the adoption of ASTeX products in production.

POST:

Most importantly, I believe the critical mass we achieve with this combination will enable us to strengthen our customer relationships. According to industry analysts and company estimates MKS' served market in 1999 was about \$750 million. For ASTeX our served market was about \$700 million. Since there is zero overlap in our product offerings, our potential market has effectively doubled. Furthermore, this market is expected to grow perhaps 60% this year, according to industry analysts. We believe the strength of the combined entity will enable us to gain a larger share of this growing market.

As John said, we have effectively surrounded the process chamber with our combined reactive gas technologies, and I think our customers will appreciate the depth and sophistication of our combined broad product line and integration capabilities.

POST:

As John alluded, the drivers affecting growth at ASTeX include the increased outsourcing by semiconductor equipment OEMs, who are looking to suppliers like ASTeX and MKS for value-added components.

That trend has guided our research efforts to develop a higher level of integration into our product line, which is illustrated by our top-selling ASTRON product, which integrates a reactive gas source, a power source and controls into a compact subsystem.

Also contributing to our growth are new etch and deposition system that increase our available market.

POST:

The combined entity will possess a uniquely broad competitive offering. MKS will be the only provider of products and solutions in all five product areas surrounding the process chamber: pressure measurement and control, materials delivery and analysis, vacuum components, reactive gas generators, and power delivery subsystems. This breadth, plus the unique ability to integrate

innovative products across these product lines, offers greater value to our OEM and end user customers and a significant competitive advantage to our company.

And now, Ron Weigner, CFO of MKS, will walk us through the financial details of the merger. Ron.

RON WEIGNER, CFO, MKS

Thank you Dick. Under the terms of the agreement, each outstanding share of ASTeX common stock will be exchanged for 0.7669 newly issued shares of common stock of MKS. This will result in the issuance of approximately 11 million shares of common stock of MKS, representing a purchase price of approximately \$300 million, based on the closing price of common stock of MKS on Friday, September 29, 2000.

The transaction is expected to close in the fourth calendar quarter of 2000 and is expected to be slightly accretive to EPS in 2001. The transaction is expected to be accounted for as a pooling of interests, and is expected to qualify as a tax-free reorganization. The merger is subject to the approval of both MKS and ASTeX stockholders, regulatory approval and other customary closing conditions.

Finally, we've prepared a number of key financial statistics illustrating the impact on our financials.

Combined revenue for the four quarters ended June 30, 2000 was \$388 million, EBIT was \$70 million combined pro forma net income was \$47 million, and combined shareholders equity as of June 30, 2000 was \$313 million.

WEIGNER

As to our combined capitalization, the sum of the unaffected market values, as of September 29, 2000 represented approximately \$910 million; combined debt as of the most recent financial statements was \$39 million; equity was \$313 million; and cash \$157 million.

And now, I believe John has a few closing comments. John.

BERTUCCI

Thank you, Ron. Over the past years, MKS and ASTeX have leveraged the know-how of highly skilled engineering teams to design and manufacture sophisticated products that have consistently produced superior value to both our customers and our shareholders. I want our shareholders to know that this merger was carefully considered with an eye to achieving a complementary business model, cultural and technological fit, and finally, a deal of financial merit.

I firmly believe the merger of MKS and ASTeX provides breadth of product offering, a company of substantial scale and high-end technological capacity that will accelerate the growth of our combined company worldwide. With that, I'll open up to any questions you might have.

CLOSING COMMENT

BERTUCCI:

Let me close by telling you that the transaction we entered into today enhances our position as a premier supplier of gas and vacuum based control subsystems worldwide. We believe that this transaction enhances our ability to deliver innovative product solutions to our customers on a global basis.

Thank you for participating in today's call.

PRESS RELEASE

FOR FURTHER INFORMATION:

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AT ASTEX

 John M. Tarrh
 Vice President and Treasurer
 (978) 284-4135

MKS INSTRUMENTS AND ASTEX ANNOUNCE DEFINITIVE MERGER AGREEMENT

ANDOVER, MASS. - OCTOBER 2, 2000 - MKS Instruments, Inc. (Nasdaq: MKSI), a leading supplier of gas measurement, control and analysis products used in semiconductor and other advanced thin-film manufacturing processes, announced today that it has entered into a definitive merger agreement to acquire Applied Science and Technology, Inc. ("ASTeX") (Nasdaq:ASTX), a Wilmington, MA-based company that designs, develops, and manufactures precision reactive gas solutions. MKS will be the surviving corporation. For the four quarters ended June 30, 2000 MKS and ASTeX revenues were \$248 million and \$140 million, respectively.

The announced transaction combines MKS, as the number one supplier of gas process control instruments, with ASTeX, the number one supplier of reactive gas solutions. The merger furthers MKS' strategy of offering a one-stop, broad based product range for its OEM and end-user customers. ASTeX's broad product line is based on its core technologies, which include reactive gas generation, power sources, and subsystem integration. The ASTeX merger will add manufacturing capabilities in Massachusetts, Colorado, Germany, and Korea.

John Bertucci, Chairman and CEO of MKS Instruments, stated that the ASTeX product offering will further enhance MKS' strategic objective of surrounding advanced process chambers with MKS control instruments and subsystems. MKS' products used to control vacuum and gas based processes will be complemented with ASTeX's reactive gas generators, RF and microwave power sources, thereby doubling the potential market served by MKS products.

"When this transaction is completed, we believe MKS will offer the most comprehensive line of process control solutions available," said John Bertucci. "Our combined products will monitor and control critical variables - pressure, gas flow, gas composition and energy - related to advanced thin film processes."

The transaction is consistent with MKS' stated objective of expanding its core product offering, both through strategic acquisitions and new product development. MKS acquisitions this year have included Compact Instruments, with technology for advanced vacuum instrumentation, Telvac, with vacuum subsystem manufacturing capability for the European market, Spectra International, with a line of in-process monitoring products, and D.I.P. Inc., with products and technology for digital process control networks.

"ASTeX is an ideal strategic fit for MKS," said Mr. Bertucci. "We serve virtually the same markets with zero product duplication; our product lines are fully complementary, and we have a high degree of geographical and cultural fit. We are very impressed by the high level of subsystem integration that ASTeX has achieved with its products. By offering additional fully integrated process control solutions we intend to increase MKS' value to our customers. The combined technological capabilities of the two companies will enable us to add further value through new innovative product solutions."

Dr. Richard Post, Chairman and CEO of ASTeX, stated "We're very enthusiastic about the combination of our two companies. Together, we will have a greater technological advantage, a larger installed customer base, and a broader ability to serve our customers. We believe that ASTeX's growth objectives can be achieved most rapidly by leveraging the global infrastructure of MKS. We are particularly enthusiastic about MKS' strong position in Japan and the rest of Asia."

Dr. Post will report to John Bertucci as Corporate Vice-President of Business Development and will serve on the Executive Committee of MKS. He and Dr. Peter Younger, President of MKS, will co-chair the MKS/ASTeX integration team. John Ross will continue to manage the new ASTeX Products group of MKS as Corporate Vice-President and General Manager, reporting to Peter Younger. At the closing, the MKS Board of Directors will be expanded from 5 to 7 members and two ASTeX designees will join.

Under the terms of the agreement, each outstanding share of ASTeX common stock will be exchanged for 0.7669 newly issued shares of common stock of MKS. This would result in the issuance of approximately 11 million shares of common stock of MKS, representing 30% of MKS' then outstanding shares. The transaction is valued at approximately \$300 million, based on the closing price of MKS common stock on Friday, September 29, 2000.

The transaction is expected to close in the fourth calendar quarter of 2000, and is expected to be slightly accretive to EPS in 2001. The transaction is expected to be accounted for as a pooling of interests, and is expected to qualify as a tax-free reorganization. The merger is subject to the approval of both MKS and ASTeX stockholders, regulatory approval and other customary closing conditions.

Conference Call Management will host a teleconference, Monday, October 2, 2000, at 8:45 a.m. ET to discuss the transaction.

To participate on the audio portion of the call, please dial 800-982-3472 (domestic) or 703-871-3022 (international) at least five minutes before start-time.

MKS Instruments, Inc. is a leading worldwide developer, manufacturer and supplier of instruments, components and subsystems used to measure, control and analyze gases in semiconductor manufacturing and similar industrial manufacturing processes. MKS Instruments, Inc. sold products to more than 4,000 customers in 1999. In addition to semiconductors, MKS's products are used in processes to manufacture a diverse range of products, such as optical filters, fiber optic cables, flat panel displays, magnetic and optical storage media, architectural glass, solar panels and gas lasers.

MKS plans to file a Registration Statement on SEC Form S-4 in connection with the merger and MKS and ASTeX expect to mail a Joint Proxy Statement/Prospectus to their stockholders containing information about the merger. Investors and security holders are urged to read the Registration Statement and the Joint Proxy Statement/Prospectus carefully when they are available. The Registration Statement and the Joint Proxy Statement/Prospectus will contain important information about MKS, ASTeX, the merger and related matters. Investors and security holders will be able to obtain free copies of these documents through the web site maintained by the U.S. Securities and Exchange Commission at <http://www.sec.gov>.

In addition to the Registration Statement and the Joint Proxy Statement/Prospectus, MKS and ASTeX file annual, quarterly and special reports, proxy statements and other information with the Securities and Exchange Commission. You may read and copy any reports, statements and other information filed by MKS and ASTeX at the SEC public reference rooms at 450 Fifth Street, N.W., Washington, D.C. 20549 or at the Commission's other public reference rooms in New York, New York and Chicago, Illinois. Please call the Commission at 1-800-SEC-0330 for further information on public reference rooms. MKS' and ASTeX's filings with the Commission also are available to the public from commercial document-retrieval services and at the web site maintained by the Commission at <http://www.sec.gov>.

MKS and ASTeX, and their respective directors, executive officers and certain members of management and employees may be soliciting proxies from MKS and ASTeX stockholders in favor of the adoption of the merger agreement and the transactions associated with the merger. A description of any interests that MKS' and ASTeX's directors and executive officers have in the merger will be available in the Joint Proxy Statement/Prospectus.

This report may contain projections or other forward-looking statements regarding future events or the future financial performance of MKS and ASTeX. These projections or statements are only predictions. Actual events or results may differ materially from those in the projections or other forward-looking statements set forth herein. Among the important factors that could cause actual events to differ materially from those in the projections or other forward-looking statements are the challenges and risks involved with integrating the operations of MKS and ASTeX, potential fluctuations in quarterly results, dependence on new product development, rapid technological and market change, acquisition strategy, manufacturing and sourcing risks, volatility of stock price, international operations, financial risk management, and future growth subject to risks. Readers are referred to MKS' and ASTeX's filings with the Securities and Exchange Commission, including their most recent filings on Form 10-K and 10-Q, for a discussion of these and other important risk factors concerning MKS and ASTeX and their respective operations.

These documents and amendments to these documents have or will be filed with the United States Securities and Exchange Commission. When these and other documents are filed with the SEC, they may be obtained free at the SEC's web site at www.sec.gov. You may also obtain for free each of these documents (when available) from MKS by directing your request to Ronald C. Weigner, Vice President and Chief Financial Officer of MKS at (978) 975-2350, or from John Tarrh, Vice President and Treasurer of ASTeX at (978) 284-4135.