SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549 FORM 8-K CURRENT REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 Date of Report (Date of Earliest Event Reported): January 26, 2001 MKS Instruments, Inc. -----(Exact Name of Registrant as Specified in Charter) Massachusetts -----(State or Other Jurisdiction of Incorporation) 0-23521 04-2277512 ------(Commission File Number) (I.R.S. Employer Identification No.) Six Shattuck Road, Andover, Massachusetts 01810 ----------(Address of Principal Executive Offices) (Zip Code) (978) 975-2350 -----(Registrant's Telephone Number, Including Area Code) Not Applicable

(Former Name or Former Address, if Changed Since Last Report)

SPECIAL NOTE REGARDING CERTAIN STATEMENTS AND REFERENCES

This Current Report on Form 8-K contains forward-looking statements which reflect the current judgment of MKS Instruments, Inc. (the "Registrant"), on certain issues, including the Registrant's use of the assets and businesses acquired by it in the Merger (as defined in this Current Report on Form 8-K). Because these statements apply to future events, they are subject to risks and uncertainties that could cause the actual results to differ materially. 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 the Registrant and Applied Science and Technology, Inc. ("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, and the other risks described in the Registrant's Registration Statement on Form S-4 (Commission File No. 333-49738), as amended (the "Registration Statement"), and in the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2000, on file with the Securities and Exchange Commission, which factors are incorporated herein by reference.

References in this Current Report on Form 8-K and the exhibits hereto to www.mksinst.com, any variations of the foregoing, or any other uniform resource locator, or URL, are inactive textual references only. The information on the Registrant's Website and any other URL is not incorporated by reference into this Current Report on Form 8-K and should not be considered to be a part of this document.

ITEM 2. ACQUISITION OR DISPOSITION OF ASSETS

On January 26, 2001, the Registrant completed its acquisition of ASTeX, a Delaware corporation, pursuant to an Agreement and Plan of Merger dated as of October 2, 2000 (the "Merger Agreement") among the Registrant, ASTeX and Mango Subsidiary Corp. (the "Merger Sub"). At the effective time of the merger contemplated by the Merger Agreement (the "Effective Time"), the Merger Sub merged with and into ASTeX, whereupon ASTeX became the wholly owned subsidiary of the Registrant (the "Merger").

In connection with the Merger, the Registrant issued an aggregate of approximately 11.2 million shares of its common stock (the "Common Stock"), in exchange for all of the outstanding shares of capital stock of ASTEX. Each share of capital stock of ASTEX outstanding immediately prior to the Effective Time was converted into the right to receive 0.7669 of a share of newly issued Common Stock. Pursuant to the terms of the Merger Agreement, no fractional shares of the Common Stock were issued in the Merger, and instead the Registrant paid cash, without interest, for any fractional shares.

At the Effective Time, the Registrant elected Robert R. Anderson and Hans-Jochen Kahl, former members of the board of directors of ASTeX, to the Registrant's board of directors.

The Merger is intended to qualify as a reorganization within the meaning of Section 368(a) of the Internal Revenue Code of 1986, as amended. The Company expects to treat the Merger as a "pooling-of-interests" for accounting purposes.

The terms of the Merger Agreement and the Merger were determined on the basis of "arm's-length" negotiations among the parties. The board of directors and stockholders of ASTEX and the board of directors of the Registrant approved the Merger Agreement and the Merger. In addition, the stockholders of the Registrant approved the issuance of the Common Stock in connection with the Merger.

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John R. Bertucci, chairman and chief executive officer of the Registrant, also served as a director of ASTeX. In addition, Mr. Bertucci owned 22,500 shares of ASTeX common stock and options to purchase 44,000 shares of ASTeX common stock. The Registrant further owned 52,500 shares of ASTeX common stock in its own name. None of the Registrant, its affiliates, or its officers or directors had any other material relationship with ASTeX or any of ASTeX's stockholders.

Prior to the Merger, ASTeX focused on the design, development, manufacture and support of high performance reactive gas modules used in the semiconductor device manufacturing and medical markets, as well as etch and deposition systems for advanced semiconductor packaging, telecommunications and magnetic sensors. The Registrant currently intends to continue to use the tangible assets of ASTeX constituting plant, equipment or other physical property and its intellectual property substantially in the same manner in which they were used by ASTeX immediately prior to the Merger.

The foregoing discussion of the Merger Agreement does not purport to be complete and is qualified by reference to the full text of the Merger Agreement, which was filed as Annex A to the Registration Statement and is incorporated herein by reference. The Company's press release dated January 26, 2001, which is filed as Exhibit 99.1 to this Current Report on Form 8-K, is also incorporated herein by reference.

ITEM 7. FINANCIAL STATEMENTS, PRO FORMA FINANCIAL INFORMATION AND EXHIBITS.

(a) Financial Statements of Businesses Acquired

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(i) The following audited consolidated financial statements of ASTeX and the notes related thereto and the independent auditors' report thereon were previously reported in the Registration Statement, and pursuant to General Instruction B.3 of Form 8-K no additional audited financial statements of ASTeX are reported in this Current Report on Form 8-K:

- (A) balance sheets as of June 26, 1999 and July 1, 2000; and
- (B) statements of operations for the fiscal years ended June 27, 1998, June 26, 1999 and July 1, 2000.

(ii) The following unaudited consolidated financial statements of ASTeX and the notes related thereto were previously reported in the Registration Statement, and pursuant to General Instruction B.3 of Form 8-K no additional unaudited financial statements of ASTeX are reported in this Current Report on Form 8-K:

- (A) balance sheet as of September 30, 2000; and
- (B) statements of operations for the three months ended September 25, 1999 and September 30, 2000.
- (b) Pro Forma Financial Information

The following unaudited pro forma combined condensed financial statements of the Registrant and ASTEX and the notes related thereto were previously reported in the Registration Statement, and pursuant to General Instruction B.3 of Form 8-K no additional pro forma financial statements are reported in this Current Report on Form 8-K:

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- (A) balance sheet as of September 30, 2000; and
- (B) statements of operations for the fiscal years ended December 31, 1997, 1998, and 1999 and for the nine months ended September 30, 1999 and for the nine months ended September 30, 2000.

(C) Exhibits

The Exhibits filed as part of this Current Report on Form 8-K are listed on the Exhibit Index immediately preceding such Exhibits, which Exhibit Index is incorporated herein by reference. Documents listed on such Exhibit Index, except for documents identified by footnotes, are being filed as exhibits herewith. Documents identified by footnotes are not being filed herewith and, pursuant to Rule 12b-32 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), reference is made to such documents as previously filed as exhibits filed with the Securities and Exchange Commission. The Registrant's file number under the Exchange Act is 0-23521.

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SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

MKS INSTRUMENTS, INC.

Date: January 26, 2001 By: /s/ Ronald C. Weigner Ronald C. Weigner Vice President and Chief Financial Officer

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EXHIBIT INDEX

Exhibit No. Description - ---------Agreement and Plan of Merger dated as of October 2, 2000 2.1(1)among the Registrant, Applied Science and Technology, Inc. and Mango Subsidiary Corp. 4.1 (2) Specimen stock certificate representing common stock, no par value per share, of the Registrant. Press Release entitled "MKS Instruments Closes on ASTeX 99.1 Merger" dated January 26, 2001. -----(1)Incorporated herein by reference to the Registrant's Registration Statement on Form S-4 (Commission File No. 333-49738), as amended.

(2) Incorporated herein by reference to the Registrant's Registration Statement on Form S-1 (Commission File No. 333-71363), as amended.

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NEWS BULLETIN FROM:

THE FINANCIAL RELATIONS BOARD BSMG WORLDWIDE

RE: MKS INSTRUMENTS, INC. Six Shattuck Road Andover, MA 01810-2449 Nasdaq: MKSI

FOR FURTHER INFORMATION:

AT THE COMPANY

THE FINANCIAL RELATIONS BOARD

Ronald C. Weigner Vice President and Chief Financial Officer (978) 975-2350 Glenn Sapadin David Closs Beth Lewis (general info) (media info) (analyst info) (212) 661-8030 (212) 661-8030 (617)369-9240

FOR IMMEDIATE RELEASE January 26, 2001

MKS INSTRUMENTS CLOSES ON ASTEX MERGER COMBINED COMPANY OFFERS MOST COMPREHENSIVE SUITE OF PROCESS CONTROL PRODUCTS

ANDOVER, MASS. - JANUARY 26, 2001 - MKS Instruments, Inc. (Nasdaq: MKSI), a leading supplier of gas measurement, control and analysis products used in semiconductor and other advanced manufacturing processes, today announced the closing of its acquisition of Applied Science and Technology, Inc. ("ASTEX"), following a vote of approval from both companies' shareholders. The combined company will have more than 2,000 employees, serving over 4,000 customers around the world through an enhanced MKS Global Customer Support organization. The transaction combines MKS, the leading supplier of gas process control products to the semiconductor industry, with ASTEX, the leading supplier of reactive gas solutions.

ASTEX(R) reactive gas generator and power delivery products will become part of a technologically advanced product family that includes MKS' Baratron(R) pressure measurement and control products, HPS(R) vacuum subsystem products, Mass-Flo(R) advanced materials delivery products, Spectra(TM) process monitor products, D.I.P.(TM) digital process control network products, and a growing range of Integrated Component Subsystems(TM) which combine products and technology from the MKS portfolio. This all-encompassing product line will provide MKS' customers a complete suite of best-in-class products to control processes and maximize productivity of their vacuum and gas-based manufacturing equipment. The combined products will monitor and control critical variables pressure, gas flow, gas composition and energy - used in advanced manufacturing processes.

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John Bertucci, Chairman and CEO of MKS Instruments, explained, "Not only do we have highly complementary product lines, a common customer base and a high degree of geographic and cultural fit, but this merger also provides us with the size and scale to be a one-stop supplier for our combined customers. Our goal for MKS is to participate in growing markets, to continually increase market share in the markets we serve, to add to our broad-based product and technology portfolio and to continue to develop the highly integrated products that our customers need. This merger helps drive all the thrusts of our growth strategy."

For the twelve months ended September 30, 2000 MKS and ASTeX combined revenues were \$435 million.

Under the terms of a definitive agreement announced October 2, 2000, each outstanding share of ASTEX common stock will be exchanged for 0.7669 newly issued shares of common stock of MKS, resulting in the issuance of approximately 11.2 million MKS shares. Shares of ASTEX will stop trading on the Nasdaq at the close of business on January 26, 2001. According to MKS management, the transaction will be accounted for as a pooling of interests. Dr. Richard Post, Chairman and CEO of ASTEX, will serve MKS as Vice President of Business Development, reporting to John Bertucci, and will also serve on the Executive Committee of MKS. John Ross, President and COO of ASTEX, will continue to manage the new ASTEX Products group of MKS as Vice President and General Manager, reporting to Peter Younger, MKS President and COO.

ASTEX is MKS' fifth acquisition since going public in the spring of 1999, and is part of the Company's overall strategy to expand core product offerings and technology through strategic acquisitions and new product development. Other acquisitions during 2000 included Compact Instruments, with technology for advanced vacuum instrumentation; Telvac, with vacuum subsystem development and 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.

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' 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 lasers. 3 MKS Instruments - ASTeX Close Page 3 of 3

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.