

Securities and Exchange Commission

Washington, D.C. 20549

Schedule 13G

Under the Securities Exchange Act of 1934

(Amendment No.5)*

Name of Issuer: KLA-Tencor Corporation

Title of Class of Securities: Common

CUSIP Number: 482480100

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

CUSIP Number: 482480100

1. Name of Reporting Person: Jennison Associates Capital Corp.

S.S. or I.R.S. Identification No. of Above Person:

RS Identification #13-2631108

2. Check the Appropriate Box if a Member of a Group: Not Applicable

3. SEC Use Only

4. Citizenship or Place of Organization: New York

Number of Shares Beneficially Owned By Each Reporting Person

With:

5. Sole Voting Power: 892,400 shares

6. Shared Voting Power: 4,160,800 shares

7. Sole Dispositive Power: 0 shares

8. Shared Dispositive Power: 5,485,500 shares

9. Aggregate Amount Beneficially Owned by Each Reporting Person:

5,485,500 shares

10. Check Box if the Aggregate Amount in Row 9 Excludes Certain
Shares*: ()

11. Percent of Class Represented by Amount in Row 9: 6.48%

12. Type of Reporting Person*: IA

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Item 1(a) Name of Issuer: KLA-Tencor Corporation

Item 1(b) Address of Issuer's Principal Executive Offices:

1 Technology Drive

Milipitas, CA 95035

Item 2(a) Name of Person Filing: Jennison Associates

Capital Corp.

Item 2(b) Address of Principal Business Office or Residence:

466 Lexington Avenue

New York, NY 10017

Item 2(c) Citizenship: New York

Item 2(d) Title of Class of Securities: Common

Item 2(e) CUSIP Number: 482480100

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Item 3 If this statement is filed pursuant to Rules 13d1(b),
or 13d-2(b), check whether the person filing is a:

(a) Broker or Dealer registered under Section 15 of the Act

(b) Bank as defined in Section 3(a) (6) of the Act

(c) Insurance Company as defined in Section 3(a) (19) of the Act

(d) Investment Company registered under Section 8 of the
Investment Company Act

(e) Investment Adviser registered under Section 203 of the

Investment Advisers Act of 1940

(f) () Employee Benefit Plan, Pension Fund which is subject to the provision of the Employee Retirement Income Security Act of 1974 or Endowment Fund; see Section 240.13d-1(b) (ii) (F)

(g) () Parent Holding Company, in accordance with Section 240.13(b) (ii) (G) (Note See Item 7)

(h) () Group, in accordance with Section 240.13d-1(b) (ii) (H)

Item 4 Ownership:

(a) Amount Beneficially Owned: 5,485,500 shares

(b) Percent of Class: 6.48%

(c) Number of shares as to which such person has:

892,400 (I) sole power to vote or to direct the vote

4,160,800 (II) shared power to vote or to direct the vote

0 (III) sole power to dispose or to direct the disposition of

5,485,500 (IV) shared power to dispose or to direct the

disposition of

Jennison Associates Capital Corp. ("Jennison") furnishes investment advice to several investment companies, insurance separate accounts, and institutional clients ("Managed Portfolios"). As a result of its role as investment adviser of the Managed Portfolios, Jennison may be deemed to be the beneficial owner of the shares of the Issuer's Common Stock held by such Managed Portfolios. The Prudential Insurance Company of America ("Prudential") owns 100% of the stock of Jennison. As a result, Prudential may be deemed to have the power to exercise or to direct the exercise of such voting and/or dispositive power that Jennison may have with respect to the Issuer's Common Stock held by the Managed Portfolios.

Jennison does not file jointly with Prudential, as such, shares of the Issuer's Common Stock reported on Jennison's 13G may be included in the shares reported on the 13G filed by Prudential. These shares were acquired in the ordinary course of business, and not with the purpose or effect of changing or influencing control of the Issuer. The filing of this statement should not be construed as an admission that Jennison is, for the purposes of Sections 13 or 16 of the Securities Exchange Act of 1934, the beneficial owner of these shares.

Item 5 Ownership of Five Percent or Less of a Class:

If this statement is being filed to report the fact that as of

the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the securities, check the following ().

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Item 6 Ownership of More than Five Percent on Behalf of Another Person:

Our clients have the right to receive or the power to direct the receipt of dividends or the profits from the sale of such securities. No one client owns more than 5% of such security class.

Item 7 Identification and Classification of the Subsidiary which Acquired the Security being Reported on by the Parent Holding Company: Not Applicable

Item 8 Identification and Classification of Members of the Group: Not Applicable

Item 9 Notice of Dissolution of Group: Not Applicable

Item 10 Certification:

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired in the ordinary course of business and were not acquired for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired in connection with or as a participant in any

transaction having such purposes or effects. After reasonable inquiry and to the best of my knowledge and belief, I certify that the correct information set forth in this statement is true, complete and correct.

February 10, 1998

Karen E. Kohler, Senior Vice President and Director