

SCHEDULE 13G
(12/31/2000)

OSI SYSTEMS INC
Cusip # 671044105
New Filing

Cusip # 671044105

- Item 1: REPORTING PERSONS
Dimensional Fund Advisors Inc. (Tax ID: 22-2370029)
- Item 4: CITIZENSHIP
Delaware Corporation
- Item 5: SOLE VOTING POWER
546,100 ** see Note 1 **
- Item 6: SHARED VOTING POWER --
None
- Item 7: SOLE DISPOSITIVE POWER --
546,100 ** see Note 1 **
- Item 8: SHARED DISPOSITIVE POWER --
0
- Item 9: AGGREGATE AMOUNT BENEFICIALLY OWNED --
546,100 ** see Note 1 **
- Item 11: PERCENT OF CLASS REPRESENTED BY LINE 9 --
5.84
- Item 12: TYPE OF REPORTING PERSON --
IA

- ITEM 1(A). NAME OF ISSUER
OSI SYSTEMS INC
- ITEM 1(B). ADDRESS OF ISSUER
12525 Chadron Ave
Hawthorne, CA 90250-4807
- ITEM 2(A). NAME OF PERSON FILING
Dimensional Fund Advisors
- ITEM 2(B). ADDRESS OF PRINCIPAL BUSINESS OFFICE
1299 Ocean Avenue, 11th Floor, Santa Monica, CA 90401
- ITEM 2(C). CITIZENSHIP
A Delaware Corporation
- ITEM 2(D). TITLE OF CLASS OF SECURITIES
Common Stock
- ITEM 2(E). CUSIP NUMBER
671044105
- ITEM 3. This statement is filed pursuant to Rule 13d-1 (b), or 13d-2 (b) and the person filing is an investment advisor registered under section 203 of the Investment Advisors Act of 1940.

- ITEM 4. OWNERSHIP
- ITEM 4(a). AMOUNT BENEFICIALLY OWNED
546,100 ** see Note 1 **
- ITEM 4(b). PERCENT OF CLASS
5.84
- ITEM 4(c). NUMBER OF SHARE AS TO WHICH SUCH PERSON HAS:
- (i). SOLE POWER TO VOTE OR DIRECT THE VOTE --
546,100 ** see Note 1 **
- (ii). SHARED POWER TO VOTE OR TO DIRECT THE VOTE --
None
- (iii). SOLE POWER TO DISPOSE OR TO DIRECT DISPOSITION OF --
546,100 ** see Note 1 **
- (iv). SHARE POWER TO DISPOSE OR TO DIRECT DISPOSITION OF --
None

** Note 1 **

Dimensional Fund Advisors Inc. ("Dimensional"), an investment advisor registered under Section 203 of the Investment Advisors Act of 1940, furnishes investment advice to four investment companies registered under the Investment Company Act of 1940, and serves as investment manager to certain other commingled group trusts and separate accounts. These investment companies, trusts and accounts are the "Funds". In its role as investment adviser or manager, Dimensional possesses voting and/or investment power over the securities of the Issuer described in this schedule that are owned the Funds. All securities reported in this schedule are owned by the Funds. Dimensional disclaims beneficial ownership of such securities.

- ITEM 5. OWNERSHIP OF FIVE PERCENT OR LESS OF A CLASS
If this statement is being filed to report the fact that as of 12/31/2000 the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following: []
- ITEM 6. OWNERSHIP OF MORE THAN FIVE PERCENT ON BEHALF OF ANOTHER PERSON
All Securities reported in this schedule are owned by advisory clients of Dimensional Fund Advisors Inc., no one of which to the knowledge of Dimensional Fund Advisors Inc. owns more than 5% of the class. Dimensional Fund Advisors Inc disclaims beneficial ownership of all such securities.
- 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 effect.

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

Signature

Friday, February 2, 2001

Michael T. Scardina
Vice President and Chief Financial Officer