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P.E 4-21-02



**SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

**FORM 6-K**

Report of Foreign Issuer  
Pursuant to Rule 13a-16 or 15d-16 of  
the Securities Exchange Act of 1934

April 21, 2002

**NOVA MEASURING INSTRUMENTS LTD.**  
(Translation of registrant's name into English)

Weizmann Science Park  
P.O. Box 266  
Rehovot 76100  
Israel

(Address of principal executive offices)

PROCESSED

MAY 01 2002

THOMSON FINANCIAL *φ*

Indicate by check mark whether the registrant files or will file annual reports under cover Form 20-F or Form 40-F.

Form 20-F  Form 40-F

Indicate by check mark whether the registrant by furnishing the information contained in this Form is also furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities and Exchange Act of 1934.

Yes \_\_\_\_\_ No

Attached hereto as Exhibit 1, and incorporated by reference herein, is the notice and proxy statement of Nova Measuring Instruments Ltd. (the "Registrant"), relating to the Extraordinary Shareholders Meeting that will take place on May 8, 2002.

SIGNATURE

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

NOVA MEASURING INSTRUMENTS LTD.

April 21, 2002

A handwritten signature in black ink, appearing to read "G. Dishon", written over a horizontal line.

Giora Dishon, President  
and Chief Executive Officer