

**EXHIBIT 6**  
**TEST REPORT**

TEST REPORT PREPARED BY:

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Test Report for Emissions Testing of the TRM-2000 [1900 MHz]

In accordance with FCC Part 2 Frequency Allocations and Radio Treaty Matters;  
General Rules and Regulations, Subpart J

Test Personnel: Erin Hails

Prepared for: Nortel Networks  
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Client Acceptance  
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## **1.0 INTRODUCTION**

### **1.1 SCOPE**

The purpose of this report is to present the results of compliance testing performed in accordance with CFR 47 FCC Part 2, Subpart J, Equipment Authorization Procedures.

### **1.2 APPLICANT**

This test report has been prepared for Nortel Networks, located in Calgary, Alberta, Canada.

### **1.3 APPLICABILITY**

All test procedures, limits, and results defined in this document apply to the Nortel Networks TRM-2000 [1900 MHz] unit, referred to as the Equipment Under Test (EUT).

The results contained in this report relate only to the item tested.

This report does not imply product endorsement by NVLAP, or the Canadian or US governments.

### **1.4 TEST SAMPLE DESCRIPTION**

The test sample provided for testing was a TRM-2000 [1900 MHz].

|                       |                                                |
|-----------------------|------------------------------------------------|
| Product Type:         | Telecommunications                             |
| Model Number:         | NPGS58CA P1                                    |
| Serial Number:        | NNTM537TG7E9                                   |
| Power Requirements:   | -48 VDC                                        |
| Peripheral Equipment: | Laptop, Cell site tester                       |
| Cables:               | DC interconnect, RF cables, fibre optic cables |

More detailed information is supplied by Nortel Networks in Appendix A.

### **1.5 GENERAL TEST CONDITIONS AND ASSUMPTIONS**

The EUT was set up and exercised using the configurations, modes of operation and arrangements defined in this report only. All inputs and outputs to and from other equipment associated with the EUT were adequately simulated.

Where relevant, the EUT was only tested using the monitoring methods and test criteria defined in this report.

All testing, unless otherwise noted, was performed under the following environmental conditions:

|                      |               |
|----------------------|---------------|
| Temperature:         | 17 to 23 °C   |
| Humidity:            | 45 to 75 %    |
| Barometric Pressure: | 68 to 106 kPa |

## 1.6 SCOPE OF TESTING

Tests were performed in accordance with FCC Part 2 Subpart J (2000).

### 1.6.1 VARIATIONS IN TEST METHODS

There were no variations from the test procedures outlined above.

### 1.6.2 MARGINAL EMISSIONS MEASUREMENTS

As noted in Section 4, some emissions were measured to be within -6 dB of the specified limit.

### 1.6.3 TEST SAMPLE MODIFICATIONS

There were no equipment modifications during test performance.

## **2.0 ABBREVIATIONS**

|     |                         |
|-----|-------------------------|
| CE  | -Conducted Emissions    |
| E   | -Field - Electric Field |
| H   | -Field - Magnetic Field |
| N/T | -Not Tested             |
| N/A | -Not Applicable         |
| RE  | -Radiated Emissions     |

## **3.0 MEASUREMENT UNCERTAINTY**

For these tests, the uncertainties in the measurements were calculated using the methods outlined in the NAMAS document, NIS81: May 1984.

Frequency =  $\pm 1$  kHz  
Amplitude (RE) =  $\pm 4.01$  dB  
Amplitude (CE) =  $\pm 3.25$  dB

#### **4.0 TEST CONCLUSION**

The EUT was subjected to the following tests. Compliance status is indicated as **PASS**, **Marginal Pass**, or **FAIL**.

The following table summarizes the test results in terms of the specification and class or level applied, the unique test sample identification, and the EUT modification state, the mode of operation, configuration and cable arrangement as applicable.

| TEST CASE | TEST TYPE                               | SPECIFICATION               | TEST SAMPLE         | MOD. STATE | CONFIGURATION          | RESULT      |
|-----------|-----------------------------------------|-----------------------------|---------------------|------------|------------------------|-------------|
| §4.1      | RF Output Power                         | FCC Part 2.1046             | TRM-2000 [1900 MHz] | nil        | Simulated Installation | <b>PASS</b> |
| §4.2      | Occupied Bandwidth                      | FCC Part 2.1049             | TRM-2000 [1900 MHz] | nil        | Simulated Installation | <b>PASS</b> |
| §4.3      | Spurious Emissions at Antenna Terminals | FCC Parts 2.1051 and 2.1057 | TRM-2000 [1900 MHz] | nil        | Simulated Installation | <b>PASS</b> |
| §4.4      | Radiated Emissions                      | FCC Parts 2.1053 and 2.1057 | TRM-2000 [1900 MHz] | nil        | Simulated Installation | <b>PASS</b> |

#### **STATEMENT OF COMPLIANCE**

The client equipment referred to in this report was found to comply with the requirements as stated above.

#### 4.1 RF POWER OUTPUT

|                                                                                                                                                        |                 |                                                                                                 |                           |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-------------------------------------------------------------------------------------------------|---------------------------|
| Test Lab: MPB Technologies Inc. Airdrie                                                                                                                |                 | Product:                                                                                        |                           |
| Test Personnel: Erin Hails                                                                                                                             |                 | TRM-2000 [1900 MHz]                                                                             |                           |
| Test Date: 29 March 2001                                                                                                                               |                 |                                                                                                 |                           |
| Test Result: TRM-2000 [1900 MHz]: PASS                                                                                                                 |                 |                                                                                                 |                           |
| Objectives/Criteria                                                                                                                                    |                 | Specifications                                                                                  |                           |
| The effective radiated power emitted by a device at its carrier frequency, measured at the antenna terminal, shall not exceed the limits as specified. |                 | FCC Part 24.232<br>ERP <= 100 W or 50.0 dBm<br>ERP <sub>meas</sub> = ERP <sub>rated</sub> ± 1dB |                           |
| Channel                                                                                                                                                | Frequency [MHz] | ERP <sub>rated</sub> [dBm]                                                                      | ERP <sub>meas</sub> [dBm] |
| 0025                                                                                                                                                   | 1931.25         | 41.50                                                                                           | 41.38                     |
| 0275                                                                                                                                                   | 1943.75         | 41.50                                                                                           | 41.03                     |
| 0325                                                                                                                                                   | 1946.25         | 41.50                                                                                           | 41.33                     |
| 0375                                                                                                                                                   | 1948.75         | 41.50                                                                                           | 41.14                     |
| 0425                                                                                                                                                   | 1951.25         | 41.50                                                                                           | 41.20                     |
| 0675                                                                                                                                                   | 1963.75         | 41.50                                                                                           | 41.25                     |
| 0725                                                                                                                                                   | 1966.25         | 41.50                                                                                           | 41.28                     |
| 0775                                                                                                                                                   | 1968.75         | 41.50                                                                                           | 41.24                     |
| 0825                                                                                                                                                   | 1971.25         | 41.50                                                                                           | 41.18                     |
| 0875                                                                                                                                                   | 1973.75         | 41.50                                                                                           | 41.29                     |
| 0925                                                                                                                                                   | 1976.25         | 41.50                                                                                           | 41.29                     |
| 1175                                                                                                                                                   | 1988.75         | 41.50                                                                                           | 41.30                     |

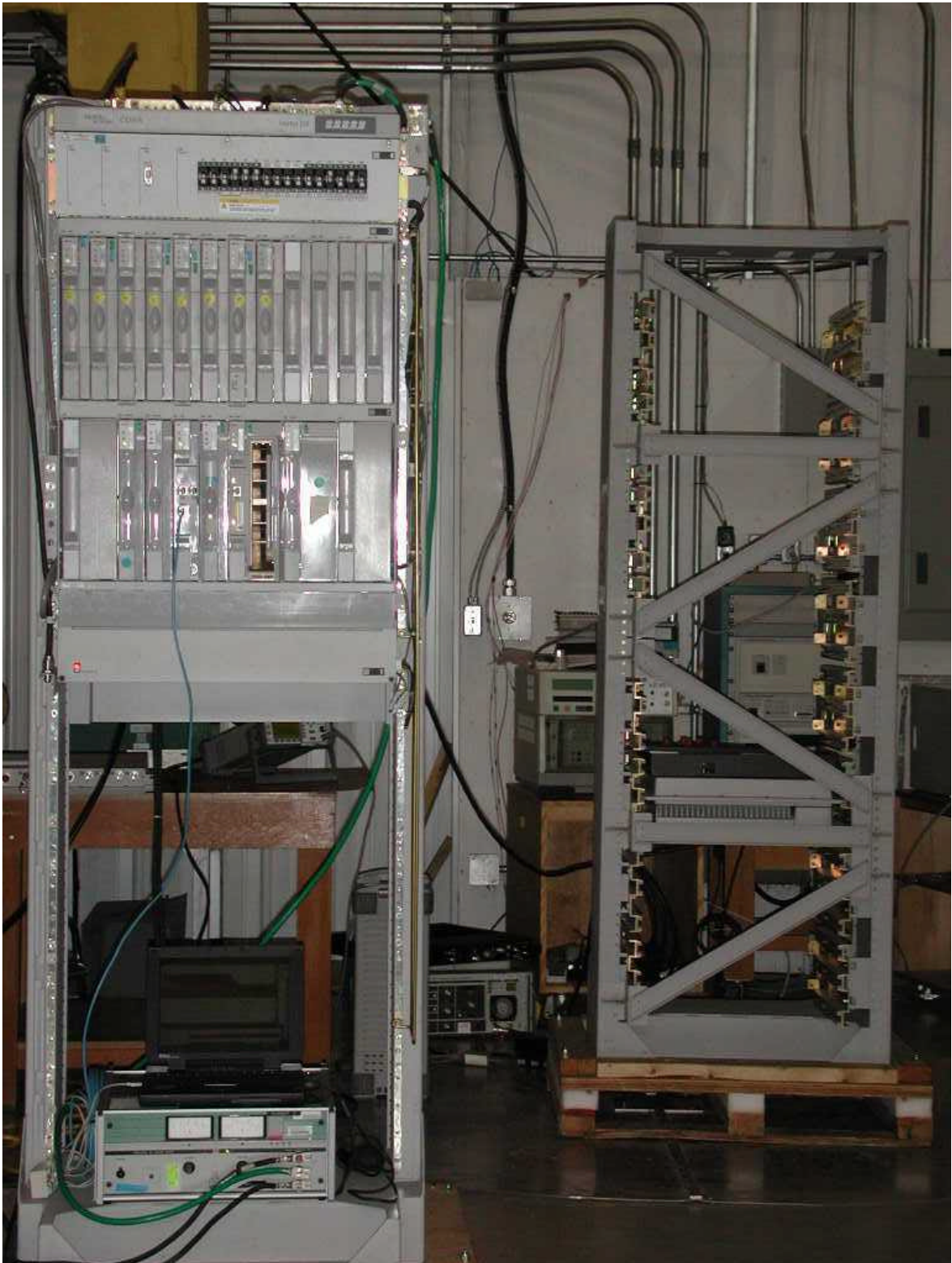
## 4.2 OCCUPIED BANDWIDTH

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                 |                                                                  |                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------|--------------------------|
| Test Lab: MPB Technologies Inc. Airdrie<br>Test Personnel: Erin Hails<br>Test Date: 29 March 2001                                                                                                                                                                                                                                                                                                                                                                      |                 | Product:<br>TRM-2000 [1900 MHz]                                  |                          |
| Test Result: TRM-2000 [1900 MHz]: PASS                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |                                                                  |                          |
| Objectives/Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 | Specifications                                                   |                          |
| The occupied bandwidth shall be measured at its antenna terminal at the carrier frequency such that:<br><br>99.0% of the total mean power (area under the curve of spectral density vs. frequency) emitted by the device is within the occupied bandwidth;<br><br>0.5% of the total mean power lies below the lower frequency limit of the occupied bandwidth; and<br><br>0.5% of the total mean power lies above the higher frequency limit of the occupied bandwidth |                 | The occupied bandwidth and channel spacing for CDMA is 1.25 MHz. |                          |
| Channel                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Frequency [MHz] |                                                                  | Occupied Bandwidth [MHz] |
| 0025                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1931.25         |                                                                  | 1.266                    |
| 0275                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1943.75         |                                                                  | 1.247                    |
| 0325                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1946.25         |                                                                  | 1.266                    |
| 0375                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1948.75         |                                                                  | 1.266                    |
| 0425                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1951.25         |                                                                  | 1.266                    |
| 0675                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1963.75         |                                                                  | 1.266                    |
| 0725                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1966.25         |                                                                  | 1.266                    |
| 0775                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1968.75         |                                                                  | 1.266                    |
| 0825                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1971.25         |                                                                  | 1.266                    |
| 0875                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1973.75         |                                                                  | 1.266                    |
| 0925                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1976.25         |                                                                  | 1.266                    |
| 1175                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1988.75         |                                                                  | 1.266                    |
| Comments: The occupied bandwidth was measured using the occupied bandwidth softkey on the spectrum analyzer.                                                                                                                                                                                                                                                                                                                                                           |                 |                                                                  |                          |

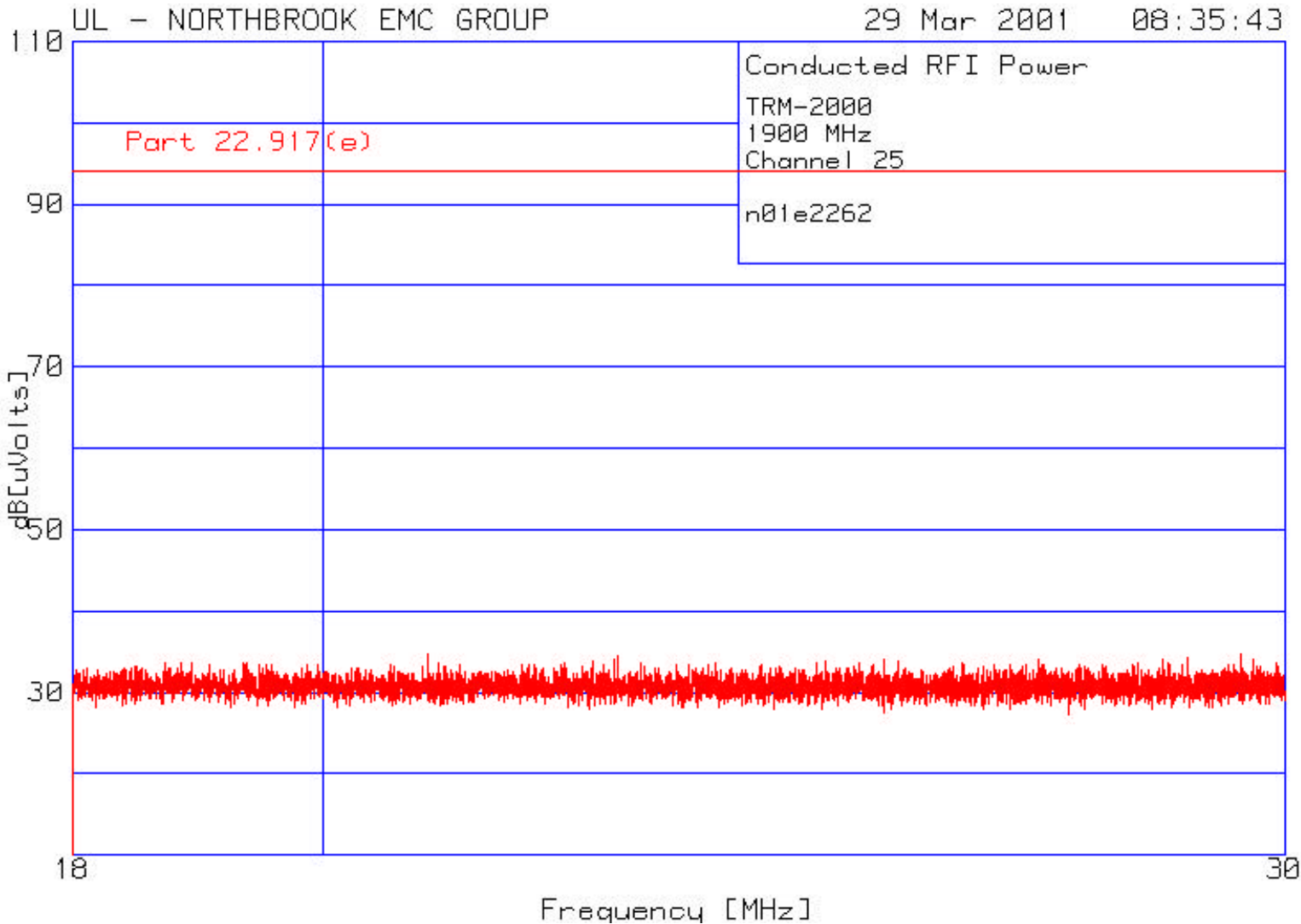
### 4.3 SPURIOUS EMISSIONS AT ANTENNA TERMINALS

|                                                                                                                                                                                                                                                                                                                                   |                 |                                                    |                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------------------|--------------------------|
| Test Lab: MPB Technologies Inc. Airdrie                                                                                                                                                                                                                                                                                           |                 | Product:                                           |                          |
| Test Personnel: Erin Hails                                                                                                                                                                                                                                                                                                        |                 | TRM-2000 [1900 MHz]                                |                          |
| Test Date: 29 March & 5 April 2001                                                                                                                                                                                                                                                                                                |                 |                                                    |                          |
| Test Result, TRM-2000 [1900 MHz]: PASS                                                                                                                                                                                                                                                                                            |                 |                                                    |                          |
| Objectives/Criteria                                                                                                                                                                                                                                                                                                               |                 | Specifications                                     |                          |
| The spurious emissions at the antenna terminals shall not exceed the limits for the specifications as stated.                                                                                                                                                                                                                     |                 | FCC Part 2.1051 and 2.1057                         |                          |
| Emission levels should meet the requirements with a margin of 6dB.                                                                                                                                                                                                                                                                |                 | FCC Part 24.238                                    |                          |
| (NB. $f_c$ denotes carrier frequency)                                                                                                                                                                                                                                                                                             |                 | Frequency                                          | Emission Level           |
|                                                                                                                                                                                                                                                                                                                                   |                 | 9 kHz to lower edge of $f_c$                       | -13 dBm or 94 dB $\mu$ V |
|                                                                                                                                                                                                                                                                                                                                   |                 | upper edge of $f_c$ to the tenth harmonic of $f_c$ | -13 dBm or 94 dB $\mu$ V |
| Comments: All the peaks that appeared to be within -20 dB of the limit were investigated to determine their average peak, and in every case, this value was more than -20 dB from the limit.                                                                                                                                      |                 |                                                    |                          |
| Channel                                                                                                                                                                                                                                                                                                                           | Frequency [MHz] | Emission Level [dB $\mu$ V]                        | Delta [dB from limit]    |
|                                                                                                                                                                                                                                                                                                                                   |                 |                                                    |                          |
|                                                                                                                                                                                                                                                                                                                                   |                 |                                                    |                          |
|                                                                                                                                                                                                                                                                                                                                   |                 |                                                    |                          |
| There were no emissions measured to be within -20 dB of the specified limit. Refer to the test data plots for more details. Note that the limit specified in the plots is from Part 22; however, the applicable limit (from Part 24) is identical in value to the one shown in the plots, and so this does not alter the results. |                 |                                                    |                          |

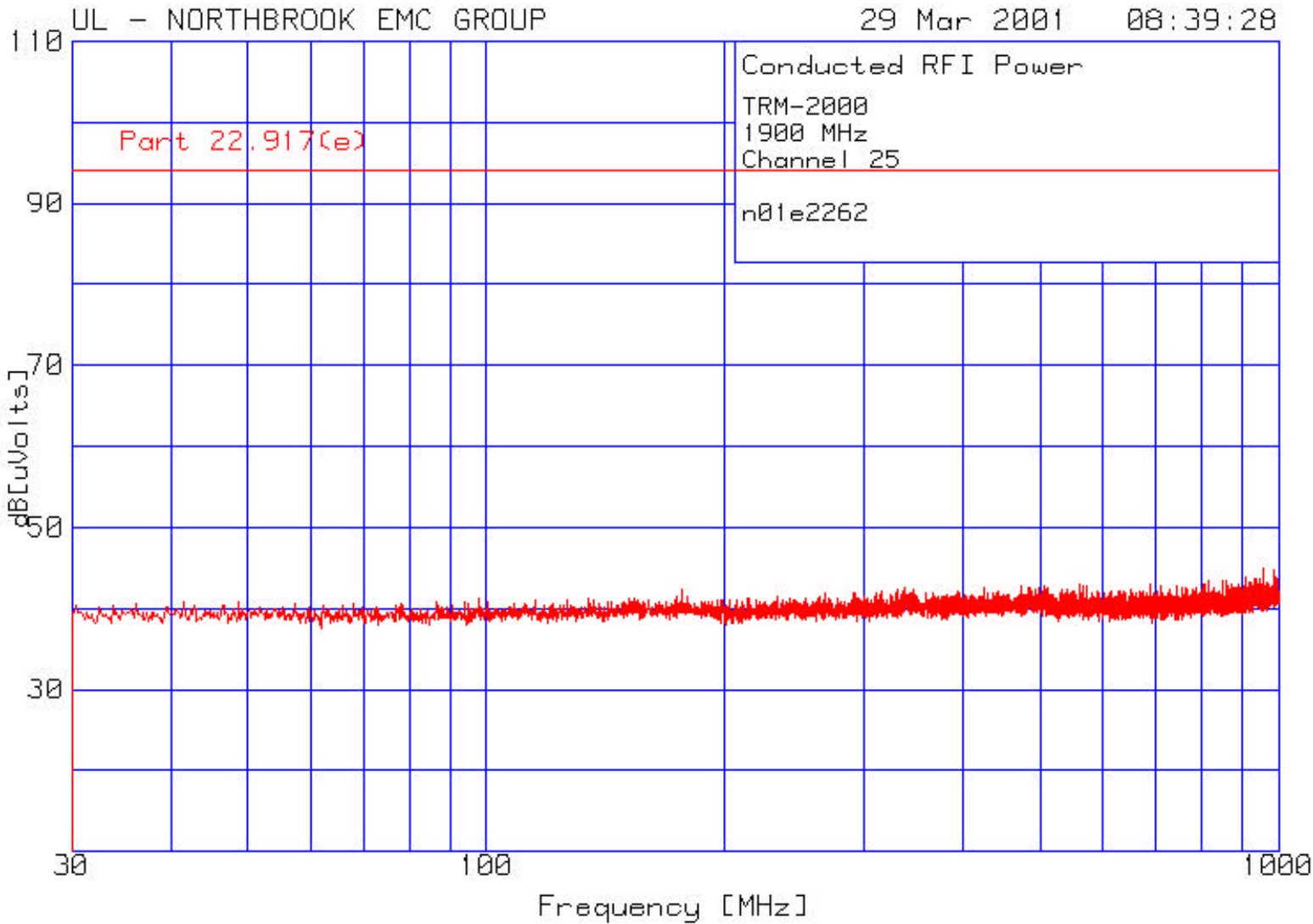
## EQUIPMENT TEST SETUP



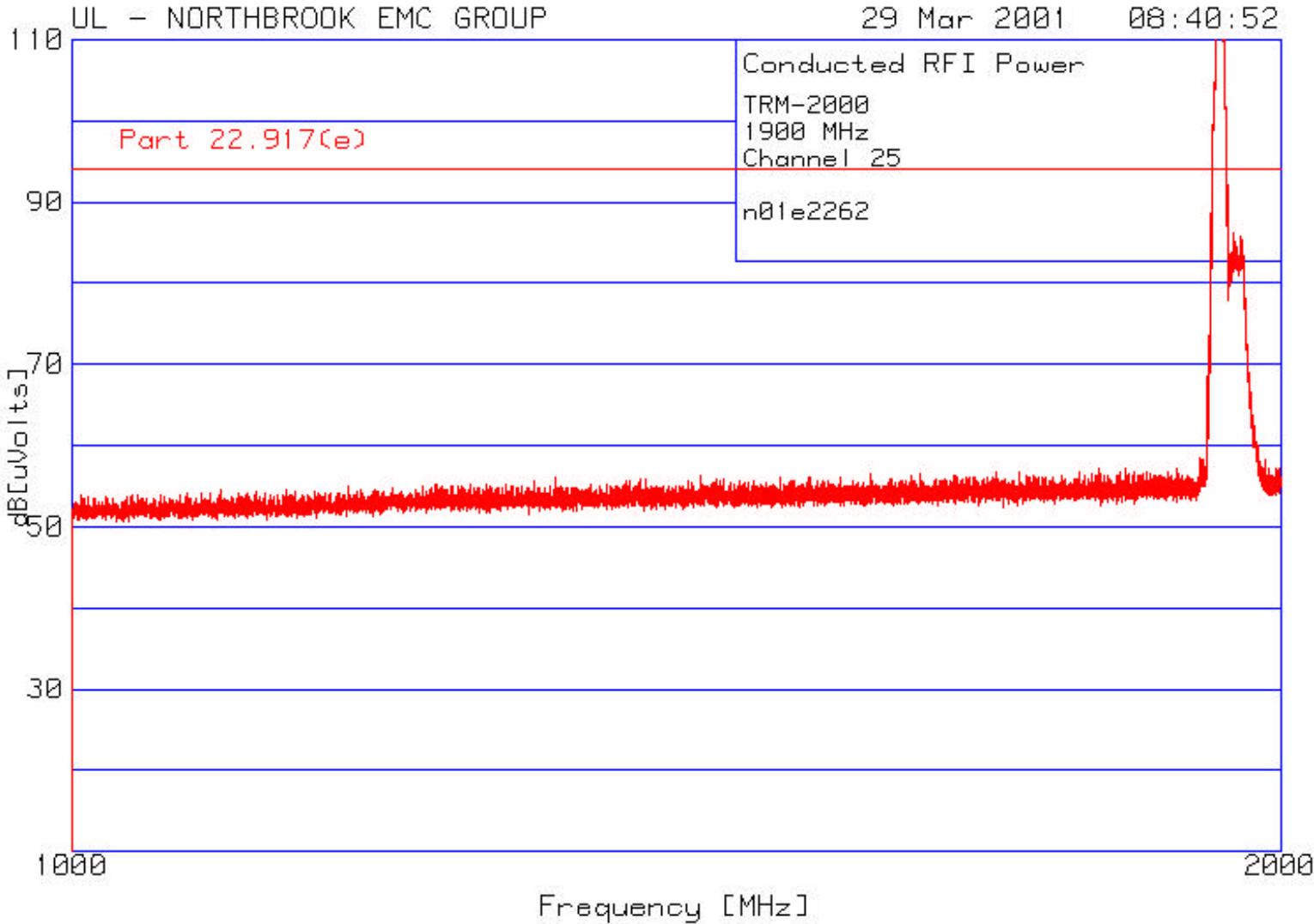
Spurious Emissions at Antenna Terminals  
Channel 0025  
18 to 30 MHz



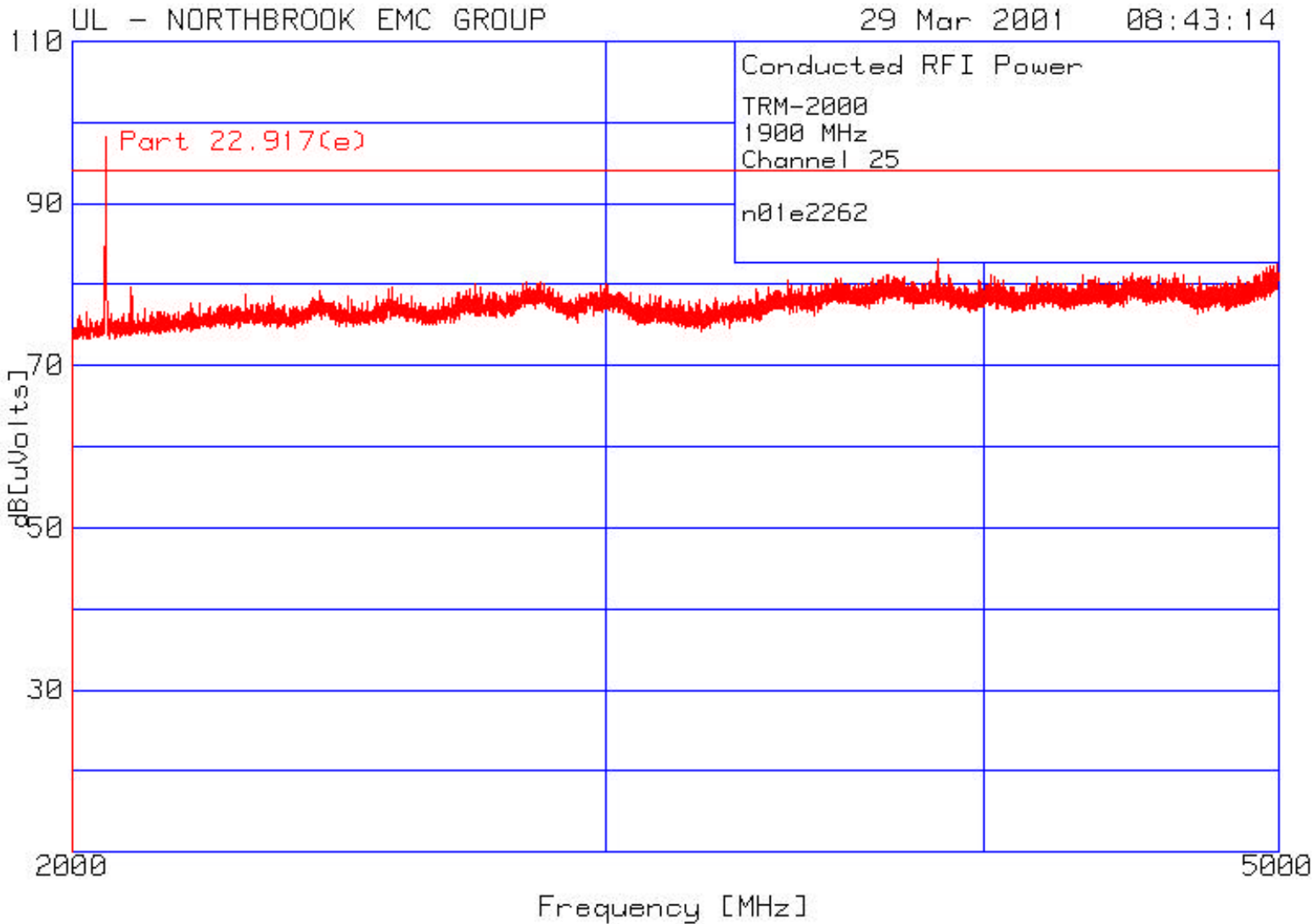
Spurious Emissions at Antenna Terminals  
Channel 0025  
30 MHz to 1 GHz



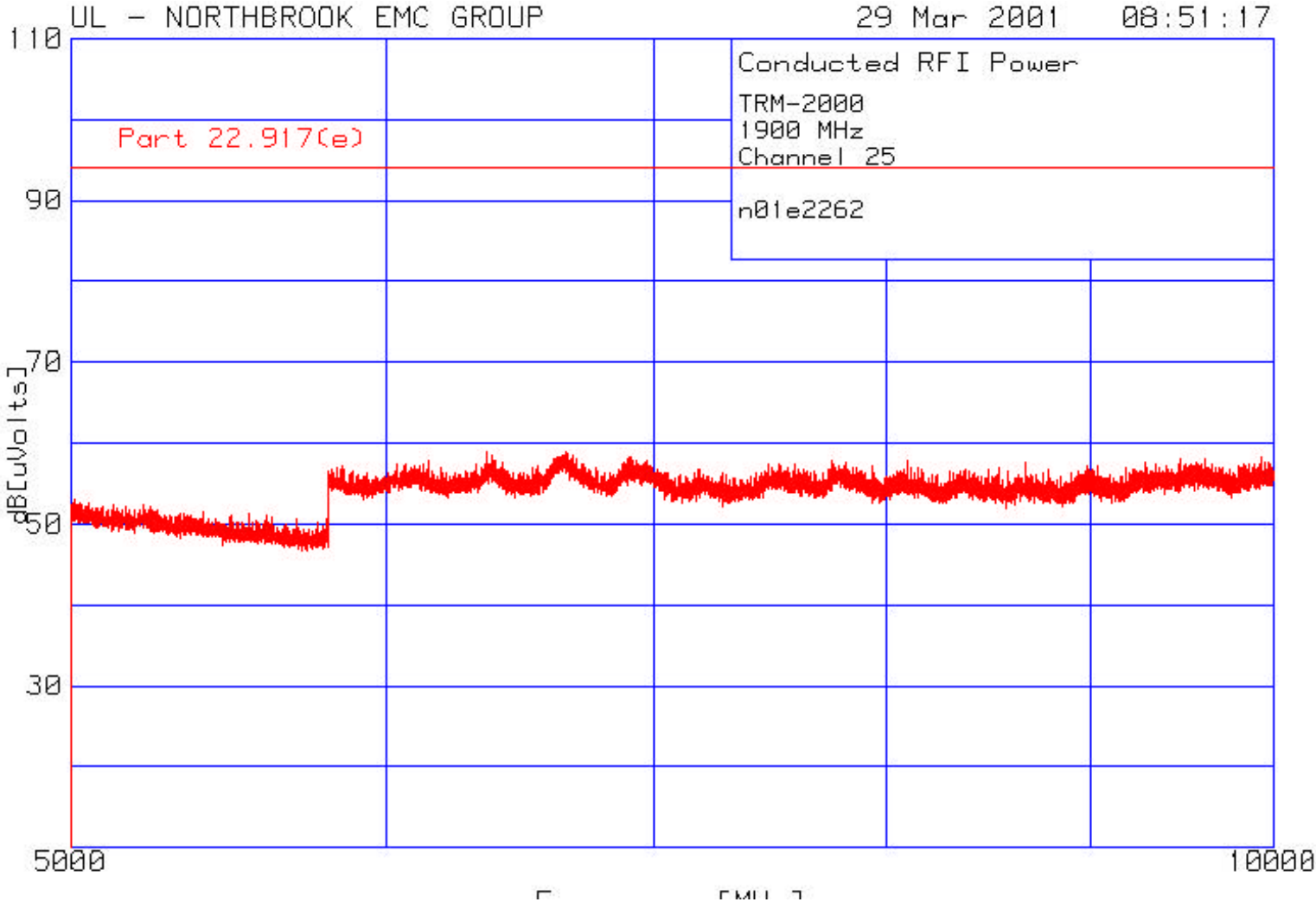
Spurious Emissions at Antenna Terminals  
Channel 0025  
1 to 2 GHz



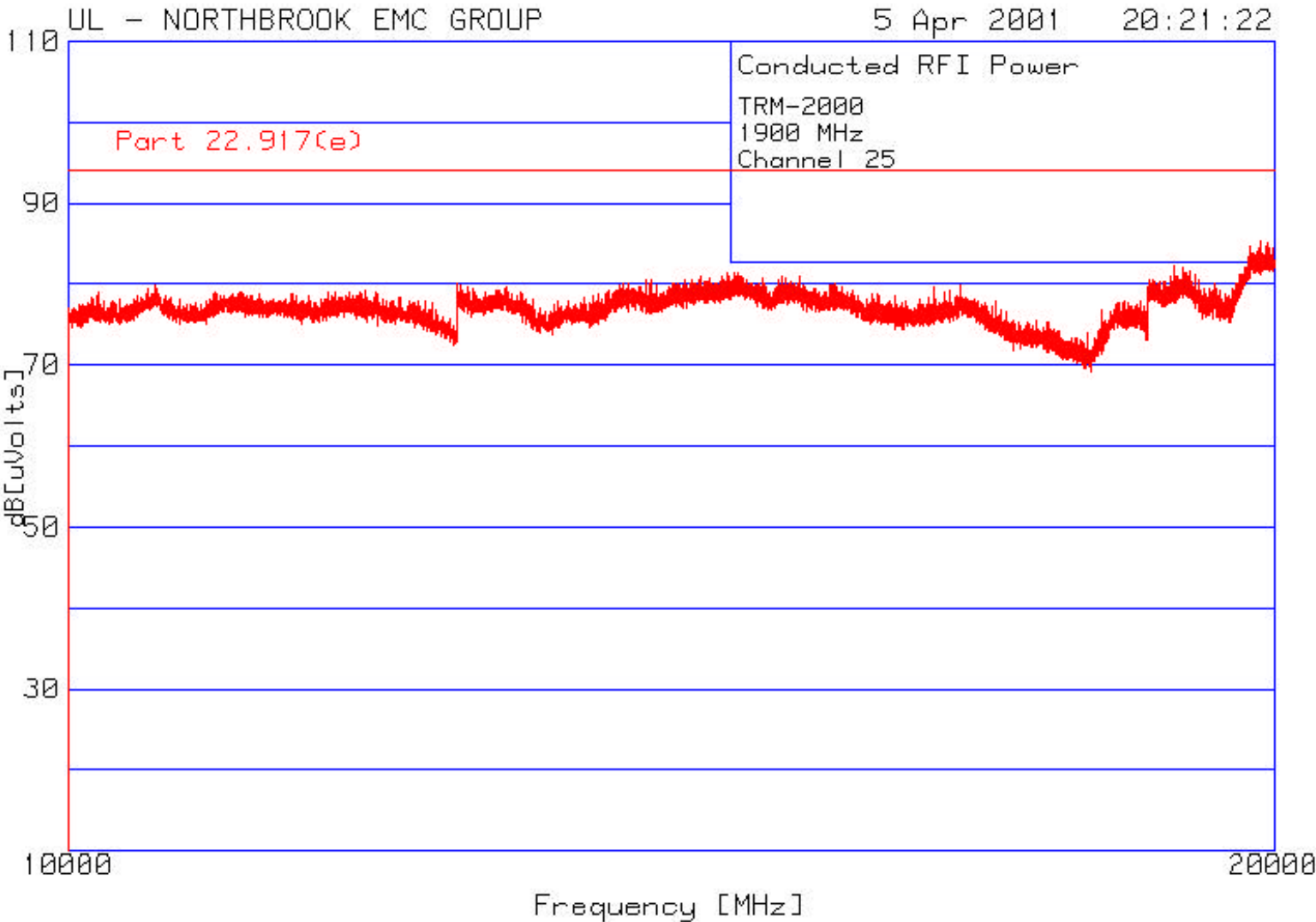
Spurious Emissions at Antenna Terminals  
Channel 0025  
2 to 5 GHz



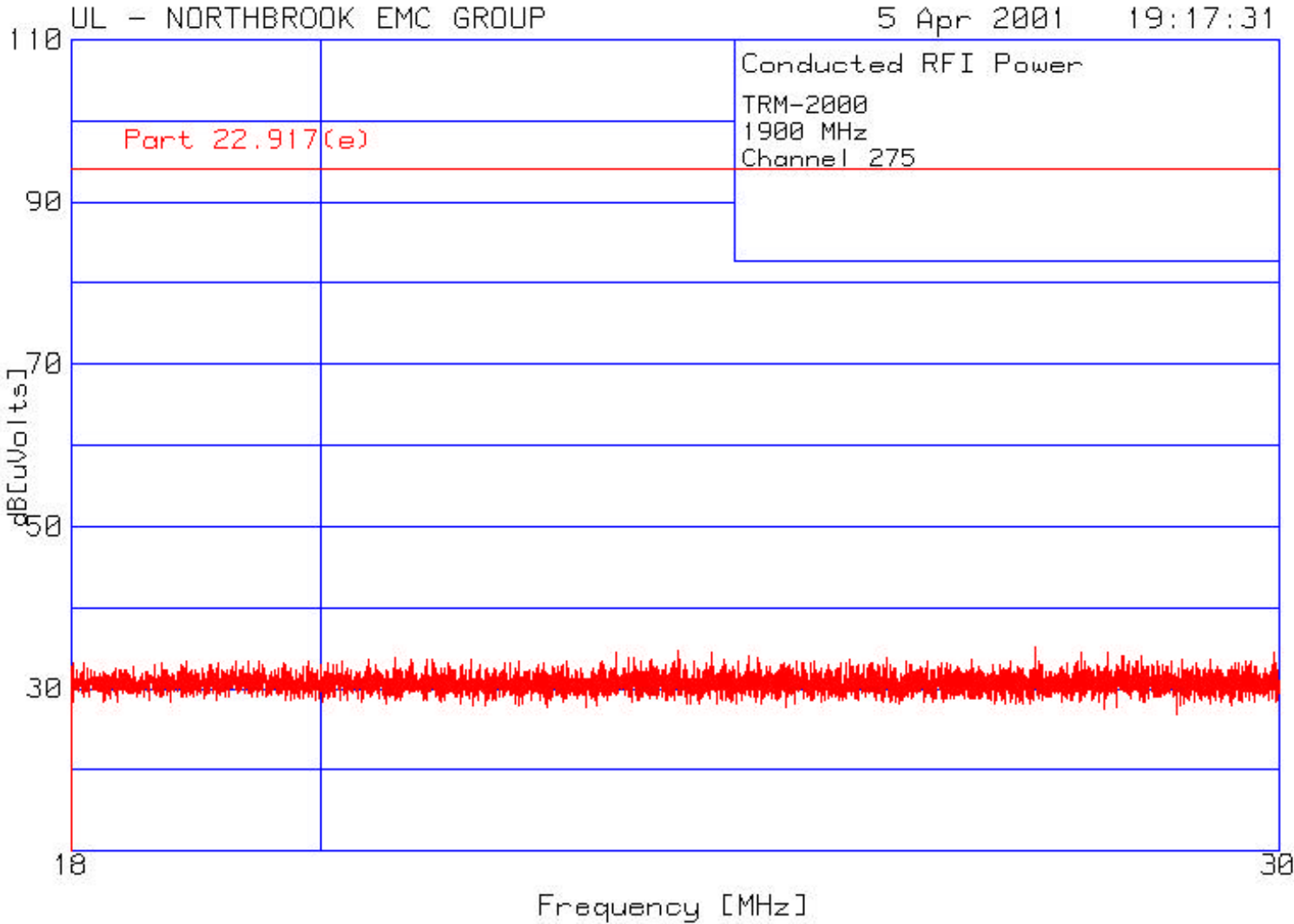
Spurious Emissions at Antenna Terminals  
Channel 0025  
5 to 10 GHz



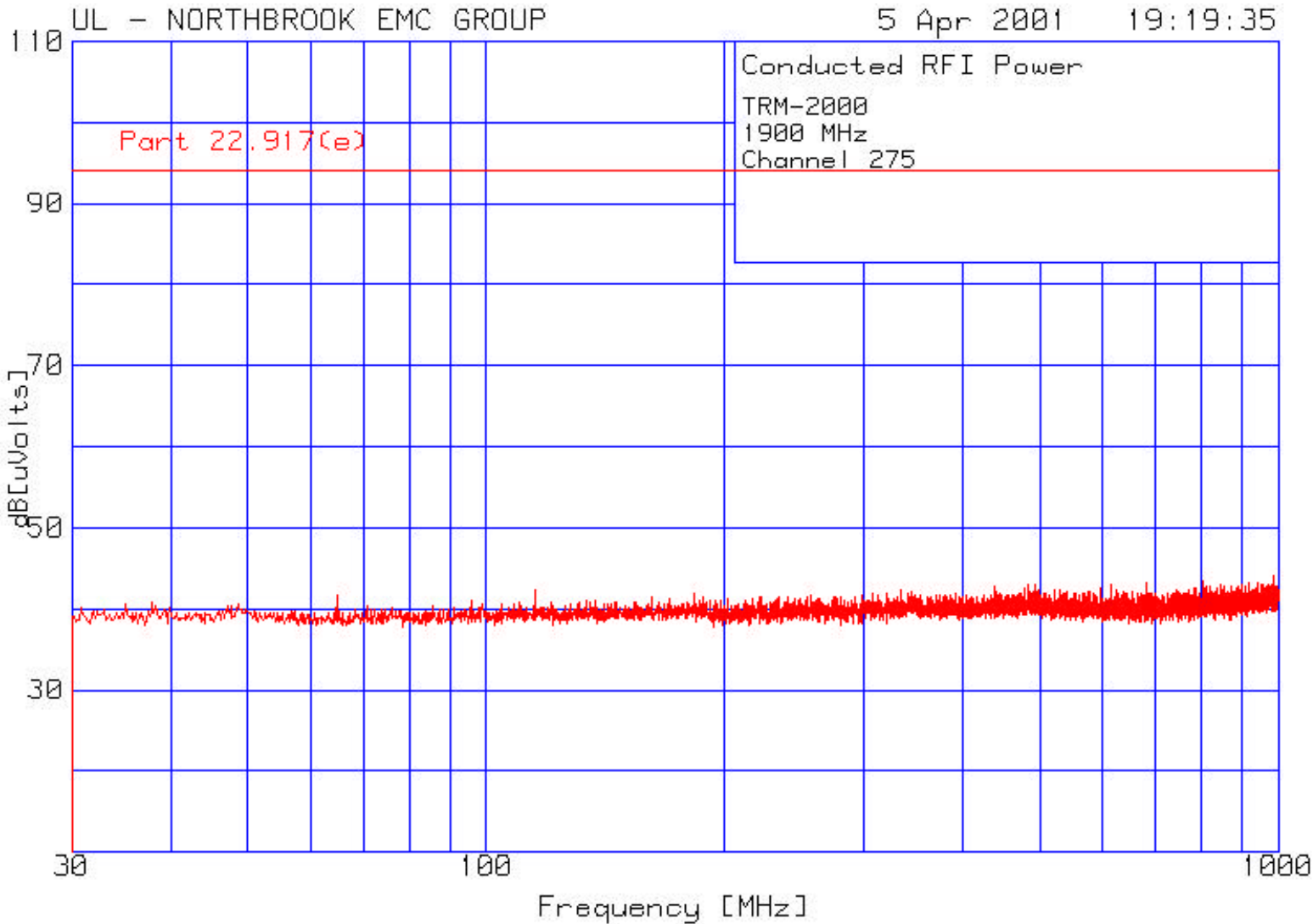
Spurious Emissions at Antenna Terminals  
Channel 0025  
10 to 20 GHz



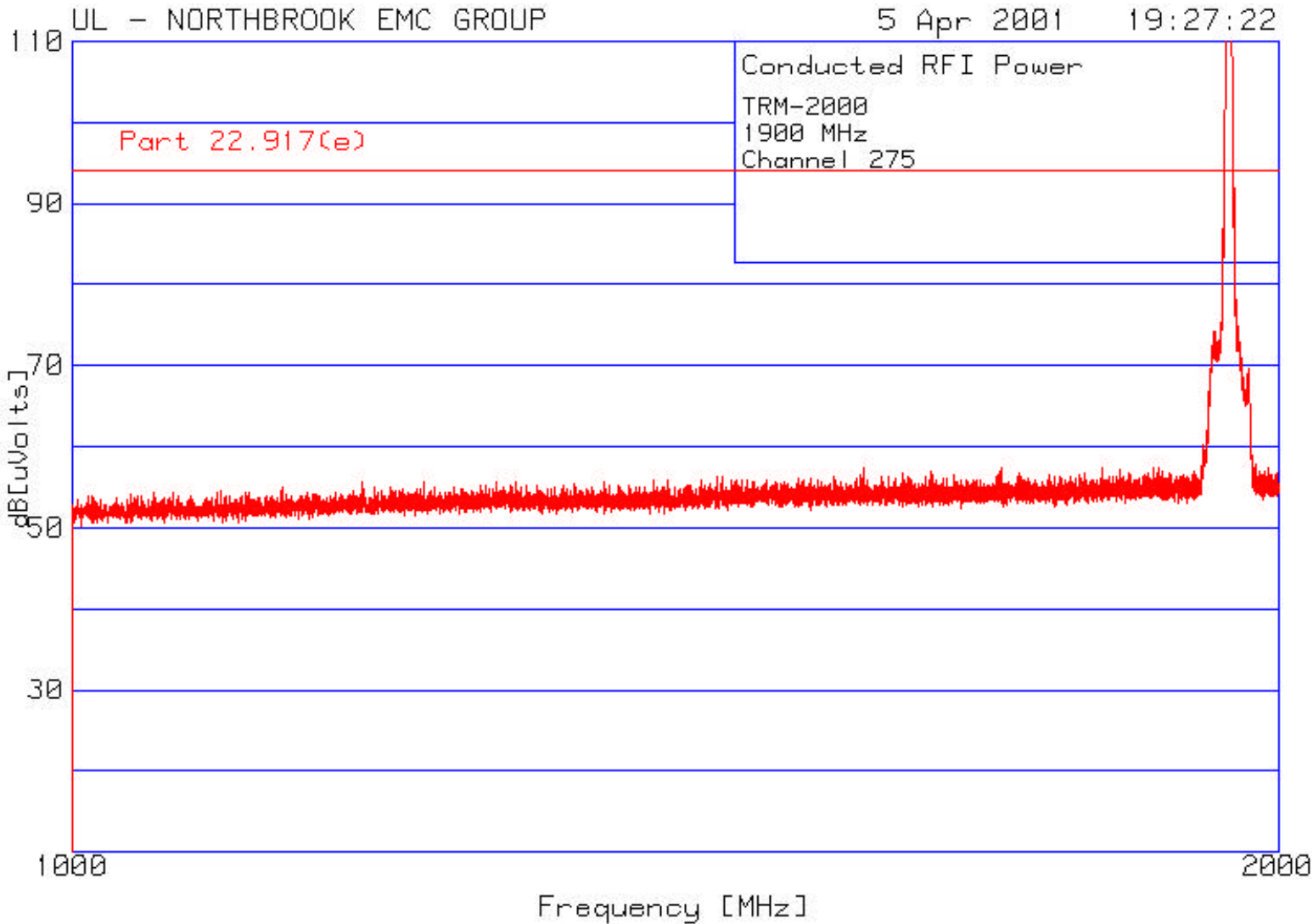
Spurious Emissions at Antenna Terminals  
Channel 0275  
18 to 30 MHz



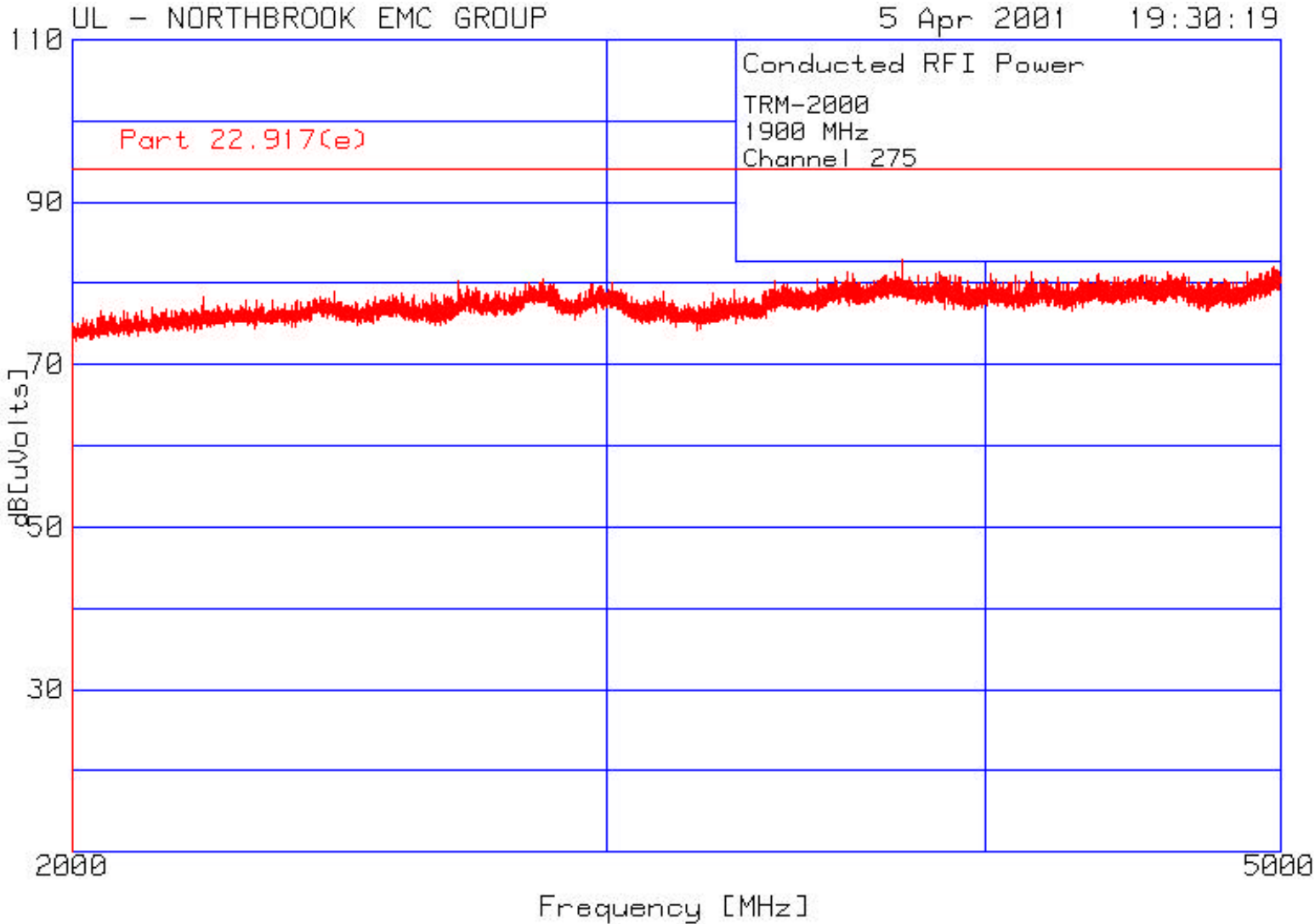
Spurious Emissions at Antenna Terminals  
Channel 0275  
30 MHz to 1 GHz



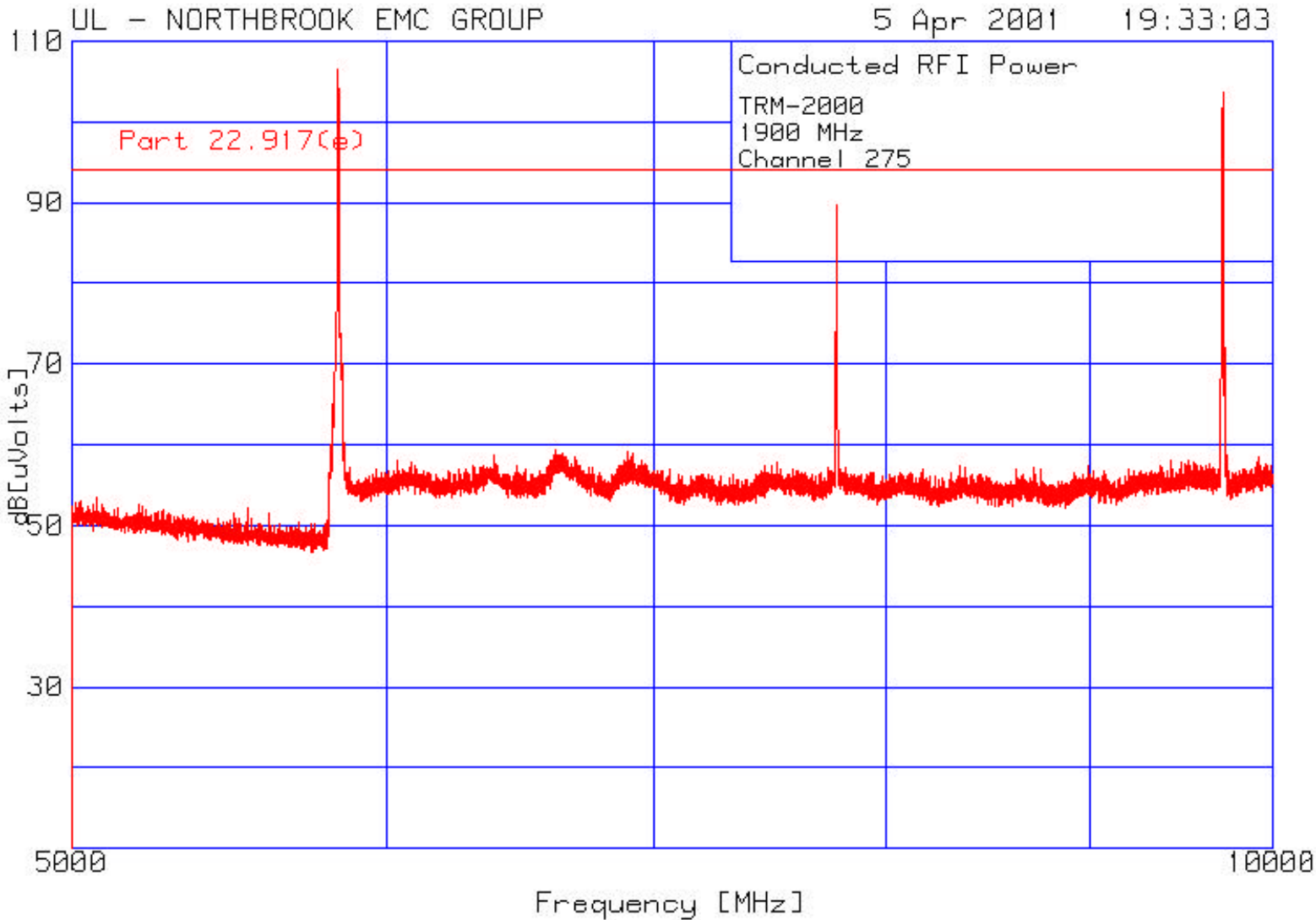
Spurious Emissions at Antenna Terminals  
Channel 0275  
1 to 2 GHz



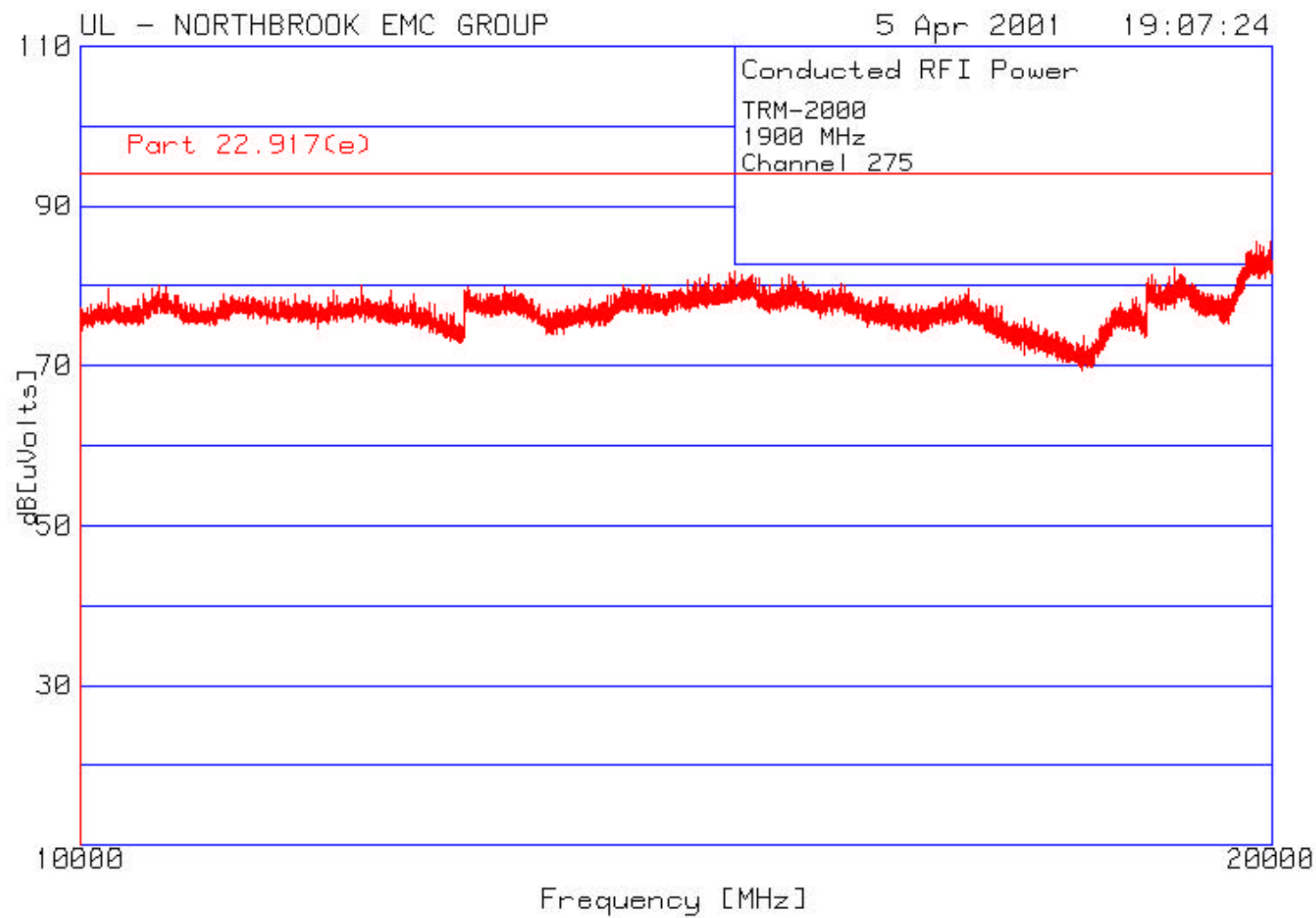
Spurious Emissions at Antenna Terminals  
Channel 0275  
2 to 5 GHz



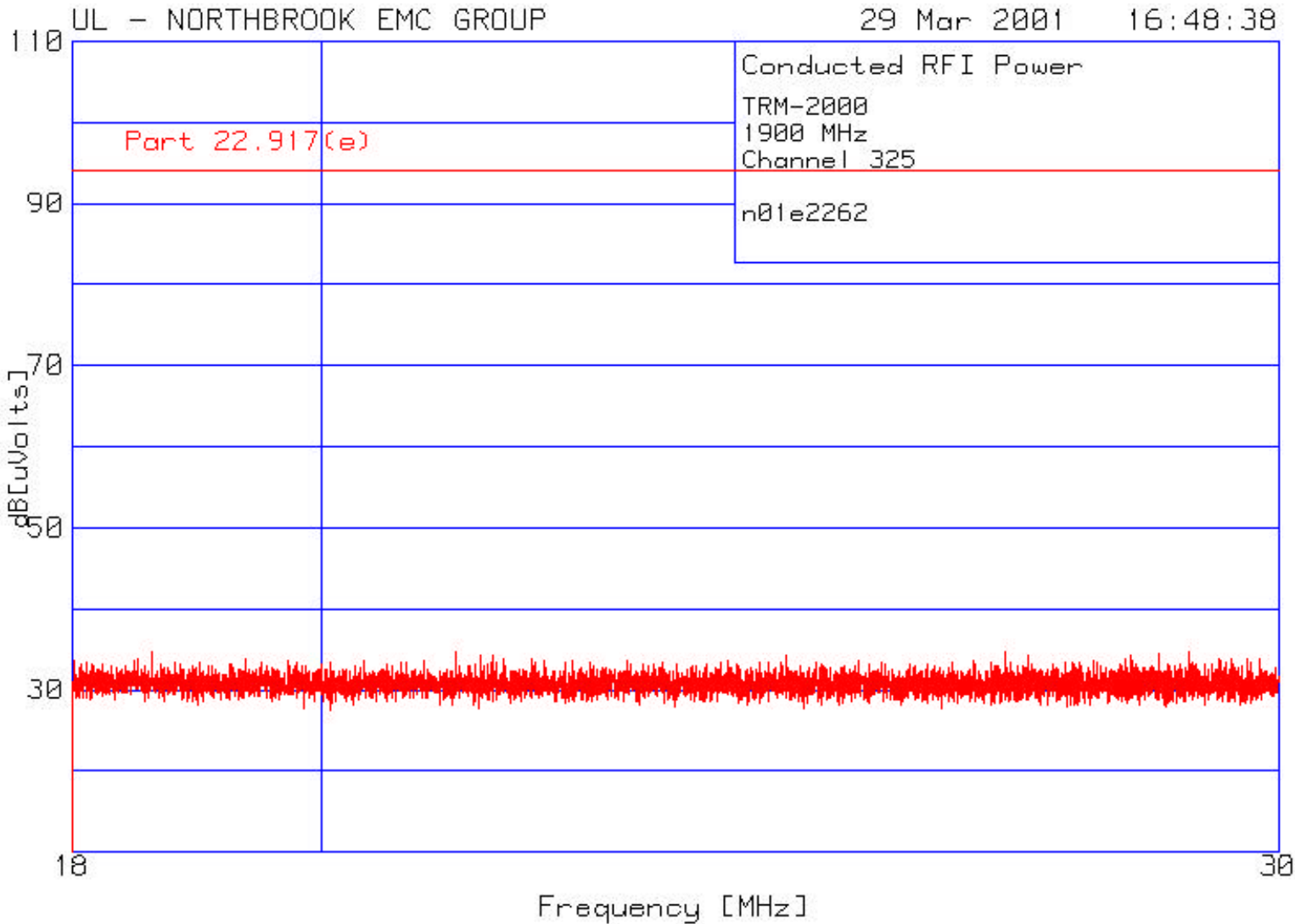
Spurious Emissions at Antenna Terminals  
Channel 0275  
5 to 10 GHz



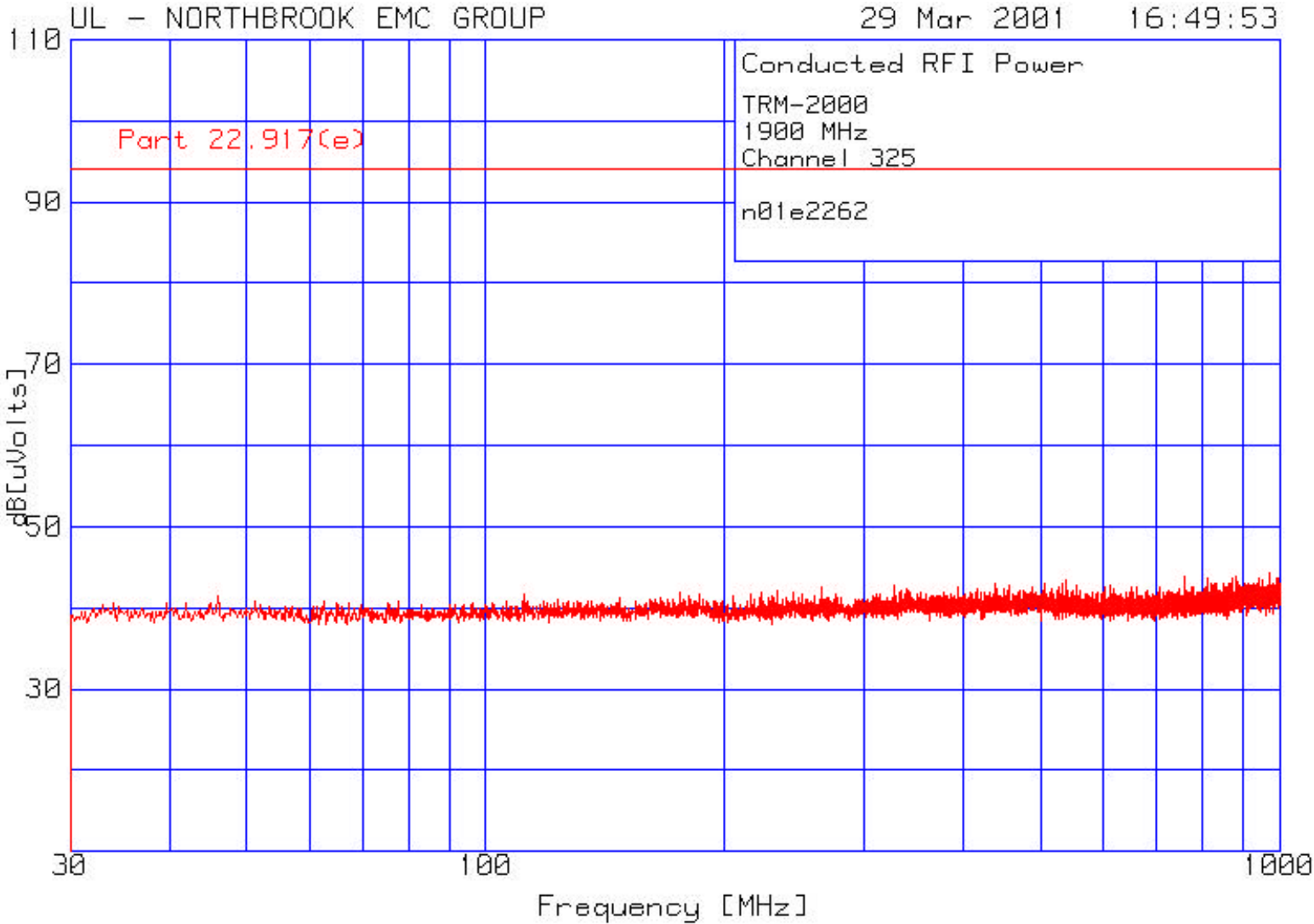
Spurious Emissions at Antenna Terminals  
Channel 0275  
10 to 20 GHz



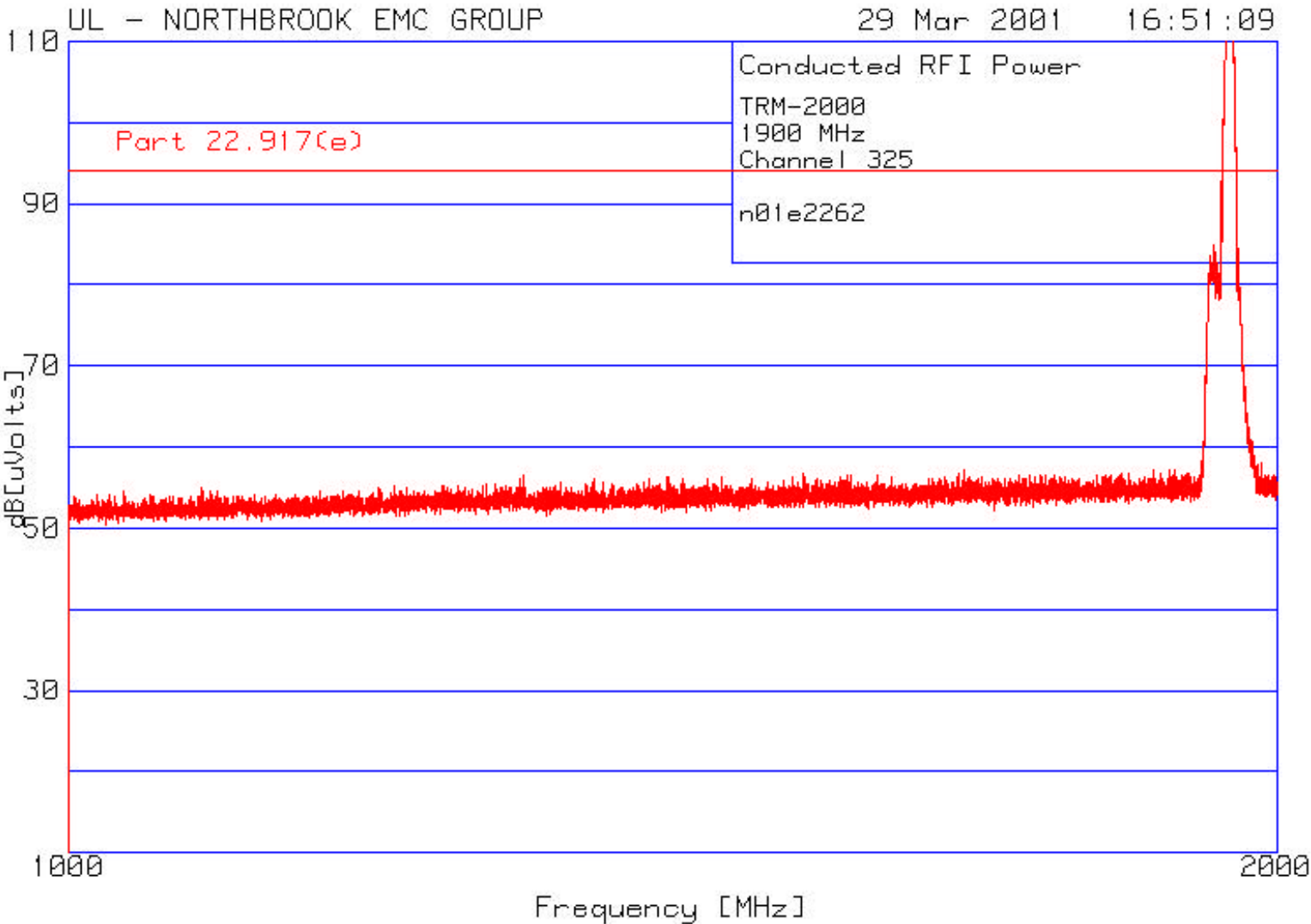
Spurious Emissions at Antenna Terminals  
Channel 0325  
18 to 30 MHz



Spurious Emissions at Antenna Terminals  
Channel 0325  
30 MHz to 1 GHz



Spurious Emissions at Antenna Terminals  
Channel 0325  
1 to 2 GHz



Spurious Emissions at Antenna Terminals  
Channel 0325  
2 to 5 GHz

