

WR2300 WAVEGUIDE SWITCH INSPECTION REPORT

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The WR2300 four-port waveguide switches in the APS 350MHz rf systems were visually inspected on January 4, 2005, under Work Request #16364. This work included visual inspection of the waveguide interior of the switches, plus the exterior motor drive components. Photographs were taken at all inspection points.

Waveguide Switch #1

Access to the interior of this waveguide switch was made by removing the 45° miter at port #4 of the switch (at flanges #901 and #902 – see figure 1):



Figure 1 – Waveguide Switch #1

The interior of the waveguide switch showed no signs of arcing or excessive wear on rf contacts, and was clean and free of foreign matter. The following figures are interior views of the switch:

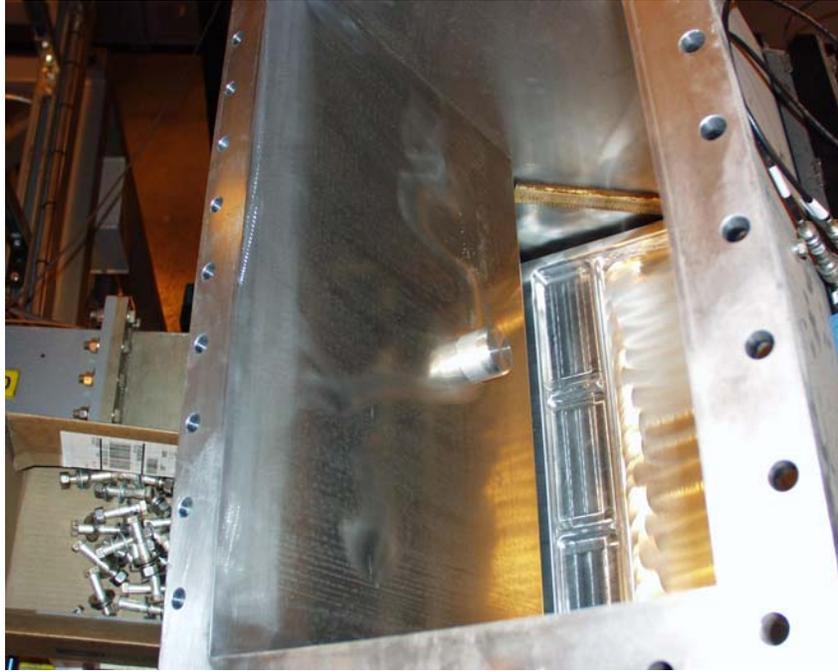


Figure 2 – Waveguide Switch #1 / Port #4

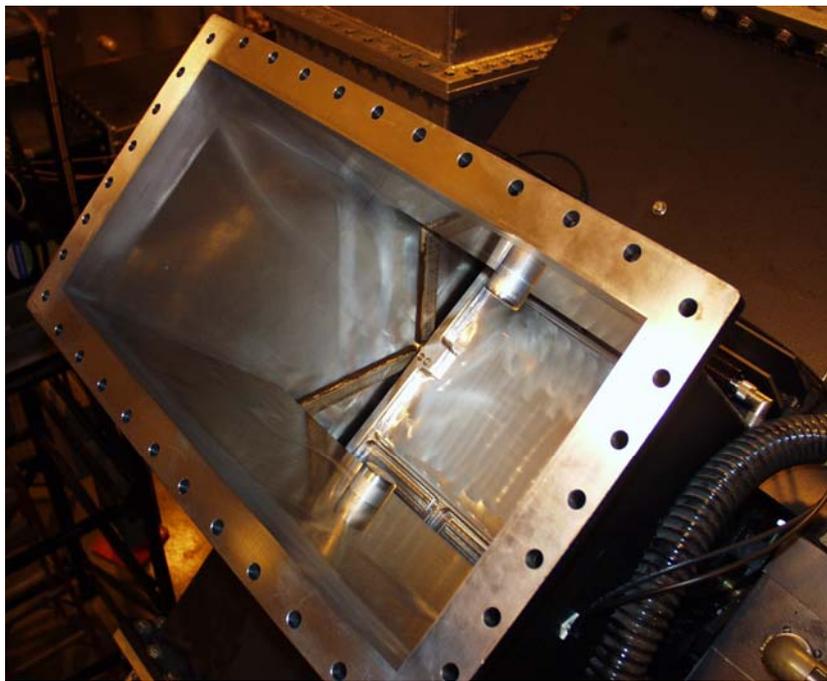


Figure 3 – Waveguide Switch #1 / Port #4



Figure 4 – Waveguide Switch #1 / Port #4

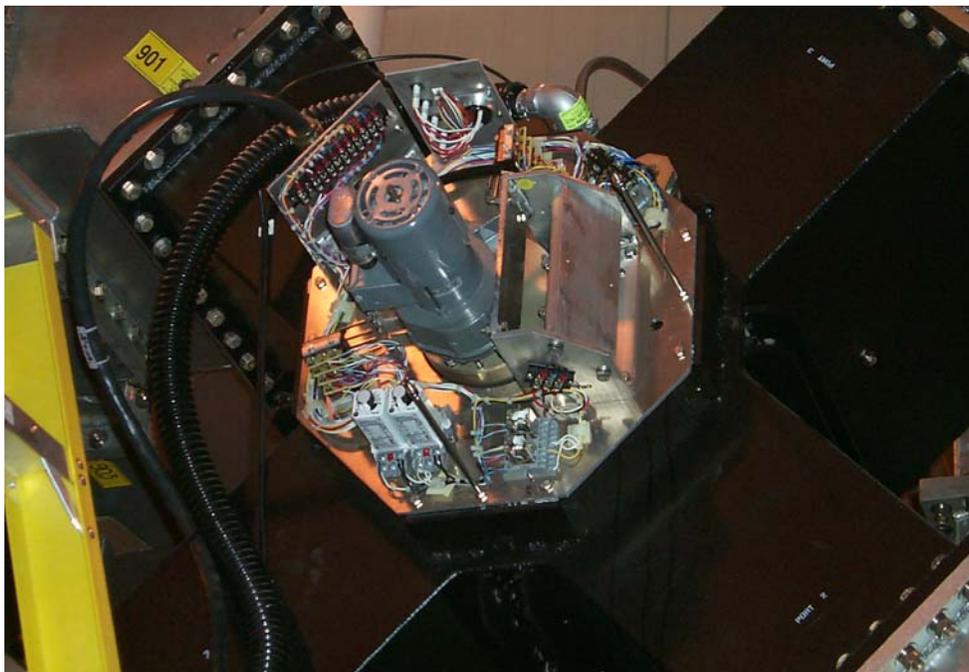


Figure 5 – Waveguide Switch #1

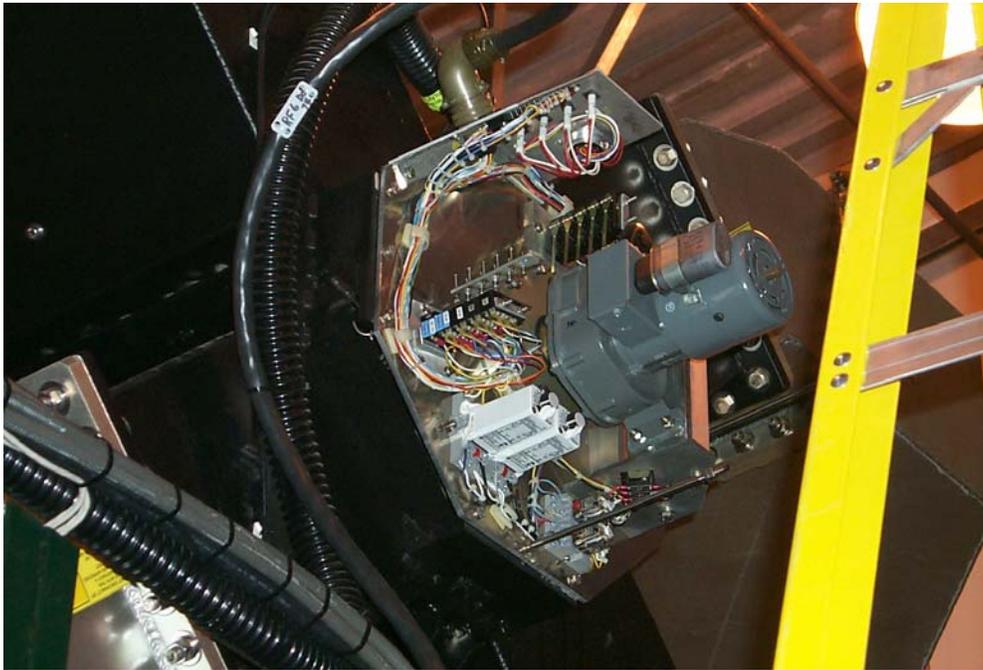


Figure 6 – Waveguide Switch #1

Note: Future inspections of waveguide switch #1 will be done by removing waveguide at port #3. This access point provides a better view of the switch vanes. However, supplemental support of the existing waveguide at port #3 of the switch will need to be designed and installed before the waveguide can be safely removed from port #3.

Waveguide Switch #2

Access to the interior of this waveguide switch was made by removing the 90° miter at port #3 of the switch (at flanges #327 and #328 – see figure 7):



Figure 7 – Waveguide Switch #2

The interior of the waveguide switch showed no signs of arcing or excessive wear on rf contacts, and was clean and free of foreign matter. The following figures are interior views of the switch:

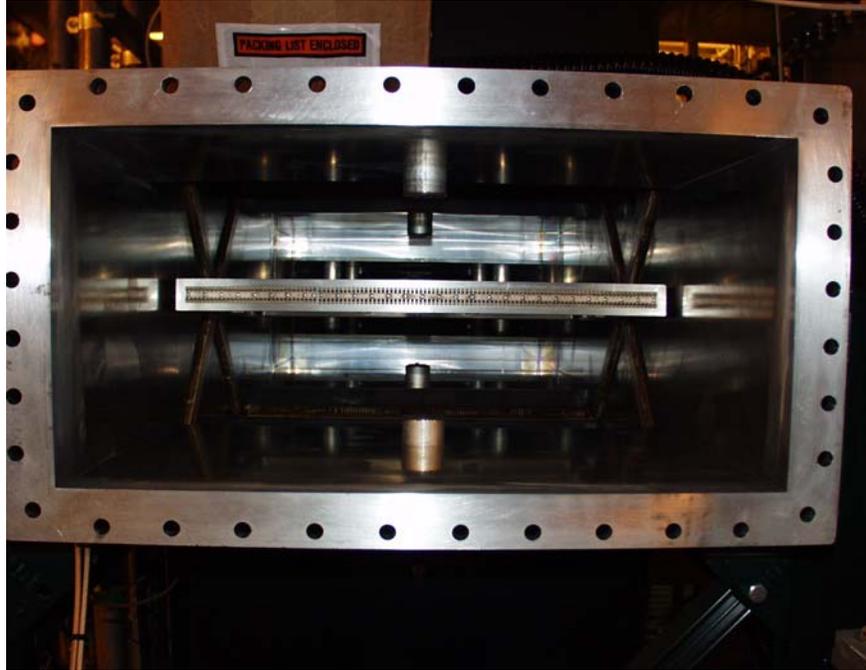


Figure 8 – Waveguide Switch #2 / Port #3

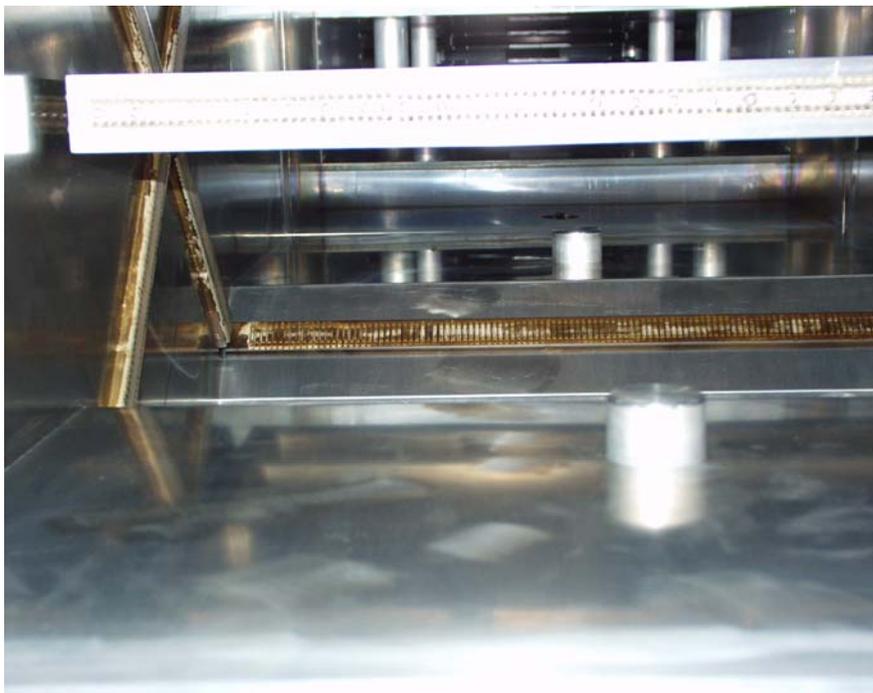


Figure 9 – Waveguide Switch #2 / Port #3

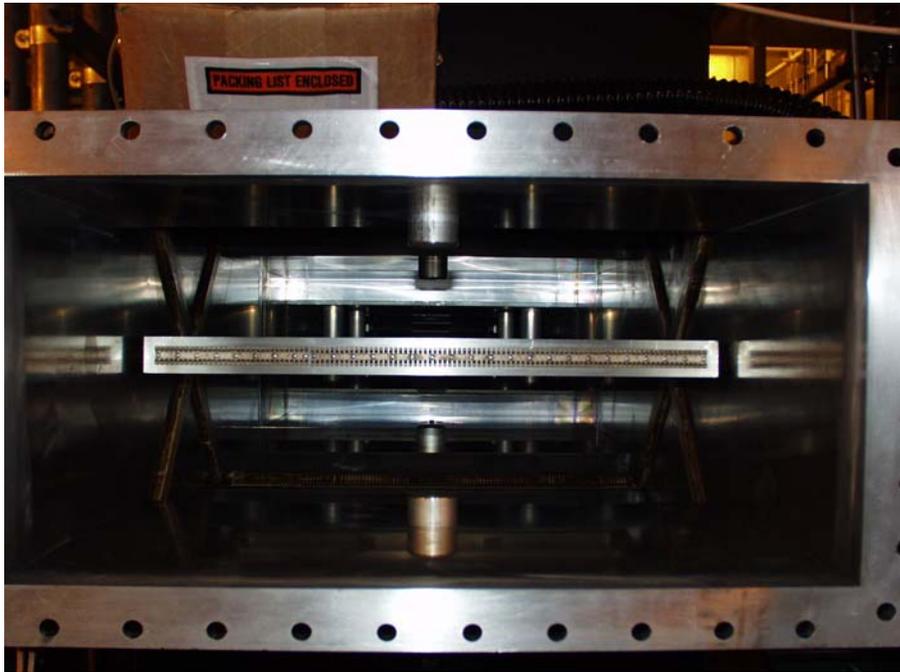


Figure 10 – Waveguide Switch #2 / Port #3

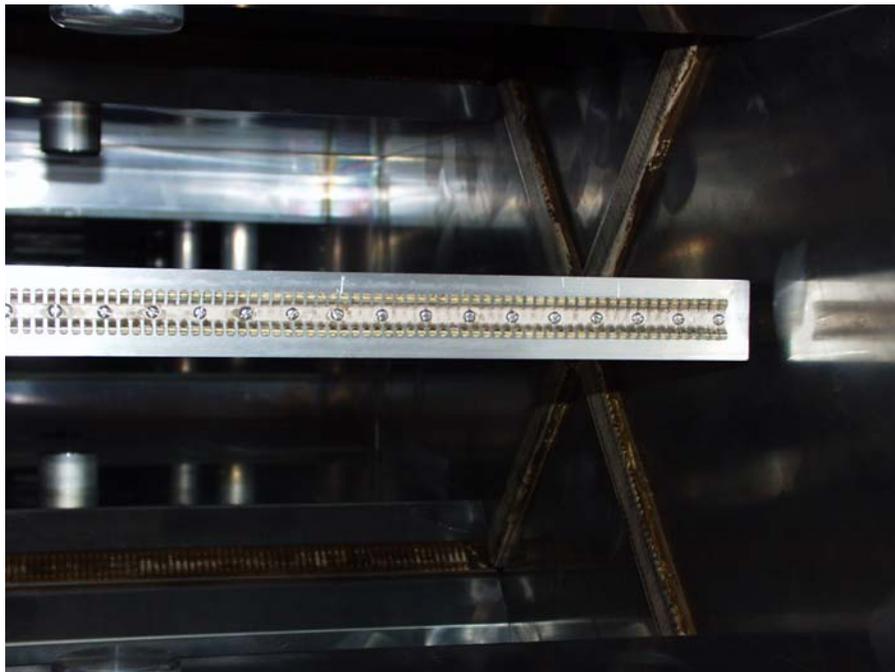


Figure 11 – Waveguide Switch #2 / Port #3

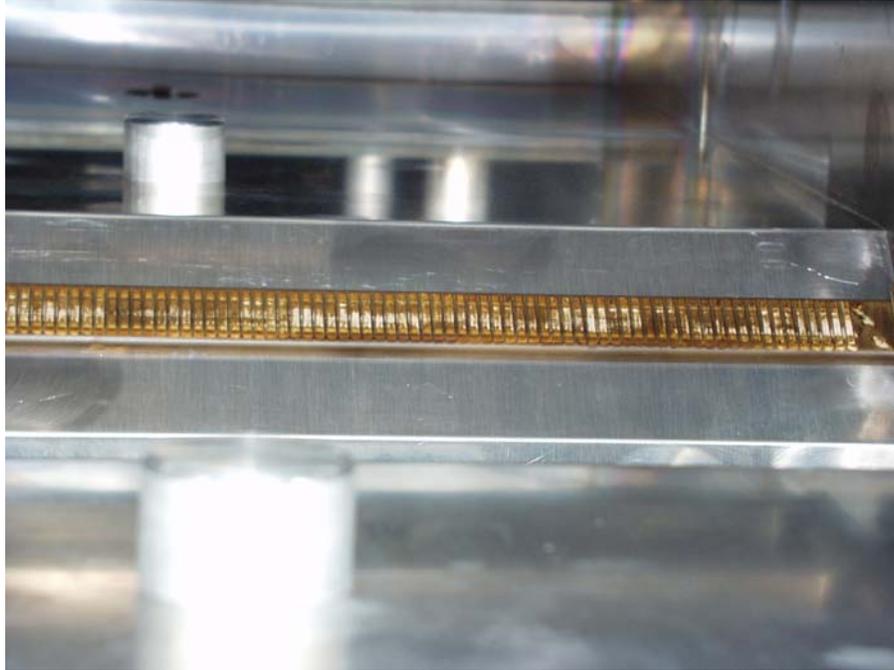


Figure 12 – Waveguide Switch #2 / Port #3

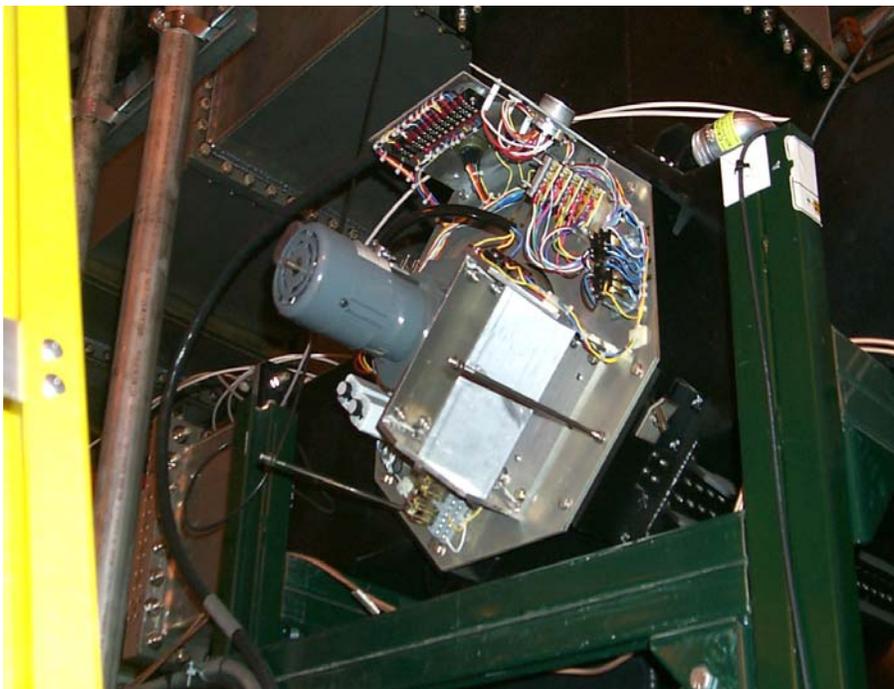


Figure 13 – Waveguide Switch #2

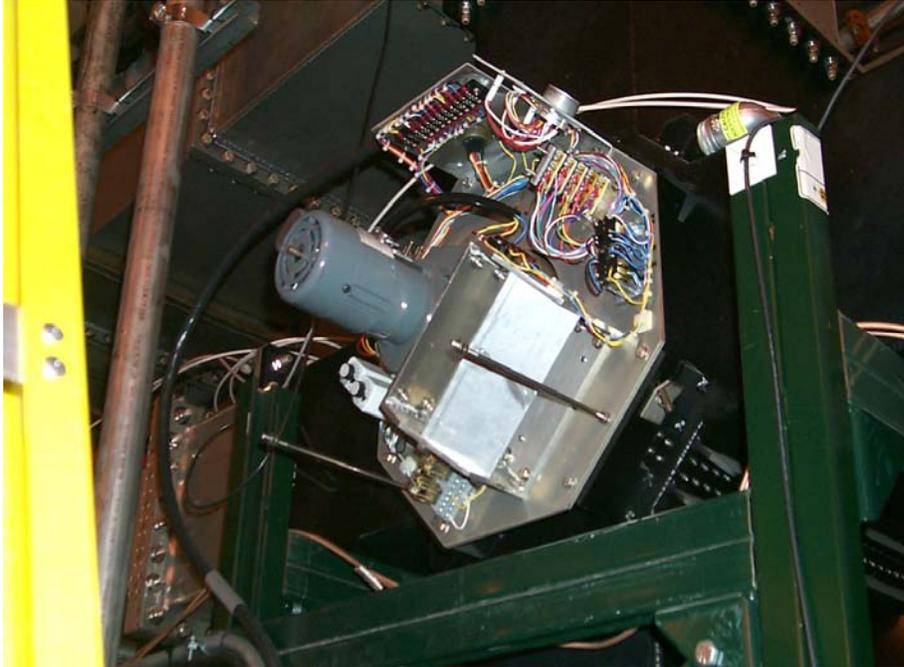


Figure 14 – Waveguide Switch #2

Waveguide Switch #3

Access to the interior of this waveguide switch was made by removing the 45° miter and straight waveguide/shorting plate combination terminating port #3 of the switch (see figure 15):



Figure 15 – Waveguide Switch #3

The interior of the waveguide switch showed no signs of arcing or excessive wear on rf contacts, and was clean and free of foreign matter. The following figures are interior views of the switch:

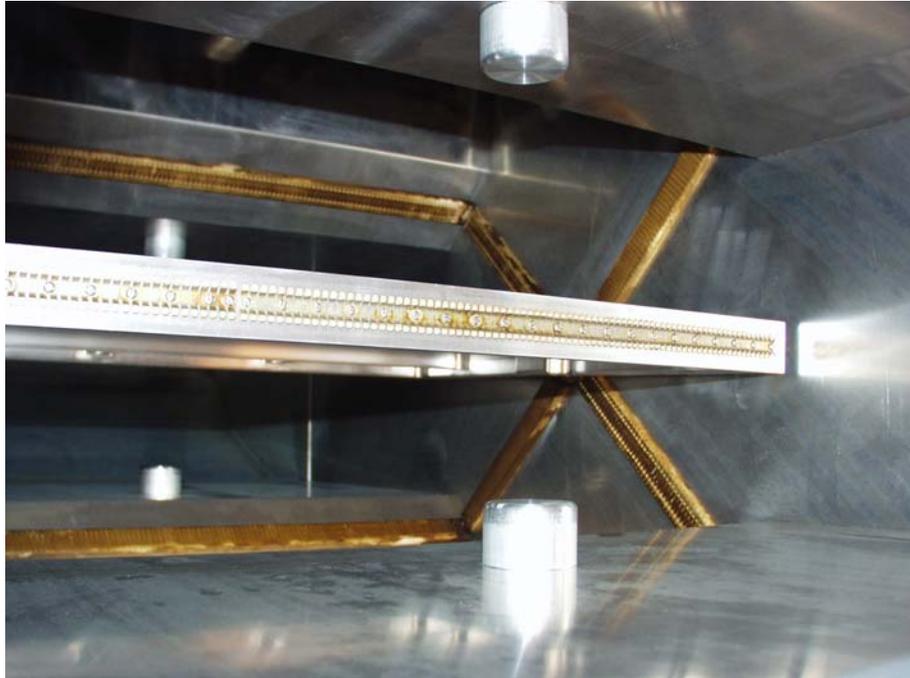


Figure 16 – Waveguide Switch #3 / Port #3

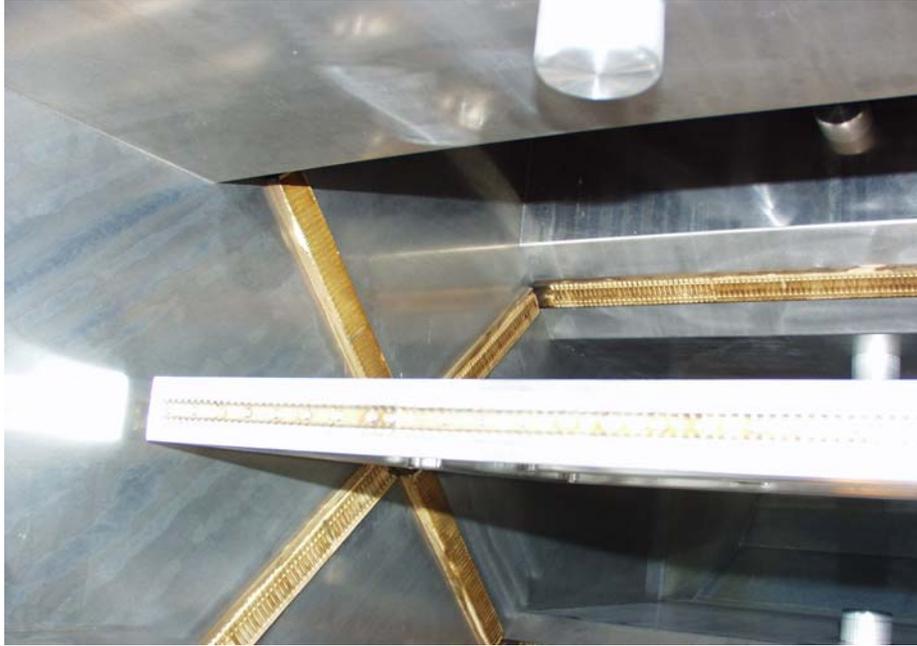


Figure 17 – Waveguide Switch #3 / Port #3

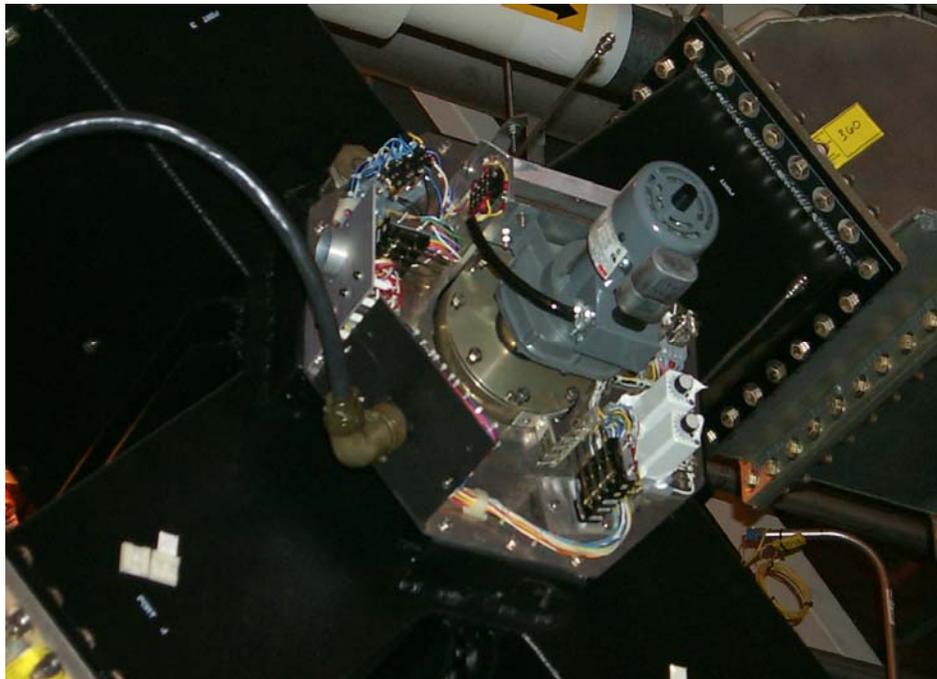


Figure 18 – Waveguide Switch #3

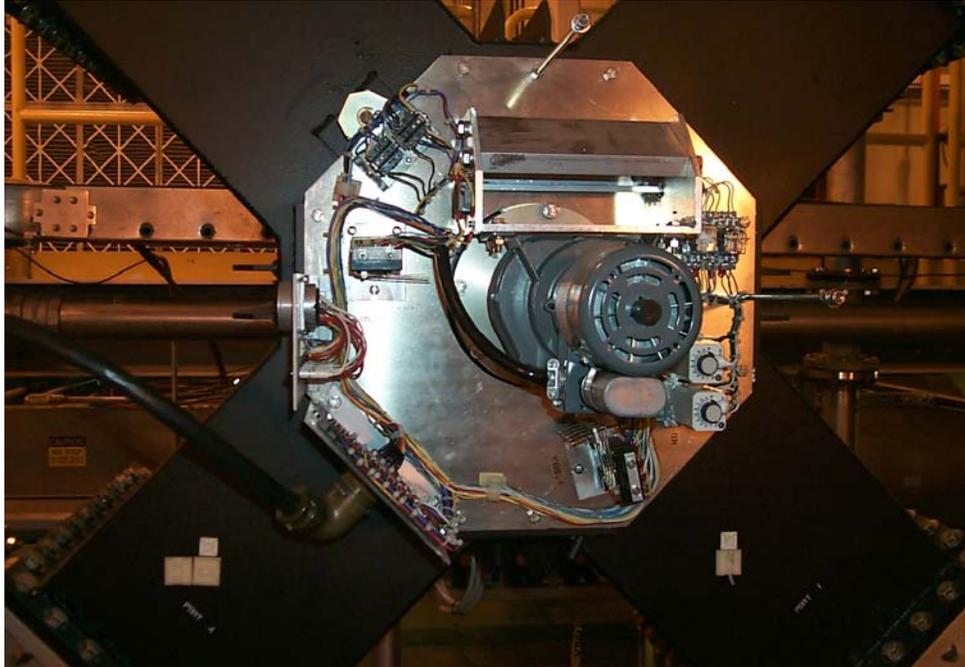


Figure 19 – Waveguide Switch #3

Waveguide Switch #4

Access to the interior of this waveguide switch was made by removing the shorting plate terminating port #3 of the switch (at flange #909 – see figure 20):



Figure 20 – Waveguide Switch #4

The interior of the waveguide switch showed no signs of arcing or excessive wear on rf contacts, and was clean and free of foreign matter. The following figures are interior views of the switch:

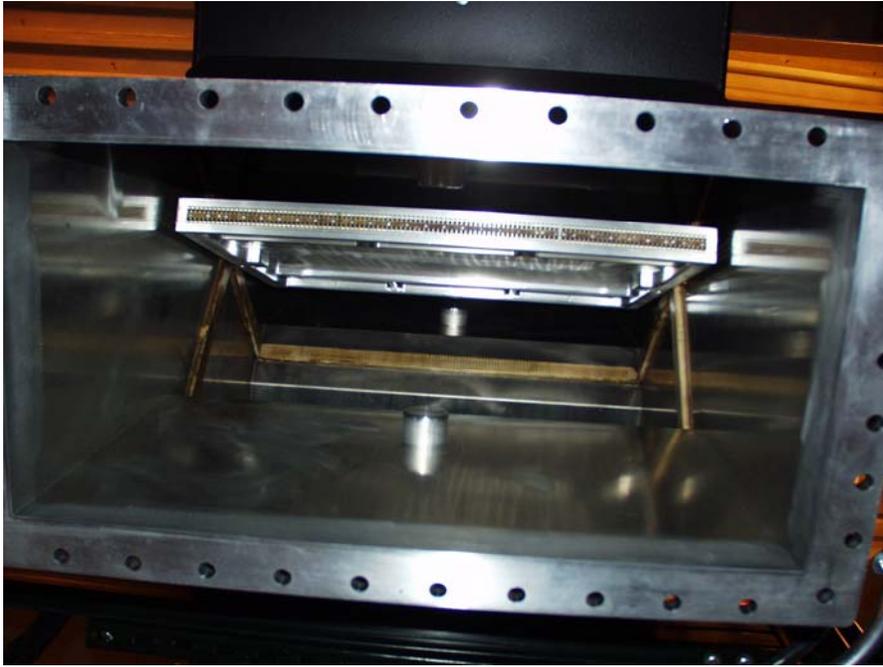


Figure 21 – Waveguide Switch #4 / Port #3



Figure 22 – Waveguide Switch #4 / Port #3

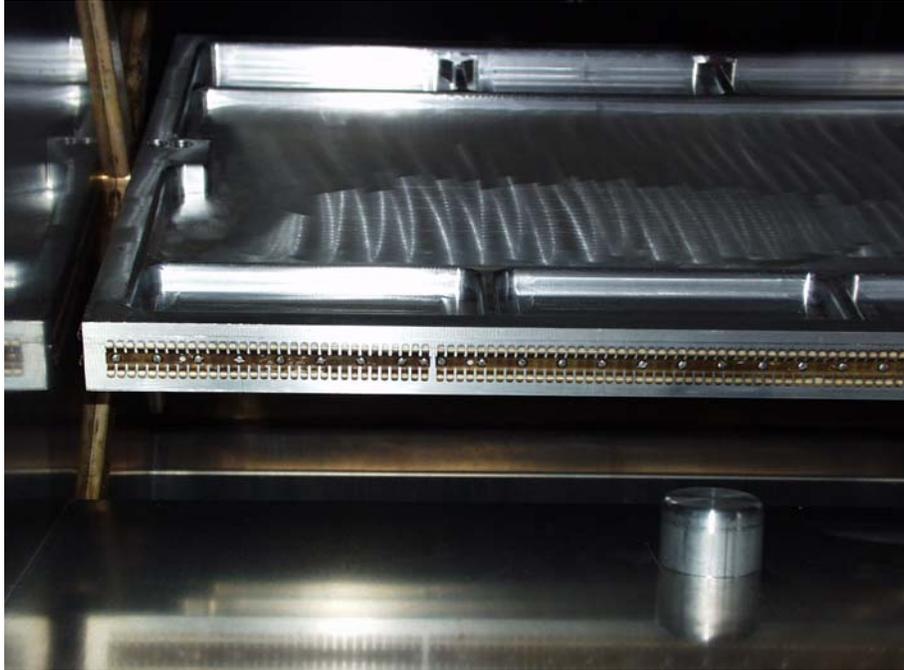


Figure 23 – Waveguide Switch #4 /Port #3

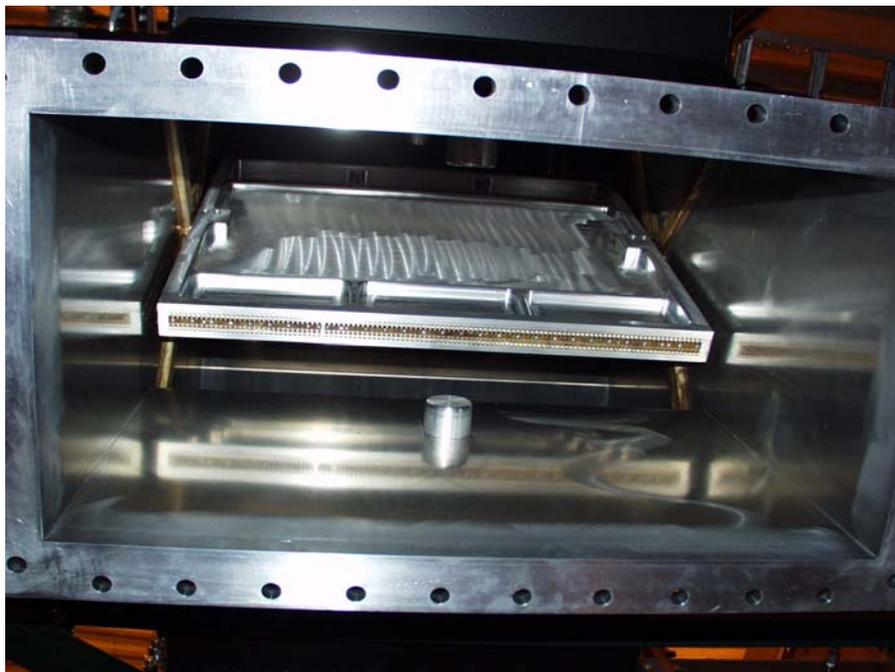


Figure 24 – Waveguide Switch #4 / Port #3

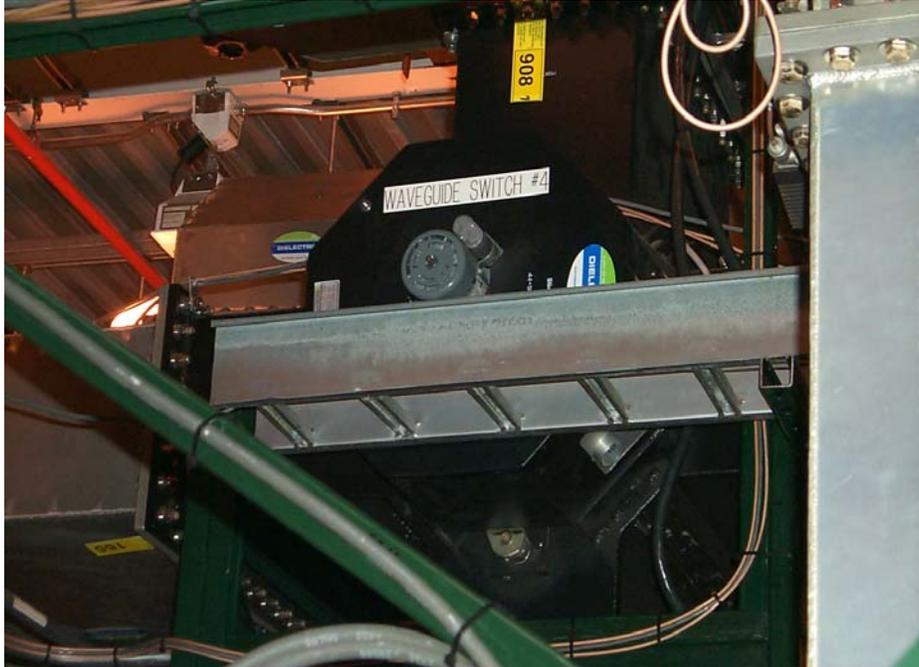


Figure 25 – Waveguide Switch #4

Note: The exterior motor drive components of waveguide switch #4 could not be inspected due to mechanical interference by a cable tray that was installed after the waveguide switch was installed (see Figure 25). This cable tray will be re-located after the December-January 2004/05 shutdown to allow clearance for inspection of the waveguide switch drive components.

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