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FAX COVER PAGE

CALIFORNIA INSTITUTE OF TECHNOLOGY

LIGO Project, 18-34 East Bridge Laboratory, Pasadena, California 91125
626-395-2970, Fax 626-304-9834

TO:	Jill Berry for Brad Shaw
ORGANIZATION:	LIGO/Caltech
FAX NUMBER:	(509) 372-2178
VOICE NUMBER:	(509) 372-2325
DATE:	11/19/97

FROM:	Larry Jones
ORGANIZATION:	LIGO Project
FAX NUMBER:	(626) 304-9834
VOICE NUMBER:	(626) 395-2970
REFER TO:	LIGO-T970214-00-B
SUBJECT:	Rai's 11/6 accum analysis; Rai's global 9 RGA calib. analysis

NUMBER OF PAGES FAXED INCLUDING THIS COVER SHEET:	3

Jill: Please call Brad Shaw at 531-4463 or 531-4213 and ask him to pick these up. Thanks.

Brad: when you call to discuss the status of the activities at the 9 ports, Rai wants me to ring him in also. Perhapts you may want to discuss the attached.

Larry

om: Rainer Weiss
ate: Wed Nov 12 16:12 PST 1997
To: ljones@ligo.caltech.edu
Subject: data again

file:rwljones111097.txt
to: Larry Jones
from: R. Weiss November 10, 1997
concerning: data from y2

Analysis of accumulation taken 11/06-07/97

<---ac1106--T=8.7C ----------> <-----ac1028--T=8.8C ---->

amu	c/s	Q t*l/s 10^-8	Q(air equiv)	c/s	Q t*l/s 10^-8	Q(air equiv)
2	5.02e5	60.6		3.08e5	39.2	
14	6.28e4	10.5	76	5.89e4	10.0	105
28	5.86e5	98.1	98	4.61e5	80.0	80
30	5.70e4	9.5		5.13e4	9.0	
32	7.68e4	12.8	74	7.89e4	13.7	116
40	8.82e3	1.5	85	9.86e3	1.7	100
44	2.79e5	46.7		1.8e5	31.2	

NOTE: The calibration for N2 in ac1106 is extrapolated from the hydrogen calibration by multiplying the hydrogen calibration in units of torr/cps by 1.387. To do better, an accumulation with the global calibrator would need to be done. The rga settings were changed between the two accumulations, the cp=0.45 for ac1028 while it was 0.3 for ac1106. Given the changes I consider the agreement between the two accumulations as good as can be expected and within the band of uncertainty between the calibrations from prior experience. CBI needs to stop changing parameters in the rga, that was why I wanted them to go to cp = 0.3 right from the start. No temperature corrections have been made for either data set so the amu2, amu30 amu44 values do not reflect the tube outgassing rate at 23C. The leak size is most likely not strongly temperature dependent.

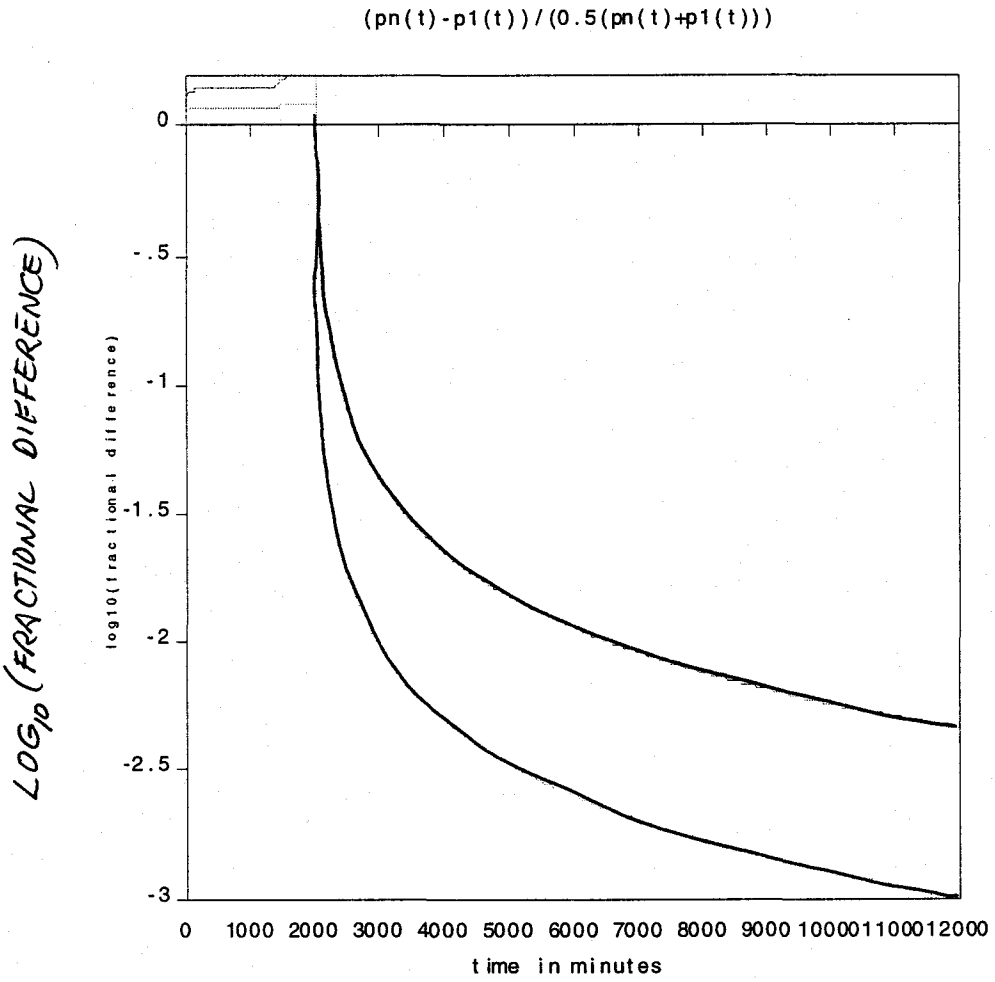

Figure 1 The curve shows the fractional difference of the pressure measured at the middle of the tube and at the end (the top curve) and the fractional difference of the pressure measured at 1/4 point and the end (lower curve). The leak is at the middle of the tube. The leak size is 1 x 10^{-6} torr liters/sec. The pumping speed at both tube ends is 1500 liters/sec. The curve shows the fractional difference as a function of time. The system begins accumulating (the pumps are valved off) at 2000 minutes.