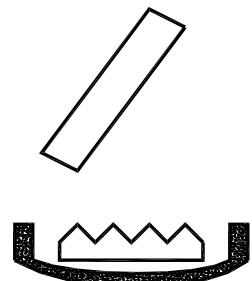


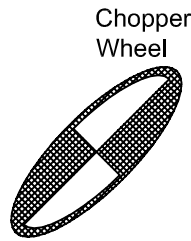
HP 8672 Synthesizer
RF Out
10 MHz Ref In

IF Linearity Test Signal

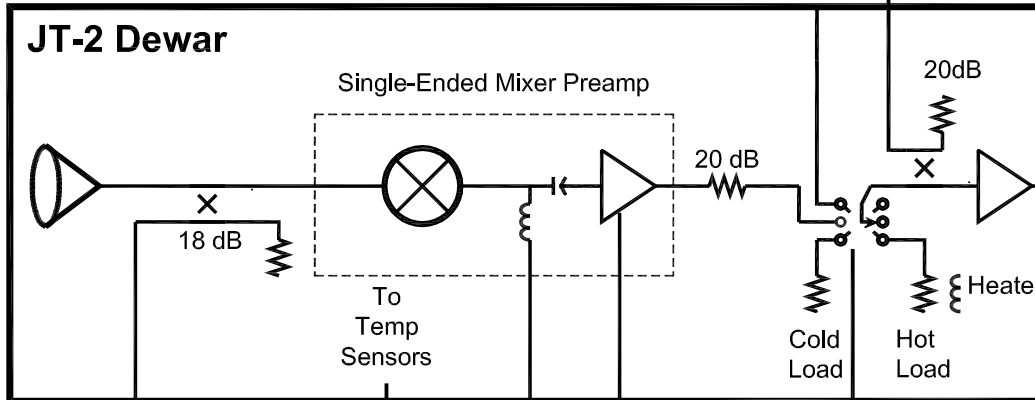
Dewar IF Amp Bias:		Warm:	
Vd (V)	Id (mA)	Vd (V)	Id (mA)
0.65	6	1.5	15
0.7	3	1.7	12
0.7	3	1.7	12



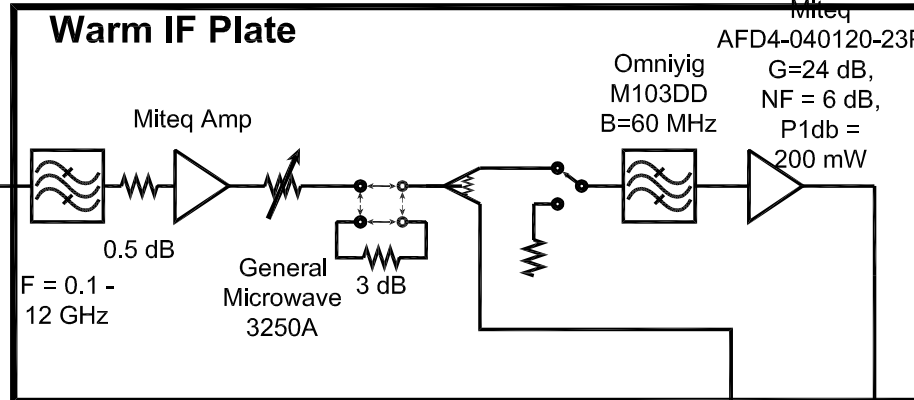
Cold Load



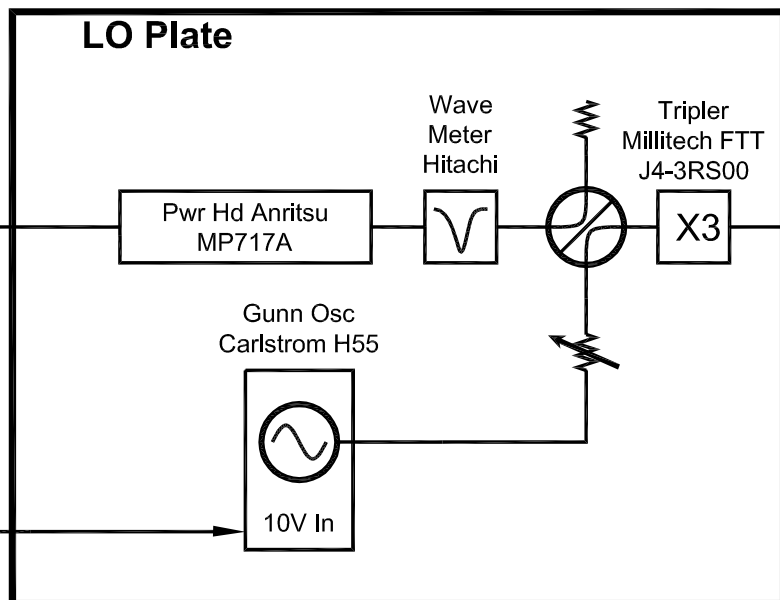
Hot Load



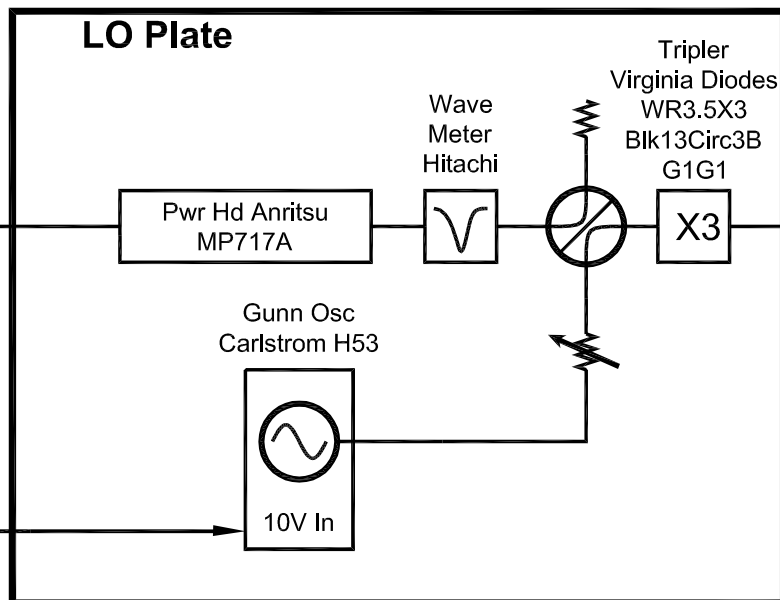
JT-2 Dewar



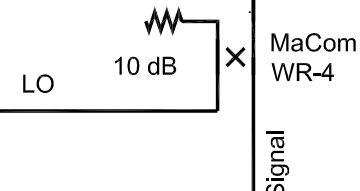
Warm IF Plate



LO Plate



LO Plate



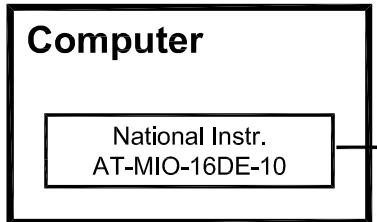
LO

LO

LO Signal

Rack

- Agilent E4408 Spectrum Analyzer
- Coax SW Controller
- Preamp Bias Supply
- Mixer Bias Supply
- LakeShore 218S Temp Meter
- NRAO Square Law Detector with ACC 1573N TD Detector
- Refrigerator Controller



Computer

REV	WHO	DATE	DESCRIPTION
10	JEE	2003-08-29	SINGLE HP IF AMP, ACC1573N DETECTOR
09	JEE	2003-08-12	REMOVED ALL PHASE LOCKED SOURCES
08	JEE	2003-08-01	CHNGD PAC MIL HAR MXR FRM EM TO E3
07	JEE	2003-04-09	CHANGED TO SQUARE-LAW DETECTOR
06	JEE	2003-04-04	ADDED POWER LEVELS AND BIAS TABLE
05	JEE	2003-04-04	ADDED REF 8672 AND OUTPUT COUPLER
04	JEE	2003-02-26	MOVED FINAL AMP, ADD COUP IN DEWAR
03	JEE	2002-11-20	REMOVED "SHARES" FROM DIR PATH
02	JEE	2002-11-01	ADDED W-BAND POWER HEAD
01	JEE	2002-10-17	ADDED HIGH OUTPUT IF AMP
00	JEE	2002-09-18	INITIAL

NATIONAL RADIO ASTRONOMY OBSERVATORY
CHARLOTTESVILLE, VA. 22903

TITLE: MIXER SATURATION MEASUREMENTS, EQUIPMENT SETUP, 2ND MEASUREMENT

PROJECT: ALMA BAND 6

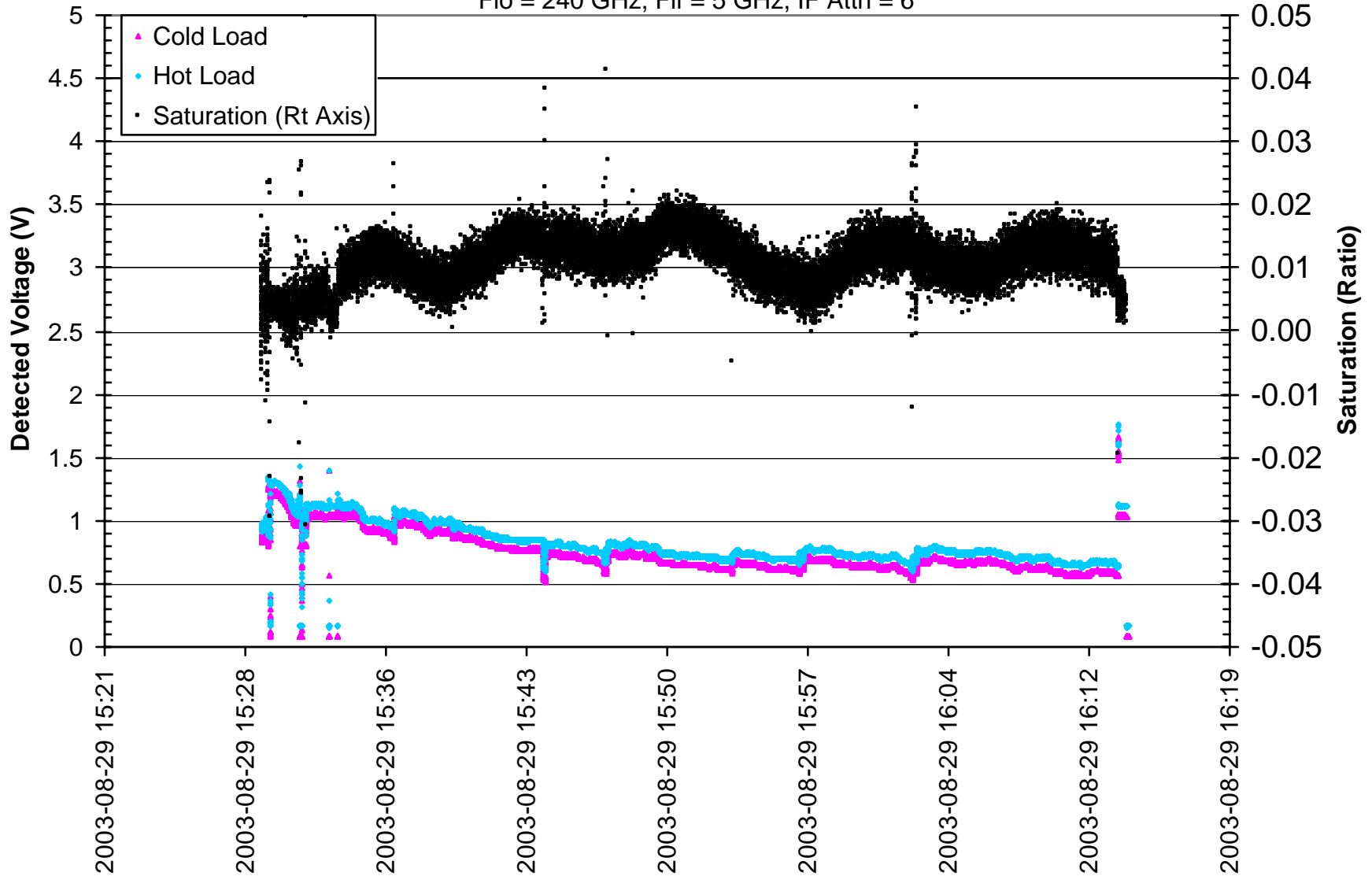
DESIGN			
DRAWN	JEE	2002-09-18	MATERIAL
SHEET	5thMeas		FINISH

COMPUTER DRAWING: \\cvfiler\cv-cdl-sis\MeasSys\Data\Saturation\Setup6.dwg

SCALE	None	DWG. NO.		REVISION SEE ABOVE
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UVA10-03-0403-L1362A-2-II-C12-L56-3-4-373-003-P.04.07

Mixer: Vj1 = 8.13mV, Ij1=54.1 uA, Vj2 = 8.25mV, I2j=?? uA, Imag = 25 mA IF: LN Amp, Attn, Splitter
YIG Filter, OffsetSW, HP Amp, NRAO Sq Law Det. W/ ACC 1573N
Flo = 240 GHz, Fif = 5 GHz, IF Attn = 6



UVA10-03-0403-L1362A-2-II-C12-L56-3-4-373-003-P.04.07

Mixer: $V_{j1} = 8.13\text{mV}$, $I_{j1} = 54.1\text{ uA}$, $V_{j2} = 8.25\text{mV}$, $I_{j2} = 43.7\text{ uA}$, $I_{\text{mag}} = 25\text{ mA}$ IF: LN Amp, Attn, Splitter

YIG Filter, OffsetSW, HP Amp, NRAO Sq Law Det. W/ ACC 1573N

$F_{\text{lo}} = 230\text{ GHz}$, $F_{\text{if}} = 5\text{ GHz}$, IF Attn = 4

