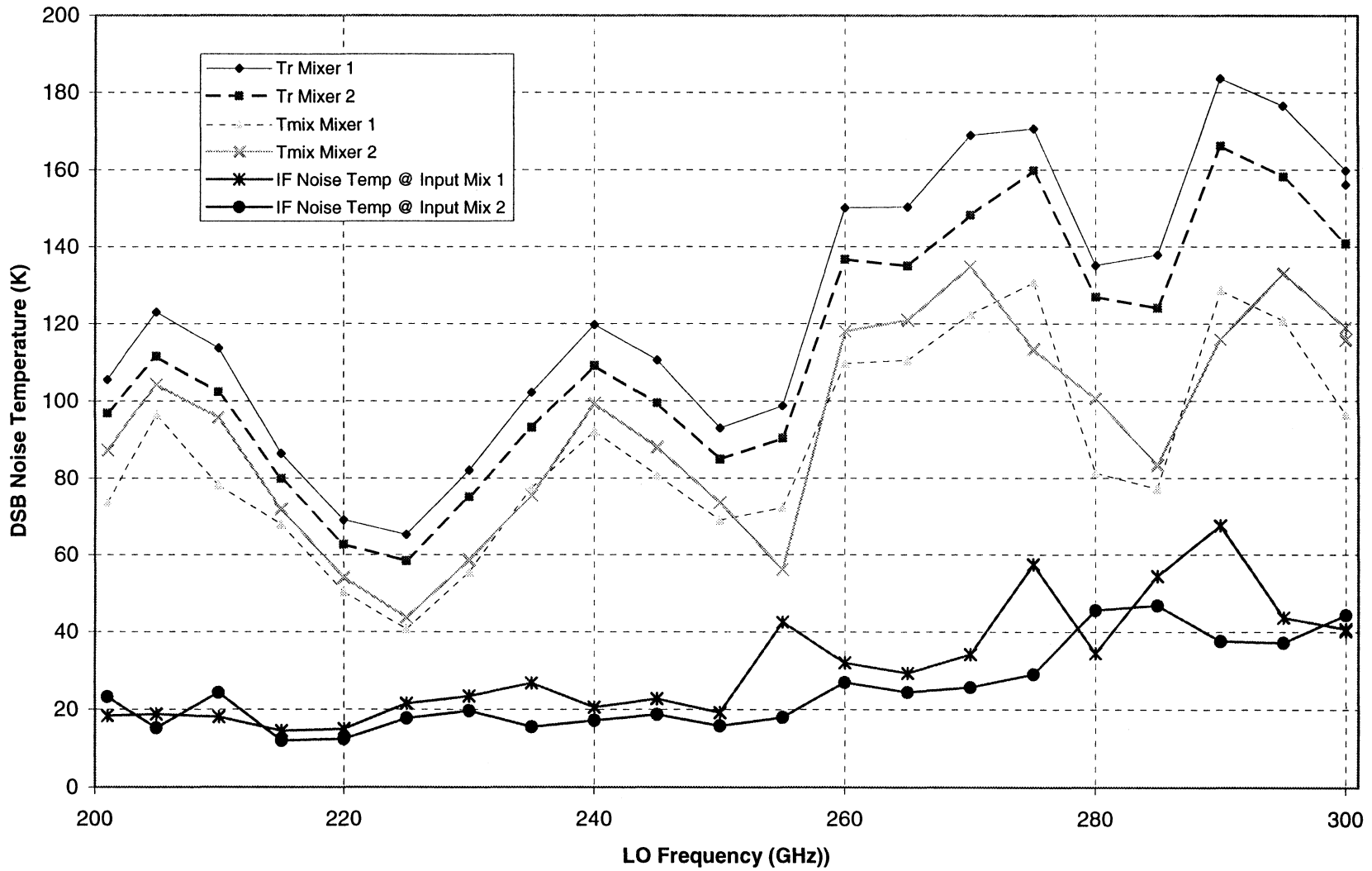


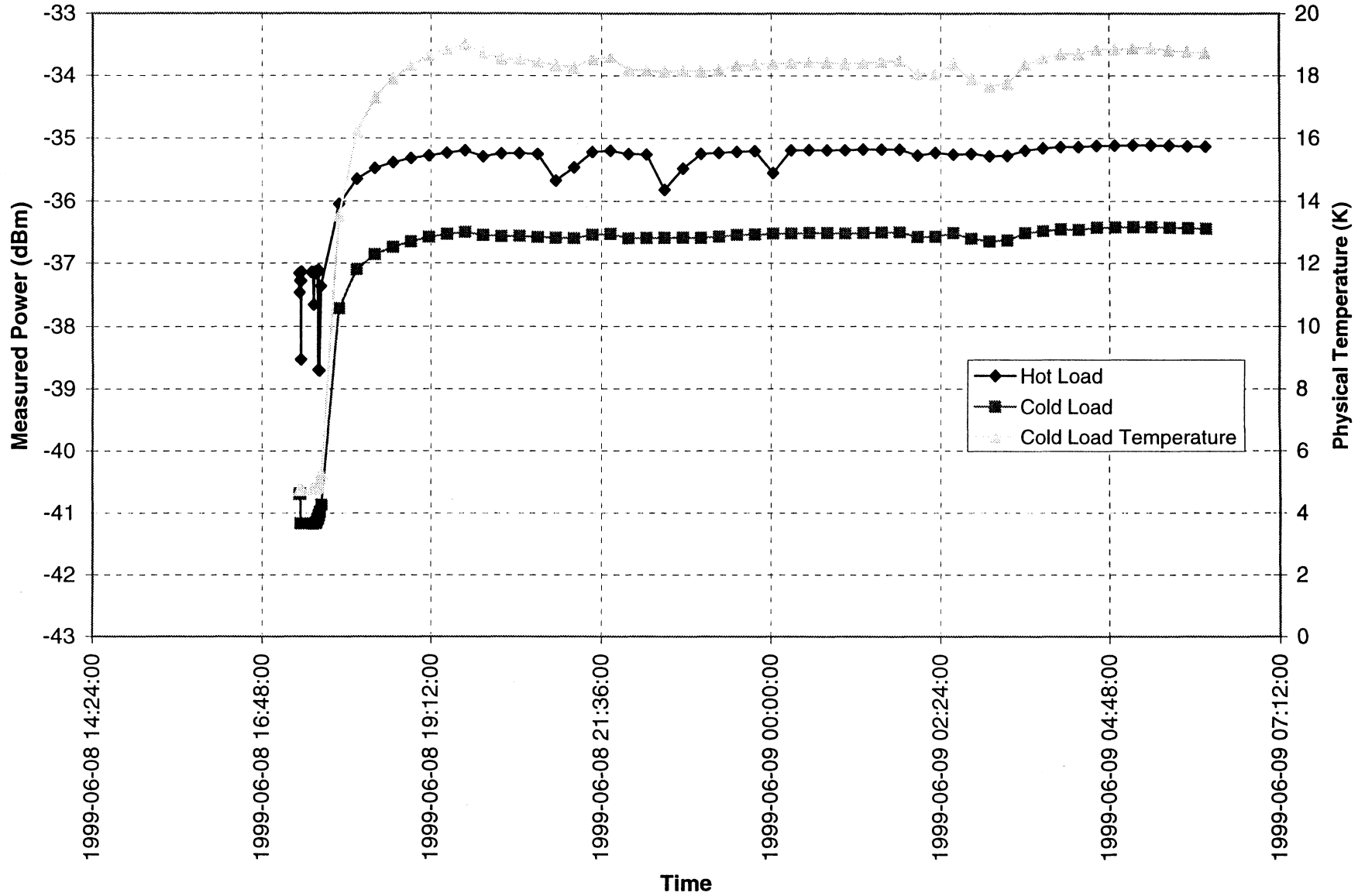
Automated SIS Mixer Measurement System Issues

- 1) Chopper wheel for automating hot/cold load measurements
 - a) Design review
 - b) Stepper motor controller
- 2) Automated LO design
 - a) Choices:
 - i) Motorize Gunns?
 - (1) Stepper motor controller should control 3 motors
 - ii) Help with Bradley's new design?
 - ii) Help with Bradley's new design?
 - b) Automated W/G switch to turn LO off?
- 3) Bias box changes
 - a) Automate ground/external/internal switching?
 - b) Tracking function to support 4 mixers
- 4) Software from Sergey Shitov Andrew Ermakov (with the Superconducting Electronics Lab at Moscow's Institute of Radioengineering and Electronics)
 - a) Mainly plotting functions that we've already built
- 5) Short-term tasks
 - a) Complete software upgrade to support JT-2 rack
 - b) Investigate intermittent switching
 - c) Chopper wheel
 - i) Mechanical Design
 - ii) Test software concepts using DAQ board in computer and existing chopper wheel
 - d) JT-1 rack hardware construction
 - e) Long-term tasks are given in attached sheet

Noise Temperatures
Balanced Mixer
BM371-UVaVIII-L568B-C3



Switch Performance Rack JT-2



SISMeasure		
ID	Task Name	Notes
3	SIS Mixer Rack	
4	Hardware	
9	Switch Controller	
14	Hot/Cold Load System	Entered: 1999Feb11 12:02
15	Gunn LO System	Entered: 1999Feb11 12:02
16	Upgrade Mixer 1 Rack	
20	Permanent Hardware Installation	Install IF switch on IF Plate...
22	Build New Bias Boxes	1) Auto switching to gnd...
24	Software	
25	DataBase	
26	Measurement Version Field	Have field for measurement software version...
27	Rack ID Field	Have field for measurement software version...
28	Store all parameters	Entered: 1999Mar11 17:36
29	Add Anal and Meas S/W version to all outputs	Entered: 1999May03 11:55
30	Update SW Design Doc	Entered: 1999Feb11 13:52...
32	Temperture/Pressure Strip Chart	
34	Use SDEV for pressure data	Entered: 1999Feb10 10:17
35	Improve graph printing	Entered: 1999Feb10 10:16
39	Create graphing program in Excel	Entered: 1999Feb10 10:17
40	Investigate resource sharing	Entered: 1999Feb10 15:11
42	Parameter subgraph	User can enter a number of selectable parameters in an autoscaling graph...
43	User-Changeable cal factors	Entered: 1999Feb12 09:04...
45	Update mag current supply	Entered: 1999Feb12 09:16...
46	Bias Measurement	
47	Fix DB interface Errors	
48	Overhaul	Make the mixer section interface similar to the IV plotter interface....
49	Duplicate mixer ID	This causes no record in Mixer table but allows records in child tables. Record is created in MeasType and Meas table
50	Delete last measurement record	When the last measurement record is deleted, the dialog box should query the user about keeping the mixer record. If
51	Initials get mangled	The initial field gets mangled....
59	Mixer Right or Left	Entered: 1999Mar11 17:36
60	Change Plot Scales	Entered: 1999Mar11 17:36
61	Plot data prior to showing parameter change box	
62	Make stepping direction user-selectable	That is, either min step to max step to min or min-max return to min
63	Change Commanded Bias Range	Entered: 1999Mar11 17:36...
64	Record Max/Min when in oscillation	Entered: 1999Mar11 17:36
65	Turn off next meas button	Entered: 1999Mar11 17:36
70	Get SDEV "Retry" working	Entered: 1999Feb10 15:12
71	Cleanup setting magnet current	If rack doesn't have programmable power supply ...
72	Recode SISDevice Class	Entered: 1999May04 08:34
73	Show Bias Point on graph	Entered: 1999-05-28 08:24
75	Noise Measurement (Excel)	Entered: 1999Feb18 14:03
81	Read temps into sheet	Entered: 1999Feb18 16:58
84	Share modules with bias meas	
85	Share Modules between racks	
86	Errors with empty workbook	Menu functions "Existing" and "Graph" error if there are not sheets in the current workbook....
87	Mixer-1 Rack	
89	Circ Noise	Circulator noise doesn't turn on with restart...
90	Plot Tr without Radome	Entered: 1999May03 11:33
91	Vague SB Error Message	If a sideband is entered that's not on the list, the error message is nebulous....

SISMeasure

ID	Task Name	Notes
92	JT-2 Rack	
93	JT-2 Copy Sheet	Copy the datasheet from the add-in to the working file....
94	Graph data after each measurement	Entered: 1999-05-28 08:42
95	Add date to noise temp spreadsheet	Put date and time measured in each row.
96	Read Tif	Put this into appropriate cell on spreadsheet....
97	Don't reset Imag	Stop resetting mag current after each measurement....
98	Intial System Checks	
99	Noise source switch	Confirm that noise source switch is in auto mod by turning switch on and off and checking for noise power difference....
100	Pin Attn Test	Confirm that Pin attenuator is working by measuring noise power while stepping through several attenuation ranges. N
101	Refresh Menu Control Buttons	Be sure to refresh control buttons when new software is loaded. Old buttons will load old software....
102	I-V Plotter	
103	Error using Print Last with no sheets	Entered: 1999-05-28 08:20: When there are no sheets in the workbook and this command is run, the delete sheet error
105	Errors with Long Comments	Sometimes long comments don't show up on plots....