

# Jefferson Lab Electronic Logbook

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# History

- **First instituted at the lab in 1996.**
- **Variously used**
  - \* **Official Record for DOE**
  - \* **Knowledge repository**
  - \* **Bulletin board to pass info among shifts**
- **Heavily Used**
  - \* **~35,000 entries/year in main ops logbook**
  - \* **400 MB/year in main ops logbook**
  - \* **Other logbooks for Software, FEL, etc.**



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# Old logbook “home page”

**Jefferson Lab OPERATIONS Logbook**

Make An [ENTRY](#)   [Scrollable logbook](#)   [Preview Entries](#)

Logbooks: [ELOG](#) / [CLOG](#) / [SLOG](#) / [SADLOG](#) / [POLOG](#) / [BDLOG](#)  
[FLOG](#) / [FUNLOG](#) / [HALOG](#) / [HBLOG](#) / [HCLG](#)

Other Links:

<a href="#">Pager</a>	<a href="#">Beam Charts</a>	<a href="#">FEL shift plans</a>
<a href="#">New elog (beta) and OPS-PR</a>	<a href="#">SWIS</a>	<a href="#">FEL Schedule</a>
<a href="#">Old News (read-only)</a>	<a href="#">Accelerator Test Plan</a>	<a href="#">FEL config</a>
<a href="#">ACE-PR</a>	<a href="#">Approved Sweepers List</a>	<a href="#">FEL Approved Users</a>
	<a href="#">Ops Documentation</a>	<a href="#">FEL Limits</a>
<a href="#">PD Shift Plans</a>	<a href="#">Ops Reconfiguration Plans</a>	<a href="#">FEL Bugger Log</a>
<a href="#">Run Coord Weekly Report</a>	<a href="#">Hall Line Optics</a>	
<a href="#">Whiteboard Schedule</a>	<a href="#">Software Documentation</a>	
<a href="#">Experiment Schedule</a>	<a href="#">FEL shift logs</a>	

**Wednesday**

- [182065 05/15/02 15:10:03 J Ludwig 930MeV/pass Reconfiguration continues... Downtime Entry](#)
- [182064 05/15/02 15:05:47 alarms BOOM Day Shift Status Summary](#)
- [182063 05/15/02 15:02:24 alarms System Status Report](#)
- [182062 05/15/02 15:02:21 alarms MAX JUICE - Day Shift Summary](#)
- [182061 05/15/02 14:42:37 M Bickley Tested bugfixed medm, which will not hang on viewer adl files](#)
- [182060 05/15/02 14:39:00 R Housman FSD Masks have been set for beam delivery to BSY](#)
- [182059 05/15/02 14:22:19 K Surles-Law AutoLog - Masked SL Pls](#)
- [182058 05/15/02 14:22:16 K Surles-Law AutoLog - Unmasked SL Pls](#)
- [182057 05/15/02 14:22:12 K Surles-Law AutoLog - Masked SL Pls](#)
- [182056 05/15/02 14:05:31 G Lahti RF3Laser - prebuncher gain vs current](#)
- [182055 05/15/02 13:30:43 R Housman Bad comm on Arc 3 Orbit Lock Downtime Entry](#)

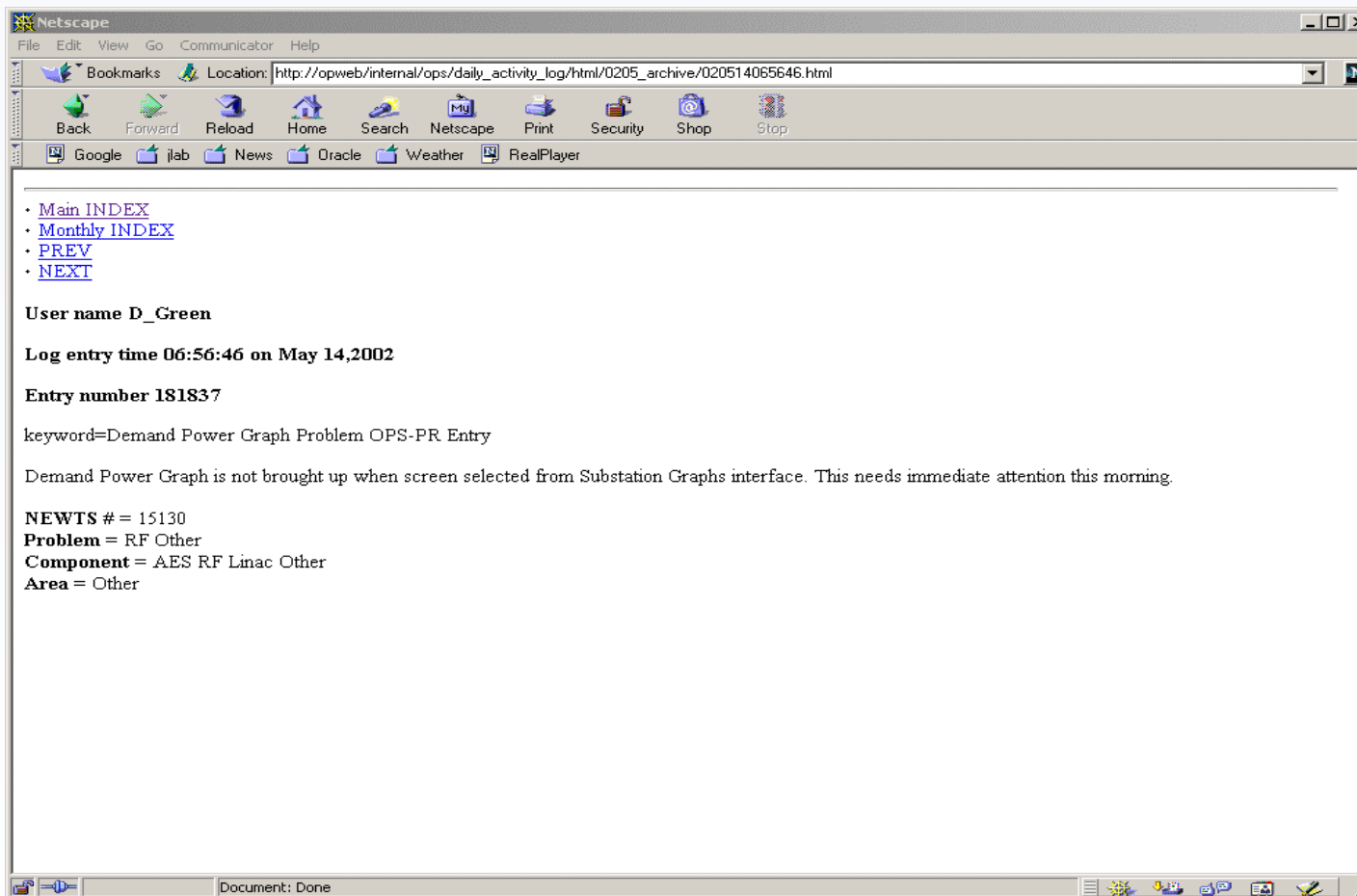


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# Old log entry



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# Shortcomings

- **Reliance on static html files – 100,000's**
  - \* **Sheer number a headache to manage**
  - \* **The html mingling of content and formatting makes data searching and extraction difficult**
- **Every program (60+ of them) responsible for number assignment, content formatting, not clobbering other entries. Little consistency.**



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# Components of an Entry

## ➤ Required

- \* **Keywords/Title, Timestamps (create, commit), Logbook(s), Entry-type**

## ➤ Optional

- \* **Attachment(s) (screenshots, documents, etc.)**
- \* **Downtime information**
- \* **References to other logs (backward/forward)**
- \* **Problem-Tracking History**



# New Version

- **Summer 2002.**
- **Addresses shortcomings**
  - \* **RDMS replaces files.**
  - \* **Dynamic Scripting replaces static HTML**
  - \* **APIs shield apps from entry-making details**
- **New Features**
  - \* **Integrated problem tracking**
  - \* **Threaded/linked entries**



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# Underpinnings

- **Relational Database (Oracle)**
- **Web Application Server (Apache + PHP)**
- **Libraries for programs that make entries**
  - \* **Tcl Package**
  - \* **Perl Module**
  - \* **C++ Library**
  - \* **HTTP API**



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# New logbook “home page”

The screenshot shows a Netscape browser window displaying the Jefferson Lab Operations Logbook. The browser title is "2002 Electronic Logbook System - Netscape". The address bar shows the URL: <http://devsrv-e.acc.jlab.org/elog02/wbin/elog.php>. The page content includes a navigation menu with links for various logbooks (ELOG, CLOG, SLOG, SADLOG, POLOG, BDLOG, FLOG, FUNLOG, EHSLOG, HALOG, HBLOG, HCLOG, TLOG) and actions (Make an Entry, Logbook prefs, Scrollable/printable logbook, Pending entries). There are also filters for Start Date (May 8, 2002), End Date (May 15, 2002), Logbook (ELOG), Entry Type (ALL), Sort Order (DESCENDING), and Source (ALL LOGS). The main content area displays a table of log entries for Wednesday, May 15, 2002.

<u>number</u>	<u>date</u>	<u>name</u>	<u>type</u>	<u>title</u>
1101889	15-May-02 15:10	J Ludwig	DOWNTIME	930MeV/pass Reconfiguration continues...
1101888	15-May-02 15:03	Alarms	LOGENTRY	BOOM Day Shift Status Summary
1101887	15-May-02 15:00	Alarms	LOGENTRY	System Status Report
1101886	15-May-02 15:00	Alarms	LOGENTRY	MAX JUICE - Day Shift Summary
1101885	15-May-02 14:42	M Bickley	LOGENTRY	Tested bugfixed medm, which will not hang on viewer adl
1101884	15-May-02 14:35	R Housman	LOGENTRY	FSD Masks have been set for beam delivery to BSY
1101883	15-May-02 14:21	K Surles-law	LOGENTRY	AutoLog - Masked SL P1s
1101882	15-May-02 14:20	K Surles-law	LOGENTRY	AutoLog - Unmasked SL P1s
1101881	15-May-02 14:19	K Surles-law	LOGENTRY	AutoLog - Masked SL P1s
1101880	15-May-02 14:05	G Lahti	LOGENTRY	RF3Laser - prebuncher gain vs current



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# Alternative Look

Jefferson Lab Unified Logbook - Netscape

Location: [http://devsrv-e.acc.jlab.org/elog02/wbin/viewer\\_main.php](http://devsrv-e.acc.jlab.org/elog02/wbin/viewer_main.php)

Start Date: May 8 2002 End Date: May 15 2002 Title Search:

Logbook: ELOG Entry Type: ALL Sort Order: DESCENDING Source: ALL LOGS

<u>number</u>	<u>date</u>	<u>name</u>	<u>type</u>	<u>title</u>
<b>Wednesday</b>				
1101889	15-May-02 15:10	J Ludwig	DOWNTIME	930MeV/pass Reconfiguration continues...
1101888	15-May-02 15:03	Alarms	LOGENTRY	BOOM Day Shift Status Summary
1101887	15-May-02 15:00	Alarms	LOGENTRY	System Status Report
1101886	15-May-02 15:00	Alarms	LOGENTRY	MAX JUICE - Day Shift Summary
1101885	15-May-02 14:42	M Bickley	LOGENTRY	Tested bugfixed medm, which will not hang on viewer adl
1101884	15-May-02 14:35	R Housman	LOGENTRY	FSD Masks have been set for beam delivery to BSY
1101883	15-May-02 14:21	K Surles-law	LOGENTRY	AutoLog - Masked SL PIs
1101882	15-May-02 14:20	K Surles-law	LOGENTRY	AutoLog - Unmasked SL PIs
1101881	15-May-02 14:19	K Surles-law	LOGENTRY	AutoLog - Masked SL PIs
1101880	15-May-02 14:05	G Lahti	LOGENTRY	RF3Laser - prebuncher gain vs current
1101879	15-May-02 13:30	R Housman	DOWNTIME	Bad comm on Arc 3 Orbit Lock
1101878	15-May-02 13:23	R Housman	LOGENTRY	EES investigating BPM problem
1101876	15-May-02 13:15	I Carlino	LOGENTRY	Screen News:Prebuncher settings
1101875	15-May-02 13:02	C Slominski	LOGENTRY	Orbit lock on-call request
1101874	15-May-02 12:51	J Ludwig	LOGENTRY	1A/2A SLM DogBones
1101873	15-May-02 12:50	K Surles-law	LOGENTRY	Orbit Correction Needed After LEM
1101872	15-May-02 12:34	K Surles-law	OPS-PR	Some Funky-ness at SLM
1101871	15-May-02 12:28	R Housman	DOWNTIME	2L09-3 CWWT fault
1101870	15-May-02 12:24	K Surles-law	LOGENTRY	Autolog LEM
1101869	15-May-02 12:11	Alarms	LOGENTRY	Krest Stopped
1101868	15-May-02 12:10	K Surles-law	LOGENTRY	Autolog LEM

Quick Links



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# New trouble report entry

The screenshot shows a Netscape browser window with the following details:

- Location: [http://opsvr.acc.jlab.org/CSUEApps/elog02/elog\\_item.php?logbook=ELOG&index=225&elog\\_id=1101620](http://opsvr.acc.jlab.org/CSUEApps/elog02/elog_item.php?logbook=ELOG&index=225&elog_id=1101620)
- Navigation: Back, Forward, Reload, Home, Search, Netscape, Print, Security, Shop, Stop
- Search: Google, jlab, News, Oracle, Weather, RealPlayer
- Navigation: [QuickPic - Demand power screen during RF recovery](#), [NL05-2 & 6 Comm Errors](#), [INDEX](#)

**Elog Title:** Demand Power Graph Problem  
**Entry number:** [1101620](#)  
**Users:** davidg | suhring  
**Logbooks:** ELOG | SLOG  
**Type of Entry:** OPS-PR  
**Log creation time:** 14-May-02 06:56

Demand Power Graph is not brought up when screen selected from Substation Graphs interface. This needs immediate attention this morning.

**Problem Tracking (OPS-PR) History:**

**History for current entry**

Timestamp	Action	Action By	Assignee	Area	Component	Problem
14-May-2002 11:45	CLOSE	G_Lahti	G_Lahti	Other General	OTHER General	SOFTWARE UNIX Other
<i>The AC Demand Power Graph program did not work. It was an old 1996 version, not for the new name server. I recompiled it, so now it works in the control room. (1) req r313c3 (2) \$LLAPPIT/Power/2-1/src/XVep.c (make -f Make_XVep XVep). (3) cp XVep ~mccops/sx_apps/GEL/AC_XVep (note the name change). This message is the same as elog #1101672.</i>						
14-May-2002 07:56	UPDATE	K_White	G_Lahti	Other General	OTHER General	SOFTWARE UNIX Other
<i>I had Pam Kjeldsen try to pull this graph up on her computer to start the debugging process. It worked on her machine. We will use it there for this morning, but the application needs to be fixed to work on all ops consoles.</i>						
14-May-2002 07:00	OPEN		R_Nelson	Other General	Linac Other	RF Other

Navigation: [QuickPic - Demand power screen during RF recovery](#), [NL05-2 & 6 Comm Errors](#), [INDEX](#)



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# Logs can be queried

Back Forward Reload Home Search Netscape Print Security Shop Stop

Google iLab News Oracle Weather RealPlayer

**Fields to Return:**

<input type="checkbox"/> Creation time	<input type="checkbox"/> Entry type	<input type="checkbox"/> Logbook(s)	<input type="checkbox"/> Title
<input type="checkbox"/> Username(s)	<input type="checkbox"/> Originating host	<input type="checkbox"/> OS account	
<input type="checkbox"/> Area	<input type="checkbox"/> Component	<input type="checkbox"/> Problem	<input type="checkbox"/> Timestamp
<input type="checkbox"/> Assignee	<input type="checkbox"/> Action by	<input type="checkbox"/> Annotation/Solution	<input type="checkbox"/> Action
<input type="checkbox"/> Time Down	<input type="checkbox"/> Time Up	<input type="checkbox"/> Time Restored	<input type="checkbox"/> Time until Up
<input type="checkbox"/> Time until Restore	<input type="checkbox"/> Time between Up and Restore		
<input type="checkbox"/> OPS-PR fields	<input type="checkbox"/> ELOG fields	<input type="checkbox"/> DOWNTIME fields	

**Basic Filters:**

Start Date: May 8 2002 End Date: May 15 2002

Logbooks: ALL

Last action:  CLOSE  MERGE  OPEN  REASSIGN  UPDATE

**Predefined Queries:**

- All OPS-PRs. Apply filters only.
- Find all unassigned OPS-PRs.
- Find all OPS-PRs assigned to:  
Select One...
- Find all OPS-PRs in area:  
Select One...
- Find all OPS-PRs in component:  
Select One...
- Find all OPS-PRs in problem:  
Select One...
- Find all OPS-PRs in problem category:  
Select One...

Include subcategories when applicable?

**Output Preference:**

HTML Table  Excel Spreadsheet



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# Browser is not only interface

The screenshot shows a Netscape browser window displaying a table of OPS-PR records. An Excel spreadsheet is overlaid on the browser, showing a detailed view of the data with columns for Log Number, OPS-PR timestamp, Title, Component\_name, Problem\_name, and Solution.

Log Number	OPS-PR timestamp	Title	Component_name	Problem_name	Solution
1101896	5/15/2002 15:52	Cavity History Updated	Linac Other	State Failure - Drops Out Of RF	
1101889	5/15/2002 15:12	930MeV/pass Reconfiguration continues...	OPTICS		
1101879	5/15/2002 13:32	Bad comm on Arc 3 Orbit Lock	BPM 4 Channel BPM	Diagnostics Other	
1101877	5/15/2002 13:36	OPS-PR changes for RADCON	OPS-PR	SOFTWARE Other	
1101872	5/15/2002 12:35	Some Funky-ness at SLM	OPTICS		
1101871	5/15/2002 14:35	2L09-3 CWWT fault	Linac Other	State Failure - Drops Out Of RF	Multiple OPS-PR's referring to same problem
1101867	5/15/2002 11:58	DOG4E dropped out due to MPS water flow failure	BoxSupply DOG 4	Water flow fault on box supply	
1101859	5/15/2002 11:32	2L09-3 CWWT fault	Linac Low Level RF Control	State Failure - Unable To Go To HV	Multiple OPS-PR's referring to same problem
1101856	5/15/2002 14:33	Cavity History Updated	Linac Other	State Failure - Drops Out Of RF	Multiple OPS-PR's referring to same problem
1101840	5/15/2002 10:21	OPS-PR Problem Menu for INJ	OPS-PR	SOFTWARE UNIX Other	
1101839	5/15/2002 9:04	INJ access to reset B Laser RF	INJECTOR	Erratic Readbacks	The RF Modules for both cavities which were \"found ... off crest by ~180 degrees\" were replaced during RF recovery during the day shift yesterday. The replacement



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# Logbook Comparison

<b>Old Logbook</b>	<b>New Logbook</b>
<b>Files (one per record)</b>	<b>RDBMS (Oracle)</b>
<b>Separate downtime &amp; problem tracking</b>	<b>Integrated downtime &amp; problem tracking</b>
<b>Unauthenticated entries</b>	<b>Authenticated entries</b>
<b>Web browser only interface</b>	<b>Accessible from scripts, browsers, spreadsheets.</b>



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# Future Direction

- **Enhance Problem-Tracking**
  - \* **Track problems with specific hardware in addition to general hardware types.**
  - \* **Integrate with future Plant Engineering Work Order system**
- **Enhance Query/Search Tools**
  - \* **Oracle Intermedia to search attachments such as PDF, Word documents.**



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