

# GLAST LAT Tracker Subsystem

## TOWER ASSEMBLY and TEST FLOW CHART

---

**Tower P/N:**

LAT-DS-00722

**Revision number:**

0

**Tower S/N:**

A

---

**Assembly supervisor**

Emilio Rapposelli

**Assembly operator 1**

Marco Ceccanti

**Assembly QA responsible**

Aldo Troianiello

**Assembly operator 2**

Nicola Saggini

---

**Tower  
Assembly**

**Tray Assembling**

**Top Tray (n° 18)**

**IDENTIFICATION:**

**tray type:**

T

**tray S/N:**

002

**tray weight (gr):**

1515

**VISUAL INSPECTION:**

**Date (mm/dd/yyyy):**

11/29/2004 12:43:14 PM

**Note**

**Flag**

OK

**MOUNTING:**

**Date (mm/dd/yy):**

11/29/2004 12:43:28 PM

**Note**

**Mid Tray (n° 17)**

<b>IDENTIFICATION:</b>		
<b>tray type:</b>	<b>tray S/N:</b>	<b>tray weight (gr):</b>
M	079	1465

<b>VISUAL INSPECTION:</b>	
<b>Date (mm/dd/yyyy):</b>	<b>Note</b>
11/29/2004 1:39:38 PM	
<b>Flag</b> <input type="text" value="OK"/>	

<b>MOUNTING:</b>	
<b>Date (mm/dd/yy):</b>	<b>Note</b>
11/29/2004 1:39:44 PM	

**Mid Tray (n° 16)**

<b>IDENTIFICATION:</b>		
<b>tray type:</b>	<b>tray S/N:</b>	<b>tray weight (gr):</b>
M	050	1450

<b>VISUAL INSPECTION:</b>	
<b>Date (mm/dd/yyyy):</b>	<b>Note</b>
11/29/2004 6:23:14 PM	
<b>Flag</b> <input type="text" value="OK"/>	

<b>MOUNTING:</b>	
<b>Date (mm/dd/yy):</b>	<b>Note</b>
11/29/2004 6:23:30 PM	

**Mid Tray (n° 15)**

<b>IDENTIFICATION:</b>		
tray type:	tray S/N:	tray weight (gr):
<input type="text" value="M"/>	<input type="text" value="062"/>	<input type="text" value="1465"/>

<b>VISUAL INSPECTION:</b>	
Date (mm/dd/yyyy):	Note
<input type="text" value="11/29/2004 7:21:36 PM"/>	<input type="text"/>
Flag <input type="text" value="OK"/>	

<b>MOUNTING:</b>	
Date (mm/dd/yy):	Note
<input type="text" value="11/29/2004 7:21:40 PM"/>	<input type="text"/>

**Mid Tray (n° 14)**

<b>IDENTIFICATION:</b>		
tray type:	tray S/N:	tray weight (gr):
<input type="text" value="M"/>	<input type="text" value="080"/>	<input type="text" value="1460"/>

<b>VISUAL INSPECTION:</b>	
Date (mm/dd/yyyy):	Note
<input type="text" value="11/29/2004 7:47:32 PM"/>	<input type="text"/>
Flag <input type="text" value="OK"/>	

<b>MOUNTING:</b>	
Date (mm/dd/yy):	Note
<input type="text" value="11/29/2004 7:47:40 PM"/>	<input type="text"/>

**Mid Tray (n° 13)**

<b>IDENTIFICATION:</b>		
<b>tray type:</b>	<b>tray S/N:</b>	<b>tray weight (gr):</b>
M	082	1480

<b>VISUAL INSPECTION:</b>	
<b>Date (mm/dd/yyyy):</b>	<b>Note</b>
11/30/2004 10:28:41 AM	
<b>Flag</b> <input type="text" value="OK"/>	

<b>MOUNTING:</b>	
<b>Date (mm/dd/yy):</b>	<b>Note</b>
11/30/2004 10:30:41 AM	

**Mid Tray (n° 12)**

<b>IDENTIFICATION:</b>		
<b>tray type:</b>	<b>tray S/N:</b>	<b>tray weight (gr):</b>
M	064	1450

<b>VISUAL INSPECTION:</b>	
<b>Date (mm/dd/yyyy):</b>	<b>Note</b>
11/30/2004 10:58:28 AM	
<b>Flag</b> <input type="text" value="OK"/>	

<b>MOUNTING:</b>	
<b>Date (mm/dd/yy):</b>	<b>Note</b>
11/30/2004 11:00:28 AM	

**Mid Tray (n° 11)**

<b>IDENTIFICATION:</b>		
tray type:	tray S/N:	tray weight (gr):
<input type="text" value="M"/>	<input type="text" value="066"/>	<input type="text" value="1465"/>

<b>VISUAL INSPECTION:</b>	
Date (mm/dd/yyyy):	Note
<input type="text" value="11/30/2004 11:31:11 AM"/>	<input type="text"/>
Flag <input type="text" value="OK"/>	

<b>MOUNTING:</b>	
Date (mm/dd/yy):	Note
<input type="text" value="11/30/2004 11:32:11 AM"/>	<input type="text"/>

**Mid Tray (n° 10)**

<b>IDENTIFICATION:</b>		
tray type:	tray S/N:	tray weight (gr):
<input type="text" value="M"/>	<input type="text" value="076"/>	<input type="text" value="1465"/>

<b>VISUAL INSPECTION:</b>	
Date (mm/dd/yyyy):	Note
<input type="text" value="11/30/2004 11:59:48 AM"/>	<input type="text"/>
Flag <input type="text" value="OK"/>	

<b>MOUNTING:</b>	
Date (mm/dd/yy):	Note
<input type="text" value="11/30/2004"/>	<input type="text"/>

**Mid Tray (n° 09)**

<b>IDENTIFICATION:</b>		
tray type:	tray S/N:	tray weight (gr):
<input type="text" value="M"/>	<input type="text" value="002"/>	<input type="text" value="1445"/>

<b>VISUAL INSPECTION:</b>	
Date (mm/dd/yyyy):	Note
<input type="text" value="11/30/2004 2:41:07 PM"/>	<input type="text"/>
Flag <input type="text"/>	

<b>MOUNTING:</b>	
Date (mm/dd/yy):	Note
<input type="text" value="11/30/2004 2:42:07 PM"/>	<input type="text"/>
<input type="text"/>	

**Mid Tray (n° 08)**

<b>IDENTIFICATION:</b>		
tray type:	tray S/N:	tray weight (gr):
<input type="text" value="M"/>	<input type="text" value="077"/>	<input type="text" value="1480"/>

<b>VISUAL INSPECTION:</b>	
Date (mm/dd/yyyy):	Note
<input type="text" value="11/30/2004 3:06:50 PM"/>	<input type="text"/>
Flag <input type="text"/>	

<b>MOUNTING:</b>	
Date (mm/dd/yy):	Note
<input type="text" value="11/30/2004 3:10:50 PM"/>	<input type="text"/>
<input type="text"/>	

**Mid Tray (n° 07)**

<b>IDENTIFICATION:</b>		
tray type:	tray S/N:	tray weight (gr):
<input type="text" value="M"/>	<input type="text" value="053"/>	<input type="text" value="1440"/>

<b>VISUAL INSPECTION:</b>	
Date (mm/dd/yyyy):	Note
<input type="text" value="11/30/2004 3:30:28 PM"/>	<input type="text"/>
Flag <input type="text"/>	

<b>MOUNTING:</b>	
Date (mm/dd/yy):	Note
<input type="text" value="11/30/2004 3:31:28 PM"/>	<input type="text"/>
<input type="text"/>	

**Heavy Tray (n° 06)**

<b>IDENTIFICATION:</b>		
tray type:	tray S/N:	tray weight (gr):
<input type="text" value="H"/>	<input type="text" value="012"/>	<input type="text" value="2885"/>

<b>VISUAL INSPECTION:</b>	
Date (mm/dd/yyyy):	Note
<input type="text" value="11/30/2004 3:52:24 PM"/>	<input type="text"/>
Flag <input type="text" value="OK"/>	

<b>MOUNTING:</b>	
Date (mm/dd/yy):	Note
<input type="text" value="11/30/2004 3:54:24 PM"/>	<input type="text"/>
<input type="text"/>	

**Heavy Tray (n° 05)**

<b>IDENTIFICATION:</b>		
<b>tray type:</b>	<b>tray S/N:</b>	<b>tray weight (gr):</b>
H	006	2905

<b>VISUAL INSPECTION:</b>	
<b>Date (mm/dd/yyyy):</b>	<b>Note</b>
11/30/2004 4:06:12 PM	
<b>Flag</b> <input type="checkbox"/> OK	

<b>MOUNTING:</b>	
<b>Date (mm/dd/yy):</b>	<b>Note</b>
11/30/2004 4:07:12 PM	

**Heavy Tray (n° 04)**

<b>IDENTIFICATION:</b>		
<b>tray type:</b>	<b>tray S/N:</b>	<b>tray weight (gr):</b>
H	020	2950

<b>VISUAL INSPECTION:</b>	
<b>Date (mm/dd/yyyy):</b>	<b>Note</b>
11/30/2004 5:53:40 PM	
<b>Flag</b> <input type="checkbox"/> OK	

<b>MOUNTING:</b>	
<b>Date (mm/dd/yy):</b>	<b>Note</b>
11/30/2004 5:53:43 PM	



**Heavy Tray (n° 03)**

<b>IDENTIFICATION:</b>		
<b>tray type:</b>	<b>tray S/N:</b>	<b>tray weight (gr):</b>
H	010	2950

<b>VISUAL INSPECTION:</b>	
<b>Date (mm/dd/yyyy):</b>	<b>Note</b>
11/30/2004 6:13:58 PM	
<b>Flag</b> <input type="text" value="OK"/>	

<b>MOUNTING:</b>	
<b>Date (mm/dd/yy):</b>	<b>Note</b>
11/30/2004 6:14:01 PM	

**Light Tray (n° 02)**

<b>IDENTIFICATION:</b>		
<b>tray type:</b>	<b>tray S/N:</b>	<b>tray weight (gr):</b>
L	016	1220

<b>VISUAL INSPECTION:</b>	
<b>Date (mm/dd/yyyy):</b>	<b>Note</b>
11/30/2004 6:29:12 PM	dirty 2nd silicon from the front side on the dx. Tried to clean with IPA
<b>Flag</b> <input type="text" value="Warning"/>	

<b>MOUNTING:</b>	
<b>Date (mm/dd/yy):</b>	<b>Note</b>
11/30/2004 6:30:33 PM	

**Light Tray (n° 01)**

<b>IDENTIFICATION:</b>		
<b>tray type:</b>	<b>tray S/N:</b>	<b>tray weight (gr):</b>
L	013	1215

<b>VISUAL INSPECTION:</b>	
<b>Date (mm/dd/yyyy):</b>	<b>Note</b>
11/30/2004 6:39:34 PM	
<b>Flag</b> <input type="checkbox"/> OK	

<b>MOUNTING:</b>	
<b>Date (mm/dd/yy):</b>	<b>Note</b>
11/30/2004 6:39:41 PM	1215gr

**Bottom Tray (n° 00)**

<b>IDENTIFICATION:</b>		
<b>tray type:</b>	<b>tray S/N:</b>	<b>tray weight (gr):</b>
B	003	2420

<b>VISUAL INSPECTION:</b>	
<b>Date (mm/dd/yyyy):</b>	<b>Note</b>
11/30/2004 7:07:43 PM	
<b>Flag</b> <input type="checkbox"/> OK	

<b>MOUNTING:</b>	
<b>Date (mm/dd/yy):</b>	<b>Note</b>
11/30/2004 7:07:49 PM	Ground was done before assembly

Cables +X (C0-C1)

<b>C-0</b> <i>(-Y corner)</i> <b>cable +XC0 sn:</b> C-0-016 S/N 0044 date 0432	<b>VISUAL INSPECTION:</b>
	<b>Date (mm/dd/yyyy):</b> 12/1/2004 10:00:00 AM <b>Flag:</b> OK <b>Note:</b> residual RTV on cable
<b>C-1</b> <i>(+Y corner)</i> <b>cable +XC1 sn:</b> C-1-003 S/N 0053 date 0431	<b>MOUNTING:</b>
	<b>Date (mm/dd/yy):</b> 12/1/2004 10:00:04 AM <b>Note:</b>
	<b>VISUAL INSPECTION:</b>
	<b>Date (mm/dd/yyyy):</b> 12/1/2004 10:00:08 AM <b>Flag:</b> OK <b>Note:</b>
	<b>MOUNTING:</b>
	<b>Date (mm/dd/yyyy):</b> 12/1/2004 10:51:11 AM <b>Note:</b>

**Cables +Y (C2-C3)**

**C-2  
(+X corner)**

**cable +YC2 sn:**

C-2-004 S/N 0044  
date 0442

**VISUAL INSPECTION:**

**Date (mm/dd/yyyy):** **Flag:** **Note:**

12/1/2004	OK	
-----------	----	--

**MOUNTING:**

**Date (mm/dd/yy):** **Note:**

12/1/2004	
-----------	--

**C-3  
(-X corner)**

**cable +YC3 sn:**

C-3-004 S/N 0019  
date0432

**VISUAL INSPECTION:**

**Date (mm/dd/yyyy):** **Flag:** **Note:**

12/1/2004	OK	
-----------	----	--

**MOUNTING:**

**Date (mm/dd/yyyy):** **Note:**

12/1/2004	
-----------	--

**Cables -X (C4-C5)**

**C-4  
(-Y corner)**

**cable -XC5 sn:**

C-4-008 S/N 0046  
date 0441

**VISUAL INSPECTION:**

**Date (mm/dd/yyyy):** **Flag:** **Note:**

12/1/2004 10:51:16 AM OK

**MOUNTING:**

**Date (mm/dd/yy):** **Note:**

12/1/2004 10:51:19 AM

**C-5  
(+Ycorner)**

**cable -XC6 sn:**

C-5-007 S/N 0035  
date 0441

**VISUAL INSPECTION:**

**Date (mm/dd/yyyy):** **Flag:** **Note:**

12/1/2004 10:03:59 AM OK

**MOUNTING:**

**Date (mm/dd/yyyy):** **Note:**

12/1/2004 10:51:22 AM

**Cables -Y (C6-C7)**

**C-6  
(+X corner)**

**cable -YC6 sn:**

C-6-011 S/N 0064  
date 0442

**VISUAL INSPECTION:**

**Date (mm/dd/yyyy):** **Flag:** **Note:**

12/1/2004 11:03:59 AM

**MOUNTING:**

**Date (mm/dd/yy):** **Note:**

12/1/2004 11:04:01 AM

**C-7  
(-X corner)**

**cable -YC7 sn:**

C-7-003 S/N 0105  
date 0433

**VISUAL INSPECTION:**

**Date (mm/dd/yyyy):** **Flag:** **Note:**

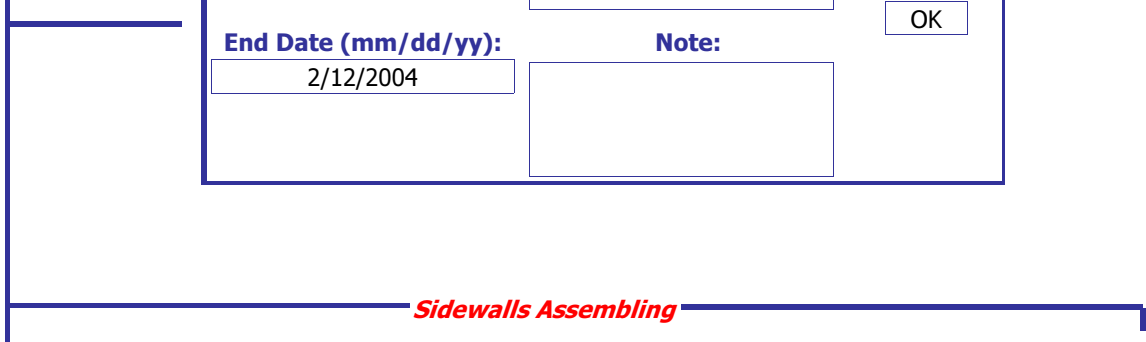
12/1/2004 11:02:14 AM

**MOUNTING:**

**Date (mm/dd/yyyy):** **Note:**

12/1/2004 11:02:17 AM

<b>1st FUNCTIONAL TEST CPT:</b>		
<b>Start Date (mm/dd/yy):</b> 1/12/2004	<b>Note:</b> INFN/PI-gamma-9	<b>Flag:</b> OK
<b>End Date (mm/dd/yy):</b> 2/12/2004	<b>Note:</b>	



<b>Sidewalls +X</b>	<b>serial nb:</b>		<b>VISUAL INSPECTION:</b> <b>Date (mm/dd/yyyy):</b> 2/12/2004 <b>Note:</b> <b>Flag:</b> OK
	<b>serial nb:</b>		<b>MOUNTING:</b> <b>Date (mm/dd/yy):</b> 2/12/2004 <b>Note:</b> No S/N and P/N appear on sidewall
<b>Sidewalls +X</b>	<b>serial nb:</b>	002	<b>VISUAL INSPECTION:</b> <b>Date (mm/dd/yyyy):</b> 1/7/2004 <b>Note:</b> <b>Flag:</b> OK
	<b>serial nb:</b>	002	<b>MOUNTING:</b> <b>Date (mm/dd/yy):</b> 1/7/2004 <b>Note:</b>

**Sidewalls  
-X**

serial nb:

<b>VISUAL INSPECTION:</b>	
Date (mm/dd/yyyy):	Note
<input type="text" value="2/12/2004"/>	<input type="text"/>
Flag <input type="text" value="OK"/>	

<b>MOUNTING:</b>	
Date (mm/dd/yy):	Note
<input type="text" value="2/12/2004"/>	No S/N and P/N appear on sidewall

**Sidewalls  
-X**

serial nb:

<b>VISUAL INSPECTION:</b>	
Date (mm/dd/yyyy):	Note
<input type="text" value="1/7/2004"/>	<input type="text"/>
Flag <input type="text" value="OK"/>	

<b>MOUNTING:</b>	
Date (mm/dd/yy):	Note
<input type="text" value="1/7/2004"/>	<input type="text"/>

**Sidewalls  
+Y**

serial nb:

<b>VISUAL INSPECTION:</b>	
Date (mm/dd/yyyy):	Note
<input type="text" value="2/12/2004"/>	<input type="text"/>
Flag <input type="text"/>	

<b>MOUNTING:</b>	
Date (mm/dd/yy):	Note
<input type="text" value="2/12/2004"/>	No S/N and P/N appear on sidewall



**Sidewalls  
+Y**

serial nb:  
002

<b>VISUAL INSPECTION:</b>	
Date (mm/dd/yyyy):	Note
1/7/2004	
Flag <input type="checkbox"/> OK	

<b>MOUNTING:</b>	
Date (mm/dd/yy):	Note
1/7/2004	

**Sidewalls  
-Y**

serial nb:

<b>VISUAL INSPECTION:</b>	
Date (mm/dd/yyyy):	Note
2/12/2004	No S/N and P/N appear on sidewall
Flag <input type="checkbox"/>	

<b>MOUNTING:</b>	
Date (mm/dd/yy):	Note
2/2/2004 4:34:40 PM	sidewalls with conter sink too deep

**Sidewalls  
-Y**

serial nb:  
002

<b>VISUAL INSPECTION:</b>	
Date (mm/dd/yyyy):	Note
1/7/2004	
Flag <input type="checkbox"/> OK	

<b>MOUNTING:</b>	
Date (mm/dd/yy):	Note
1/7/2004	

<b>ALIGNMENT:</b>	
<b>Date (mm/dd/yyyy):</b> 1/12/2004	<b>Note:</b> remeasured on 1/7/2004 after C6 fix (NCR/FM/INFN/PI-348)
<b>Flag:</b> <input type="text" value="OK"/>	

<b>BASE PLATE ASSEMBLING:</b>	
<b>Date (mm/dd/yyyy):</b> 2/12/2004	<b>Note:</b> Problem with cones setting program
<b>Flag:</b> <input type="text" value="Warning"/>	

<b>2nd FUNCTIONAL TEST :</b>	
<b>Start Date (mm/dd/yy):</b> 3/12/2004	<b>Note:</b> INFN/PI-gamma-10
<b>End Date (mm/dd/yy):</b> 6/12/2004	<b>Note:</b>
	<b>Flag:</b> <input type="text" value="OK"/>

<b>TOWER Turn Over :</b>	
<b>Date (mm/dd/yyyy):</b> 6/12/2004	<b>Note:</b>
<b>Flag:</b> <input type="text" value="OK"/>	

<b>BRACKET ASSEMBLING:</b>	
<b>Date (mm/dd/yyyy):</b>	<b>Note:</b>
7/12/2004	A lot of time lost in finding datasheet of Solithane and resolve problem on toxicity. NCR on Brackets
<b>Flag:</b> <input type="text" value="OK"/>	

<b>SHIPPING TO ALENIA:</b>	
<b>Date (mm/dd/yyyy):</b>	<b>Note:</b>
9/12/2004	
<b>Flag:</b> <input type="text" value="OK"/>	

<b>THERMO-VACUUM:</b>	
<b>Date (mm/dd/yyyy):</b>	<b>Note:</b>
12/12/2004	NCR/FM/INFN/PI-341. test report is LAT-TD-05495
<b>Flag:</b> <input type="text" value="OK"/>	

<b>VIBRATIONAL:</b>	
<b>Date (mm/dd/yyyy):</b>	<b>Note:</b>
12/9/2004	test report is LAT-TD-05494
<b>Flag:</b> <input type="text" value="OK"/>	

<b>SHIPPING TO INFN/PISA:</b>	
<b>Date (mm/dd/yyyy):</b>	<b>Note:</b>
12/22/2004	
<b>Flag:</b> <input type="text" value="OK"/>	

**Test @ALENIA**

<b>Verify</b>	<b>TOWER BOX VISUAL INSPECTION:</b> <b>Date (mm/dd/yyyy):</b> <input type="text" value="12/23/2004"/> <b>Note:</b> <input style="width: 200px; height: 40px;" type="text"/> <b>Flag:</b> <input type="text" value="OK"/>
	<b>MEASUREMENT CMM:</b> <b>Date (mm/dd/yyyy):</b> <input type="text" value="12/27/2004"/> <b>Note:</b> <input style="width: 200px; height: 40px;" type="text"/> <b>Flag:</b> <input type="text" value="OK"/>
	<b>FUNCTIONAL TEST:</b> <b>Date (mm/dd/yyyy):</b> <input type="text" value="12/23/2004"/> <b>Note:</b> <input style="width: 200px; height: 40px;" type="text" value="infn-gamma-12 test session. test of clock line on cable 6 shows missing lvds CLK signal. INFN/PI-gamma-13 long run for data taking. Repeated after c6 fix (NCR348), see INFN/PI-"/> <b>Flag:</b> <input type="text" value="Warning"/>
	<b>PACKAGING:</b> <b>Date (mm/dd/yyyy):</b> <input type="text" value="1/7/2004"/> <b>Note:</b> <input style="width: 200px; height: 40px;" type="text"/> <b>Flag:</b> <input type="text" value="OK"/>
	<b>SHIPPING TO SLAC:</b> <b>Date (mm/dd/yyyy):</b> <input type="text" value=""/> <b>Note:</b> <input style="width: 200px; height: 40px;" type="text"/> <b>Flag:</b> <input type="text" value=""/>