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# GLAST Monthly PSR

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October 6, 2004

**GBM**

**Bill Browne**  
*GBM Instrument Manager*



# Accomplishments

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- ▶ ***SwRI completed DPU EU#1 updates, unit returned to NSSTC.***
- ▶ ***GBM-GLAST MCDR presentation received w/o RFAs.***
- ▶ ***GBM Build 1 FSW verification testing is > 50% complete. The FSW continues to run w/o crashing.***
- ▶ ***GLAST signed the authorization to GD/SASS for GBM EQM detector thermal blankets. GBM to supply the blanket outer layer.***
- ▶ ***Astrium given ATP for Power Box structural analysis.***
- ▶ ***SwRI returned the SDIS K2 Board to GD/SASS per GLAST direction.***



# Issues/Problems

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- ▶ ***Shipment of the SDIS K2 CPU board to GD/SASS will impact the following:***
  - *Build 1 FSW verification*
  - *GSIS development*
  - *GSW development*
  - *DPU EU#1 testing*



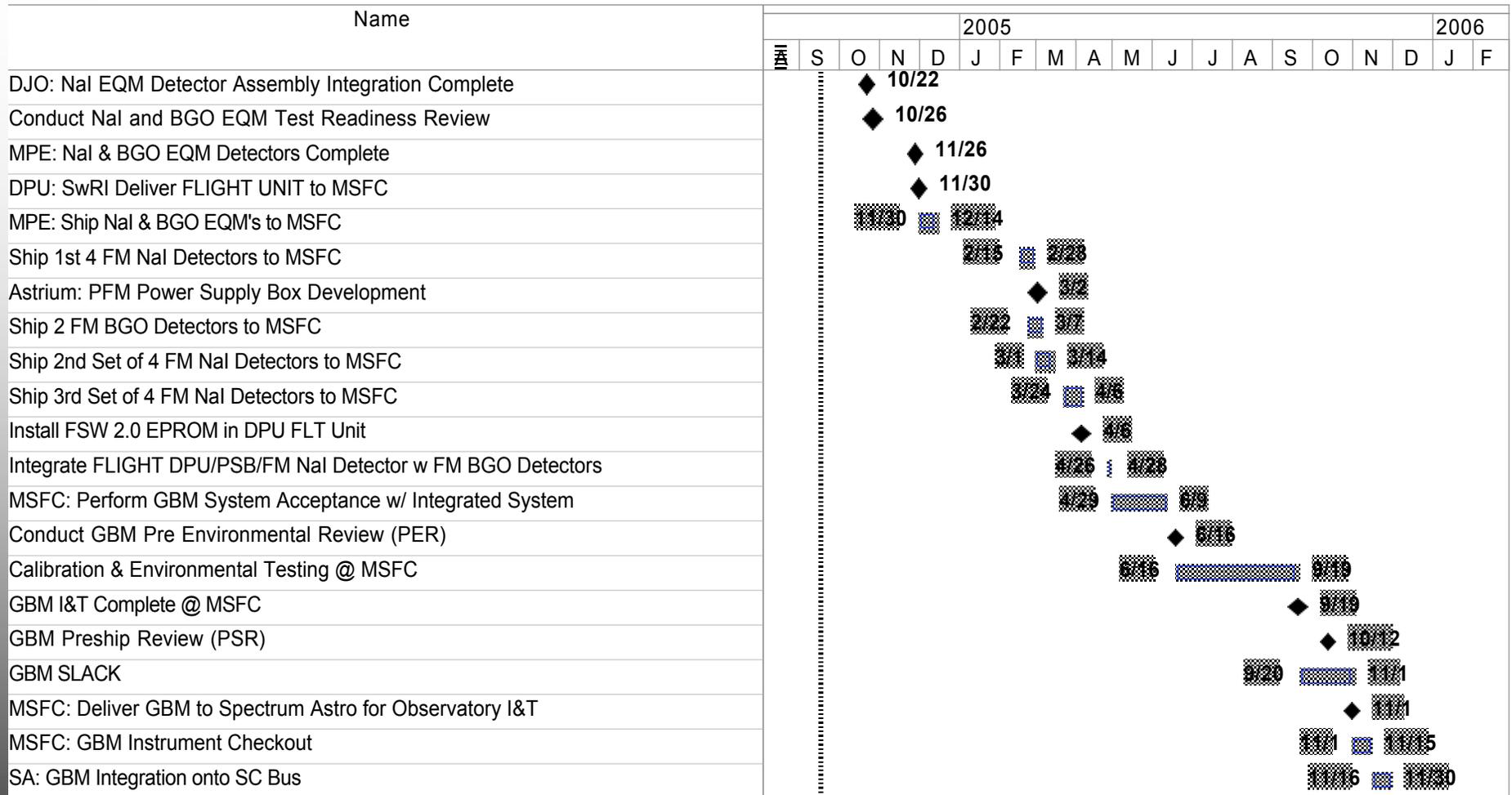
# Upcoming Events

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- ▶ ***Deliver LV Power Box Load Simulator to General Dynamics/Spectrum Astro – October 15, 2004***
- ▶ ***Astrium (Germany) to deliver GSE Power Box – October 15, 2004***
- ▶ ***Deliver flight Power Box FPGAs to Astrium – October 15, 2004***
- ▶ ***GBM Quarterly Review at GSFC – October 19, 2004***
- ▶ ***GD/SASS to deliver SDIS K2 board – October 29, 2004***
- ▶ ***Deliver GBM Instrument Simulator (GSIS) to GD/SASS - November 15, 2004***
- ▶ ***Test Readiness Review – November 17&18, 2004***
- ▶ ***GD/SASS to deliver the GBM test harness – TBD 2004***
- ▶ ***EQM NaI & BGO detector shipment – December 23, 2004***

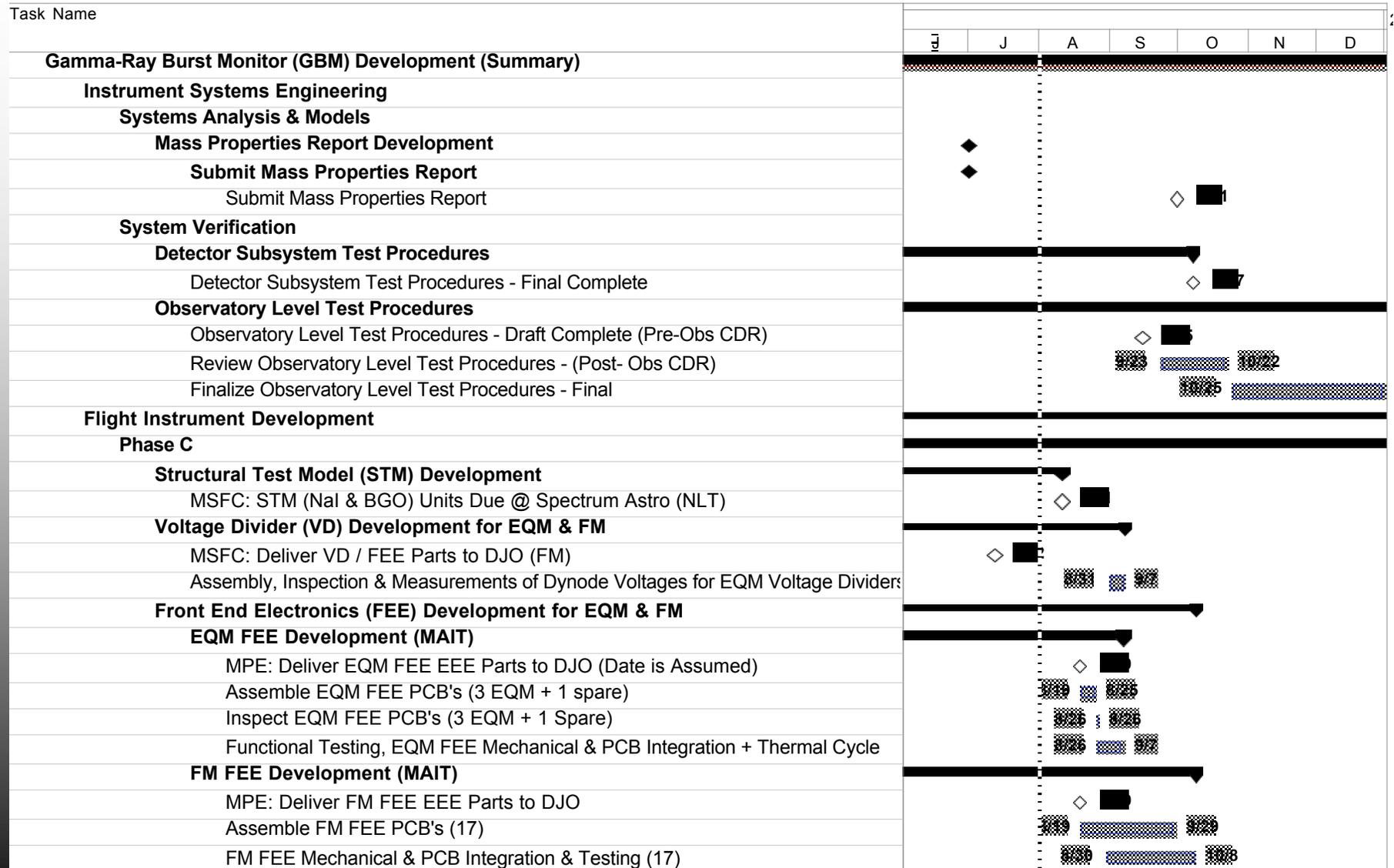


# GBM Top Level Schedule





# Rolling Wave Schedule

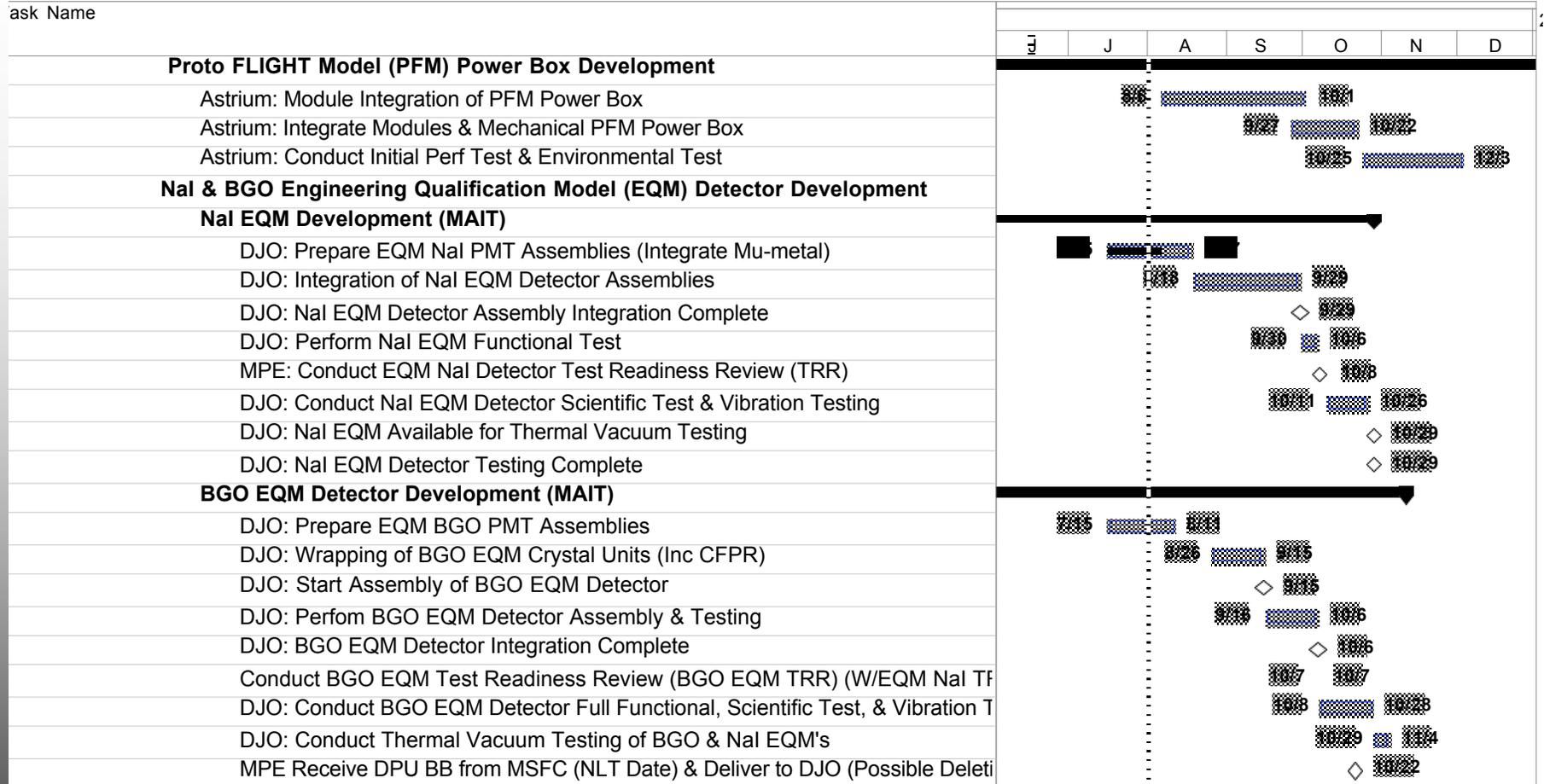




# Rolling Wave Schedule



Task Name

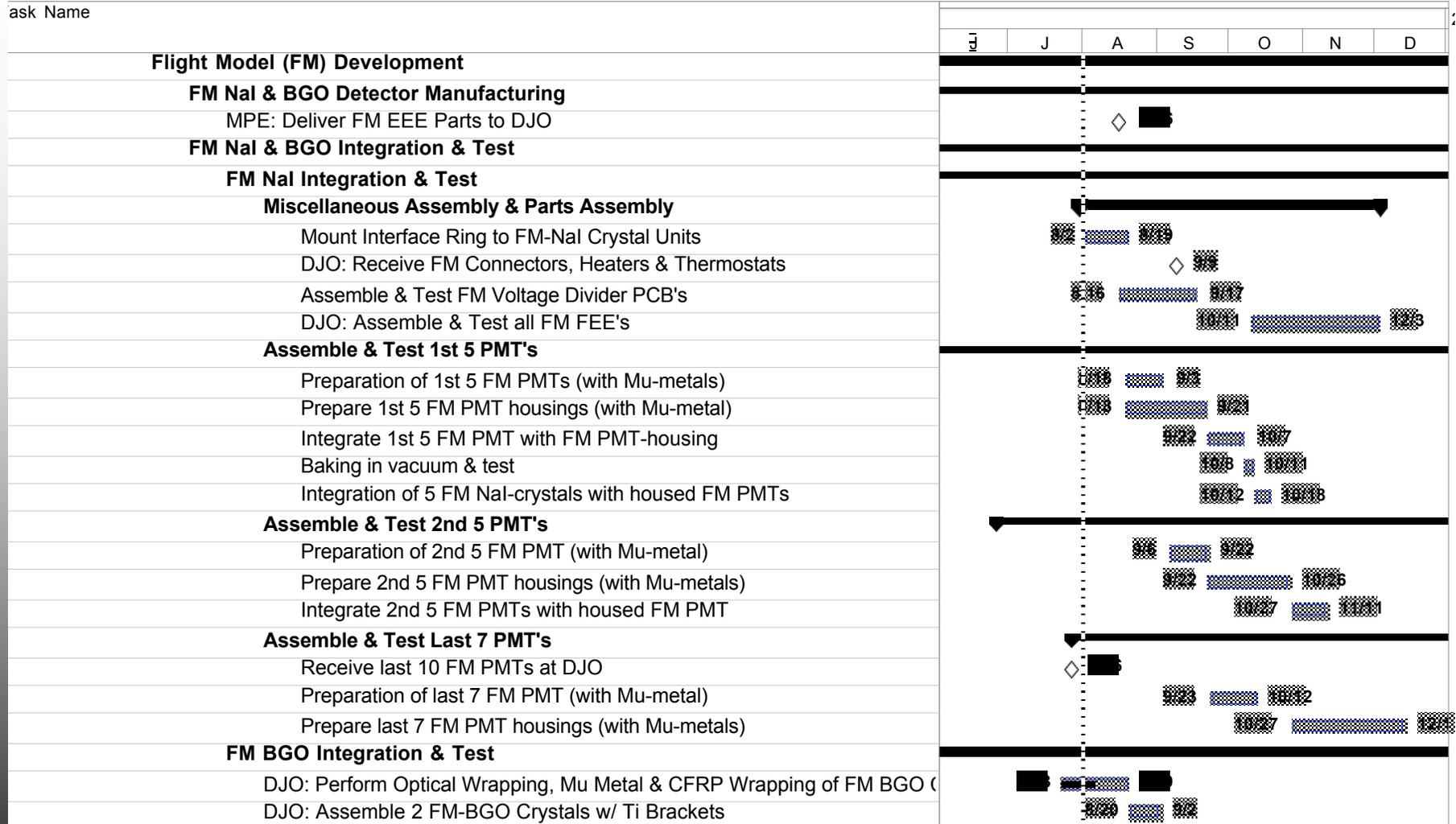




# Rolling Wave Schedule

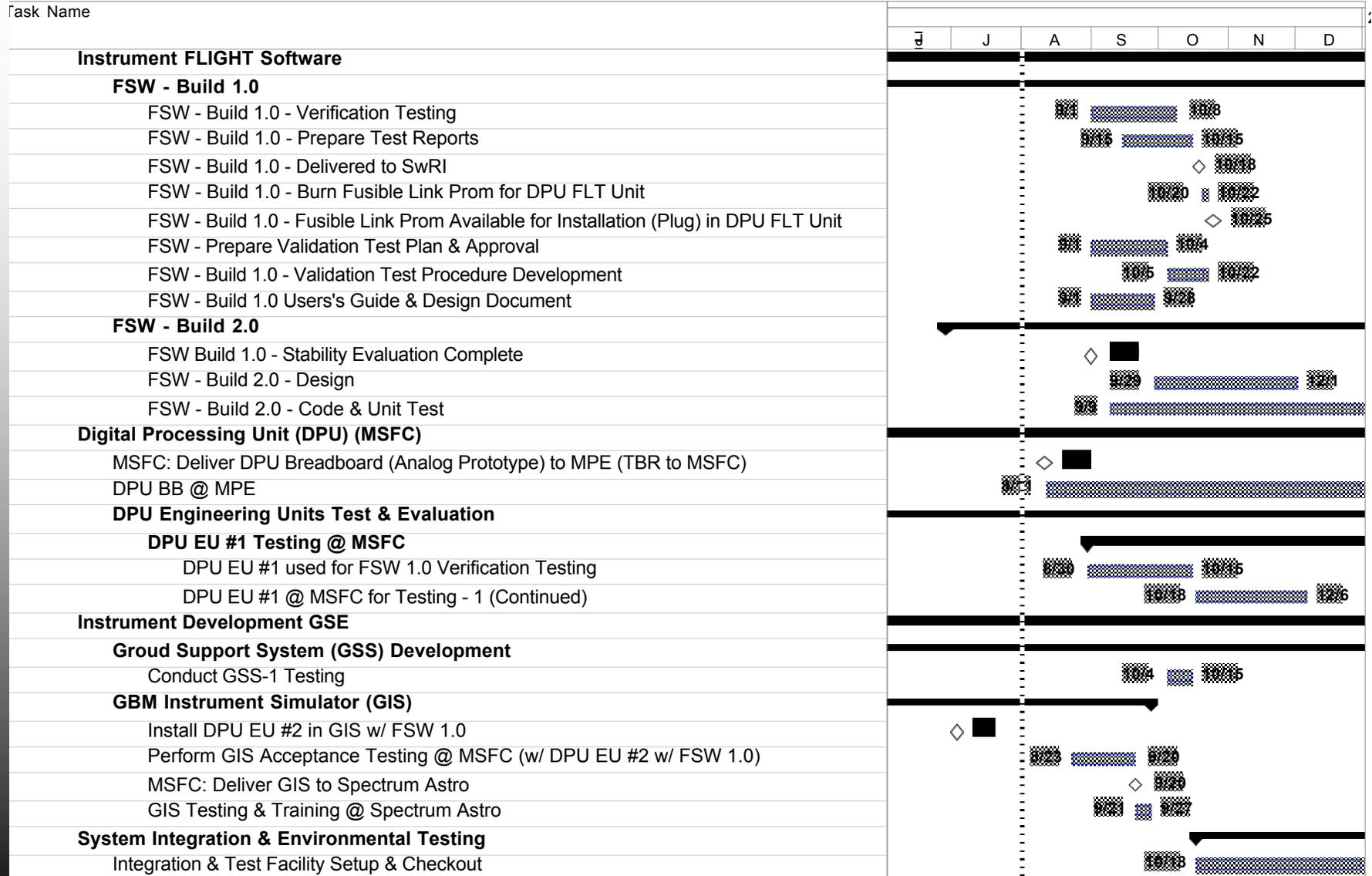


Task Name



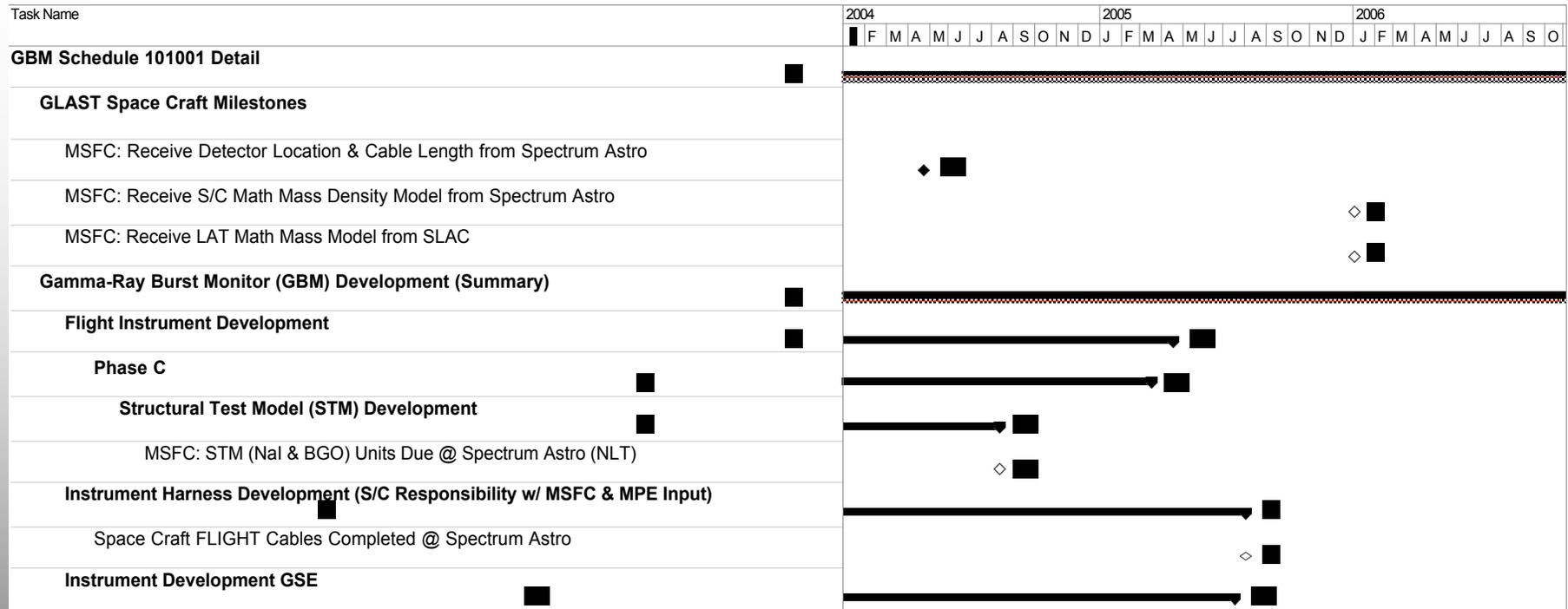


# Rolling Wave Schedule



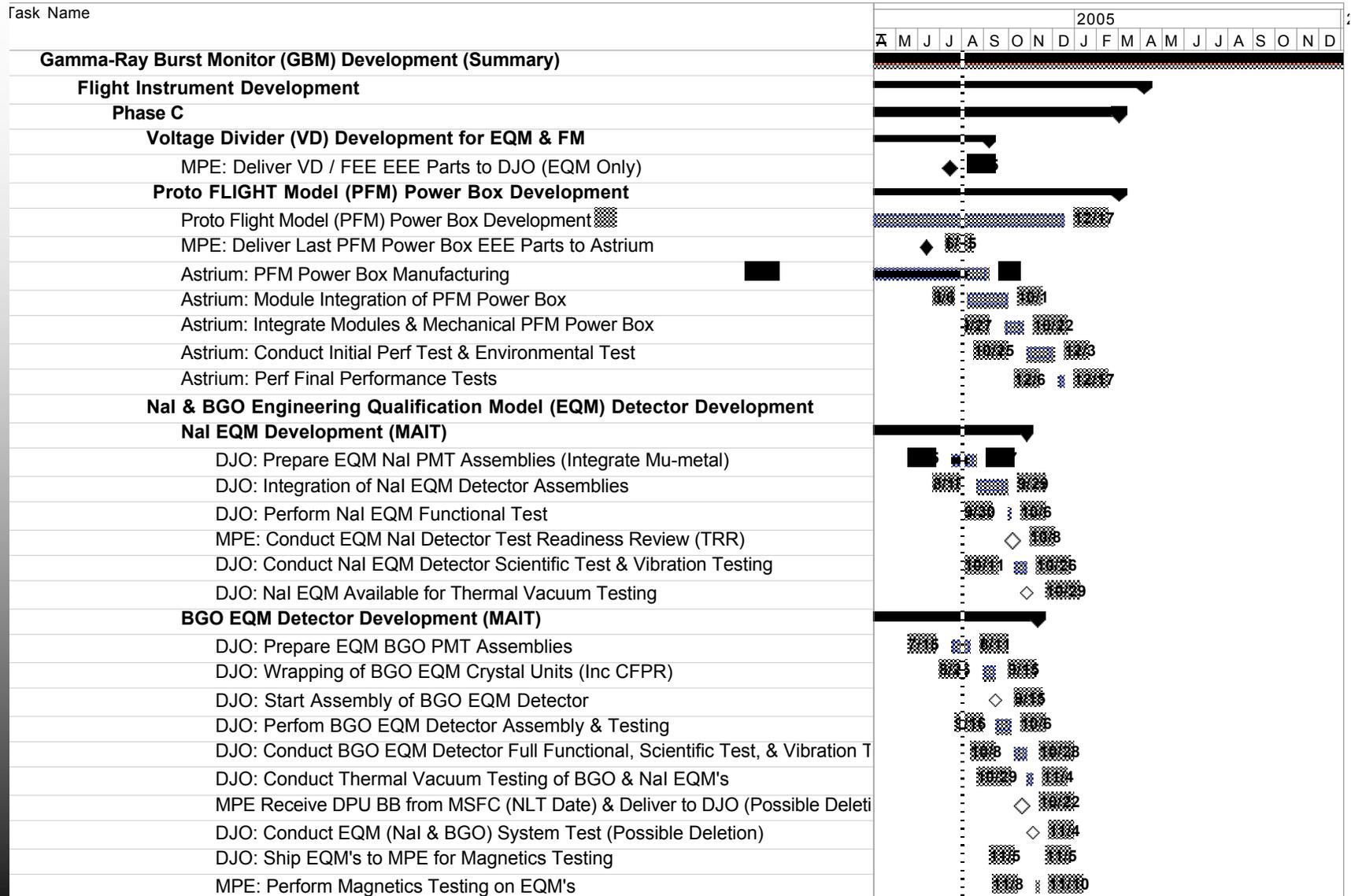


# Deliverable Schedule



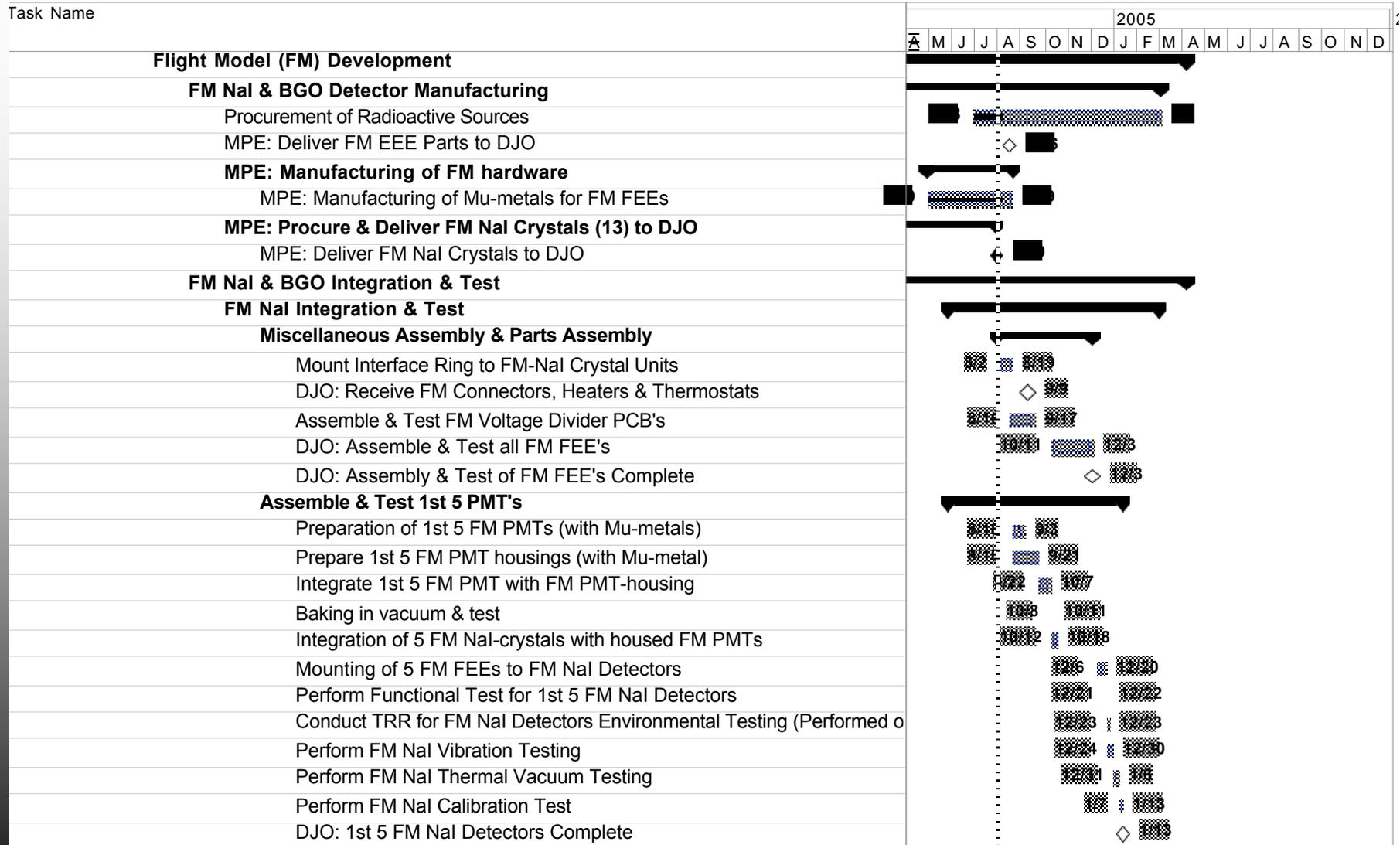


# MPE Schedule





# MPE Schedule





# MPE Schedule



| Task Name  | 2005 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  | A    | M | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D |
| <b>Assemble &amp; Test 2nd 5 PMT's</b>                   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Preparation of 2nd 5 FM PMT (with Mu-metal)              |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Prepare 2nd 5 FM PMT housings (with Mu-metals)           |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Integrate 2nd 5 FM PMTs with housed FM PMT               |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| 2nd 5 FM PMTs Baking in vacuum & test                    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Integration of 2nd 5 FM NaI-crystals with housed FM PMTs |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mounting of 2nd 5 FM FEEs to FM NaI Detectors            |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Perform Functional Test for 2nd 5 FM NaI Detectors       |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Perform 2nd 5 FM NaI Vibration Testing                   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: Perform 2nd 5 FM NaI Thermal Vacuum Testing         |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: Perform 2nd 5 FM NaI Calibration Test               |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: 2nd 5 FM NaI Detectors Complete                     |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Assemble &amp; Test Last 7 PMT's</b>                  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Receive last 10 FM PMTs at DJO                           |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Preparation of last 7 FM PMT (with Mu-metal)             |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Prepare last 7 FM PMT housings (with Mu-metals)          |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Integrate last 7 FM PMTs with housed FM PMT              |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Last 7 FM PMTs Baking in vacuum & test                   |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Integration of 7 FM NaI-crystals with housed PMTs        |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mounting of 7 FM FEEs to FM NaI Detectors                |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: Perform Functional Test for last 7 FM NaI Detectors |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Perform FM NaI Vibration Testing                         |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Perform FM NaI Thermal Vacuum Testing                    |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: Perform FM NaI Calibration Test                     |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: Last FM NaI Detectors & PMT's Complete              |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |



# MPE Schedule



Task Name

|  |  | 2005 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
|--|--|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|  |  | M    | J | J | A | S | O | N | D | J | F | M | A | M | J | J | A | S | O | N | D |
| <b>FM BGO Integration &amp; Test</b>                                 |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: Perform Optical Wrapping, Mu Metal & CFRP Wrapping of FM BGO C  |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: Assemble 2 FM-BGO Crystals w/ Ti Brackets                       |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: (BGO) Integrate 2 Assembled FM-BGO Crystals W/ PMT's            |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: (BGO) Integrate 2 Assembled FM-BGO Crystals W/ FEE's            |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: Integration of FM-BGO Detector with Main Ti Bracket             |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: Integration of FM-BGO Detector with Main Ti Bracket Complete    |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: Conduct FM-BGO Functional Test                                  |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Conduct TRR for FM BGO Detector Environmental Testing                |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Perform FM BGO Vibration Testing                                     |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: Perform FM BGO Thermal Vacuum Testing                           |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: Perform FM BGO Calibration Test                                 |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| DJO: FM BGO Testing Complete   |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Perform System Testing</b>  |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| MPE: FM Power Box / Detector Sub-system Level Testing Complete       |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Perform BGO Calibration Testing @ MPE</b>                         |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Ship FM BGO to MPE   |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Perform Special FM BGO Calibration Test @ MPE                        |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| MPE: Ship FM BGO Detectors to MSFC                                   |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Pre Ship Review &amp; Shipping to MSFC</b>                        |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| MPE Pre Ship Review (PSR) to MSFC                                    |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| MPE: Ship FM NaI Detectors to MSFC                                   |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| <b>Digital Processing Unit (DPU) (MSFC)</b>                          |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| MSFC: Deliver DPU Breadboard (Analog Prototype) to MPE (TBR to MSFC) |  |      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |



# GBM Missed Milestones

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| Milestone  | Due Date |
|--|----------|
| DJO: Start Assembly of BGO EQM Detector          | 8/14/04  |
| DJO: NaI EQM Detector Assy Integration Complete  | 8/21/04  |
| DJO: BGO EQM Detector Integration Complete       | 9/2/04   |
| MPE:EQM NaI Detector Test Readiness Review (TRR) | 9/13/04  |
| DJO: NaI EQM Detector Testing Complete           | 9/22/04  |