

| AIP Ongoing and Future Project List                      |        |           |         | 2/3/2009       |             | Seeman       |              |            |
|--|--------|-----------|---------|----------------|-------------|--------------|--------------|------------|
| Project Name   | Charge | Tech      | Prior   | FY2009         | FY2010      | FY2011       | FY2012       | Total      |
|  | Number | Manager   | Year(s) |                |             |              |              | Cost (k\$) |
| <b>Ongoing Approved Projects</b>                         |        |           |         | <b>Funding</b> |             |              |              |            |
| Linac Timing Upgrade                                     | 67-24  | Shoaee    | 322     |                |             |              |              | 322        |
| Linac Network Upgrade                                    | 67-25  | Lahey     | 325     |                |             |              |              | 325        |
| Linac Machine Protection System Upgrade                  | 67-26  | Norum     | 667     |                |             |              |              | 667        |
| Linac Waveguide Manifold Vacuum Controller Upgrade       | 67-27  | O'Neal    | 244     |                |             |              |              | 244        |
| Linac Klystron Modulator Upgrade S-28                    | 67-28  | Burkhart  | 441     |                |             |              |              | 441        |
| Linac Quadrupole Magnet PS Upgrade Sectors 22-23         | 67-29  | Ratkovsky | 740     |                |             |              |              | 740        |
| Linac control computer Upgrade Sectors 20-BSY            | 68-30  | Shoaee    | 495     |                |             |              |              | 495        |
| Linac PPS Upgrade  | 68-31  | Bong      | 50      | 450            | 500         |              |              | 1000       |
| BSY PPS Upgrade  | 68-32  | Bong      | 50      | 550            |             |              |              | 600        |
| Linac Quadrupole Magnet PS Upgrade Sector 30             | 68-33  | Ratkovsky | 50      | 90             |             |              |              | 140        |
| Linac vibration damping Sectors 21-30                    | 68-34  | Schultz   | 50      | 550            |             |              |              | 600        |
| <b>Proposed New Projects</b>                             |        |           |         |                |             |              |              |            |
| Linac Building 136 dipole and quad upgrade               |        | Ratkovsky |         | 150            |             |              |              | 150        |
| Linac Wire scanners in Sector 24 (4 units)               |        | Schultz   |         | 300            |             |              |              | 300        |
| Linac New VME PS controllers Sectors 20-30               |        | Bellomo   |         | 250            |             |              |              | 250        |
| Linac Quadrupole Magnet PS Upgrade Sectors 21+24-29      |        | Ratkovsky |         | 1400           |             |              |              | 1400       |
| Linac EPIC controls upgrade Sectors 21-30                |        | Shoaee    |         | 250            |             |              |              | 250        |
| Linac BPM electronics upgrade Sectors 21-30              |        | Shoaee    |         | 600            |             |              |              | 600        |
| Linac Klystron Modulator Upgrade S-21                    |        | Burkhart  |         | 1000           |             |              |              | 1000       |
| Linac new RF low level control unit ( 1 klystron)        |        | Akre      |         | 250            |             |              |              | 250        |
| LTU energy spread wire scanner                           |        | Iverson   |         | 100            |             |              |              | 100        |
| New OTR screen for beam monitoring                       |        | Emma      |         | 60             | 100         |              |              | 160        |
| Transverse x-band RF cavity after undulator              |        | Emma      |         |                | 600         | 500          |              | 1100       |
| Beam phase monitor after undulator                       |        | Emma      |         |                | 200         |              |              | 200        |
| Energy spectrometer after BC2                            |        | Emma      |         |                | 800         | 700          |              | 1500       |
| Linac Solid State Sub-boosters Sectors 21-30             |        | Burkhart  |         |                | 800         | 700          |              | 1500       |
| Linac New RF Low Level Controls Sectors 21-30            |        | Akre      |         |                | 500         | 500          |              | 1000       |
| Linac new hot swap laser                                 |        | White     |         |                | 1000        | 1000         |              | 2000       |
| Klystron Modulator Upgrades 20-30 (ex 28)                |        | Burkhart  |         |                | 1300        | 1300         |              | 2600       |
| Linac Magnet LCW controls upgrade Sectors 21-30          |        | Schultz   |         |                | 600         | 600          |              | 1200       |
| Linac Vacuum Pump Controller Upgrade Sectors 21-30       |        | Fant      |         |                | 400         | 500          |              | 900        |
| Linac New Klystron Solenoid PS Sectors 20-30             |        | Bellomo   |         |                | 900         | 900          |              | 1800       |
| Linac magnet temperature monitor upgrade Sectors 21-30   |        | Robinson  |         |                | 300         | 900          |              | 1200       |
| Linac FIAT Rack Power Distrib Upgrade Sector 21-30       |        | Robinson  |         |                |             | 700          |              | 700        |
| Linac water pump controller upgrade Sectors 21-30        |        | Shoaee    |         |                |             | 900          |              | 900        |
| Linac New RF Low Level Controls Sectors 21-30            |        | Akre      |         |                |             | 800          | 400          | 1200       |
| Linac 4 Crucial Klys Modulators to Solid State Sector 21 |        | Burkhart  |         |                |             |              | 800          | 800        |
| Linac Beam Line Fast Valve Upgrade Sectors 21-30         |        | Shoaee    |         |                |             |              | 2000         | 2000       |
| Linac Mechanical Alcove Motor Distribution Centers 21-30 |        | Robinson  |         |                |             |              | 2000         | 2000       |
| Linac Klystron Vacuum Gauge Controller Sectors 21-30     |        | Shoaee    |         |                |             |              | 300          | 300        |
| Linac sector air handling system upgrade                 |        | Robinson  |         |                |             |              | 1100         | 1100       |
| Linac bunch length monitor upgrade                       |        | Emma      |         |                |             |              | 900          | 900        |
| Bunch timing monitor upgrade                             |        | Emma      |         |                |             |              | 800          | 800        |
| Linac upgraded undulator vacuum system                   |        | Shoaee    |         |                |             |              | 1200         | 1200       |
| Linac water pump motor upgrade Sectors 21-30             |        | Robinson  |         |                |             |              | 500          | 500        |
| <b>Totals</b>  |        |           |         | <b>6000</b>    | <b>8000</b> | <b>10000</b> | <b>10000</b> |            |
| <b>Year</b>  |        |           |         | <b>FY09</b>    | <b>FY10</b> | <b>FY11</b>  | <b>FY12</b>  |            |