| MOLLER Task | Topic | Deliverable | CIS/Grames | | CASA/Roblin | | OPS-Inj/Kazimi | | I&C/Rider | | OPS-SW/Kjeldsen | | OPS-MCC/Vasil. | | SSG/Kowal | | RCG/Welch | | FastElec/Cueves | | Milestones | | | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | FTE | M&S (k$) | FTE | M&S (k$) | FTE | M&S (k$) | FTE | M&S (k$) | FTE | M&S (k$) | FTE | M&S (k$) | FTE | M&S (k$) | FTE | M&S (k$) | FTE | M&S (k$) | FY24 | FY25 | FY26 | |
| 1 | Helicity Generator | Helicity board with new settings | | 8 | | | | | | | | | | | | | | | | | 5 boards given to MOLLER coll. Fix two boards | Maintain | Maintain | |
| 2 | Helicity Decoder | New Boards for delayed helicity reporting | | 10 | | | | | | | | | | | | | | | | | Build 20 boards and distibute to Halls | Maintain | Maintain | |
| 3 | RTP Pockels Cell HV | Build, install a new 8-channel driver, with 10 µs risetime, electrically isolated | 0.6 | 30 | | | | | | | | | | | | | | | | | Design<br>Bench testing<br>Installation<br>CEBAF beam test | Fabricate spares | Operate<br>Maintain | Need PR for John Hansknecht, $20k contingency |
| 4 | IA HV Driver | Build, install a new 4-channel driver, with 10 µs risetime, electrically isolated | 0.4 | 20 | | | | | | | | | | | | | | | | | Design<br>Bench testing<br>Installation<br>CEBAF beam test | Fabricate spares | Operate<br>Maintain | |
| 5 | Helicity Magnets Control | Build, instal new control system, with 10 µs rise-time, electrically isolated | 0.3 | 20 | 0.1 | | | | | | | | | | | | | | | | Design<br>Bench testing<br>Installation<br>CEBAF beam test | Fabricate spares | Operate<br>Maintain | |
| 6 | Polarization Feedback | Provide feedback mechanism (Wiens or energy) to keep $P_L$ within 0.25° | 0.6 | 10 | 0.3 | | 0.3 | | | | | | | | | | | | | | Design<br>Implement<br>CEBAF beam test | Operate<br>Maintain | Operate<br>Maintain | |
| 7 | Wien Filter Slow Reversal | Study Wiens Flip-Right and Flip-Left setups | 0.9 | | | | 1.2 | | | | | | | | | | | | | | Model<br>Inj beam test | Inj beam test | Inj beam test | |
| 8 | Injector Transmission and PQB | Optimize injector transmission for >95% | | | | | 1.2 | | | | | | | | | | | | | | Model<br>Inj beam test | Inj beam test | Inj beam test | |
| 9 | Matching and Adiapatic Damping | Deliver matched beam and adquate damping | | | 0.9 | | | | | | | | | | | | | | | | Model and tools<br>Beam test | Beam test | Beam test | |
| 10 | Fast Feedback | Test and maintain existing system | | | 0.6 | | | | | | | | | | | | | | | | Beam test | Beam test | Beam test | |
| 11 | Compton Polarimeter | Setup beam thru polarimetor with low halo > 100 Hz/µA | | | 0.6 | | | | | | | | | | | | | | | | Beam test | Beam test | Beam test | |
| 12 | Beam Modulation | Hot checkout and maintain system | | | 0.1 | | | | | | | | | | | | | | | | Hot checkout | Beam test | Beam test | |
| 13 | Phase Advance | Design Hall A brsm optics with sufficient phase advance | | | 0.3 | | | | | | | | | | | | | | | | Model<br>Beam test | Beam test | Beam test | |
| 14 | K-long Beam | Install Hall D low-rep laser, IA laser system. Study photocathode effects. Model beam loading in Linacs and test with beam. Write report to Physics Division | 0.6 | 10 | 0.5 | | 0.3 | | | | | | | | | | | | | | Study K-long beam<br>Write report | | | |
| 15 | Control of Charge Asymmetry | Measure and control charge asymmetry of Halls B, C, D | | | | | | | | | | | | | | | | | | | Beam test | Beam test | Beam test | |
| 16 | PQB in Injector and Hall A | Setup PQB in injector and Hall A and perform beam studies | | | 0.3 | | 0.6 | | | | | | | | | | | | | | Beam test | Beam test | Beam test | |
| 17 | Hallo Monitors in Hall A | Install halo target and detectors and provide FSD and EPICS controls | | | | | | | | | | | | | 0.1 | 6 | | | | | Design | Install | | |
| 18 | MOLLER Apparatus Protection | Protect apparatus from beam mis-steering | | | | | | | | | | | | | 0.1 | 20 | | | | | Design | Design | Install | |
| 19 | BPM Receivers | New receivers in Hall A line instead of S/H cards | | | | | | | | | | | | | | | | | | | Design<br>Bench testing | Installation<br>CEBAF beam test | Beam test | |
| 20 | BCM Receivers | New BCM recivers in Hall A line | | | | | | | | | | | | | | | | | | | Design<br>Bench testing<br>Installation<br>CEBAF beam test | Beam test | Beam test | |
| 21 | PQB Liason | Coordinate MOLLER tasks | 1.8 | | | | | | | | | | | | | | | | | | | | | |
| TOTAL | | | 5.2 | 108 | 3.7 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.2 | 26 | 0 | 0 | 0 | 0 | | | | |

Task Color Code

- **Almost done**
- **Did it before, should be straightforward**
- **Working on it, should be able to do**
- **New or hard, could be very complicated**