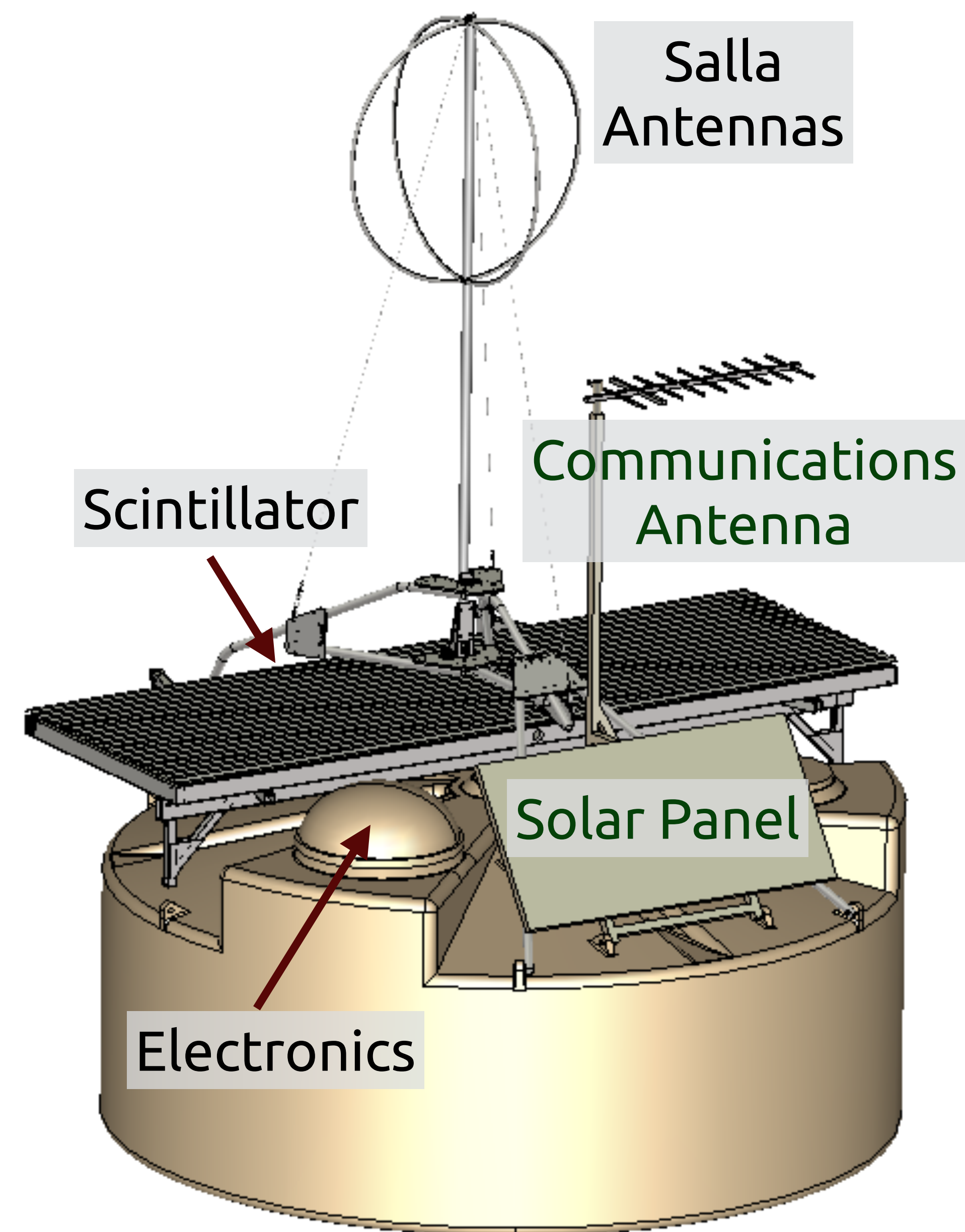# Update of the Offline Framework for AugerPrime

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AugerPrime changes to the detector

- The AugerPrime upgrade modifies the individual station of the surface detector
  - Additional Scintillator detector
  - Additional Radio detector (Salla antennas)
  - Small PMT to extend the dynamic range
  - New electronics
    - Digitizer speed from 40MHz to 120 MHz
    - Additional channels
- This invalidated some assumptions made in the software design
  - Number of PMTs changed
  - Signal binning changed
- Also: migration to C++11/14

Salla Antennas

Communications Antenna

Scintillator

Solar Panel

Electronics

Lessons learned

- Change is inevitable
  - Detector additions and upgrades
  - Changes in compilers and systems
- The Offline Framework was sufficiently flexible and robust to accommodate all the required changes
- A comprehensive testing infrastructure was essential to ensure the correctness of the changes
- Try to consider the needs of the end-user early on in the design