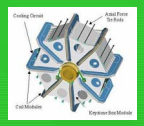
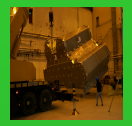
The Handling and Transport of the ATLAS components

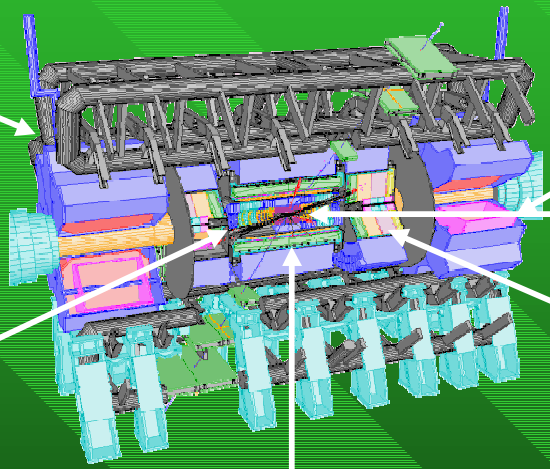
The Barrel Toroid magnets are constructed from three main components,these being the vacuum vessel, cold mass, and the windings. All must be handled with great care and precision. The total weight of a finished Barrel Toroid is 100 t.There are 8 transports planned from hall 180 to Point 1. The lowering into the cavern will be a very technical operation that involves the translation from the vertical to horizontal position.

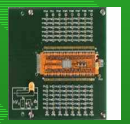




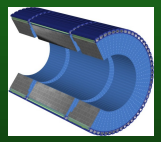
The End Cap Toroids present an interesting handling problem that involves the movement by road of a vessel weighing 280 t with a height of 14 m. The vessels must be transported from building 191 to Point 1 where they will be lowered into the Experimental cavern.

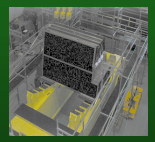
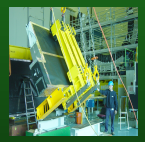
The TX1S shielding consists of a cast tube weighing 58 t. One tube will be installed at each end of the detector.



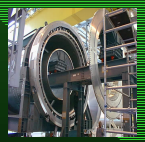


The Pixel Detector is a very fragile component that will be inserted into the Barrel Cryostat.



The Tile Calorimeter is being preassembled in building 185. The work requires a great deal of precision and skill to handle the modules. Once completed, it will be disassembled then transported to Point 1.



The Central Barrel Cryostat is the heart of the detector. Once completed it will weigh approximately 265 t, and will be transported by means of a low loader to Point 1 before it begins its' descent into the cavern by means of the overhead crane.

The Endcap Cryostat, of which there are two has undergone many handling operations in building 180, including some delicate operations not planned in the schedule. When complete it will weigh 230 tons and will be transported by low loader To Point 1.