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Successes to rework CBM-STS detector ladders and modules

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The CBM-STS, a silicon tracker based on double sided silicon microstrip sensors, is currently in full production. 876 detector modules are being assembled and further integrated onto 106 detector ladders which are linear subassemblies of 2 to 10 detector modules. Detector ladders will eventually be further integrated onto half units which will allow to instrument a 25° cone of acceptance with 8 tracking planes. Due to the fixed target forward boost experimental geometry, the 876 detector modules come in an extremely broad variety of about 200 different designs. The extremely high channel density makes the use of directly micro-bonded micro-cables indispensable. Originally each detector module as well as the detector ladders were considered monolithic devices that could not be reworked. During the course of serial assembly and the setbacks experienced, means of rework for ladders and modules could be worked out which will be presented in this contribution. This achievement makes the CBM-STS a much less monolithic device and consequently reduces the overall risk of failure in the project very significantly. The presentation demonstrates what kind of rework on the sensitive double sided silicon micro strip sensors is feasible.

Speed talk:

I am unwilling/unable to present a speed talk

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