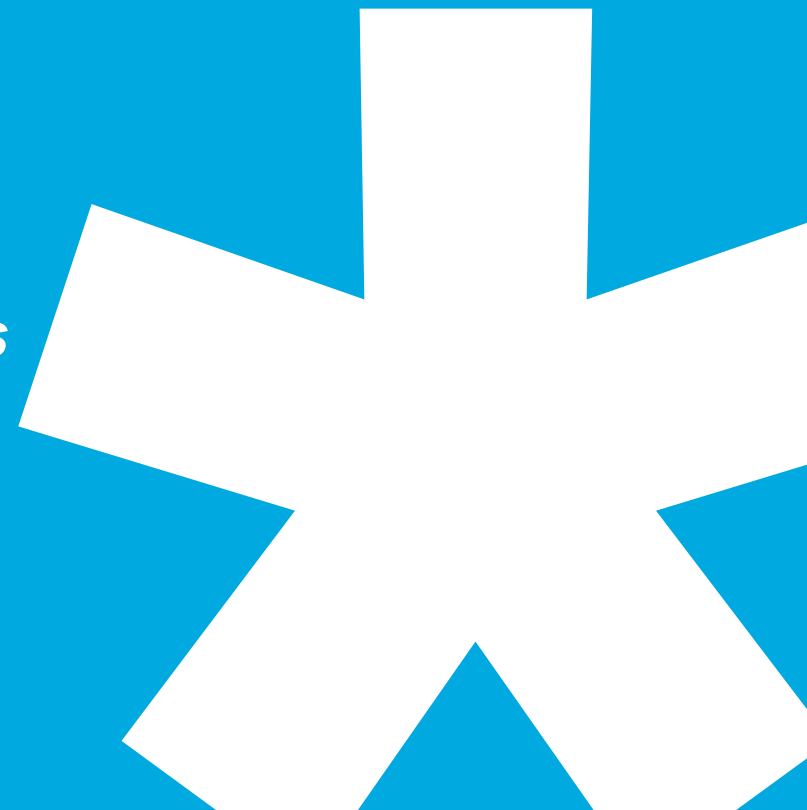


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A Suggestion for a Stress - Resilient Cable

*Workshop on Nb₃Sn Technology for Accelerator Magnets
Paris, October 12, 2018*

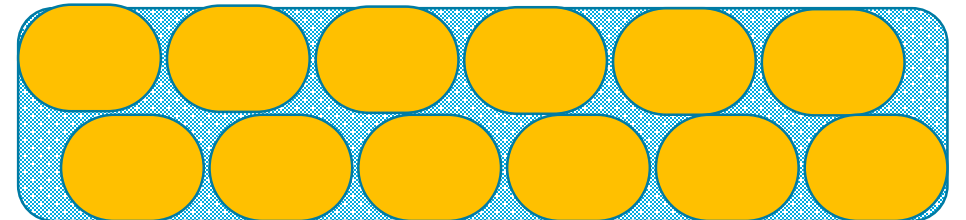
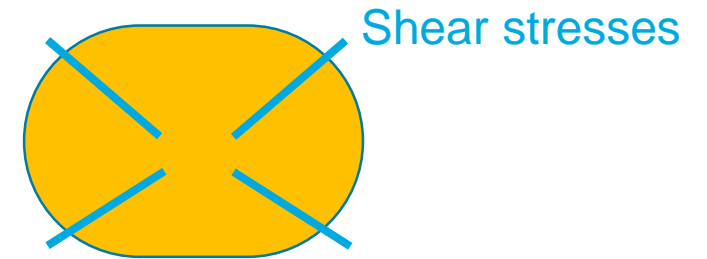
Arno Godeke
Varian Medical Systems Particle Therapy GmbH



A Suggestion to Make Nb₃Sn Cables More Resilient

Add stiffer local support inside a Rutherford cable

- Boschman, *et al.*, *Trans. Magn.* **27** 1829 (1993)
 - Cables need to be impregnated for a test
- Fleiter, *et al.*, Nb₃Sn Techn. Worksh. Paris (2018)
 - Crack damage pattern in RT pressed cables similar as in free wires
- **Epoxy at RT does not provide sufficient support!**
- **We need to add internal support to the strands**
 - E.g. making the filler "stiffer"
 - E.g. filling cable with Al₂O₃ powder before impregnation



(Thank You)