



M26 - Angled DUT analysis

Rhorry Gauld

University of Oxford

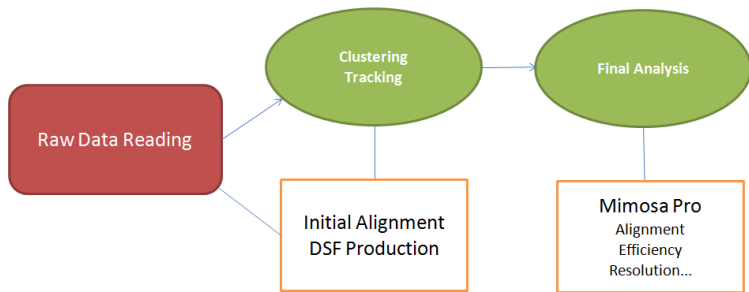
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Data Analyzed

M26 data (CERN 09/2009)

<http://www.iphc.cnrs.fr/Public-documentation.html>





Analysis-M26

Run26520 - 0 degrees

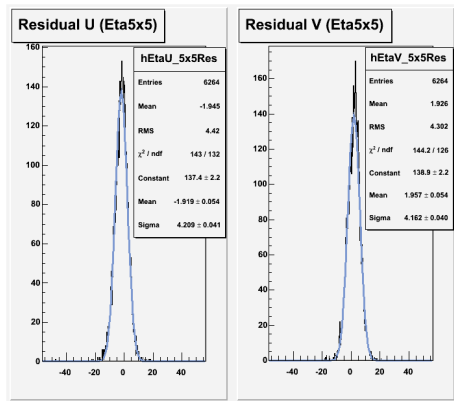
Threshold Ref = 8 S/N

Threshold DUT = 8 S/N

Efficiency - 99.1%

Corresponding to

$$\sigma_{x_t} = 1.9 \mu\text{m}$$

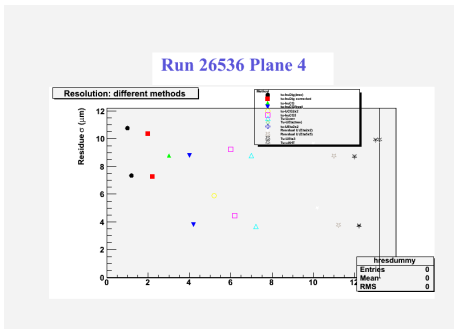




Analysis

Results of M26 at 58 degrees

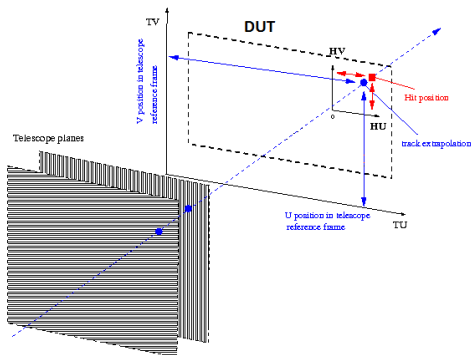
Alignment in U - problem with Alignment procedure or something physical?





Alignment

Align by minimizing distance between extrapolated track and measured hit in DUT plane





Alignment

Transform extrapolated track into DUT frame

$$\begin{pmatrix} u_t \\ v_t \\ w_t \end{pmatrix} = e_i \otimes e'_j \begin{pmatrix} x_t \\ y_t \\ z_t \end{pmatrix} + \begin{pmatrix} u_{off} \\ v_{off} \\ w_{off} \end{pmatrix}$$

Apply method of least squares

TAF software will minimize transformation parameters to align DUT