7 STRING RECONSTRUCTION OF AN IMPACT BLOODSTAIN SPATTER PATTERN

7.1 Stain Patterns' Spatter Size, Shape and Distribution

7.1.1 By looking at a stain patterns' spatter size, shape and distribution the stain may be placed in the impact category.

7.2 Procedure

7.2.1 Choose at least 10 stains of average size and with average directionality. If the pattern is a conical overall shape, stains should be chosen from all around the pattern, being cautious of the stains affected by gravity.

7.2.2 Actually label the chosen stains for reference and begin a documentation worksheet for your stain calculations. Columns should include: stain #, width, length, sine function, and impact angle.

7.2.3 Measure each stain's width and length and place in the appropriate column on your documentation sheet.

7.2.4 Place strings on a flat surface to locate an area-of-convergence. Strings should be taped just beyond the individual stains disrupted edge and continue backward through the smooth edge, following the line of the stain's directionality. Strings should continue for a sufficient length to insure that it reaches the area-of-convergence.

7.2.5 Check this area of convergence to see that the smallest and most circular stains are present in this area and that stains elongate, enlarge in size, and the distance between stains increases as they progress away from this central area.

7.2.6 Divide the width by the length for each stain chosen. Document the sine functions. Use a trigonometry chart to determine an impact angle or what is considered the angle of incidence.

7.2.7 Place a perpendicular (90 degrees) axis at the area-of-convergence. This can be a string for a vertical surface of deposit or a tripod for a horizontal surface of deposit.

7.2.8 Using the protractor with the center line directly on top of the stain and the bottom edge (cut at zero) following that stain's area-of-convergence line, tape a string directly on top of the stain. Secure the string to the perpendicular axis established at the area-of-convergence.

7.2.9 Obvious outlier strings which do not correspond to the general information provided by the other strings should be disregarded.

7.2.10 When all the stains have been strung, measure the location of the blood source impact site. These measurements include two fixed measurements (extremes) and a range along the perpendicular axis.

7.3 Equipment Needed

- Tripod
- Safety Glasses
- Camera with Lenses
- Lab Coat/Jumpsuit
- Flash with bracket, flash attachments
- Gloves
- Batteries (for flash, flashlight, camera meter)
- Black Marker
- Film
- Pens/Pencils (assorted colors)

- Bloodstain Scales
- Sketch Forms
- 6” Scales
- Graph Paper
- Protractor
- Chartpak Graphic Tape/Different Colors
- String
- Thread
- Flashlight
- Loupe/Magnifier
- Thumb Tacks
- Distilled Water
- Magnifying Glass
- Hemastixs
- Cotton Tip Swabs
- Plastic Bags
- Glassine Envelopes
- Notebook/Paper
- Tweezers
- Adhesive Tapes (1” white tape/duct tape/2” tape)

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