X-PREX Image Processing Data Passing

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Divide code data passing into stages where a new dimension is added

Stage 1  
Input: A Single X-Ray Image  
Output: 2D 2x2xNp matrix of pin image endpoint coordinates (in units of pixels)



Question: how do we want to handle uncertainty in the pin endpoints?

Stage 2

Input: Several **X** (Output from Stage 1) from Multiple X-Ray Images

Output: 3D 3x2xNp matrix of pin endpoint coordinates (in units of m)



Origin in x-y plane is the axis of rotation, z=0 at level of the focal point.

Stage 3

Input: **X**2 Output from Stage 2 for all Time Steps

Output: max(Np)x2xN\_TimeSteps matrix that is a mapping of pebble indexes between each time step