Jellyfish swim scanning
-crystal jellyfish almost completely transparent
-dead jellyfish maybe optical properties have changed
-varied thickness of jellyfish tissue
-correspondence issue with tomography
-need a single shot system with live jellyfish (moves too quick to do multiple shots)
    -problems with MRI scans (nonlinear warp from frame to frame?)
    -have to integrate registration with reconstruction
    -MRI every frame still has valid absorption value (vs reflection/refraction values in our case)
    -Gordon's light field? Resolution trade-off (not easy to get very transparent materials)
-need large field of view (move large distances in a short period of time)
-interested in an engineering p.o.v rather than a graphical approach
    -zoologically interesting
-resonance analysis on how jellyfish move (paper/research by...)
    -dissection/analysis
    -certain kinds of fibres he could not explain
    -observing how the jellyfish actually moves while alive rather than dissected
    -could aid in research
-tomographically interesting?
    -first step Schlieren style tomography, then take it from there
    -absorption & scattering happening
    -potential for polarization (worst case obstacle, best case useful for reconstruction)
-extensive optical property tests
    -apply different colour filters and see how much dispersion occurs
    -look through polarization filters, different orientations
    -check against high frequency backgrounds & see the kind of outcomes
-might be opportunity to use a substitute material after scanning and understanding refractive indexes
-can see the edges: suggests a difference in refractive index
-tangentially refractive skin affecting visibility of edges (tentacles vs body...)
-tentacles hard to capture with Schlieren style due to camera resolution being unfeasible
-exploiting rotational symmetry? (at least 90% symmetric)
    -might be good with a single shot and single point of view
-other species has 6-fold symmetry
-should look like jellyfish in the end
-people interested in fluid/animal type
-optical properties change considerably after death
-ultimately capturing might not be able to be done on campus
    -might end up at a facility better equipped
    -need information on how the setup will look
    -Bamfield?
-might need to tape background on cylinder, but will have problems with the distance constraint
-straight rays only, no need for ray tracing
-need to do an SLR, video array...
-jellyfish optics mostly unknown except for large blooms as they change the oxygen content of water
    (most research/information unavailable)
-10-20 images in a second useful?
    -required velocity to get reasonable spacial accuracy: 1 mm/sec (4 images max)
-stochastic code can be developed?
-frequency coding for different colour channels

-someway of projecting a time-sequential background
-back-projected backgrounds onto paper on back of cylinder
    -acid etch the background?
-first and foremost is the optical properties (will guide the rest of study)
-green laser pointer? (Staples on campus)
-use brush to remove bubbles on glass
-surface and interior fibres would be useful information to biologists/engineering applications