APPENDIX A. MARKER SITES AND DATAFILE COLUMNS

Datafiles (provided in this Appendix) associated with the six heart (H1-H6) study are:

<table>
<thead>
<tr>
<th>HEART</th>
<th>CONTROL STUDY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>FILE1</td>
</tr>
<tr>
<td>H1</td>
<td>NAC03R04.1EC</td>
</tr>
<tr>
<td>H2</td>
<td>NAM14R01.1EC</td>
</tr>
<tr>
<td>H3</td>
<td>NAM18R03.1EC</td>
</tr>
<tr>
<td>H4</td>
<td>NSA12R01.1EC</td>
</tr>
<tr>
<td>H5</td>
<td>NAC09R03.1EC</td>
</tr>
<tr>
<td>H6</td>
<td>NAS07R03.1EC</td>
</tr>
</tbody>
</table>

Each datafile has (if the parameter was successfully recorded):
- Electrocardiogram (mV) in Column 4
- Left Ventricular Pressure (mmHg) in Column 5
- Left Atrial Pressure (mmHg) in Column 6
- Aortic Pressure (mmHg) in Column 7

In addition, *.1EC datafiles have (See Figure A.1)
- Marker#1 x, y, z lab coordinates (cm) in Columns 11, 12, 13
- Marker#2 x, y, z lab coordinates (cm) in Columns 14, 15, 16
- ... Marker#13 x, y, z lab coordinates (cm) in Columns 47, 48, 49
- Marker#14 is not used, placeholders in Columns 50, 51, 52
- Marker#15 x, y, z lab coordinates (cm) in Columns 53, 54, 55
- ... Marker#31 x, y, z lab coordinates (cm) in Columns 101, 102, 103
- Marker#32 is not used, placeholders in Columns 104, 105, 106
- Marker#33 x, y, z lab coordinates (cm) in Columns 107, 108, 109

In addition, *.1IC datafiles have (as Markers#34, 35, 36 were not used) (See Figure A.1)
- Marker#37 x, y, z lab coordinates (cm) in Columns 20, 21, 22
- Marker#38 x, y, z lab coordinates (cm) in Columns 23, 24, 25
- ... Marker#53 x, y, z lab coordinates (cm) in Columns 68, 69, 70 (#53 is the last marker)

Each datafile row is a single sample time, with sampling occurring 60 times/sec (i.e. every 16.67msec). Row numbers correspond in 1EC and 1IC datafiles.

Marker numbers were assigned so as to retain backward compatibility with previous marker studies.
MARKER LOCATIONS: LEFT VENTRICULAR, MITRAL ANNULAR, AND PAPILLARY MUSCLES

LEFT VENTRICULAR (LV) MARKERS

- LV Apex (Marker#1)
- LV Anterior Subepicardium, apical plane (Marker#2), equatorial plane (Marker#3), basal plane (Marker#4), inserted before the pump run
- LV Septal Subendocardium, apical plane (Marker#5), equatorial plane (Marker#6), basal plane (Marker#7), inserted during the pump run
- LV Posterior Subepicardium, apical plane (Marker#8), equatorial plane (Marker#9), basal plane (Marker#10), inserted before the pump run
- LV Lateral Subepicardium, apical plane (Marker#11), equatorial plane (Marker#12), basal plane (Marker#13), inserted before the pump run
MITRAL ANNULUS (ALL MARKERS PLACED AT DIRECTLY OBSERVED LEAFLET “HINGE” LOCATIONS DURING THE PUMP RUN)
  - Trigone Region
    - Left Fibrous Trigone (LFT) (Marker #29)
    - “Saddlehorn” (SH) (Marker #22)
    - Right Fibrous Trigone (RFT) (Marker #24)
    - LFT to SH (Markers #15, 30)
    - SH to RFT (Markers #23, 21)
  - Contractile Annulus
    - Anterior Commissure (AC) (Marker #16)
    - Lateral Annulus (Marker #18)
    - Posterior Commissure (PC) (Marker #20)
    - AC to Lateral Annulus (Markers #28, 17, 27)
    - Lateral Annulus to PC (Markers #26, 19, 25)
- PAPILLARY MUSCLES (INSERTED DURING THE PUMP RUN)
  - Anterior Papillary Muscle Tip (Marker #31)
  - Posterior Papillary Muscle Tip (Marker #33)

MARKER LOCATIONS: LEAFLETS
- ANTERIOR LEAFLET
  - Trigone Region (See Figure 01) is the Anterior Leaflet Hinge Region
  - Leaflet Edge (markers sewn to atrial side of leaflet)
    - Central Edge (Marker #38)
    - LFT to Central Edge (Markers #42, 43, 44)
    - Central Edge to RFT (Markers #45, 46, 47)
    - Central Meridian from Central Edge to SH (Markers #39, 40, 41)
    - Left Belly (Markers #48, 50, 51)
    - Right Belly (Markers #49, 52, 53)
- POSTERIOR LEAFLET
  - Only one marker (Marker #37) sewn to the central meridian edge of the central scallop for timing of valve opening and closing