

INTERNAL REPORT SDL-89-03

**SUMMARY OF SPECTROSCOPIC SHOTS FROM
APRIL 1982 TO JULY 1989**

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July 1989

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Table. Summary of Spectroscopic Shots from April 1982 to July 1989. (I. April 1982 - May 1983).

| Shots | | Sample | Cell | Experimental Type | | Initial | Impact | Final | Recording | Comment | |
|-------|----------|-------------------|-----------|-------------------|--------------|-------------|-----------------|----------|-----------------|-------------------|--|
| No. | Date | | Thickness | Cell | Spectroscopy | Temperature | Velocity | Pressure | Rate | | |
| | | | | | | (K) | (mm/ μ sec) | (GPa) | (mm/ μ sec) | | |
| 82006 | 4/13/82 | CS_2 | 8 | Ramp | Transmission | r.t. | 0.2400 | 3.5 | 8.700 | | |
| 82015 | 7/ 2/82 | CS_2 | 180 | Reg. | Transmission | r.t. | 0.3230 | 7.3 | 8.247 | | |
| 82018 | 7/22/82 | CS_2 | 157 | Reg. | Transmission | r.t. | 0.4100 | 9.3 | 8.710 | | |
| 82019 | 7/23/82 | CS_2 | - | Reg. | Transmission | r.t. | - | - | - | no flash | |
| 82022 | 8/20/82 | CS_2 | - | Reg. | Transmission | r.t. | - | - | - | empty cell | |
| 82028 | 9/20/82 | CS_2 | 116 | Reg. | Transmission | r.t. | 0.3420 | 7.7 | 8.450 | | |
| 82031 | 10/ 6/82 | CS_2 | 165 | Reg. | Transmission | r.t. | 0.2460 | 5.5 | 8.428 | | |
| 82036 | 10/18/82 | CH_3NO_2 | 107 | Reg. | Transmission | r.t. | 0.5370 | 12.3 | 8.514 | | |
| 82037 | 11/ 5/82 | CS_2 | 160 | Reg. | Transmission | r.t. | 0.3690 | 8.4 | 8.550 | | |
| 82039 | 11/10/82 | CS_2 | 152 | Reg. | Transmission | r.t. | 0.5380 | 12.3 | 8.716 | | |
| 83004 | 1/27/83 | CS_2 | - | Reg. | Transmission | r.t. | - | - | - | projectile failed | |
| 83007 | 2/ 4/83 | - | - | Tilt | - | r.t. | high | - | - | | |
| 83011 | 2/14/83 | CS_2 | - | Reg. | Transmission | r.t. | - | - | - | no record on film | |
| 83014 | 2/23/83 | CS_2 | 158 | Reg. | Transmission | r.t. | 0.5850 | 13.4 | 8.480 | Lucite window | |
| 83015 | 2/24/83 | 25 % CS_2 /EtOH | 155 | Reg. | Transmission | r.t. | 0.3270 | 7.4 | 8.320 | | |
| 83019 | 3/ 2/83 | CS_2 | 150 | Refl. | Reflection | r.t. | 0.4010 | 9.1 | 8.157 | | |
| 83020 | 3/ 3/83 | CS_2 | 193 | Refl. | Reflection | r.t. | no | 6.0 | 8.491 | | |
| 83021 | 3/12/83 | CS_2 | 1.5 | Ramp | Transmission | r.t. | 0.4470 | 4.1 | 8.540 | | |
| 83022 | 3/13/83 | CS_2 | 174 | Hot | Transmission | 398 | 0.2980 | 6.7 | 8.573 | | |
| 83031 | 5/13/83 | CS_2 | 151 | Cold | Transmission | 201 | 0.2810 | 6.3 | 8.488 | | |

Table. Continued Summary of Spectroscopic Shots. (II. June 1983 to June 1984)

| Shots | | Sample | Cell Thickness (μm) | Experimental Type | | Initial Temperature (K) | Impact Velocity ($\text{mm}/\mu\text{sec}$) | Final Pressure (GPa) | Recording Rate ($\text{mm}/\mu\text{sec}$) | Comment |
|-------|---------|--------------------------|-------------------------------------|-------------------|--------------|----------------------------|--|-------------------------|---|-------------|
| No. | Date | | | Cell | Spectroscopy | | | | | |
| 83034 | 6/17/83 | CS_2 | 175 | Reg. | Transmission | r.t. | 0.2880 | - | 8.367 | |
| 83037 | 7/ 1/83 | CS_2 | 0.9 | Reg. | Transmission | r.t. | 0.3680 | 8.3 | 8.459 | |
| 83040 | 7/24/83 | CS_2 | 0.6 | Reg. | Transmission | r.t. | 0.4200 | 9.2 | 8.386 | |
| 83041 | 8/ 9/83 | CS_2 | 5 | Reg. | Transmission | r.t. | 0.4200 | 9.2 | 8.430 | |
| 83042 | 8/10/83 | CS_2 | 4 | Ramp | Transmission | r.t. | 0.4490 | 4.1 | 8.595 | |
| 83045 | 8/25/83 | CS_2 | - | - | - | - | - | - | - | no flash |
| 83049 | 9/27/83 | CS_2 | 10 | Reg. | Transmission | r.t. | 0.4170 | - | 8.486 | |
| 84002 | 1/11/84 | CH_3NO_2 | 229 | Reg. | Transmission | r.t. | - | - | - | no flash |
| 84006 | 2/13/84 | CS_2 | 320 | Revs. | Transmission | r.t. | 0.3500 | 7.7 | 8.511 | |
| 84009 | 2/20/84 | n-hexane | 160 | Reg. | Transmission | r.t. | 0.5356 | 12.3 | - | |
| 84010 | 2/27/84 | 37 % CS_2 /Hex. | 312 | Reg. | Transmission | r.t. | 0.3410 | 7.7 | - | poor record |
| 84019 | 3/ 9/84 | 37 % CS_2 /Hex. | 310 | Reg. | Transmission | r.t. | 0.3376 | 7.4 | 7.846 | |
| 84017 | 3/22/84 | 10 % CS_2 /Hex. | 163 | Reg. | Transmission | r.t. | 0.3385 | 7.4 | 8.357 | |
| 84022 | 5/ 1/84 | 1 % CS_2 /Hex. | - | - | - | r.t. | - | - | - | no flash |
| 84025 | 5/14/84 | CS_2 | 102 | Revs. | Transmission | r.t. | 0.3400 | 7.4 | 8.490 | |
| 84026 | 5/15/84 | 1 % CS_2 /Hex. | 157 | Reg. | Transmission | r.t. | 0.3450 | 7.6 | 8.539 | |
| 84028 | 6/ 4/84 | CS_2 | 43 | Revs. | Transmission | r.t. | 0.4345 | 9.6 | 8.522 | |
| 84031 | 6/ 8/84 | 3 % CS_2 /Hex. | 315 | Reg. | Transmission | r.t. | 0.3200 | - | - | poor record |
| 84033 | 6/15/84 | 3 % CS_2 /Hex. | - | Reg. | Transmission | r.t. | 0.3370 | - | - | poor record |
| 84036 | 6/29/84 | CS_2 | 81 | Revs. | Transmission | r.t. | 0.3860 | 8.7 | 8.274 | |

Table. Continued Summary of Spectroscopic Shots. (III. July 1984 to Feb. 1985)

| Shots | | Sample | Cell | Experimental Type | | Initial | Impact | Final | Recording | Comment | |
|-------|----------|-----------------------|-----------|-------------------|--------------|-------------|-----------------|----------|-----------------|--------------|--|
| No. | Date | | Thickness | Cell | Spectroscopy | Temperature | Velocity | Pressure | Rate | | |
| | | | | | | (K) | (mm/ μ sec) | (GPa) | (mm/ μ sec) | | |
| 84038 | 7/12/84 | CH_3NO_2 | 137 | Reg. | Transmission | 398 | 0.5560 | - | 8.563 | | |
| 84039 | 7/17/84 | CS_2 | 21 | Revs. | Transmission | r.t. | 0.4110 | 9.3 | 8.462 | | |
| 84040 | 7/24/84 | H_2O | 306 | Reg. | Transmission | r.t. | 0.5490 | 12.5 | - | | |
| 84043 | 7/31/89 | CS_2 | 30 | Ramp | Transmission | r.t. | 0.446 | 4.1 | 8.535 | | |
| 84044 | 8/ 2/84 | CS_2 | 19 | Revs. | Transmission | r.t. | 0.4018 | 9.1 | 8.560 | | |
| 84045 | 8/10/84 | CS_2 | 18 | Revs. | Transmission | r.t. | 0.3940 | 8.9 | 8.741 | | |
| 84046 | 8/31/84 | CS_2 | 26 | Reg. | Transmission | r.t. | 0.3909 | 8.9 | 8.506 | | |
| 84048 | 10/22/84 | H_2O | 310 | Reg. | Transmission | r.t. | 0.5410 | 12.3 | 8.413 | | |
| 84049 | 11/ 1/84 | CS_2 | 21 | Revs. | Transmission | r.t. | 0.3983 | 9.0 | 8.587 | | |
| 84050 | 11/ 7/84 | 5 % CS_2 /Hex. | 307 | Reg. | Transmission | r.t. | 0.3420 | 7.7 | 8.553 | | |
| 84051 | 11/21/84 | CS_2 | 26 | Revs. | Transmission | r.t. | 0.4150 | 9.4 | 8.605 | | |
| 84052 | 12/12/84 | Benzene | 305 | Reg. | Transmission | r.t. | 0.5410 | 12.3 | 8.483 | | |
| 84053 | 12/21/84 | Benzene | 117 | Revs. | Transmission | r.t. | 0.4930 | 11.2 | 7.804 | | |
| 85001 | 1/11/85 | Sapphire | - | Saph. | Transmission | r.t. | 0.5940 | 13.6 | 8.058 | vailed sapph | |
| 85002 | 1/16/85 | CH_3NO_2 /10 % E.D. | 30 | Reg. | Transmission | r.t. | 0.5810 | 13.3 | 8.330 | | |
| 85003 | 1/22/85 | nitrobenzene | 112 | Reg. | Transmission | r.t. | 0.5890 | 13.5 | 8.588 | | |
| 85004 | 1/30/85 | CH_3NO_2 /10 % E.D. | 160 | Reg. | Transmission | r.t. | 0.4400 | 10.0 | 8.575 | | |
| 85005 | 1/31/85 | Acetone | 107 | Reg. | Transmission | r.t. | 0.4870 | 11.1 | - | no record | |
| 85006 | 2/12/85 | Acetone | 109 | Reg. | Transmission | r.t. | 0.4888 | 11.1 | 8.631 | | |
| 85007 | 2/14/85 | CH_3NO_2 / 5 % E.D. | 310 | Reg. | Transmission | r.t. | 0.2890 | 6.5 | - | | |

Table. Continued Summary of Spectroscopic Shots. (IV. Feb. 1985 to Nov. 1985)

| Shots | | Sample | Cell | Experimental Type | | Initial | Impact | Final | Recording | Comment | |
|-------|----------|---------------------------|-----------|-------------------|--------------|-------------|-----------------|----------|-----------------|-----------|--|
| No. | Date | | Thickness | Cell | Spectroscopy | Temperature | Velocity | Pressure | Rate | | |
| | | | | | | (K) | (mm/ μ sec) | (GPa) | (mm/ μ sec) | | |
| 85008 | 2/15/85 | CCl_4 | 112 | Reg. | Transmission | r.t. | 0.4880 | 11.1 | 8.547 | | |
| 85009 | 2/27/85 | Styrene | 109 | Reg. | Transmission | r.t. | 0.4840 | 11.0 | 8.533 | | |
| 85010 | 3/ 1/85 | Acrylonitrile | 104 | Reg. | Transmission | r.t. | 0.4850 | 11.0 | 8.388 | | |
| 85014 | 4/15/85 | Styrene | 107 | Reg. | Transmission | r.t. | 0.5380 | 12.3 | 8.578 | | |
| 85016 | 4/26/85 | Ethanol | 110 | Reg. | Transmission | r.t. | 0.5230 | 11.6 | 8.579 | | |
| 85017 | 5/16/85 | Styrene | 107 | Revs. | Transmission | r.t. | 0.4880 | 11.1 | 8.386 | | |
| 85021 | 5/22/85 | Styrene | 94 | Revs. | Transmission | r.t. | 0.3500 | 7.9 | 8.507 | | |
| 85022 | 6/ 7/85 | Styrene | 89 | Revs. | Transmission | r.t. | 0.2550 | 5.8 | 8.410 | | |
| 85023 | 6/13/85 | Ethyl Iodide | 158 | Reg. | Transmission | r.t. | 0.4530 | 10.1 | 8.499 | | |
| 85024 | 6/25/85 | Hexene | 158 | Reg. | Transmission | r.t. | 0.4510 | 10.1 | 8.362 | | |
| 85025 | 6/28/85 | CH_3NO_2 / 5 % E.D. | - | Reg. | Transmission | r.t. | - | - | - | no record | |
| 85026 | 7/11/85 | CH_3NO_2 / 5 % E.D. | 122 | Reg. | Transmission | r.t. | 0.3870 | 8.6 | 8.538 | | |
| 85027 | 7/16/85 | 2-Butyne | 155 | Reg. | Transmission | r.t. | 0.4440 | 10.1 | 8.499 | | |
| 85028 | 7/17/85 | cis 1,2- Dichloroethylene | 156 | Reg. | Transmission | r.t. | 0.4537 | 10.1 | 8.509 | | |
| 85030 | 8/14/85 | 1,5- Hexadiene | 155 | Reg. | Transmission | r.t. | 0.4528 | 10.1 | 8.447 | | |
| 85031 | 8/27/85 | 2,4- Hexadiene | 160 | Reg. | Transmission | r.t. | 0.5910 | 13.0 | 8.375 | | |
| 85033 | 8/30/85 | Hydrogene Iodide | 161 | Reg. | Transmission | r.t. | 0.5590 | 12.0 | 8.393 | | |
| 85034 | 9/ 9/85 | CS_2 | 0.8 | Reg. | Transmission | r.t. | 0.2570 | 5.5 | 8.488 | | |
| 85041 | 10/16/85 | 1,5- Hexadiene | 158 | Reg. | Transmission | r.t. | 0.585 | 12.9 | 8.362 | | |
| 85043 | 11/ 3/85 | 80 % CS_2 /Hex. | 170 | Reg. | Transmission | r.t. | 0.3170 | 6.9 | 8.404 | | |

Table. Continued Summary of Spectroscopic Shots. (V. Nov. 1985 to Feb. 1987)

| Shots | | Sample | Cell | Experimental Type | | Initial | Impact | Final | Recording | Comment | |
|-------|----------|-------------------|-----------|-------------------|--------------|-------------|-----------------|----------|-----------------|-------------|--|
| No. | Date | | Thickness | Cell | Spectroscopy | Temperature | Velocity | Pressure | Rate | | |
| | | | | | | (K) | (mm/ μ sec) | (GPa) | (mm/ μ sec) | | |
| 85045 | 11/19/85 | 60 % CS_2 /Hex. | 152 | Reg. | Transmission | r.t. | 0.3508 | - | 2 μ sec | no record | |
| 85046 | 11/18/85 | 60 % CS_2 /Hex. | 165 | Reg. | Transmission | r.t. | 0.3416 | 7.4 | 2 μ sec | Cordin shot | |
| 85047 | 11/19/85 | CS_2 | 0.98 | Reg. | Transmission | r.t. | 0.2190 | - | 1 μ sec | no record | |
| 85052 | 12/18/85 | CS_2 | 1.2 | Reg. | Transmission | r.t. | 0.2660 | 5.8 | 1 μ sec | Cordin shot | |
| 86020 | 6/ 9/86 | 60 % CS_2 /Hex. | 158 | Reg. | Transmission | r.t. | 0.3500 | - | 8.291 | | |
| 86030 | 9/15/86 | 10 % CS_2 /Hex. | 112 | Reg. | Transmission | r.t. | 0.2100 | 4.6 | 8.106 | | |
| 86031 | 9/24/86 | 1 % CS_2 /Hex. | 100 | Reg. | Transmission | r.t. | 0.5940 | 13.0 | 8.552 | | |
| 86032 | 10/01/86 | 1 % CS_2 /Hex. | 514 | Reg. | Transmission | r.t. | 0.4570 | 10.4 | 8.200 | | |
| 86033 | 10/07/86 | 50 % CS_2 /Hex. | 5 | Reg. | Transmission | r.t. | 0.2630 | 5.9 | 4.950 | | |
| 86034 | 11/ 6/86 | 1 % CS_2 /Hex. | 483 | Reg. | Transmission | r.t. | 0.4570 | 10.4 | 8.440 | | |
| 86035 | 11/14/86 | 10 % CS_2 /Hex. | 114 | Revs. | Transmission | r.t. | 0.2110 | 4.6 | 8.490 | | |
| 86036 | 12/04/86 | 10 % CS_2 /Hex. | 122 | Revs. | Transmission | r.t. | 0.5390 | 12.3 | 8.626 | | |
| 86037 | 12/11/86 | 10 % CS_2 /Hex. | 99 | Revs. | Transmission | r.t. | 0.5430 | 12.4 | 8.296 | | |
| 86038 | 12/18/86 | 5 % CS_2 /Hex. | 112 | Revs. | Transmission | r.t. | 0.4550 | 10.3 | 8.335 | | |
| 86039 | 12/20/86 | 5 % CS_2 /EtOH | 91 | Reg. | Transmission | r.t. | - | - | - | no record | |
| 86040 | 12/22/86 | 5 % CS_2 /Hex. | 150 | Revs. | Transmission | r.t. | 0.441 | 10.0 | 7.669 | | |
| 87001 | 1/ 8/87 | 50 % CS_2 /Hex. | 203 | Revs. | Transmission | r.t. | 0.538 | 12.3 | 8.562 | | |
| 87002 | 1/13/87 | 5 % CS_2 /EtOH | 113 | Reg. | Transmission | r.t. | - | - | - | no record | |
| 87003 | 1/15/87 | 5 % CS_2 /EtOH | 132 | Reg. | Transmission | r.t. | 0.441 | 10.0 | 8.405 | | |
| 87005 | 2/ 5/87 | 5 % CS_2 /Hex. | 119 | Reg. | Transmission | 164 | 0.461 | 9.9 | 7.683 | | |

Table. Continued Summary of Spectroscopic Shots. (VI. Feb. 1987 to Sep. 1987)

| Shots | | Sample | Cell | Experimental Type | | Initial | Impact | Final | Recording | Comment |
|-------|---------|--|--------------------------------|-------------------|---------------|--------------------|---|-------------------|---------------------------------------|---------|
| No. | Date | | Thickness (μm) | Cell | Spectroscopy | Temperature (K) | Velocity ($\text{mm}/\mu\text{sec}$) | Pressure (GPa) | Rate ($\text{mm}/\mu\text{sec}$) | |
| 87006 | 2/ 9/87 | 5 % $\text{CS}_2/\text{Hex.}$ | 107 | Reg. | Transmission | 209 | 0.4580 | 10.1 | 8.012 | |
| 87009 | 2/18/87 | 5 % $\text{CS}_2/\text{Hex.}$ | 109 | Reg. | Transmission | 159 | 0.4570 | 10.0 | 8.216 | |
| 87010 | 2/23/87 | 5 % CS_2/CCl_4 | 115 | Reg. | Transmission | r.t. | 0.4390 | 10.0 | 7.510 | |
| 87011 | 2/26/87 | 5 % $\text{CS}_2/\text{H}_2\text{CCl}_2$ | 135 | Reg. | Transmission | r.t. | 0.4380 | 9.9 | 8.135 | |
| 87012 | 2/27/87 | 5 % $\text{CS}_2/\text{HCCl}_3$ | 114 | Reg. | Transmission | r.t. | 0.4360 | 9.9 | 8.327 | |
| 87013 | 3/ 2/87 | 80 % $\text{CS}_2/\text{Hex.}$ | 91 | Revs. | Transmission | r.t. | 0.5450 | 12.4 | 8.585 | |
| 87014 | 3/ 4/87 | 60 % $\text{CS}_2/\text{Hex.}$ | 114 | Revs. | Transmission | r.t. | 0.5470 | 12.5 | 8.521 | |
| 87015 | 3/ 6/87 | 40 % $\text{CS}_2/\text{Hex.}$ | 130 | Revs. | Transmission | r.t. | 0.5450 | 12.4 | 8.487 | |
| 87017 | 3/17/87 | 20 % $\text{CS}_2/\text{Hex.}$ | 135 | Revs. | Transmission | r.t. | 0.5440 | 12.4 | 6.281 | |
| 87018 | 3/20/87 | 5 % $\text{CS}_2/\text{Hex.}$ | 293 | Reg. | Transmission | 165 | 0.4320 | 10.0 | 8.528 | |
| 87019 | 4/ 1/87 | 5 % $\text{CS}_2/\text{Hex.}$ | 142 | Revs. | Transmission | 166 | 0.4600 | 10.4 | 8.587 | |
| 87020 | 4/30/87 | 5 % $\text{CS}_2/\text{Hex.}$ | 236 | Reg. | Transmission | 168 | 0.4400 | 10.0 | 8.272 | |
| 87023 | 5/26/87 | 1,3- Hexadiene | 198 | Revs. | Transmission | r.t. | 0.4620 | 10.4 | 8.238 | |
| 87027 | 7/12/87 | 5 % $\text{CS}_2/\text{Hex.}$ | 151 | Reg. | Transmission | r.t. | 0.4420 | 10.0 | 8.575 | |
| 87029 | 8/19/87 | O_2 | 500 | Cryo. | Transmission | 90 | 0.5450 | 12.4 | 8.328 | |
| 87031 | 8/23/87 | 5 % $\text{CS}_2/\text{Hex.}$ | 127 | Quartz | Gauge | r.t. | 0.3200 | 3.7 | - | |
| 87032 | 8/27/87 | 5 % $\text{CS}_2/\text{Hex.}$ | 132 | Quartz | Gauge | r.t. | 0.3520 | 4.0 | - | |
| 87033 | 9/ 3/87 | O_2 | 450 | Cryo. | Transmission | 90 | 0.570 | 12.8 | 8.390 | |
| 87035 | 9/16/87 | 1 % $\text{CS}_2/\text{Hex.}$ | 514 | Revs. | Transmission | 154 | 0.4620 | 10.4 | 8.706 | |
| 87036 | 9/18/87 | 10 % $\text{CS}_2/\text{Hex.}$ | 87 | Reg. | Transmisssion | 150 | 0.4584 | 10.3 | 8.175 | |

Table. Continued Summary of Spectroscopic Shots. (VII. Oct. 1987 to Sep. 1988)

| Shots | | Sample | Cell | Experimental Type | | Initial | Impact | Final | Comment |
|-------|----------|--------------------------|-------------------|-------------------|--------------|-------------|------------------------|----------|--------------------------------|
| No. | Date | | Thickness | Cell | Spectroscopy | Temperature | Velocity | Pressure | |
| | | | (μm) | | | (K) | (mm/ μsec) | (GPa) | |
| 87038 | 10/ 9/87 | 1 % CS_2 /Hex. | 220 | Revs. | Transmission | r.t. | 0.4570 | 10.0 | Lamp trigger problem |
| 87039 | 10/13/87 | 1 % CS_2 /Hex. | 235 | Revs. | Transmission | r.t. | 0.4580 | 10.0 | Lamp trigger problem |
| 87040 | 10/20/87 | Test for Triggering | - | - | - | r.t. | 0.5000 | - | Pulse trigger O.K. |
| 87042 | 11/20/87 | CS_2 | 307 | Elect-Optic | Resist./Dual | r.t. | 0.4410 | 10.0 | R.R. 7.979 mm/ μsec |
| 87049 | 12/ 2/87 | 0.001 M Anth./Hex. | 249 | Revs. | Dual | r.t. | 0.2416 | 5.0 | R.R. 7.569 " |
| 87050 | 12/ 3/87 | 1 % CS_2 /Hex. | 225 | Revs. | Dual | r.t. | 0.4382 | 10.0 | R.R. 8.387 " |
| 88004 | 2/ 5/88 | CH_3NO_2 | 239 | Reg. | Dual | 233 | 0.5294 | 11.6 | R.R. 8.584 " |
| 88007 | 2/12/88 | CS_2 | 127 | Elec-Optic | Resist./Dual | r.t. | 0.3947 | 9.0 | R.R. 7.900 " |
| 88008 | 2/26/88 | 0.001 M Anth./Hex. | 158 | Reg. | Dual | r.t. | 0.3370 | 7.6 | no film, but OMA |
| 88010 | 3/11/88 | CH_3NO_2 | 18 | Reg. | Dual | 244 | 0.4396 | 10.0 | R.R. 8.435 mm/ μsec |
| 88014 | 4/ 1/88 | CH_3NO_2 | 20 | Reg. | OMA | 233 | 0.4953 | 11.2 | |
| 88024 | 7/20/88 | CS_2 | 1.32 | Reg. | OMA | r.t. | 0.1170 | 2.6 | |
| 88027 | 8/ 2/88 | CS_2 | 1.23 | Reg. | OMA | r.t. | 0.1497 | 3.3 | |
| 88030 | 8/19/88 | CS_2 | 0.02 | Ramp | OMA | r.t. | 0.4373 | 4.1 | |
| 88033 | 9/15/88 | CS_2 | 183 | Revs. | Raman | r.t. | 0.5263 | 12.0 | Dye Laser at 514.5 nm |
| 88034 | 9/18/88 | Test for Timming | - | - | - | r.t. | 0.5260 | 12.0 | Piezoelectric pins |
| 88035 | 9/19/88 | Diamond | 282 | Revs. | Raman | r.t. | 0.5290 | 12.0 | Random cut diamond |
| 88036 | 9/20/88 | Diamond | 287 | Revs. | Raman | r.t. | 0.5310 | 12.1 | (110) cut diamond |
| 88037 | 9/21/88 | Diamond | 285 | Revs. | Raman | r.t. | 0.5310 | 12.1 | (110) cut diamond |
| 88039 | 9/23/88 | CS_2 | 127 | Revs. | Raman | 160 | 0.3510 | 8.0 | |

Table. Continued Summary of Spectroscopic Shots. (VIII. Feb. 1989 to July 1989)

| Shots | | Sample | Cell | Experimental Type | | Initial | Impact | Final | Comment |
|-------|---------|--------------------|-------------------|-------------------|--------------|-------------|-------------------------------|----------|-----------------------|
| No. | Date | | Thickness | Cell | Spectroscopy | Temperature | Velocity | Pressure | |
| | | | (μm) | | | (K) | ($\text{mm}/\mu\text{sec}$) | (GPa) | |
| 89004 | 2/23/89 | 0.001 M Anth./Hex. | 762 | Reg. | OMA | r.t. | 0.6564 | 15.0 | |
| 89012 | 3/ 4/89 | 0.001 M Anth./Hex. | 94 | Reg. | OMA | r.t. | 0.1420 | 3.1 | |
| 89014 | 3/31/89 | CS_2 | 1.89 | Revs. | OMA | r.t. | 0.3366 | 7.6 | |
| 89015 | 3/21/89 | CS_2 | 1.57 | Revs. | OMA | r.t. | 0.3967 | 9.0 | |
| 89016 | 4/11/89 | CS_2 | 1.16 | Revs. | OMA | r.t. | 0.4595 | 10.5 | |
| 89020 | 4/27/89 | CS_2 | 2.66 | Revs. | OMA | r.t. | 0.5293 | 12.0 | |
| 89021 | 5/ 9/89 | CS_2 | 0.90 | Revs. | OMA | r.t. | 0.5295 | 12.0 | |
| 89024 | 6/27/89 | Benzene | 154 | Reg. | OMA | r.t. | 0.5330 | 12.1 | |
| 89028 | 7/25/89 | Sapphire | - | Saph. | OMA | r.t. | 0.8065 | - | 10.13 cm thick sample |

Cell Types;

- Reg. - A regular thick or thin cell.
- Revs. - A reversible thick or thin cell.
- Ramp - A ramp wave cell.
- Tilt - A tilt measurement cell.
- Hot - Granholm's hot cell.
- Cold - Granholm's cold cell.
- Saph. - A cell for measuring Sapphire transmission.
- Quartz - A cell for quartz gauge measurements.
- Refl. - A reflection measurement cell.
- Elec-Optic - A electro optical measurement cell
- Cryo. - A cell to obtaining cryogenic temperature.

Measurement Types;

- Transmission - film recording using a rotating mirror streak camera.
- OMA - OMA recording using Cordin camera and videcon detector.
- Dual - Both film and OMA recordings
- Gauge - Gauge record
- Resist. - Resistance record for the Electro-optical shots