Understanding the Atmospheres of Hot Earths and the Impact on Solar System Formation

## Year 3 milestones

Things we said would be accomplished in our proposal during year 3.

Listed straight from the proposal for us to discuss.

### For Bruce-

\* observational feedback for his modeling efforts. (Not necessarily from us, but would be nice.)

Lab work: Dave and Nate \* All hardware will be functional. \* Investigating 'different' materials.

Observation: Mike \* Planetary characterizations using our observations, lab results, and models.

## The Budget:Personnel money will be spent.

| GRANT: 102392       | Budget           |   | June 2014<br>Expenditures |    | Cumulative<br>Expenditures | Available<br>Balance |            |
|---------------------|------------------|---|---------------------------|----|----------------------------|----------------------|------------|
| Key Personnel       | \$<br>42,862.00  | Ş | -                         | Ş  | 10,723.58                  | Ş                    | 32,138.42  |
| Research Assistants | 54,822.00        |   | 1,040.50                  | \$ | 18,632.47                  |                      | 36,189.53  |
| Student Wages       | 36,000.00        |   | 3,526.46                  | \$ | 15,571.46                  |                      | 20,428.54  |
| Travel              | 54,000.00        |   | 3,194.00                  | \$ | 13,756.66                  |                      | 40,243.34  |
| Supplies            | 84,737.00        |   | 679.38                    | Ş  | 7,886.66                   |                      | 76,850.34  |
| Services            | 2,100.00         |   | -                         | \$ | -                          |                      | 2,100.00   |
| Total Direct        | \$<br>274,521.00 | Ş | 8,440.34                  | \$ | 66,570.83                  | \$                   | 207,950.17 |
| Indirect (19.25%)   | 52,845.00        |   | 1,624.77                  | Ş  | 12,814.88                  |                      | 40,030.12  |
| Tuition             | 39,000.00        |   | -                         | \$ | 8,710.00                   |                      | 30,290.00  |
| Subrecipient        | 117,403.00       |   | -                         | \$ | 24,186.33                  |                      | 93,216.67  |
| TOTAL               | \$<br>483,769.00 | Ş | 10,065.11                 | Ş  | 112,282.04                 | \$                   | 371,486.96 |

#### The Budget: RA money- ? New student begins this month.

| GRANT: 102392       |        |            | June 2014    |           |    | Cumulative   | Available |            |
|---------------------|--------|------------|--------------|-----------|----|--------------|-----------|------------|
|                     | Budget |            | Expenditures |           |    | Expenditures | Balance   |            |
| Key Personnel       | \$     | 42,862.00  | \$           |           | \$ | 10,723.58    | Ş         | 32,138.42  |
| Research Assistants |        | 54,822.00  |              | 1,040.50  | \$ | 18,632.47    |           | 36,189.53  |
| Student Wages       |        | 36,000.00  |              | 3,526.46  | \$ | 15,571.46    |           | 20,428.54  |
| Travel              |        | 54,000.00  |              | 3,194.00  | Ş  | 13,756.66    |           | 40,243.34  |
| Supplies            |        | 84,737.00  |              | 679.38    | Ş  | 7,886.66     |           | 76,850.34  |
| Services            |        | 2,100.00   |              |           | \$ | -            |           | 2,100.00   |
| Total Direct        | \$     | 274,521.00 | \$           | 8,440.34  | \$ | 66,570.83    | \$        | 207,950.17 |
| Indirect (19.25%)   |        | 52,845.00  |              | 1,624.77  | \$ | 12,814.88    |           | 40,030.12  |
| Tuition             |        | 39,000.00  |              | -         | \$ | 8,710.00     |           | 30,290.00  |
| Subrecipient        |        | 117,403.00 |              | -         | \$ | 24,186.33    |           | 93,216.67  |
| TOTAL               | \$     | 483,769.00 | Ş            | 10,065.11 | Ş  | 112,282.04   | Ş         | 371,486.96 |

#### The Budget: Undergrad money- will be spent.

| GRANT: 102392       |                  |    | lune 2014        |    | Cumulative   |         | Available  |
|---------------------|------------------|----|------------------|----|--------------|---------|------------|
|                     | Budget           | Ex | penditures       |    | Expenditures | Balance |            |
| Key Personnel       | \$<br>42,862.00  | Ş  |                  | Ş  | 10,723.58    | Ş       | 32,138.42  |
| Research Assistants | 54,822.00        |    | 1,040.50         | Ş  | 18,632.47    |         | 36,189.53  |
| Student Wages       | 36,000.00        |    | 3,526.46         | \$ | 15,571.46    |         | 20,428.54  |
| Travel              | 54,000.00        |    | 3,194.00         | Ş  | 13,756.66    |         | 40,243.34  |
| Supplies            | 84,737.00        |    | 679.38           | Ş  | 7,886.66     |         | 76,850.34  |
| Services            | 2,100.00         |    | : <del>-</del> 3 | \$ | -            |         | 2,100.00   |
| Total Direct        | \$<br>274,521.00 | \$ | 8,440.34         | \$ | 66,570.83    | Ş       | 207,950.17 |
| Indirect (19.25%)   | 52,845.00        |    | 1,624.77         | Ş  | 12,814.88    |         | 40,030.12  |
| Tuition             | 39,000.00        |    | -                | \$ | 8,710.00     |         | 30,290.00  |
| Subrecipient        | 117,403.00       |    | 343              | \$ | 24,186.33    |         | 93,216.67  |
| TOTAL               | \$<br>483,769.00 | \$ | 10,065.11        | \$ | 112,282.04   | \$      | 371,486.96 |

#### **The Budget:** Travel- DPS in November, IAU next year, Extreme Solar Systems III next year, other? (We have international funds to spend too)

| GRANT: 102392       | Budget           |   | June 2014<br>Expenditures |    | Cumulative<br>Expenditures | Available<br>Balance |            |
|---------------------|------------------|---|---------------------------|----|----------------------------|----------------------|------------|
| Key Personnel       | \$<br>42,862.00  | Ş | -                         | Ş  | 10,723.58                  | Ş                    | 32,138.42  |
| Research Assistants | 54,822.00        |   | 1,040.50                  | Ş  | 18,632.47                  |                      | 36,189.53  |
| Student Wages       | 36,000.00        |   | 3,526.46                  | \$ | 15,571.46                  |                      | 20,428.54  |
| Travel              | 54,000.00        |   | 3,194.00                  | \$ | 13,756.66                  |                      | 40,243.34  |
| Supplies            | 84,737.00        |   | 679.38                    | \$ | 7,886.66                   |                      | 76,850.34  |
| Services            | 2,100.00         |   | -                         | \$ | <u></u>                    |                      | 2,100.00   |
| Total Direct        | \$<br>274,521.00 | Ş | 8,440.34                  | \$ | 66,570.83                  | \$                   | 207,950.17 |
| Indirect (19.25%)   | 52,845.00        |   | 1,624.77                  | \$ | 12,814.88                  |                      | 40,030.12  |
| Tuition             | 39,000.00        |   | -                         | \$ | 8,710.00                   |                      | 30,290.00  |
| Subrecipient        | 117,403.00       |   |                           | \$ | 24,186.33                  |                      | 93,216.67  |
| TOTAL               | \$<br>483,769.00 | Ş | 10,065.11                 | Ş  | 112,282.04                 | \$                   | 371,486.96 |

# The Budget:Supplies- lab equipment & filters.Services- machine shop.

| GRANT: 102392       |       | Budget     |    | June 2014<br>Expenditures |    | Cumulative<br>Expenditures | Available<br>Balance |            |
|---------------------|-------|------------|----|---------------------------|----|----------------------------|----------------------|------------|
|                     | 1948) |            |    |                           |    |                            | 38                   |            |
| Key Personnel       | \$    | 42,862.00  | Ş  | -                         | \$ | 10,723.58                  | Ş                    | 32,138.42  |
| Research Assistants |       | 54,822.00  |    | 1,040.50                  | \$ | 18,632.47                  |                      | 36,189.53  |
| Student Wages       |       | 36,000.00  |    | 3,526.46                  | \$ | 15,571.46                  |                      | 20,428.54  |
| Travel              |       | 54,000.00  |    | 3,194.00                  | \$ | 13,756.66                  |                      | 40,243.34  |
| Supplies            |       | 84,737.00  |    | 679.38                    | \$ | 7,886.66                   |                      | 76,850.34  |
| Services            |       | 2,100.00   |    | : <del>.</del>            | \$ | -                          |                      | 2,100.00   |
| Total Direct        | \$    | 274,521.00 | \$ | 8,440.34                  | \$ | 66,570.83                  | <b>\$</b> :          | 207,950.17 |
| Indirect (19.25%)   |       | 52,845.00  |    | 1,624.77                  | \$ | 12,814.88                  |                      | 40,030.12  |
| Tuition             |       | 39,000.00  |    | -                         | \$ | 8,710.00                   |                      | 30,290.00  |
| Subrecipient        |       | 117,403.00 |    | 3 <b>-</b> 33             | \$ | 24,186.33                  |                      | 93,216.67  |
| TOTAL               | \$    | 483,769.00 | Ş  | 10,065.11                 | \$ | 112,282.04                 | \$ :                 | 371,486.96 |

#### The Budget: Match Travel match & RAs

| MATCH: G02077                             | Budget        |    | une 2014<br>penditures | Cumulative<br>Expenditures | Available<br>Balance |  |
|---|---------------|----|------------------------|----------------------------|----------------------|--|
| Salary/Fringe (MSU)                       | \$ 103,323.00 | Ş  | 2                      | \$<br>5 <u>5</u> 5         | \$ 103,323.00        |  |
| Salary/Fringe (wash. u)                   | 64,457.00     |    | 17                     | \$<br>-                    | 64,457.00            |  |
| Research Assistants                       | 18,273.00     |    | -                      | \$<br>-                    | 18,273.00            |  |
| Supplies                                  | 39,000.00     |    | -                      | \$<br>35,642.41            | 3,357.59             |  |
| Travel                                    | 4,500.00      |    |                        | \$<br>-                    | 4,500.00             |  |
| Total Direct                              | \$ 229,553.00 | Ş  | -                      | \$<br>35,642.41            | \$ 193,910.59        |  |
| Unrecovered Indirect (19.25%)             | 47,034.00     |    | 1,624.77               | \$<br>12,814.88            | 34,219.12            |  |
| Indirect (38.5% of first \$25,000 of sub) | 9,625.00      |    | -                      | \$<br>9,311.74             | 313.26               |  |
| Indirect (Wash. U on personnel)           | 33,517.64     |    | 1                      | \$<br>259                  | 33,517.64            |  |
| TOTAL                                     | \$ 319,729.64 | \$ | 1,624.77               | \$<br>57,769.03            | \$ 261,960.61        |  |

#### Other:

\* Student training: Denny on track to graduate? How many more grad students can we do? \* 4 undergraduates working this academic year. \* Arrange another undergrad to work with Nate next summer? \* SOFIA internships or REUs?

Wrap up \* Web page (with these presentations and progress reports) \* Annual Report to Rolla- Please begin writing your portion and send to me, say by Sept. 15? \* Next year's meeting-? \* Time to start looking at proposal deadlines for continued funding.