

## CERES PGE (Dependence) Matrix Processes

| Input                 | 1.1P1=TRMM<br>1.1P3=Terra<br>1.1P5=Aqua | 1.1P2=TRMM<br>1.1P4=Terra<br>1.1P6=Aqua | 1.2P1 | 2.1P1 | 2.2P1 | 2.3P1 | 2.3P2 | 3.1P1 | 3.2P1 | 4.1-4.0P1 | 4.1-4.1P1     | 4.1-4.2P1 | 4.1-4.3P1 | 4.5-6.1P1 | 4.5-6.2P1 |
|-----------------------|---|---|-------|-------|-------|-------|-------|-------|-------|-----------|---------------|-----------|-----------|-----------|-----------|
| Level 0               | D                                       |   |       |       |       |       |       |       |       |           |               |           |           |           |           |
| QL                    |   | H                                       |       |       |       |       |       |       |       |           |               |           |           |           |           |
| 1.1P1/1.1P3/<br>1.1P5 |   |   | D     |       |       |       |       |       |       |           | H or<br>(H*2) |           |           |           |           |
| NSIDC                 |   |   |       | M     |       |       |       |       |       | D         |               |           |           |           |           |
| 1.2P1                 |   |   |       |       | D     | D=1   | D=ld  |       |       |           |               |           |           |           |           |
| 2.1P1                 |   |   |       |       | D     | D=1   | D=ld  |       |       |           |               |           |           |           |           |
| 2.2P1                 |   |   |       |       |       |       |       | M     |       |           |               |           |           |           |           |
| 2.3P1                 |   |   |       |       |       |       |       | M     |       |           |               |           |           |           |           |
| 2.3P2                 |   |   |       |       |       |       |       | M     |       |           |               |           |           |           |           |
| 3.1P1                 |   |   |       |       |       |       |       |       | (M)   |           |               |           |           |           |           |
| VIRS/<br>MODIS        |   |   |       |       |       |       |       |       |       |           | H             |           |           |           |           |
| 4.1-4.0P1             |   |   |       |       |       |       |       |       |       |           | H             |           |           |           |           |
| 4.1-4.1P1             |   |   |       |       |       |       |       |       |       |           |               | D         |           | H         |           |
| 4.1-4.2P1             |   |   |       |       |       |       |       |       |       |           | H             | D         | M         |           |           |
| 4.5-6.1P1             |   |   |       |       |       |       |       |       |       |           |               |           |           |           | D         |
| 12.1P1                |   |   |       |       |       |       |       |       |       |           | H             |           |           | H         |           |

Note: H = Hourly, D = Daily, Hs = Synoptic {3-Hourly}, M = Monthly, M/Z = Monthly/Zonal, ( ) = Multi-Instrument, shaded box = Alternate Input, ld = last day of month

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| Input                  | 5.2P1 | 5.3P1 | 5.1P1 | 6.1P1 | 6.2P1 | 6.3P1 | 7.1P1 | 7.2.1<br>P1-8 | 7.2.2P1 | 8.1P1 | 9.1P1 | 9.2P1 | 9.3P1 | 9.4P1 | 10.1P1 | 11.1<br>P1-4 | 11.2P1 | 12.1P1 |
|------------------------|-------|-------|-------|-------|-------|-------|-------|---------------|---------|-------|-------|-------|-------|-------|--------|--------------|--------|--------|
| 4.1-4.0P1              |       |       | H     |       |       |       |       |               |         |       |       |       |       |       |        |              |        |        |
| 4.5-6P1                | H     |       | H     |       |       |       |       |               |         |       |       | H     |       |       |        |              |        |        |
| 5.2P1                  |       | D     |       |       |       |       |       |               |         |       |       |       |       |       |        |              |        |        |
| 5.3P1                  |       |       | D     |       |       |       |       |               |         |       |       |       |       |       |        |              |        |        |
| 5.1P1                  |       |       |       | H     |       |       |       |               |         |       |       |       |       |       |        |              |        |        |
| 6.1P1                  |       |       |       |       | (M/Z) |       |       |               |         |       |       |       |       |       |        |              |        |        |
| 6.2P1                  |       |       |       |       |       | (M/Z) | M     |               |         |       |       |       |       |       |        |              |        |        |
| 7.1.1P1                |       |       |       |       |       |       |       | Hs            |         |       |       |       |       |       |        |              |        |        |
| 7.2.1P1-8              |       |       |       |       |       |       |       |               | D       | M     |       |       |       |       |        |              |        |        |
| 9.1P1                  |       |       |       | H     |       |       | M     |               |         | M     |       | H     |       |       | M      |              |        |        |
| 9.2P1                  |       |       |       |       |       |       |       |               |         |       |       |       | (M/Z) |       |        |              |        |        |
| 9.3P1                  |       |       |       |       |       |       |       |               |         |       |       |       |       | (M/Z) | M      |              |        |        |
| ISSCP-B1               |       |       |       |       |       |       |       |               |         |       |       |       |       |       |        | 2/Sat        |        |        |
| 11.1P1-4               |       |       |       |       |       |       |       |               |         |       |       |       |       |       |        |              | M      |        |
| 11.2P1                 |       |       |       |       |       |       | M     |               |         |       |       |       |       |       | M      |              |        |        |
| ECMWF/<br>DAO/<br>NCEP |       |       |       |       |       |       |       |               |         |       |       |       |       |       |        |              |        | D      |
| 12.1P1                 | H     |       | H     |       |       |       |       | Hs            |         |       | M     |       |       |       |        |              |        |        |

Note: H = Hourly, D = Daily, Hs = Synoptic {3-Hourly}, M = Monthly, M/Z = Monthly/Zonal, () = Multi-Instrument, shaded box = Alternate Input, ld = last day of month

**Table 1: PGE Frequency Table per DataMonth (47 PGEs)**

| PGE       | Instrument Independent | TRMM | Terra | Aqua | Total/PGE |
|-----------|------------------------|------|-------|------|-----------|
| 1.1P1     |                        | 31   |       |      | 31        |
| 1.1P2     |                        | ~10  |       |      | ~10       |
| 1.1P3     |                        |      | 62    |      | 62        |
| 1.1P4     |                        |      | ~10   |      | ~10       |
| 1.1P5     |                        |      |       | 62   | 62        |
| 1.1P6     |                        |      |       | ~10  | ~10       |
| 1.2P1     |                        | 31   | 62    | 62   | 155       |
| 2.1P1     | 31                     |      |       |      | 31        |
| 2.2P1     |                        | 31   | 62    | 62   | 155       |
| 2.3P1     |                        | 1    | 2     | 2    | 5         |
| 2.3P2     |                        | 1    | 2     | 2    | 5         |
| 3.1P1     |                        | 1    | 2     | 2    | 5         |
| 3.2P1     |                        |      | 4     | 18   | 22        |
| 4.1-4.0P1 | 31                     |      |       |      | 31        |
| 4.1-4.1P1 |                        | 744  | 744   | 744  | 2232      |
| 4.1-4.2P1 |                        | 31   | 62    | 62   | 155       |
| 4.1-4.3P1 |                        | 1    | 2     | 2    | 5         |
| 4.5-6.1P1 |                        | 744  | 1488  | 1488 | 3720      |

**Table 1: PGE Frequency Table per DataMonth (47 PGEs)**

| PGE          | Instrument Independent | TRMM | Terra | Aqua | Total/PGE |
|--------------|------------------------|------|-------|------|-----------|
| 4.5-6.2P1    |                        | 31   | 62    | 62   | 155       |
| 5.2P1        |                        | 744  | 1488  | 1488 | 3720      |
| 5.3P1        |                        | 31   | 62    | 62   | 155       |
| 5.1P1        |                        | 744  | 1488  | 1488 | 3720      |
| 6.1P1        |                        | 744  | 1488  | 1488 | 3720      |
| 6.2P1        |                        | 1    | 2     | 2    | 5         |
| 6.3P1        |                        | 1    | 6     | 20   | 27        |
| 7.1.1P1      |                        | 1    | 6     | 20   | 27        |
| 7.2.1P1-8    |                        | 248  | 496   | 496  | 1240      |
| 7.2.2P1      |                        | 31   | 62    | 62   | 155       |
| 8.1P1        |                        | 1    | 2     | 2    | 5         |
| 9.1P1        | 1                      |      |       |      | 1         |
| 9.2P1        |                        | 744  | 1488  | 1488 | 3720      |
| 9.3P1        |                        | 1    | 6     | 20   | 27        |
| 9.4P1        |                        | 1    | 6     | 20   | 27        |
| 10.1P1       |                        | 1    | 6     | 20   | 27        |
| 11.1-4P1     | 8                      |      |       |      | 8         |
| 11.2P1       | 1                      |      |       |      | 1         |
| 12.1P1       | 31                     |      |       |      | 31        |
| <b>Total</b> | 103                    | 4950 | 9170  | 9254 | 23,477    |