THEMIS Online Summary Plot Descriptions.

Found at: <http://themis.ssl.berkeley.edu/summary.shtml?autoload=1>

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| Plot Type/Name | Description | Observatories  | Time Intervals |
| Overview[[1]](#footnote-1) | General snapshot of THEMIS spacecraft instruments and ground data. | Single Spacecraft[[2]](#footnote-2)Selected ASI site.Aggregated GMAGs[[3]](#footnote-3) | 24hr,6 hr,2 hr |
| Space ESA moments. | Electron/Ion velocity, pressure, field aligned temperature vector, and energy eflux.[[4]](#footnote-4) Values derived from high resolution ESA data on spacecraft before down sampling for transmission | Single Spacecraft. | 24hr,6 hr,2 hr |
| Ground ESA moments. | Electron/Ion velocity, pressure, field aligned temperature vector, and energy eflux.[[5]](#footnote-5) Values derived from ESA reduced[[6]](#footnote-6) distribution during ground processing. | Single Spacecraft | 24 hr,6 hr,2 hr |
| ESA burst | Electron/Ion energy eflux spectrograms derived from ESA burst[[7]](#footnote-7) distribution during ground processing and spacecraft mode indicator plots. | All Spacecraft | 24 hr,6 hr,2 hr |
| ESA Full | Electron/Ion energy eflux spectrograms derived from ESA full[[8]](#footnote-8) distribution during ground processing and spacecraft mode indicator plots. | All Spacecraft | 24 hr,6 hr, 2 hr |
| ESA Reduced | Electron/Ion energy eflux spectrograms derived from ESA reduced distribution during ground processing and spacecraft mode indicator plots. | All Spacecraft | 24 hr, 6 hr, 2 hr |
| SST Full | Electron/Ion energy eflux spectrograms derived from SST full[[9]](#footnote-9) distribution during ground processing and spacecraft mode indicator plots. | All Spacecraft | 24 hr, 6 hr, 2 hr |
| SST Reduced | Electron/Ion energy eflux spectrograms derived from SST reduced[[10]](#footnote-10) distribution during ground processing and spacecraft mode indicator plots. | All Spacecraft | 24 hr, 6 hr, 2 hr |
| FGM | Fluxgate Magnetometer FGS[[11]](#footnote-11) and FGL[[12]](#footnote-12) data. Spacecraft mode indicator plots. | All Spacecraft | 24 hr,6 hr, 2 hr |
| Burst Memory | Burst memory segment fill level.  | All Spacecraft | 24 hr, 6 hr, 2 hr |
| Survey Memory | Survey memory segment fill level.  | All Spacecraft | 24 hr, 6 hr, 2 hr |
| GMAG High-H | Stacked plot of H component of HDZ ground magnetometer readings. | High Latitude THEMIS-GBO sites. | 24 hr |
| GMAG High-D | Stacked plot of D component of HDZ ground magnetometer readings. | High Latitude THEMIS-GBO sites. | 24 hr |
| GMAG High-Z | Stacked plot of Z component of HDZ ground magnetometer readings. | High Latitude GBO sites. | 24 hr |
| GMAG Low-H | Stacked plot of H component of HDZ ground magnetometer readings. | Low Latitude GBO sites. | 24 hr |
| GMAG Low-D | Stacked plot of D component of HDZ ground magnetometer readings. | Low Latitude GBO sites. | 24 hr |
| GMAG Low-Z | Stacked plot of Z component of HDZ ground magnetometer readings. | Low Latitude GBO sites. | 24 hr |
| ASI-Summary[[13]](#footnote-13) | Interactive grid of station versus hour/minute/second ASI thumbnails. | 20 THEMIS ASI sites. | 1 hr/1 minute/3 second. |
| ASI-Keograms | Interactive grid of station versus hour ASI Keograms. | 20 THEMIS ASI sites. | 1 hr |
| ASI-Averages | Interactive grid of station versus hour ASI averages. | 20 THEMIS ASI sites. | 1 hr |
| ASI-Mosaic | Map showing ASI station mosaic overlayed on map. | 20 THEMIS ASI sites. | 3 second. |
| Orbits-GSM | 3 plots of THEMIS orbits over X/Y/Z axis of GSM coordinates, in an earth centered frame and 40 Re range in each dimension. | All Spacecraft | 24 hr/6 hr |
| Orbits-GSE | 3 plots of THEMIS orbits over X/Y/Z axis of GSE coordinates, in a moon centered frame and 120 Re range in each dimension. | All Spacecraft | 24 hr/6 hr |
| Ground Tracks North | Plot of THEMIS footprints on map of northern polar region. Generated by tracing field lines from spacecraft position to the north using the T89 model. | All Spacecraft | 24 hr/6 hr |
| Ground Tracks South | Plot of THEMIS footprints on map of southern polar region. Generated by tracing field lines from spacecraft position to the south using the T89 model. | All Spacecraft | 24 hr/6 hr |

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| Ground Based Magnetometer stations used in calculating AE-Indexes |
| Dates: | Station Names: |
| From 2007-2014 | 'atha', 'chbg', 'ekat', 'fsim', 'fsmi', 'fykn', 'gako', 'gbay', 'gill', 'inuv', 'kapu', 'kian','kuuj', 'mcgr', 'pgeo', 'pina', 'rank', 'snap' |
| From 2015 to present | 'pbk', 'tik', 'dik', 'amd', 'nor', 'hop', 'jck', 'and', 'nal',  'roe', 'dob', 'sol', 'dmh', 'lvr', 'leth', 'naq', 'stf', 'kuv',  'nain', 'sept', 'thl', 'salu', 'vldr', 'inuk', 'rbay', 'rank',  'fsmi', 'atha', 'gill', 'fsim', 'inuv', 'whit', 'sit', 'kako',  'fykn', 'cigo', 'trap', 'ded', 'brw', 'kian', 'shu' |

1. . Detailed description at http://themis.ssl.berkeley.edu/key.png [↑](#footnote-ref-1)
2. . All single spacecraft plots are available for all THEMIS spacecraft when data is available, but displayed on separate plots. [↑](#footnote-ref-2)
3. . Aggregated using an algorithm like AE-index, but using THEMIS gmags rather than standard AE ground stations.

 .The gmag sites used in creating the AE-Index are listed below, following this table. [↑](#footnote-ref-3)
4. . Also for reference E= -VxB, spacecraft measured spin resolution magnetic field, and t89 model predicted magnetic field. [↑](#footnote-ref-4)
5. . Also for reference E= -VxB, spacecraft measured spin resolution magnetic field, and t89 model predicted magnetic field. [↑](#footnote-ref-5)
6. . ESA Reduced distribution has high temporal(~3 second) resolution but low angle(1-6 bins) resolution. [↑](#footnote-ref-6)
7. . ESA Burst distribution has high temporal(~3 second) and high angle(88 bins) resolution but limited availability. [↑](#footnote-ref-7)
8. . ESA Full distribution has low temporal (~395/~98 seconds) and high angle(88 bins) resolution. [↑](#footnote-ref-8)
9. . SST Full distribution has low temporal and high angle(128 bins) resolution. [↑](#footnote-ref-9)
10. . SST Reduced distribution has high temporal(~3 second) and low angle(1-6 bins) resolution. [↑](#footnote-ref-10)
11. . FGS data is at spin resolution(~3 second) and is continuously available for most of the mission. [↑](#footnote-ref-11)
12. . FGL data is at 1/4 second resolution and is available during configured regions. [↑](#footnote-ref-12)
13. . Map indicating ASI site locations and field of view provided for reference. [↑](#footnote-ref-13)