

1.6 FPI References

Publications:

To learn more about the MMS Fast Plasma Investigation, the following publications offer primary source information:

- Pollock, C., Moore, T., Jacques, A. et al. **Fast Plasma Investigation for Magnetospheric Multiscale**. Space Sci Rev (2016) 199: 331. <https://doi.org/10.1007/s11214-016-0245-4>.
- Gershman, D. J., Avanov, L. A., Boardson, S. A., Dorelli, J. C., Gliese, U., Barrie, A. C., ... Pollock, C. J. (2017). **Spacecraft and instrument photoelectrons measured by the dual electron spectrometers on MMS**. Journal of Geophysical Research: Space Physics, 122, 11,548–11,558. <https://doi.org/10.1002/2017JA024518>
- Barrie, A. C., S. E. Smith, J. C. Dorelli, D. J. Gershman, P. Yeh, C. Schiff, and L. A. Avanov (2017), **Performance of a space-based wavelet compressor for plasma count data on the MMS Fast Plasma Investigation**, J. Geophys. Res. Space Physics, 122, 765–779, doi:[10.1002/2016JA022645](https://doi.org/10.1002/2016JA022645).
- Gershman, D. J., U. Gliese, J. C. Dorelli, L. A. Avanov, A. C. Barrie, D. J. Chornay, E. A. MacDonald, M. P. Holland, B. L. Giles, and C. J. Pollock (2016), **The parameterization of microchannel-plate-based detection systems**, J. Geophys. Res. Space Physics, 121, 10,005–10,018, doi:[10.1002/2016JA022563](https://doi.org/10.1002/2016JA022563)
- Collinson, G. A., J. P. McFadden, D. J. Chornay, D. Gershman, and T. E. Moore (2016), **Constraining electric fields from electrostatic deflector plates: A brief report and case study from the Fast Plasma Investigation for the Magnetospheric Multiscale Mission**, J. Geophys. Res. Space Physics, 121, 7887–7894, doi:[10.1002/2016JA022590](https://doi.org/10.1002/2016JA022590).
- Rager, A. C., Dorelli, J. C., Gershman, D. J., Uritsky, V., Avanov, L. A., Torbert, R. B.,...Saito, Y. (2018). **Electron crescent distributions as a manifestation of diamagnetic drift in an electron-scale current sheet: Magnetospheric Multiscale observations using new 7.5 ms Fast Plasma Investigation moments**. Geophysical Research Letters, 45, 578–584. <https://doi.org/10.1002/2017GL076260>

2018 HV801 Anomalies:

- Pre-launch HV801 Analysis: FPI-SYS-RPT-0903 (FPI MIS) or 461-IS-RPT-0889 (MMS MIS)
 - Includes numerous detailed analyses and data files
 - Post Phase 1A HV801 Analysis Update: FPI-SYS-RPT-0904 (FPI MIS)
 - Anomaly #1 MMS Flares ARB ticket MMSATS-4352
 - Anomaly #2 MMS Flares ARB ticket MMSATS-4325
 - FPI Internal Team Tickets:
 - Trac Ticket #800 MMS4 DES1 (DES210) HV801 optocoupler (ESA high range stepper circuit) failure left the unit permanently disabled, as of 5Jun2018 12:43 UTC
 - Trac Ticket #814 MMS4 DES0 (DES215) HV801 optocoupler failure (Deflector0 high range stepper circuit) allows the ESA to sweep the full range of energies at one extreme, uncalibrated deflection angle, as of 15Jul2018 00:49 UTC.
 - Closeout Anomalies on DES210 & DES215: Trac Ticket #910
 - Updated Reliability and Statistical Analysis: FPI-SYS-RPT-906 (FPI MIS)
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