

## CME Catalogue Format Document (Version 02)

1. **Unique CME identifier** in the format `HCME_C_YYYYMMDD_##`, where *C* is the observing spacecraft (A or B), *YYYYMMDD* is the date during which the CME is first observed in HI-1 and *##* is a two digit number to distinguish between CMEs occurring on the same day.
2. Time of the **first HI-1 image in which the CME is observed** (UTC).
3. **Observing spacecraft** (A or B).
4. **Southernmost extent of CME position angle** throughout the HI-1 field of view (degrees). Preceded by optional **less-than** symbol if the CME exceeds the angular field of view in HI-1.
5. **Northernmost extent of CME position angle** throughout the HI-1 field of view (degrees). Preceded by optional **greater-than** symbol if the CME exceeds the angular field of view in HI-1.
6. **Confidence level** (*poor*, *fair* or *good*)
  - (a) *poor*, an object spanning at least  $20^\circ$  in position angle is observed, but which poorly resembles a CME.
  - (b) *fair*, an object that resembles a CME, though some may disagree.
  - (c) *good*, an object that is unquestionably a CME.
7. The **postion angle used in the time-elongation fitting** (degrees). The fitting procedure is applied only to *fair* and *good* CMEs. For *poor* events this, and all subsequent columns, contain the value  $-999$ .
8. Name of text **File containing time-elongation profiles** in the format `HCME_C_YYYYMMDD_##_PAXXX.dat`, which contains the unique identifier and the position angle (*XXX*), in degrees, used in the time-elongation fitting.
9. **CME Speed** in  $km\,s^{-1}$  using **Fixed-Phi** fitting.
10. Uncertainty in **Speed** in using **Fixed-Phi** fitting.
11. Spacecraft-Sun-CME angle ( $\phi$ ) in degrees using **Fixed-Phi** fitting
12. Uncertainty in  $\phi$  in using **Fixed-Phi** fitting.
13. **CME HEEQ Longitude** in degrees using **Fixed-Phi** fitting.

14. CME **HEEQ Latitude** in degrees using **Fixed-Phi** fitting.
15. CME **Carrington Longitude** in degrees using **Fixed-Phi** fitting.
16. CME **Launch time** (UTC) from  $r = 0$  using **Fixed-Phi** fitting.
17. CME **Speed** in  $km s^{-1}$  using **Self-Similar Expansion**<sup>1</sup> fitting.
18. Uncertainty in **Speed** in using **Self-Similar Expansion** fitting
19. Spacecraft-Sun-CME angle ( $\phi$ ) in degrees using **Self-Similar Expansion** fitting
20. Uncertainty in  $\phi$  in using **Self-Similar Expansion** fitting.
21. CME **HEEQ Longitude** in degrees using **Self-Similar Expansion** fitting.
22. CME **HEEQ Latitude** in degrees using **Self-Similar Expansion** fitting.
23. CME **Carrington Longitude** in degrees using **Self-Similar Expansion** fitting.
24. CME **Launch time** (UTC) from  $r = 0$  using **Self-Similar Expansion** fitting.
25. CME **Speed** in  $km s^{-1}$  using **Harmonic-Mean** fitting.
26. Uncertainty in **Speed** in using **Harmonic-Mean** fitting.
27. Spacecraft-Sun-CME angle ( $\phi$ ) in degrees using **Harmonic-Mean** fitting
28. Uncertainty in  $\phi$  in using **Harmonic-Mean** fitting.
29. CME **HEEQ Longitude** in degrees using **Harmonic-Mean** fitting.
30. CME **HEEQ Latitude** in degrees using **Harmonic-Mean** fitting.
31. CME **Carrington Longitude** in degrees using **Harmonic-Mean** fitting.
32. CME **Launch time** (UTC) from  $r = 0$  using **Harmonic-Mean** fitting.

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<sup>1</sup>The Self-similar expansion method assumes a half width of  $\lambda = 30^\circ$  for all CMEs.

## **Time-elongation file format**

1. **Pofile number** (0-4).
2. **Time** (UTC) of each data point.
3. **Elongation** (degrees) of each data point.
4. The **postion angle used in the time-elongation fitting** (degrees).
5. **Observing spacecraft** (A or B).