Supporting Information for

**More rapid intensification of flash droughts with shorter onset timescales**

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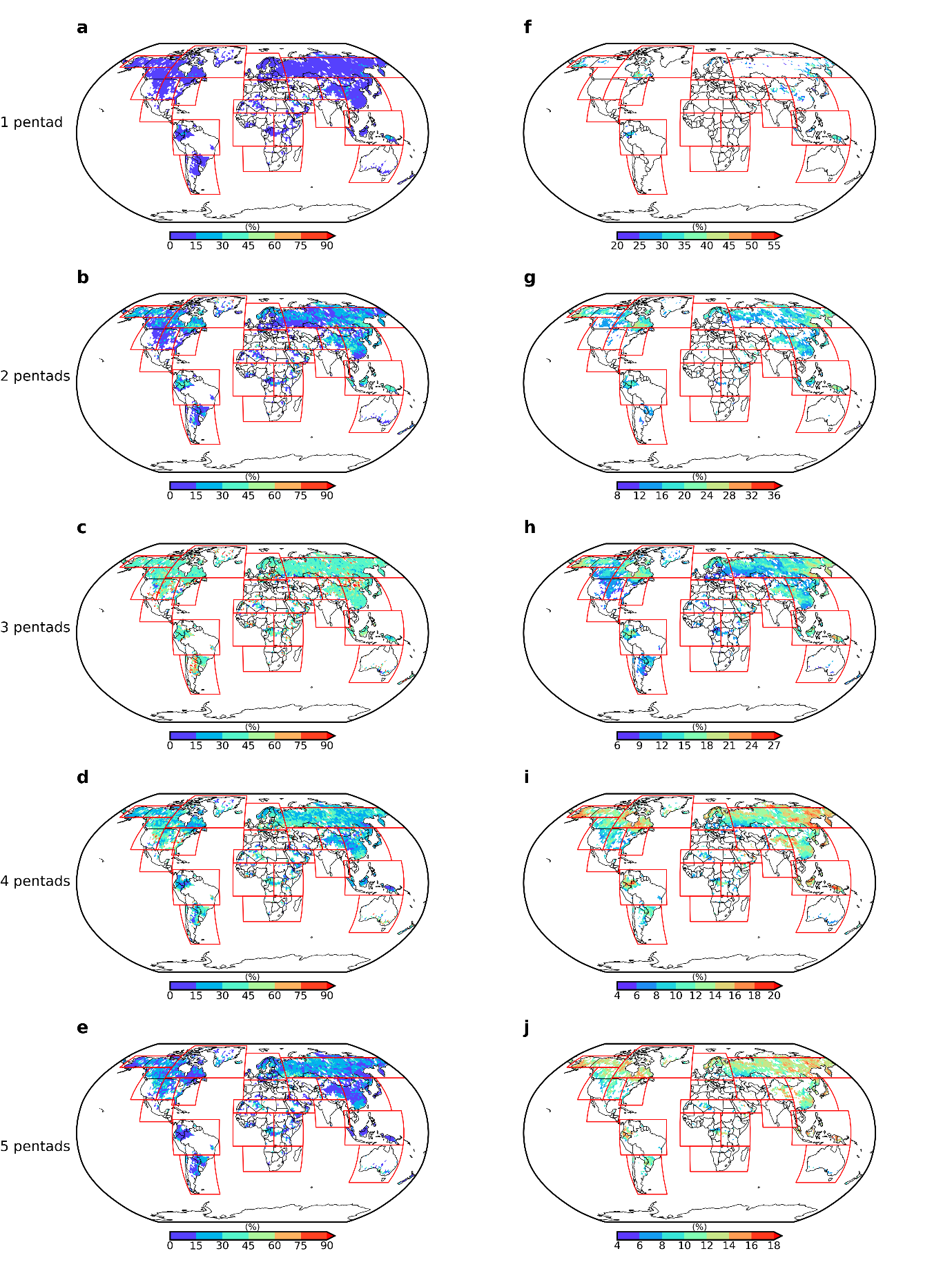
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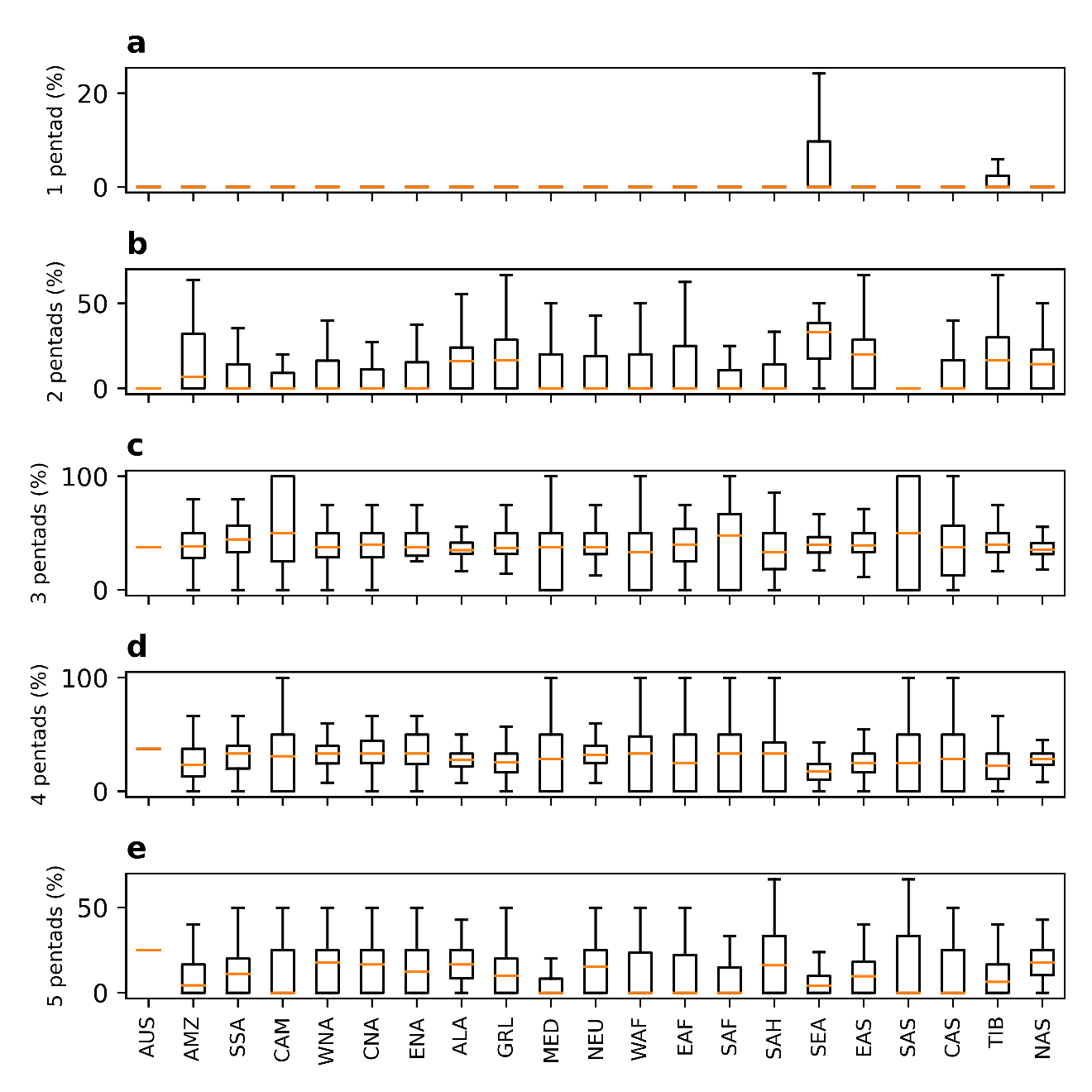
**Fig. 12** Variations in soil moisture percentiles for flash drought events at 1-, 2-, 3-, 4-, 5-pentad lead times of all grid points. The two red dashed lines represent the wet (high SM percentile of the 40th percentile) and the dry (low SM percentile of the 20th percentile) SM conditions, respectively.

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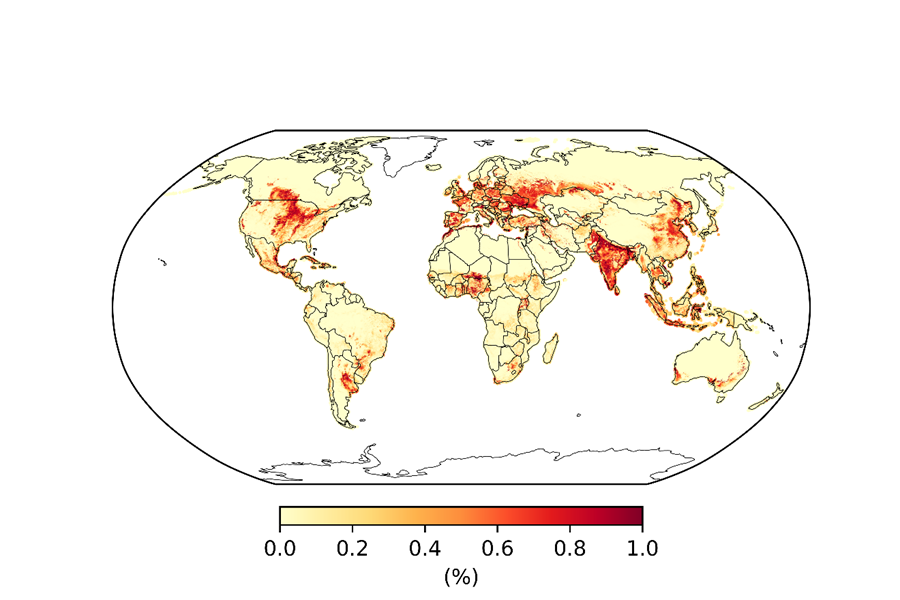
|  |  |  |  |
| --- | --- | --- | --- |
| Name | Acronym | Latitude (°) | Longitude (°) |
| Australia | AUS | 45S-11S | 110E-155E |
| Amazon Basin | AMZ | 20S-12N | 82W-34W |
| Southern South America | SSA | 56S-20S | 76W-40W |
| Central America | CAM | 10N-30N | 116W-83W |
| Western North America | WNA | 30N-60N | 130W-103W |
| Central North America | CNA | 30N-50N | 103W-85W |
| Eastern North America | ENA | 25N-50N | 85W-60W |
| Alaska | ALA | 60N-72N | 170W-103W |
| Greenland | GRL | 50N-85N | 103W-10W |
| Mediterranean Basin | MED | 30N-48N | 10W-40E |
| Northern Europe | NEU | 48N-75N | 10W-40E |
| Western Africa | WAF | 12S-18N | 20W-22E |
| Eastern Africa | EAF | 12S-18N | 22E-52E |
| Southern Africa | SAF | 35S-12S | 10W-52E |
| Sahara | SAH | 18N-30N | 20W-65E |
| Southeast Asia | SEA | 11S-20N | 95E-155E |
| East Asia | EAS | 20N-50N | 100E-145E |
| South Asia | SAS | 5N-30N | 65E-100E |
| Central Asia | CAS | 30N-50N | 40E-75E |
| Tibet | TIB | 30N-50N | 75E-100E |
| North Asia | NAS | 50N-70N | 40E-180E |



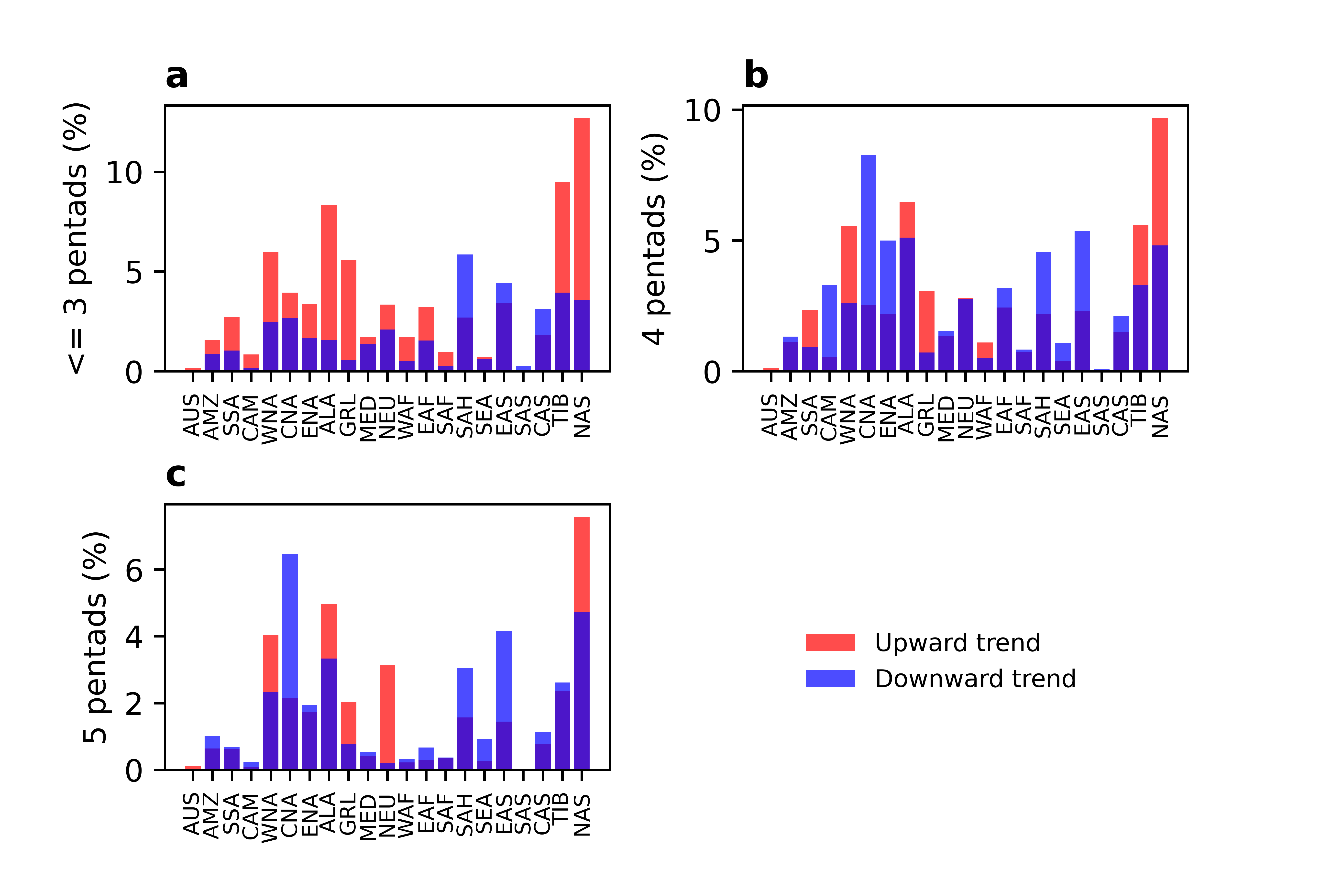
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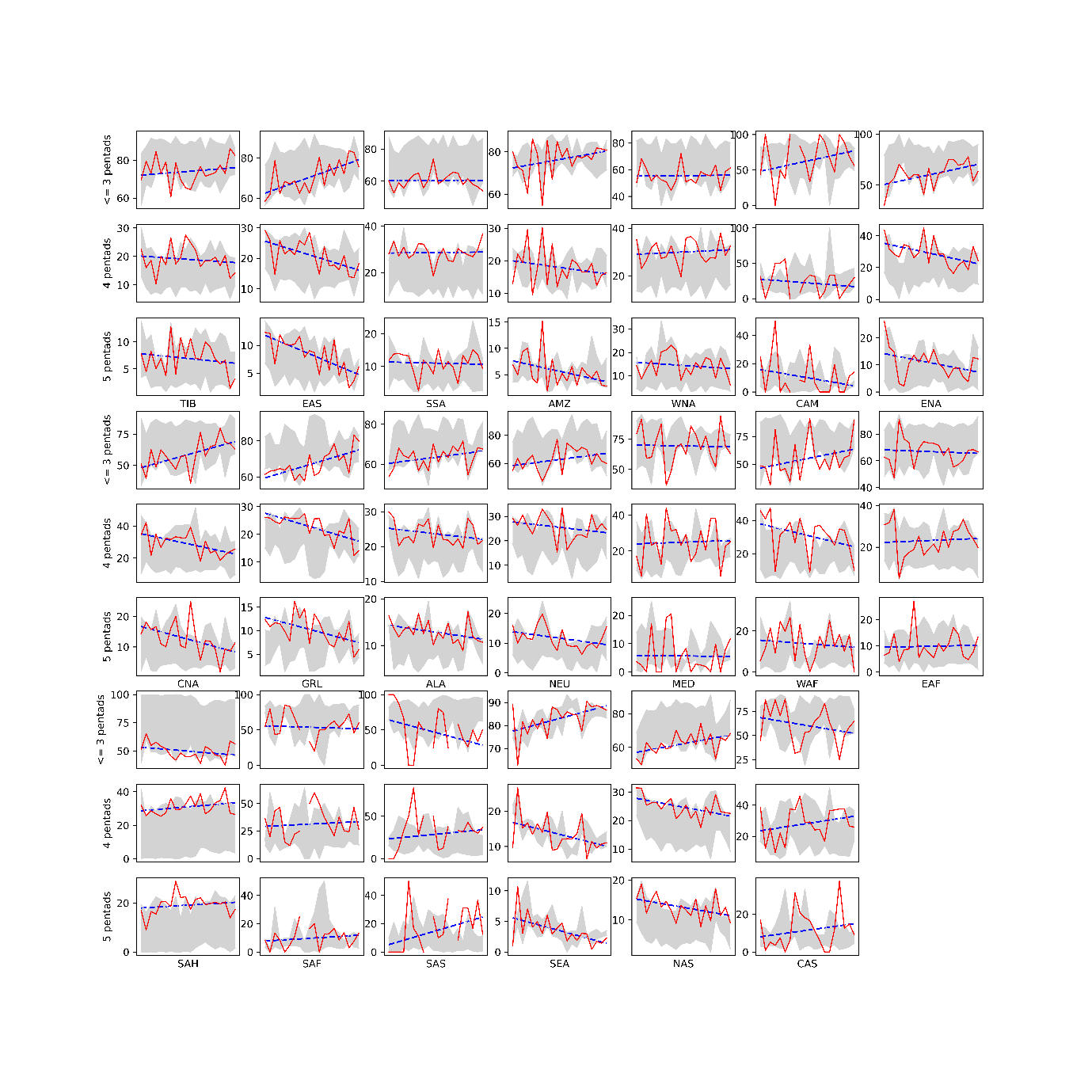
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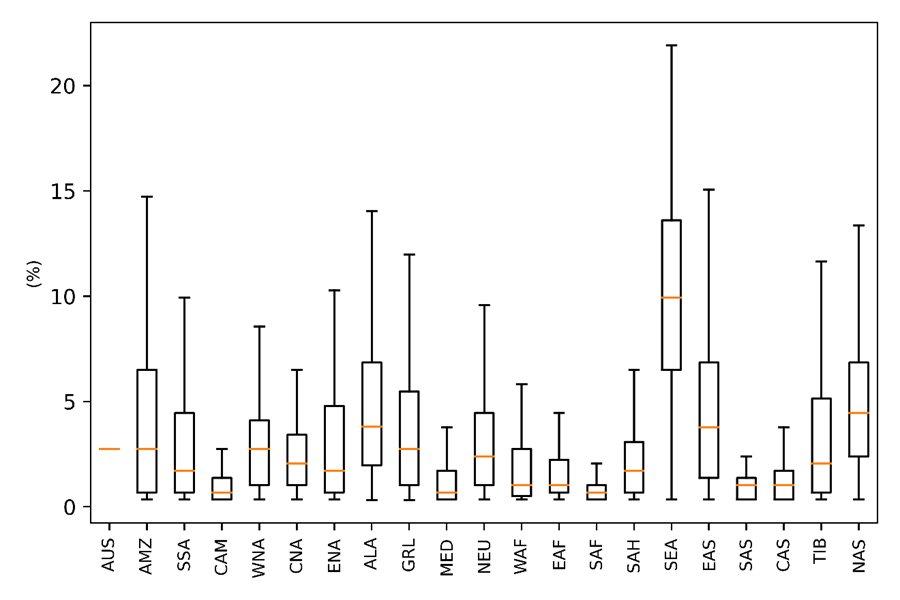
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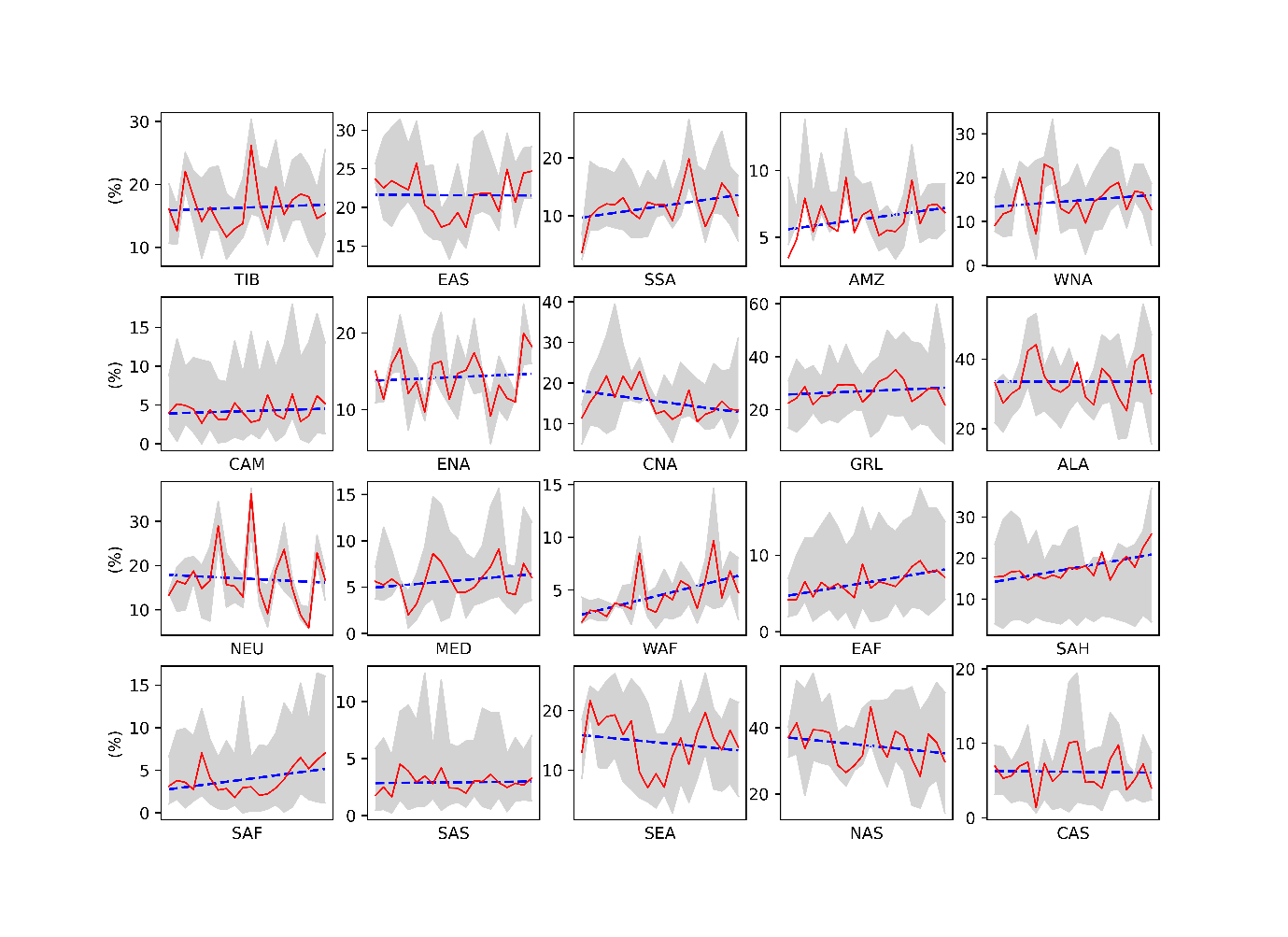
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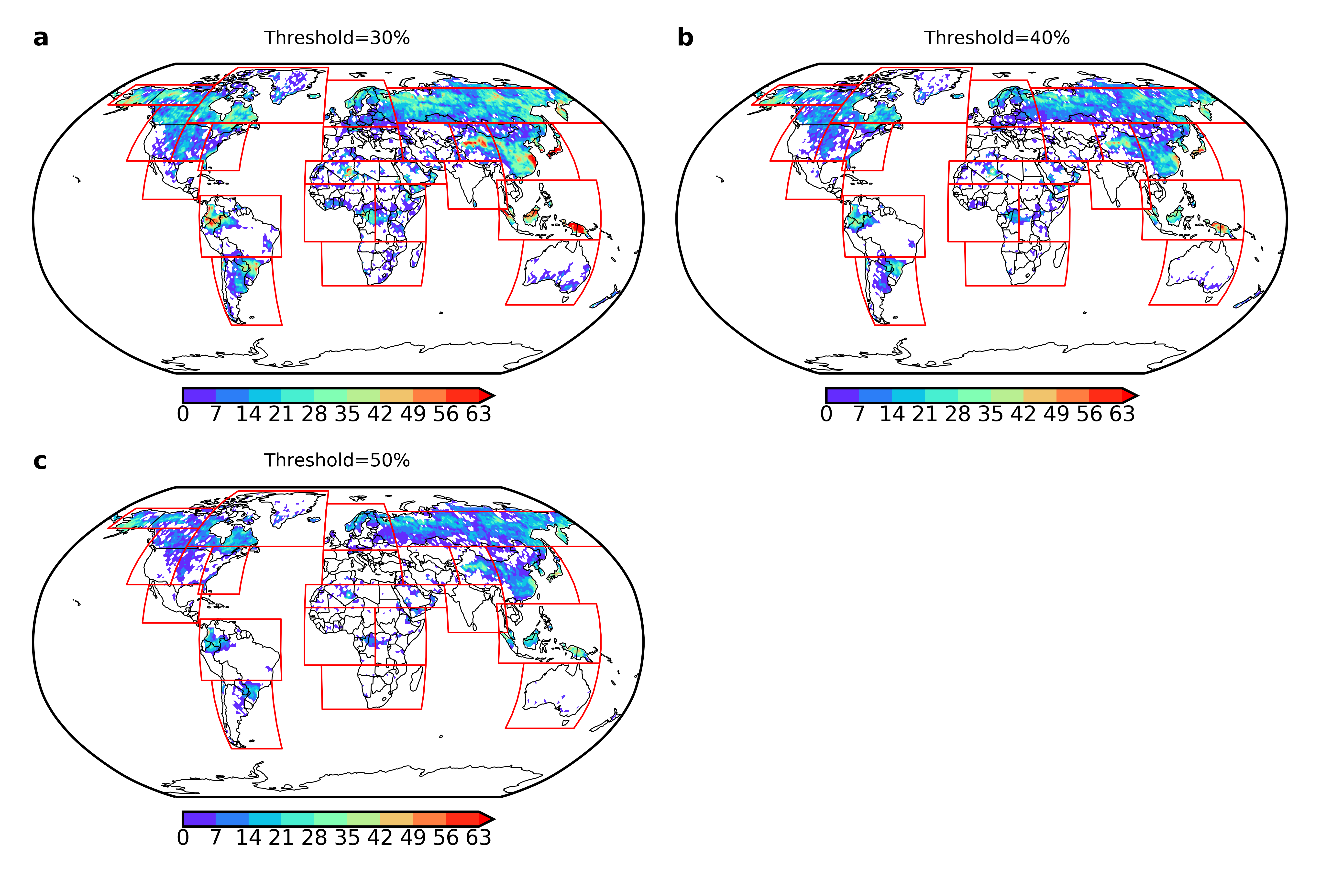
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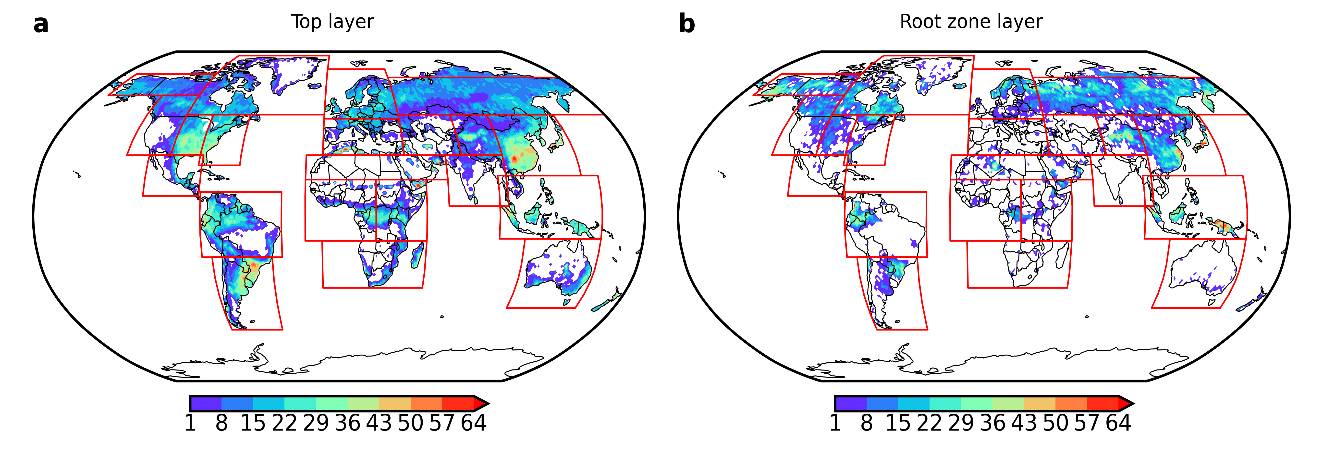
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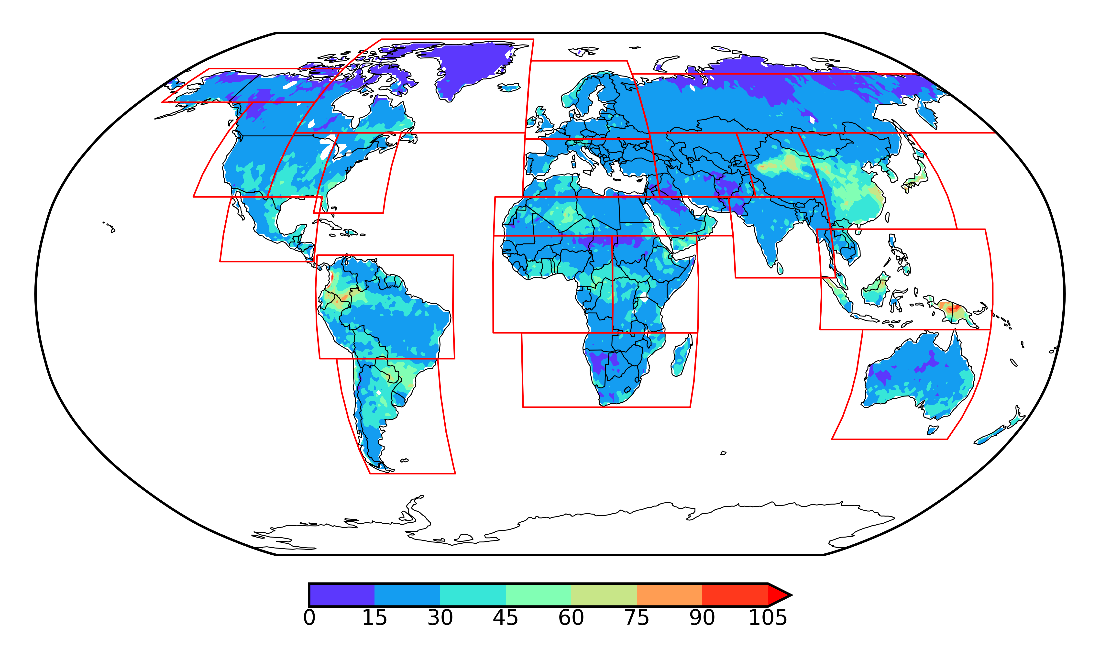
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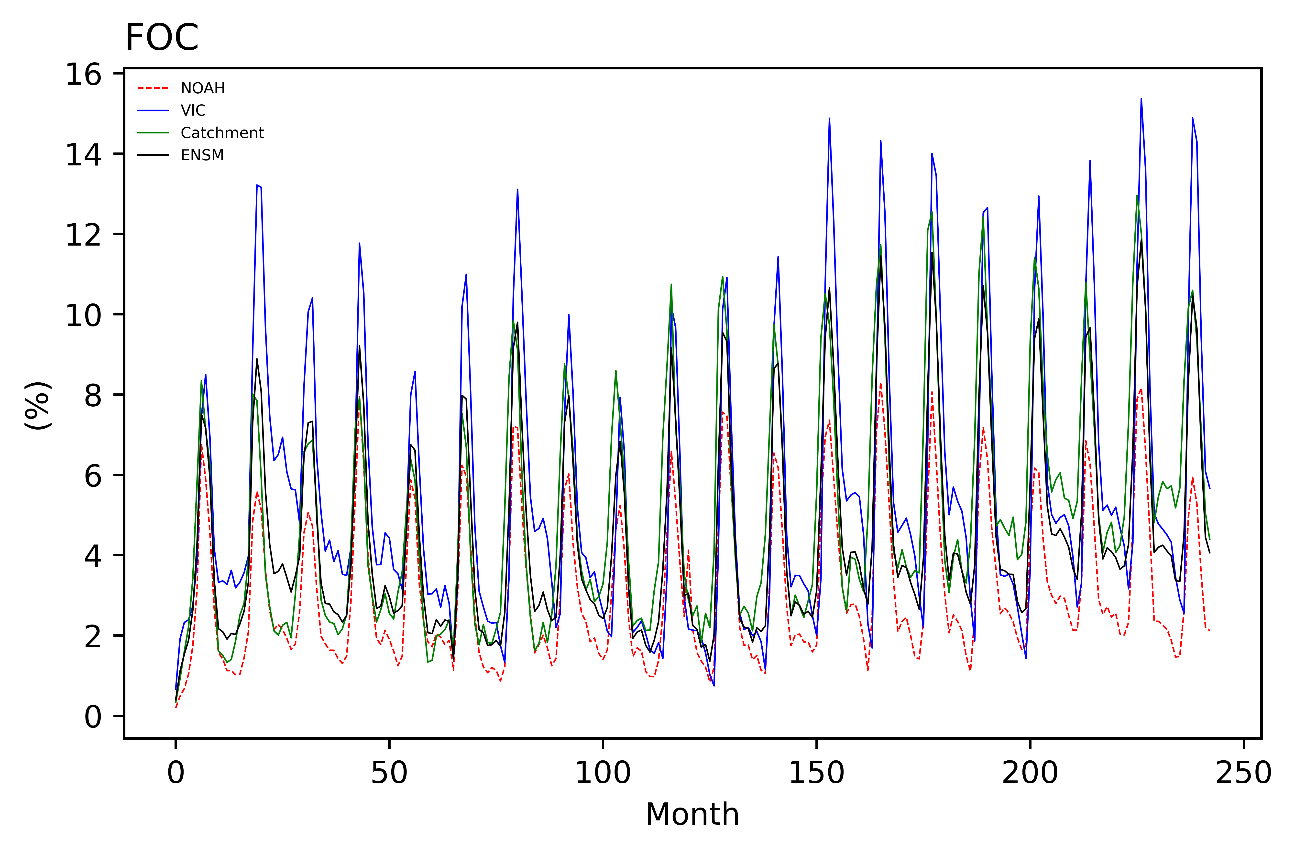
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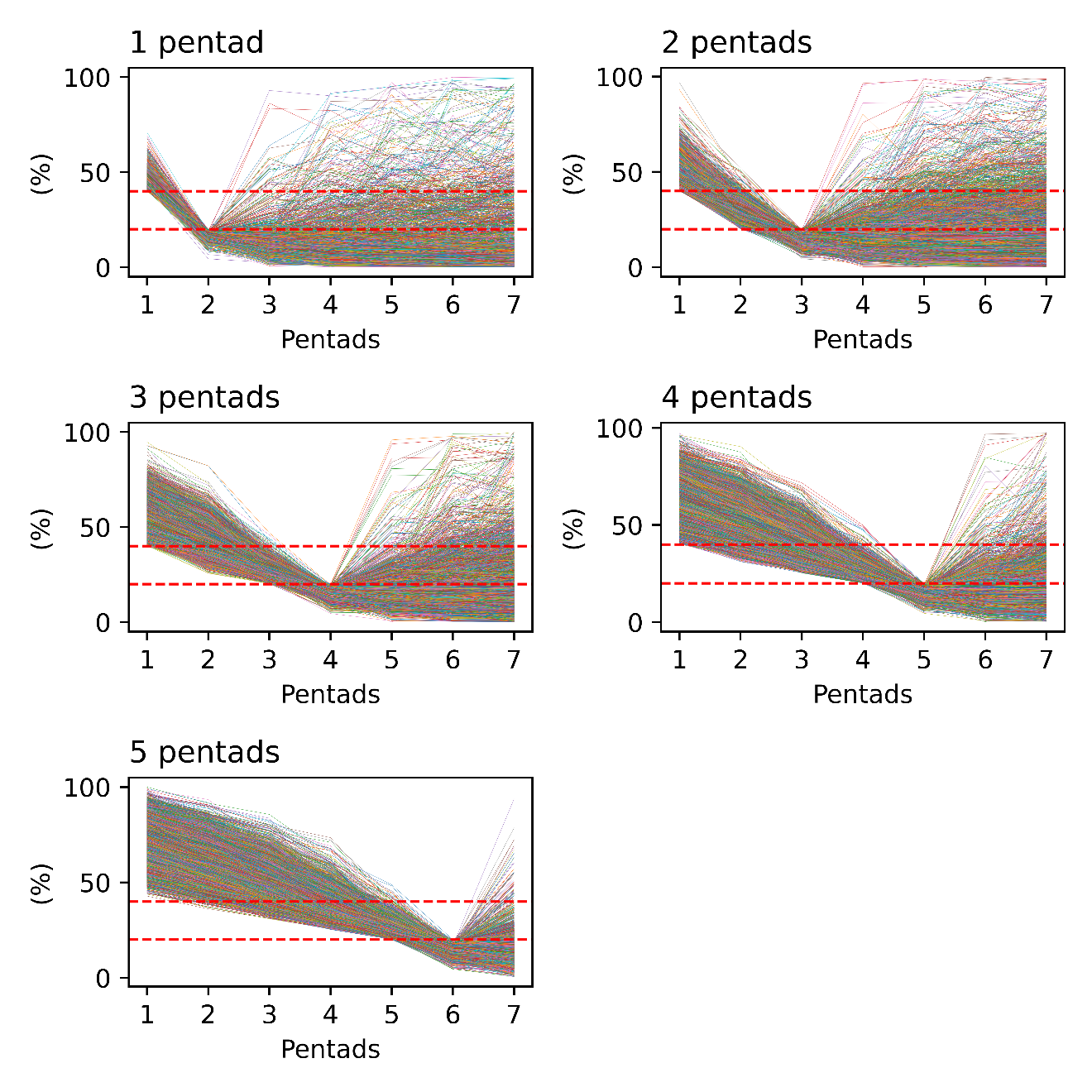
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