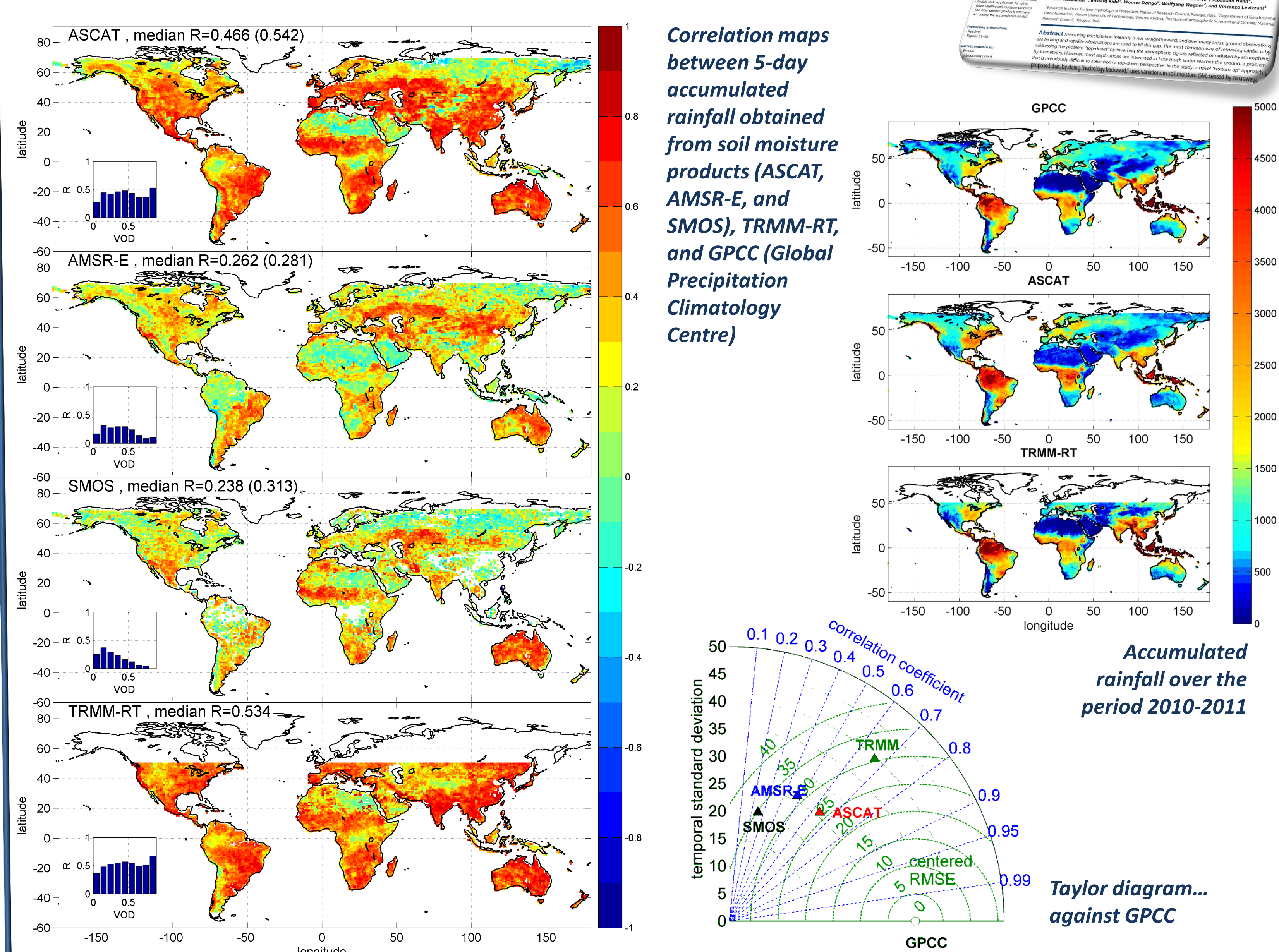


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# We can estimate rainfall from satellite soil moisture data ...



$$P_{int}(t) = P_{sat}(t) + K[P_{SM2R}(t) - P_{sat}(t)]$$

Median R=0.71

Median R=0.72

Median R=0.78

SM2RAIN<sub>SMOS</sub>

3B42RT

SM2RAIN<sub>SMOS</sub>+3B42RT

Correlation maps for 5-day accumulated rainfall

The graph plots normalized RMSE (y-axis, 0.4 to 0.75) against six sites (x-axis, 1 to 6). Three data series are shown: ASCAT (blue line with circles), SMOS (green line with circles), and ASCAT+SMOS (red line with circles). ASCAT+SMOS consistently shows the lowest RMSE values across most sites, particularly at site 3 where it drops significantly below the other two methods.

Sites	ASCAT	SMOS	ASCAT+SMOS
1	0.48	0.55	0.57
2	0.66	0.64	0.59
3	0.65	0.51	0.43
4	0.54	0.62	0.52
5	0.57	0.56	0.53
6	0.57	0.62	0.53

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