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Seasonal geocenter motion – is there a consensus?

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We present observed geocenter motion over 1993–2008 based on laser ranging data from LAGEOS-1 and LAGEOS-2. We also include estimates based on multiple SLR satellites and from combinations of geodetic data and GRACE. The seasonal variation is compared to the estimates based on other techniques and on surface mass redistribution derived from various climatic data sources and models. While geodesy and climatic data indicate reasonably good agreement in terms of the seasonal variation, we examine whether the agreement is sufficient to support the adoption of a model for geodetic analysis.