Questions, Comments and Answers following the presentation

(*GAIA*)
Carme Jordi

Kaufer: A lot of effort went into stabilizing the basic angle. Now you observe quite large variations. Do you understand what is happening?

We have seen modulations of the variations in several different timescales, mainly correlated with the rotation of the satellite, with the change of the Gaia-Sun distance and sunshield aging, and with Galactic plane crossings. The two telescopes show different variations: while the line of sight of the preceding telescope fluctuates within +/-1000 μas, the other line-of-sight varies only at +/-200 μas level. There is strong evidence of a thermo-elastic origin and a purely mechanical root cause can be ruled out. However, the coupling mechanism needed to efficiently and quickly translate the perturbations in the several originator elements located in the Sun-illuminated part of the spacecraft to the payload module is still unclear. More details can be found in Gaia collaboration (A&A 595, A1, 2016) section 4.2.3.

Lupton: Is it tru that GDR2 will only release Teff and A_V rather than g and [Fe/H]? I understand that the spectra will not be released until GDR3.

Yes, this is true. GDR2 will include effective temperatures and, where possible, line-of-sight extinction based on the photometry in white light (G), and the integrated spectrophotometry in the blue (G_BP) and in the red (G_RP). The BP and RP spectra will be released in GDR3. See https://www.cosmos.esa.int/web/gaia/release for the Data Release Scenario.

Osip:
1. *Could you explain the exceptional magnitude limit for very faint targets?*
2. *For the occultation prediction example, was the improvement due only to stellar position improvement?*

1. The magnitude limit of Gaia is G=20.7 measured in white light. The conversion of G magnitudes to V magnitudes (or any other passband) is colour-dependent. As an example, for a very red object of V-I=5, G-V is about -4. Then, for such an object at the limit of G=20.7, V~24.7 mag.
2. The position of the star in Gaia DR1 is ten times more precise than previously known. This allowed to locate the centrality of the shadow with an accuracy better than 100 km compared to the 1500 km accuracy with previous on-ground data based predictions. Certainly, the improved Pluto orbital solution based on the radio tracking of the New Horizons spacecraft that also reached an accuracy of about 100 km was used to perform the final predictions of the occultation path.