Surface gravito-inertial waves on Altair and Rasalhague

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Abstract: With the spectro-polarimeter Neo-Narval of Telescope Bernard Lyot at Picdu-Midi observatory we observed two fast rotating stars: Altair (α Aql) and Rasalhague (α Oph) in Sept. 2020 and May 2024 respectively. Both of these stars have high Vsini (respectively 230 km/s and 240 km/s) which broadens their lines significantly. However, this large rotational broadening allowed us to monitor waves travelling at the surface of the stars and identify them as gravito-inertial ones. Both of the stars show waves with high azimuthal wavenumber, typically of order 10 to 40, which could be detected thanks to the high spectral resolution of Neo-Narval.

We will present in this talk the preliminary results that can be deduced from these observations and the comparison of their pulsational behaviour with theoretical models.