

POSTERS

TEN YEARS OF SLR PRODUCTION IN ARGENTINA

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SLR technique is a proved astro-geodetic art with a significant power to contribute to Earth and Space Sciences. Therefore, scientific applications of SLR System are able to perform multiple tasks in the fields of Astrometry, Geodesy and Geophysics. The results we show here were obtained from satellite observations made at SLR 7406 Station of Observatorio Astronómico Félix Aguilar (OFA) in San Juan, Argentina. The telescope was installed early on 2006, in concordance with an International Cooperation Agreement between Universidad Nacional de San Juan, Argentina and Chinese Academy of Sciences. In this abstract we show the current research being done with ILRS 7406 station: Length of day (LOD) and Angular velocity of Earth Rotation, calculated weekly; Pole Motion. ILRS7406 is daily surveying Pole coordinates x and y ; Tracking SLR to GNSS constellations. SLR System contributes to the adjustment and validation of satellite GALILEO, GPS, GLONASS, and BEIDOU orbits. Our station is nowadays member of the new ITRF 2014 frame, and these past years has been one of the 3 highest producing SLR Stations on the ILRS net, composed of about 40 stations distributed all around the world. The obtained results during this first 10 years of experience are useful to enhance the traditional collaboration between OFA and international services such as ILRS, IERS and NASA.

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MEASUREMENT OF THE RADIAL VELOCITY OF VEGA AND SAO 104807 BY HIGH RESOLUTION SPECTROMETRY

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The radial velocity is the component of the velocity with which a celestial object approaches (blueshift) or go away (redshift) of the observer. The precise measurement of the redshift allowed to Humason and Hubble discover the expansion of the Universe. In 1998 two research teams simultaneously discovered that this expansion is accelerated, for that reason the hypothesis of the dark energy has been raised to explain the existing repulsion.

The present work shows the measurement of the radial velocity of Vega and SAO104807 by high resolution spectrometry. Using the instruments of the Astronomical Observatory of the University of Nariño, located in the south of Colombia, was measured the displacement that the spectral lines of both celestial objects suffer due to the Doppler effect. The results obtained were quite close to those recorded in databases such as *SIMBAD*, according to the used equipment.

The instruments used were: Celestron CGE Pro 1400 Telescope, Shelyak LHIRES III High Resolution Spectrometer and SBIG ST-8300 CCD Camera. The characteristics of the spectrometer are: Diffraction grating: 2400 lines/mm, Spectral dispersion (H alpha): 0:012 nm/pixel, Radial velocity resolution: 5 km/s.

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