



## **Observations of the APOD satellite with the AuScope VLBI network**

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The Chinese APOD (Atmospheric density detection and Precise Orbit Determination) satellite, launched in September 2015, is the first LEO (Low Earth Orbit) satellite co-locating three space-geodetic techniques including VLBI. Being equipped with a dual-frequency GNSS receiver, an SLR retro-reflector and a VLBI beacon transmitting DOR tones in the S and X band it can be considered as a first prototype of a geodetic co-location satellite in space. Basically it is suitable to realize so-called space-ties, complementing the local-ties used nowadays to connect single-technique reference frame solutions in the ITRF combination. Due to the low orbit of about 470 km altitude and the accompanying high velocity of the satellite, VLBI observations become very challenging. In this contribution we discuss a series of VLBI observations of APOD which were carried out by the Australian AuScope network in late 2016. The applied satellite tracking and data acquisition schemes will be discussed along with first results of the geodetic data processing.