



DORIS data processing at GOPE by using the Bernese GPS Software: development of the method and first results

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A new DORIS data processing strategy based on a GPS-like approach has been developed in a cooperation of AIUB (Astronomical Institute, University of Bern), GOPE (Geodetic Observatory Pecny) and IGN (Institut Géographique National). The processing is based on a modified version of the Bernese GPS Software, adapted for DORIS data analysis. The algorithms and models are as close to GPS phase data processing as possible. First results of station coordinate, Earth orientation, orbit and troposphere parameter estimation were obtained and analyzed at GOPE. A reduced dynamic orbit model was adopted allowing to take nonconservative forces into account by empiric and stochastic parameters. The presentation focuses on the weakly constrained network solutions and on the comparison of estimated station and pole coordinates to corresponding results from analysis centers of International DORIS Service, to ITRF 2000 coordinates, and to IERS C04 Earth orientation parameters as well. It is demonstrated that the precision of the first GOPE results is already almost comparable with those of other analysis centers. An automatic processing and analysis engine is under development at GOPE. Routine DORIS data processing is planned at GOPE in the near future.