

CPF implementation in the SLR station Riga software

K.Salminsh

Institute of Astronomy
University of Latvia
kalvis@lanet.lv

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Software features

- Relational database for the SLR data storage
- Internal XML format for the ranging data
- Data compression for the ranging and orbital data
- Automatic prediction data update
- Automatic error detection and reporting

CPF handling

- Automatic CPF download (ftp, e-mail)
- CPF validity check

```

view anderra_cpf_070910_7532.nrl - Far
C:\...\b1\anderra_cpf_070910_7532.nrl      Win      708800      Col 0      0%
H1 CPF 01  NRL 2007 09 09 23 2532 anderra  NONE
H2 605506 1071 29664 2007 09 09 23 54 00 2007 09 15 23 54 00 60 1 1 0 >>
H3 100 5 10 200 20 20 500 60 50
H5 0.2241
H9
10 0 54352 86040.000000 0 -4721308.321 2088243.669 4209000.3>>
10 0 54352 86100.000000 0 -5012880.331 1836582.070 3983985.7>>
10 0 54352 86160.000000 0 -5282481.796 1578509.745 3739604.0>>
10 0 54352 86220.000000 0 -5528860.667 1315074.157 3477041.5>>
10 0 54352 86280.000000 0 -5750867.186 1047338.275 3197573.1>>
10 0 54352 86340.000000 0 -5947459.592 776376.485 2902556.1>>
10 0 54353 0.000000 0 -6117709.148 503270.354 2593423.3>>
10 0 54353 60.000000 0 -6260804.663 229104.546 2271677.0>>
10 0 54353 120.000000 0 -6376056.771 -45037.464 1938880.9>>
10 0 54353 180.000000 0 -6462901.336 -318077.581 1596653.1>>
10 0 54353 240.000000 0 -6520902.521 -588947.188 1246657.9>>
10 0 54353 300.000000 0 -6549755.079 -856591.305 890597.6>>
10 0 54353 360.000000 0 -6549285.972 -1119972.543 530204.5>>
10 0 54353 420.000000 0 -6519455.568 -1378075.122 167231.7>>
10 0 54353 480.000000 0 -6460357.896 -1629908.656 -196554.7>>
10 0 54353 540.000000 0 -6372220.575 -1874511.770 -559385.1>>
10 0 54353 600.000000 0 -6255403.998 -2110955.774 -919494.3>>
10 0 54353 660.000000 0 -6110399.718 -2338348.009 -1275131.0>>
1Help 2Wrap 3Quit 4Hex 5 6Edit 7Search 8DOS 9 10Quit

```

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view anderra_cpf_070910_7533.nrl - Far
C:\...b1\anderra_cpf_070910_7533.nrl      Win      591540      Col 0      0%
H1 CPF 01  NRL 2007 09 09 23 0003 anderra  HYBRID
H2 605506 1071 29664 2007 09 09 23 49 00 2007 09 14 23 59 00 60 1 1 0 >>
H3 100 5 10 200 20 20 500 60 50
H5 0.2241
H9
10 0 54352 85800.000000 0 -3363520.601 3010658.024 4895111.2>>
10 0 54352 85860.000000 0 -3728622.704 2794665.404 4757477.5>>
10 0 54352 85920.000000 0 -4077662.599 2568308.084 4596720.4>>
10 0 54352 85980.000000 0 -4409041.735 2332531.156 4413621.1>>
10 0 54352 86040.000000 0 -4721238.067 2088311.160 4209069.0>>
10 0 54352 86100.000000 0 -5012812.858 1836652.315 3984057.2>>
10 0 54352 86160.000000 0 -5282417.575 1578582.480 3739678.1>>
10 0 54352 86220.000000 0 -5528800.093 1315149.115 3477118.0>>
10 0 54352 86280.000000 0 -5750810.648 1047415.154 3197651.6>>
10 0 54352 86340.000000 0 -5947407.367 776454.931 2902636.1>>
10 0 54353 0.000000 0 -6117661.441 503350.042 2593504.6>>
10 0 54353 60.000000 0 -6260761.644 229185.111 2271759.1>>
10 0 54353 120.000000 0 -6376018.466 -44956.377 1938963.3>>
10 0 54353 180.000000 0 -6462867.766 -317996.308 1596735.3>>
10 0 54353 240.000000 0 -6520873.602 -588866.076 1246739.5>>
10 0 54353 300.000000 0 -6549730.628 -856510.660 890678.2>>
10 0 54353 360.000000 0 -6549265.793 -1119892.693 530283.6>>
10 0 54353 420.000000 0 -6519439.335 -1377996.354 167308.9>>
1Help 2Wrap 3Quit 4Hex 5 6Edit 7Search 8DOS 9 10Quit

```

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Conclusions

Detected CPF header anomalies in most cases are not critical but may require special handling in software.