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SALVE 2

(SOFTWARE AIMED AT OFF LINE VERIFICATION ETI SIGNALS VER 2.0)

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The Italian SIV module is a 24-million channel at 15 MHz input bandwidth version of the Berkeley SERENDIP IV spectrometer, working since 1998 for the SETI-Italia program. It has been installed in piggyback mode to the 32 m VLBI dish in Medicina and it continuously monitors the radioastronomical frequencies within the 1-23 GHz bands and operates in parallel at the normal observation activities.

This big amount of data is off-line processed by SALVE 2 (Software Aimed at off Line Verification ETI signals, ver 2.0), a new generation of algorithms realised in order to obtain a more efficient memory optimisation, to allow a scalability versus future upgrades of SIV and fix the old bugs.

SALVE 2 has been realised in different modules run by a scheduler. Each day the scheduled main processes are:

- 1) Transfer of data files from SIV PC host to PC data processor
- 2) Deletion of invalid data
- 3) Interference detection and rejection
- 4) Doppler-shifted narrow signal detection by a new technique based on Hough transform
- 5) Compression and archiving of data

This paper would give evidence to the latest innovations and facilities realised for SALVE 2 in order to increase both the reliability of pattern recognition algorithms and the performance of the programs devoted to the data visualisation task.