La Silla and Paranal Science Operations

UC Fact Sheets – April 2005

Gautier Mathys

Highlights

- Regular operation of MIDI started on April 8, 2004, with the execution of the first Service Mode observations for general user runs.
- Regular operation of VISIR started on March 20, 2005, with the execution of the first Service Mode observations for general user runs.
- Regular operation of SINFONI is ready to start on April 1 (with the first Period 75 Visitor Mode runs).
- FORS-1 was moved from UT1 to UT2 and FORS-2 was moved from UT4 to UT1 at the beginning of June 2004; the move was fully transparent for the users.
- First fringes with the Auxiliary Telescopes and MIDI were obtained in February 2005. As a result, some AT baselines are made available to the community for Period 76.
- The 3.6m telescope M2 upgrade was successfully completed, yielding a substantial improvement of image quality and of efficiency.
- Following the merging of the La Silla and Paranal sites into the single La Silla and Paranal Observatory, O. Hainaut has taken over the responsibility of Head of the Paranal Science Operations Department, and M. Sterzik has been appointed Head of the La Silla Science Operations Department. Both report to the Head of Science of the La Silla and Paranal Observatory, G. Mathys.

UT1 operations

Distribution of telescope usage – Period 73

Fraction of available time (%)	Apr04	May04	Jun04	Jul04	Aug04	Sep04
ISAAC	56.0	60.4	35.1	69.1	64.9	57.2
FORS-1	17.5	34.8	0.0	0.0	0.0	0.0
FORS-2	0.0	0.0	36.5	30.9	34.0	40.6
VLTI	0.0	3.4	26.6	0.0	0.0	0.0
No instrument	26.5	1.4	0.0	0.0	1.0	2.2
Non-operational time	0.0	0.0	0.0	0.0	0.0	0.0
Engineering time	28.6	1.5	4.9	0.3	1.2	10.2
Commissioning time	0.0	3.3	10.0	0.0	0.0	0.0
Non-operational time	0.0	0.0	0.0	0.0	0.0	0.0
Science time	71.4	95.2	85.1	99.7	98.8	89.8
Visitor mode	30.9	33.2	38.5	40.3	33.6	0.0
Service mode	69.1	66.8	61.5	59.7	66.4	100.0
Technical downtime	2.7	3.2	1.3	5.3	0.3	0.7
Weather downtime	17.6	4.8	4.8	14.8	24.8	7.1
Execution downtime	0.9	1.8	0.1	0.5	0.5	1.2
Preparation downtime	0.9	0.2	0.5	0.2	0.0	0.4
Idle downtime	0.0	0.0	0.4	0.0	0.0	0.7
Other downtime	0.0	0.3	0.0	0.3	0.0	0.0

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between April and September 2004

```
ISAAC            104.7 nights or  57.2% of the time
FORS-1            16.0 nights or   8.7% of the time
FORS-2            43.3 nights or  23.7% of the time
VLTI               9.1 nights or   5.0% of the time
No instruments     9.8 nights or   5.4% of the time
No operations      0.0 nights or   0.0% of the time


Number of frames transferred to the archive:

     ISAAC     39858
     FORS-2    37232
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```
Engineering time       14.2 nights or   7.8% of the time
Commissioning time      4.0 nights or   2.2% of the time
Non-operational time    0.0 nights or   0.0% of the time
Science time          164.8 nights or  90.0% of the time

Visitor         49.0 nights or  29.7% of the science time
Service        115.8 nights or  70.3% of the science time


Number of visitor runs: 27
Average run length: 1.8 nights


Total technical downtime:     2367 minutes or   2.3%
Total weather downtime:      12529 minutes or  12.4%
Total execution downtime:      855 minutes or   0.8%
Total preparation downtime:    321 minutes or   0.3%
Total idle downtime:           182 minutes or   0.2%
Total other downtime:          128 minutes or   0.1%
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Instrument efficiency – Period 73

Efficiency (%)	Apr04	May04	Jun04	Jul04	Aug04	Sep04
ISAAC	54.6	67.3	50.5	59.0	55.0	66.4
FORS-2	73.4	75.3	67.0	75.6	72.2	73.5

(Instrument efficiencies are defined as the ratio of the total integration time to the available observing time, after subtraction of the downtime and exclusion of the engineering, commissioning and technical periods.)

Users' feedback – Period 73

	E	G	A	P	NA
Support astronomer	16	2	0	0	0
Telescope operator	15	2	0	0	1
Technical support	15	2	0	0	1
On-line pipeline	9	1	1	1	6
User's workstation	8	5	3	0	2
Residence computers	7	9	2	0	0
Doc. about ESO	14	3	1	0	0
Doc. about Paranal	16	1	1	0	0
Instrument manuals	10	8	0	0	0

(18 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

Distribution of telescope usage – Period 74

Fraction of available time (%)	Oct04	Nov04	Dec04	Jan05	Feb05	Mar05
ISAAC	57.2	42.8	38.0	61.8	41.6	
FORS-2	42.8	56.4	62.0	36.0	54.8	
VLTI	0.0	0.0	0.0	0.0	0.0	
No instrument	0.0	0.8	0.0	2.2	3.6	
Non-operational time	0.0	0.0	0.0	0.0	0.0	
Engineering time	1.8	2.2	0.0	2.8	3.6	
Commissioning time	0.0	0.0	0.0	0.0	0.0	
Non-operational time	0.0	0.0	0.0	0.0	0.0	
Science time	98.2	97.8	100.0	97.2	96.4	
Visitor mode	52.7	66.6	59.2	11.5	18.2	
Service mode	47.3	33.4	40.8	88.5	81.8	
Technical downtime	0.5	0.9	1.2	1.8	0.6	
Weather downtime	2.1	0.0	1.0	11.3	28.4	
Execution downtime	0.4	0.1	0.2	0.3	1.2	
Preparation downtime	0.1	0.1	0.2	0.7	0.6	
Idle downtime	0.0	0.0	0.0	0.1	0.0	
Other downtime	0.0	0.0	0.0	0.0	0.0	

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between October 2004 and February 2005

```
ISAAC              73.2 nights or  48.5% of the time
FORS-2             75.9 nights or  50.3% of the time
VLTI                0.0 nights or   0.0% of the time
No instruments      2.0 nights or   1.3% of the time
No operations       0.0 nights or   0.0% of the time


Number of frames transferred to the archive:

     ISAAC     22410
     FORS-2    32916
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```
Engineering time          3.2 nights or   2.1% of the time
Commissioning time        0.0 nights or   0.0% of the time
Non-operational time      0.0 nights or   0.0% of the time
Science time            147.8 nights or  97.9% of the time

Visitor           62.3 nights or  42.2% of the science time
Service           85.7 nights or  58.0% of the science time


Number of visitor runs: 23
Average run length: 2.7 nights


Total technical downtime:       701 minutes or   1.0%
Total weather downtime:        5911 minutes or   8.3%
Total execution downtime:       309 minutes or   0.4%
Total preparation downtime:     229 minutes or   0.3%
Total idle downtime:              0 minutes or   0.0%
Total other downtime:             0 minutes or   0.0%
```

Instrument efficiency – Period 74

Efficiency (%)	Oct04	Nov04	Dec04	Jan04	Feb04	Mar04
ISAAC	67.3	77.8	74.2	59.5	65.7	
FORS-2	85.2	80.3	86.0	74.1	69.6	

(Instrument efficiencies are defined as the ratio of the total integration time to the available observing time, after subtraction of the downtime and exclusion of the engineering, commissioning and technical periods.)

Users' feedback – Period 74

	E	G	A	P	NA
Support astronomer	17	1	0	0	0
Telescope operator	16	2	0	0	0
Technical support	15	1	0	0	2
On-line pipeline	6	3	2	1	6
User's workstation	8	3	4	2	1
Residence computers	9	3	2	1	3
Doc. about ESO	11	6	1	0	0
Doc. about Paranal	12	6	0	0	0
Instrument manuals	10	8	0	0	0

(18 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

UT2 operations

Distribution of telescope usage – Period 73

Fraction of available time (%)	Apr04	May04	Jun04	Jul04	Aug04	Sep04
UVES	61.4	45.8	16.5	16.7	25.4	40.2
FLAMES	25.2	42.2	57.3	23.2	16.5	24.3
FORS-1	0.0	0.0	4.1	37.9	55.1	28.3
VLTI	11.5	9.8	6.6	22.2	1.4	7.0
No instrument	1.9	2.2	15.5	0.0	1.7	0.2
Non-operational time	0.0	0.0	0.0	0.0	0.0	0.0
Engineering time	6.0	2.2	20.6	0.1	4.1	6.0
Commissioning time	0.0	9.8	0.0	0.0	1.4	0.0
Non-operational time	0.0	0.0	0.0	0.0	0.0	0.0
Science time	94.0	88.0	79.4	99.9	94.5	94.0
Visitor mode	31.3	11.3	48.6	11.3	11.1	42.8
Service mode	68.7	88.7	51.4	88.7	88.9	57.2
Technical downtime	1.9	3.9	3.4	2.5	0.5	2.0
Weather downtime	12.6	4.0	6.0	14.9	27.9	5.8
Execution downtime	0.9	1.0	0.6	2.3	0.2	1.1
Preparation downtime	0.2	0.2	0.1	0.6	0.2	0.1
Idle downtime	0.0	0.0	0.0	0.0	1.2	0.0
Other downtime	0.0	0.4	0.1	0.2	0.2	0.0

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between April and September 2004

```
UVES              62.7 nights or  34.3% of the time
FLAMES            57.5 nights or  31.4% of the time
FORS-1            38.6 nights or  21.1% of the time
VLTI              17.9 nights or   9.8% of the time
No instruments     6.5 nights or   3.6% of the time
No operations      0.0 nights or   0.0% of the time


Number of frames transferred to the archive:

     UVES      24923
     GIRAFFE    5007
     FORS-1    16514
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```
Engineering time       11.8 nights or   6.4% of the time
Commissioning time      3.4 nights or   1.9% of the time
Non-operational time    0.0 nights or   0.0% of the time
Science time          167.8 nights or  91.7% of the time

Visitor          42.3 nights or  25.2% of the science time
Service         125.4 nights or  74.7% of the science time


Number of visitor runs: 31
Average run length: 1.4 nights


Total technical downtime:     2488 minutes or   2.4%
Total weather downtime:      12526 minutes or  12.2%
Total execution downtime:     1065 minutes or   1.0%
Total preparation downtime:    240 minutes or   0.2%
Total idle downtime:           209 minutes or   0.2%
Total other downtime:          144 minutes or   0.1%
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Instrument efficiency – Period 73

Efficiency (%)	Apr04	May04	Jun04	Jul04	Aug04	Sep04
UVES	81.4	82.5	74.3	83.1	80.1	83.4
FLAMES	72.2	80.2	81.5	77.0	72.0	86.2
FORS-1	44.4	55.0	59.1	57.4	65.2	64.2

(Instrument efficiencies are defined as the ratio of the total integration time to the available observing time, after subtraction of the downtime and exclusion of the engineering, commissioning and technical periods.)

Users' feedback – Period 73

	E	G	A	P	NA
Support astronomer	16	3	0	0	0
Telescope operator	17	2	0	0	0
Technical support	14	4	0	0	1
On-line pipeline	5	5	4	1	4
User's workstation	7	6	2	3	1
Residence computers	8	7	3	0	1
Doc. about ESO	17	2	0	0	0
Doc. about Paranal	16	3	0	0	0
Instrument manuals	13	6	0	0	0

(10 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

Distribution of telescope usage – Period 74

Fraction of available time (%)	Oct04	Nov04	Dec04	Jan05	Feb05	Mar05
UVES	38.5	29.2	25.2	29.6	18.5	
FLAMES	21.0	37.1	38.6	46.2	29.2	
FORS-1	133.4	28.9	17.0	16.8	17.0	
VLTI	27.1	4.3	19.1	6.2	34.2	
No instrument	0.0	0.6	0.2	1.1	1.0	
Non-operational time	0.0	0.0	0.0	0.0	0.0	
Engineering time	0.2	0.6	3.9	1.3	9.8	
Commissioning time	18.8	0.0	3.2	0.0	10.8	
Non-operational time	0.0	0.0	0.0	0.0	0.0	
Science time	81.1	99.4	92.9	98.7	79.4	
Visitor mode	53.9	48.2	43.6	54.3	60.8	
Service mode	46.1	51.8	56.4	45.7	39.2	
Technical downtime	2.9	2.9	1.3	1.0	0.9	
Weather downtime	2.7	0.0	2.3	10.8	22.5	
Execution downtime	0.9	0.7	0.5	1.0	0.2	
Preparation downtime	0.4	0.2	0.3	0.4	0.0	
Idle downtime	0.0	0.0	0.0	0.0	0.0	
Other downtime	0.5	0.0	0.0	0.0	0.0	

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between October 2004 and February 2005

```
UVES              42.9 nights or  28.4% of the time
FLAMES            52.1 nights or  34.5% of the time
FORS-1            28.2 nights or  18.7% of the time
VLTI              27.1 nights or  17.9% of the time
No instruments     1.0 nights or   0.7% of the time
No operations      0.0 nights or   0.0% of the time


Number of frames transferred to the archive:

     UVES      19352
     GIRAFFE    4273
     FORS-1    10445
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```
Engineering time          4.6 nights or   3.0% of the time
Commissioning time        9.8 nights or   6.5% of the time
Non-operational time      0.0 nights or   0.0% of the time
Science time            136.5 nights or  90.4% of the time

Visitor           70.5 nights or  51.6% of the science time
Service           65.9 nights or  48.3% of the science time


Number of visitor runs: 36
Average run length: 2.0 nights


Total technical downtime:      1198 minutes or   1.8%
Total weather downtime:        4719 minutes or   7.2%
Total execution downtime:       431 minutes or   0.7%
Total preparation downtime:     177 minutes or   0.3%
Total idle downtime:              0 minutes or   0.0%
Total other downtime:            61 minutes or   0.1%
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Instrument efficiency – Period 74

Efficiency (%)	Oct04	Nov04	Dec04	Jan04	Feb04	Mar04
UVES	89.7	68.0	76.2	77.5	87.9	
FLAMES	88.1	88.0	84.9	85.8	84.6	
FORS-1	64.1	64.6	49.0	61.7	67.9	

(Instrument efficiencies are defined as the ratio of the total integration time to the available observing time, after subtraction of the downtime and exclusion of the engineering, commissioning and technical periods.)

Users' feedback – Period 74

	E	G	A	P	NA
Support astronomer	18	2	0	0	0
Telescope operator	17	2	0	0	1
Technical support	17	2	0	0	1
On-line pipeline	11	4	3	2	0
User's workstation	6	9	1	1	3
Residence computers	12	6	1	0	1
Doc. about ESO	13	7	0	0	0
Doc. about Paranal	14	5	1	0	0
Instrument manuals	15	4	1	0	0

(20 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

UT3 operations

Distribution of telescope usage – Period 73

Fraction of available time (%)	Apr04	May04	Jun04	Jul04	Aug04	Sep04
VIMOS	65.2	56.3	63.4	53.1	58.1	60.7
VISIR	7.5	31.8	3.3	19.5	18.9	38.8
VLTI	13.2	9.8	33.3	25.6	23.0	0.0
No instrument	14.1	2.1	0.0	1.8	0.0	0.6
Non-operational time	0.0	0.0	0.0	0.0	0.0	0.0
Engineering time	23.5	2.4	0.4	8.6	0.0	3.0
Commissioning time	7.5	41.7	13.3	19.5	38.7	31.8
Non-operational time	0.0	0.0	0.0	0.0	0.0	0.0
Science time	68.9	55.9	86.3	71.8	61.3	65.2
Visitor mode	43.9	11.7	52.8	5.4	0.0	51.2
Service mode	56.1	88.3	47.2	94.6	100.0	48.8
Technical downtime	9.7	13.4	11.0	4.4	12.5	8.0
Weather downtime	16.6	7.1	3.9	9.8	37.3	0.2
Execution downtime	0.8	0.0	0.3	0.1	0.1	0.5
Preparation downtime	0.4	0.0	0.4	0.1	0.0	0.0
Idle downtime	0.0	0.0	0.4	6.4	0.1	0.0
Other downtime	0.0	0.1	0.0	1.5	0.0	0.0

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between April and September 2004

```
VIMOS            108.6 nights or  59.3% of the time
VISIR             36.8 nights or  20.1% of the time
VLTI              32.0 nights or  17.5% of the time
No instruments     5.6 nights or   3.1% of the time
No operations      0.0 nights or   0.0% of the time


Number of frames transferred to the archive:

     VIMOS     59584
     VISIR     16902
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Engineering time       11.6 nights or   6.3% of the time
Commissioning time     46.8 nights or  25.6% of the time
Non-operational time    0.0 nights or   0.0% of the time
Science time          124.8 nights or  68.2% of the time

Visitor         36.0 nights or  28.8% of the science time
Service         88.8 nights or  71.1% of the science time


Number of visitor runs: 18
Average run length: 2.0 nights


Total technical downtime:     7177 minutes or   9.3%
Total weather downtime:       9165 minutes or  12.0%
Total execution downtime:      217 minutes or   0.3%
Total preparation downtime:    125 minutes or   0.2%
Total idle downtime:           985 minutes or   1.3%
Total other downtime:          226 minutes or   0.3%
```

Instrument efficiency – Period 73

Efficiency (%)	Apr04	May04	Jun04	Jul04	Aug04	Sep04
VIMOS	70.5	64.4	64.4	65.4	66.4	69.9
VISIR	N/A	N/A	N/A	N/A	58.2	40.7

(Instrument efficiencies are defined as the ratio of the total integration time to the available observing time, after subtraction of the downtime and exclusion of the engineering, commissioning and technical periods.)

Users' feedback – Period 73

	E	G	A	P	NA
Support astronomer	3	1	0	0	0
Telescope operator	1	3	0	0	0
Technical support	3	1	0	0	0
On-line pipeline	0	1	2	0	1
User's workstation	0	1	2	0	1
Residence computers	0	4	0	0	0
Doc. about ESO	2	2	0	0	0
Doc. about Paranal	2	2	0	0	0
Instrument manuals	1	2	0	0	1

(10 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

Distribution of telescope usage – Period 74

Fraction of available time (%)	Oct04	Nov04	Dec04	Jan05	Feb05	Mar05
VIMOS	70.8	64.6	61.1	57.1	53.9	
VISIR	13.6	21.0	6.1	42.9	10.7	
VLTI	15.6	14.4	32.8	0.0	23.8	
No instrument	0.0	0.0	0.0	0.0	11.6	
Non-operational time	0.0	0.0	0.0	0.0	0.0	
Engineering time	0.4	1.5	0.5	0.0	23.5	
Commissioning time	26.1	25.1	12.5	29.8	12.5	
Non-operational time	0.0	0.0	0.0	0.0	0.0	
Science time	73.5	73.4	86.9	70.2	64.1	
Visitor mode	4.2	25.9	16.5	36.8	12.9	
Service mode	95.8	74.1	83.5	63.2	87.1	
Technical downtime	7.2	8.4	3.1	3.8	3.4	
Weather downtime	4.8	0.0	1.4	13.6	25.3	
Execution downtime	0.5	0.1	0.4	0.4	0.0	
Preparation downtime	0.0	0.0	0.2	0.1	0.2	
Idle downtime	0.0	0.0	0.0	0.0	1.2	
Other downtime	0.0	0.0	0.6	0.0	0.0	

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between October 2004 and February 2005

```
VIMOS              93.0 nights or  61.6% of the time
VISIR              28.7 nights or  19.0% of the time
VLTI               26.0 nights or  17.2% of the time
No instruments      3.2 nights or   2.1% of the time
No operations       0.0 nights or   0.0% of the time


Number of frames transferred to the archive:

     VIMOS     49054
     VISIR     15748
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Engineering time          7.3 nights or   4.8% of the time
Commissioning time       32.2 nights or  21.3% of the time
Non-operational time      0.0 nights or   0.0% of the time
Science time            111.5 nights or  73.8% of the time

Visitor          21.5 nights or  19.3% of the science time
Service          90.0 nights or  80.7% of the science time


Number of visitor runs: 13.5
Average run length: 1.6 nights


Total technical downtime:      2787 minutes or   5.2%
Total weather downtime:        4399 minutes or   8.2%
Total execution downtime:       165 minutes or   0.3%
Total preparation downtime:      51 minutes or   0.1%
Total idle downtime:            110 minutes or   0.2%
Total other downtime:            73 minutes or   0.1%
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Instrument efficiency – Period 74

Efficiency (%)	Oct04	Nov04	Dec04	Jan04	Feb04	Mar04
VIMOS	70.8	75.9	72.8	76.9	72.2	
VISIR	N/A	53.8	53.0	43.3	50.0	

(Instrument efficiencies are defined as the ratio of the total integration time to the available observing time, after subtraction of the downtime and exclusion of the engineering, commissioning and technical periods.)

Users' feedback – Period 74

	E	G	A	P	NA
Support astronomer	3	0	0	0	0
Telescope operator	3	0	0	0	0
Technical support	3	0	0	0	0
On-line pipeline	1	1	0	1	0
User's workstation	0	1	1	1	0
Residence computers	0	2	1	0	0
Doc. about ESO	2	1	0	0	0
Doc. about Paranal	2	1	0	0	0
Instrument manuals	1	2	0	0	0

(3 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

UT4 operations

Distribution of telescope usage – Period 73

Fraction of available time (%)	Apr04	May04	Jun04	Jul04	Aug04	Sep04
NACO	46.4	66.4	77.8	52.1	34.0	92.5
FORS-2	53.6	17.7	0.0	0.0	0.0	0.0
SINFONI	0.0	3.3	21.7	42.0	38.7	0.0
VLTI	0.0	0.0	0.0	5.4	23.0	7.1
No instrument	0.0	12.6	0.5	0.5	4.2	0.4
Non-operational time	0.0	0.0	0.0	0.0	0.0	0.0
Engineering time	1.9	14.6	6.1	6.1	5.5	7.9
Commissioning time	0.0	3.3	21.7	45.6	58.4	0.0
Non-operational time	0.0	0.0	0.0	0.0	0.0	0.0
Science time	98.1	82.1	72.3	48.4	36.1	92.1
Visitor mode	51.6	34.5	56.8	44.7	47.1	33.1
Service mode	48.4	65.5	43.2	55.3	52.9	66.9
Technical downtime	2.5	5.1	3.2	3.0	1.3	4.2
Weather downtime	12.6	4.4	6.9	27.6	45.7	15.2
Execution downtime	0.5	0.5	0.0	0.0	0.5	0.4
Preparation downtime	0.2	0.6	0.0	0.0	0.3	0.0
Idle downtime	0.0	1.2	0.0	0.0	0.0	0.0
Other downtime	0.1	0.0	0.0	0.0	0.0	0.1

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between April and September 2004

```
NACO              99.3 nights or  54.3% of the time
FORS-2            34.5 nights or  18.9% of the time
SINFONI           32.5 nights or  17.8% of the time
VLTI              10.9 nights or   6.0% of the time
No instruments     5.6 nights or   3.1% of the time
No operations      0.0 nights or   0.0% of the time


Number of frames transferred to the archive:

     NACO      48833
     SINFONI   12132
```

```
Engineering time       12.9 nights or   7.0% of the time
Commissioning time     39.7 nights or  21.7% of the time
Non-operational time    0.0 nights or   0.0% of the time
Science time          130.3 nights or  71.2% of the time

Visitor         57.4 nights or  44.1% of the science time
Service         73.0 nights or  56.0% of the science time


Number of visitor runs: 44
Average run length: 1.3 nights


Total technical downtime:     2735 minutes or   3.4%
Total weather downtime:      11973 minutes or  15.1%
Total execution downtime:      256 minutes or   0.3%
Total preparation downtime:    156 minutes or   0.2%
Total idle downtime:           190 minutes or   0.2%
Total other downtime:           29 minutes or   0.0%
```

Instrument efficiency – Period 73

Efficiency (%)	Apr04	May04	Jun04	Jul04	Aug04	Sep04
NACO	43.2	45.8	39.4	43.1	43.8	45.3
SINFONI	N/A	N/A	N/A	N/A	72.0	N/A

(Instrument efficiencies are defined as the ratio of the total integration time to the available observing time, after subtraction of the downtime and exclusion of the engineering, commissioning and technical periods.)

Users' feedback – Period 73

	E	G	A	P	NA
Support astronomer	10	5	0	0	0
Telescope operator	13	2	0	0	0
Technical support	12	3	0	0	0
On-line pipeline	3	6	3	0	3
User's workstation	4	5	2	1	3
Residence computers	6	3	6	0	0
Doc. about ESO	7	6	0	0	2
Doc. about Paranal	8	5	0	1	1
Instrument manuals	7	7	0	0	1

(15 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

Distribution of telescope usage – Period 74

Fraction of available time (%)	Oct04	Nov04	Dec04	Jan05	Feb05	Mar05
NACO	55.4	62.0	68.7	91.4	57.8	
SINFONI	16.5	23.6	6.4	0.0	8.9	
VLTI	22.6	10.7	24.9	7.0	25.7	
No instrument	2.3	2.4	0.0	1.6	7.2	
Non-operational time	3.2	1.4	0.0	0.0	0.0	
Engineering time	5.4	4.5	0.9	2.3	10.9	
Commissioning time	29.9	24.7	8.8	0.0	18.3	
Non-operational time	3.2	1.4	0.0	0.0	0.0	
Science time	61.6	69.5	90.3	97.7	70.8	
Visitor mode	59.3	56.4	50.6	33.4	16.5	
Service mode	40.7	43.6	49.4	66.6	83.5	
Technical downtime	7.7	4.3	3.2	1.4	1.6	
Weather downtime	10.9	1.7	1.5	13.9	25.6	
Execution downtime	0.9	0.3	0.2	0.3	0.0	
Preparation downtime	0.0	0.0	0.8	1.0	0.5	
Idle downtime	2.3	0.0	0.0	0.0	0.0	
Other downtime	0.0	0.0	0.4	0.0	0.0	

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between October 2004 and February 2005

```
NACO              101.6 nights or  67.3% of the time
SINFONI            16.7 nights or  11.1% of the time
VLTI               27.3 nights or  18.1% of the time
No instruments      4.0 nights or   2.6% of the time
No operations       1.4 nights or   0.9% of the time


Number of frames transferred to the archive:

     NACO      43821
     SINFONI    9525
```

```
Engineering time          7.1 nights or   4.7% of the time
Commissioning time       24.5 nights or  16.2% of the time
Non-operational time      1.4 nights or   0.9% of the time
Science time            118.0 nights or  78.1% of the time

Visitor           50.7 nights or  43.0% of the science time
Service           67.5 nights or  57.2% of the science time


Number of visitor runs: 31
Average run length: 1.6 nights


Total technical downtime:      1947 minutes or   3.5%
Total weather downtime:        5946 minutes or  10.6%
Total execution downtime:       182 minutes or   0.3%
Total preparation downtime:     293 minutes or   0.5%
Total idle downtime:            229 minutes or   0.4%
Total other downtime:            45 minutes or   0.1%
```

Instrument efficiency – Period 74

Efficiency (%)	Oct04	Nov04	Dec04	Jan04	Feb04	Mar04
NACO	48.6	43.1	47.4	49.1	42.5	
SINFONI	N/A	92.0	93.4	N/A	N/A	

(Instrument efficiencies are defined as the ratio of the total integration time to the available observing time, after subtraction of the downtime and exclusion of the engineering, commissioning and technical periods.)

Users' feedback – Period 74

	E	G	A	P	NA
Support astronomer	12	2	0	0	0
Telescope operator	13	1	0	0	0
Technical support	11	2	0	0	1
On-line pipeline	5	2	2	0	5
User's workstation	5	6	0	0	3
Residence computers	7	2	3	0	2
Doc. about ESO	9	4	0	0	1
Doc. about Paranal	8	4	2	0	0
Instrument manuals	6	6	2	0	0

(14 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

VLTI operations

Distribution of telescope usage – Period 73

Fraction of available time (%)	Apr04	May04	Jun04	Jul04	Aug04	Sep04
MIDI	100.0	0.0	100.0	100.0	42.7	93.9
AMBER	0.0	100.0	0.0	0.0	0.0	0.0
No instrument	0.0	0.0	0.0	0.0	57.3	0.0
Non-operational time	0.0	0.0	0.0	0.0	0.0	6.1
Engineering time	9.1	0.0	0.7	0.0	0.0	60.9
Commissioning time	0.0	100.0	30.0	0.0	100.0	0.0
Non-operational time	0.0	0.0	0.0	0.0	0.0	6.1
Science time	90.9	0.0	69.3	100.0	0.0	33.0
Visitor mode	9.1	N/A	84.4	15.2	N/A	0.0
Service mode	90.9	N/A	15.6	84.8	N/A	100.0
Technical downtime	12.0	N/A	32.5	7.6	N/A	11.0
Weather downtime	0.0	N/A	3.4	13.1	N/A	0.0
Execution downtime	3.8	N/A	0.0	0.0	N/A	0.0
Preparation downtime	1.1	N/A	0.0	0.3	N/A	0.0
Idle downtime	0.0	N/A	1.6	15.0	N/A	0.0
Other downtime	0.0	N/A	12.6	8.0	N/A	0.0

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between April and September 2004

```
MIDI              26.9 nights or  79.1% of the time
AMBER              3.0 nights or   8.8% of the time
No instruments     4.0 nights or  11.8% of the time
No operations      0.1 nights or   0.3% of the time


Number of frames transferred to the archive:

     MIDI        7044
     AMBER      17258
```

```
Engineering time          1.7 nights or   5.0% of the time
Commissioning time       13.0 nights or  38.2% of the time
Non-operational time      0.1 nights or   0.3% of the time
Science time             19.2 nights or  56.5% of the time

Visitor            7.2 nights or  37.5% of the science time
Service           12.0 nights or  62.5% of the science time


Number of visitor runs: 9
Average run length: 0.8 nights


Total technical downtime:       2116 minutes or  17.7%
Total weather downtime:          805 minutes or   6.7%
Total execution downtime:         82 minutes or   0.7%
Total preparation downtime:       38 minutes or   0.3%
Total idle downtime:             824 minutes or   6.9%
Total other downtime:            959 minutes or   8.0%
```

Users' feedback – Period 73

	E	G	A	P	NA
Support astronomer	2	0	0	1	0
Telescope operator	2	0	1	0	0
Technical support	1	1	1	0	0
On-line pipeline	1	0	0	0	2
User's workstation	0	1	0	0	2
Residence computers	2	1	0	0	0
Doc. about ESO	2	1	0	0	0
Doc. about Paranal	2	1	0	0	0
Instrument manuals	2	0	1	0	0

(3 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

Distribution of telescope usage – Period 74

Fraction of available time (%)	Oct04	Nov04	Dec04	Jan05	Feb05	Mar05
MIDI	44.1	38.3	50.1	100.0	57.8	
AMBER	55.9	0.0	49.9	0.0	36.4	
No instrument	0.0	41.3	0.0	0.0	0.0	
Non-operational time	0.0	20.3	0.0	0.0	5.8	
Engineering time	0.0	0.0	0.0	0.0	12.1	
Commissioning time	67.0	36.4	30.0	0.0	26.9	
Non-operational time	0.0	20.3	0.0	0.0	5.8	
Science time	33.0	38.3	70.0	100.0	55.2	
Visitor mode	41.9	100.0	49.2	29.8	37.1	
Service mode	58.1	0.0	50.8	70.2	62.9	
Technical downtime	3.6	27.4	6.8	21.8	3.0	
Weather downtime	0.0	0.0	0.0	0.0	23.5	
Execution downtime	0.0	0.0	0.2	0.0	0.0	
Preparation downtime	0.0	0.0	0.6	0.0	0.5	
Idle downtime	15.4	0.0	0.0	0.0	0.0	
Other downtime	14.0	11.4	3.6	0.0	2.6	

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between October 2004 and February 2005

```
MIDI              19.7 nights or  51.8% of the time
AMBER             14.0 nights or  36.8% of the time
No instruments     2.5 nights or   6.6% of the time
No operations      1.8 nights or   4.7% of the time


Number of frames transferred to the archive:

     MIDI       4401
     AMBER     17405
```

```
Engineering time         1.3 nights or   3.4% of the time
Commissioning time      14.2 nights or  37.4% of the time
Non-operational time     1.8 nights or   4.7% of the time
Science time            20.4 nights or  53.7% of the time

Visitor           9.8 nights or  48.0% of the science time
Service          10.5 nights or  51.5% of the science time


Number of visitor runs: 8.5
Average run length: 1.2 nights


Total technical downtime:       854 minutes or   8.8%
Total weather downtime:         736 minutes or   7.6%
Total execution downtime:        10 minutes or   0.1%
Total preparation downtime:      35 minutes or   0.4%
Total idle downtime:            229 minutes or   2.4%
Total other downtime:           526 minutes or   5.4%
```

Users' feedback – Period 74

	E	G	A	P	NA
Support astronomer	4	1	0	0	0
Telescope operator	3	2	0	0	0
Technical support	2	3	0	0	0
On-line pipeline	0	1	2	0	2
User's workstation	0	2	1	1	1
Residence computers	0	4	0	0	1
Doc. about ESO	1	3	0	0	1
Doc. about Paranal	1	3	1	0	0
Instrument manuals	1	3	0	0	1

(5 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

NTT operations

Distribution of telescope usage – Period 73

Fraction of available time (%)	Apr04	May04	Jun04	Jul04	Aug04	Sep04
EMMI	76.0	57.7	32.1	30.0	76.5	93.3
SUSI-2	8.0	3.8	17.9	23.3	0.0	6.7
SOFI	16.0	38.5	50.0	46.7	23.5	0.0
Engineering time	6.7	16.1	3.3	3.2	25.8	16.7
Science time	93.3	83.9	96.7	96.8	74.2	83.3
Technical downtime	0.4	0.7	0.2	1.0	2.0	1.1
Weather downtime	21.7	24.7	14.4	40.2	43.7	9.5

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between April and September 2004

```
EMMI              109.1 nights or  59.6% of the time
SUSI-2             19.9 nights or  10.9% of the time
SOFI               54.0 nights or  29.5% of the time


Engineering time       22.0 nights or  12.1% of the time
Science time          161.0 nights or  88.0% of the time

Total technical downtime:     1034 minutes or   0.9%
Total weather downtime:      31074 minutes or  27.9%
```

Instrument efficiency – Period 73

Efficiency (%)	Apr04	May04	Jun04	Jul04	Aug04	Sep04
EMMI	64.0	59.6	65.4	51.8	N/A	85.0
SUSI-2	N/A	N/A	71.4	79.0	N/A	72.0
SOFI	N/A	N/A	N/A	N/A	N/A	N/A

Users' feedback – Period 73

	E	G	A	P	NA
Setup and introduction	15	7	0	0	0
Telescope operator	15	6	0	0	1
Technical support	17	4	1	0	0
On-line computers	13	4	1	0	4
Off-line computers	11	5	0	0	6
Doc. about ESO	13	9	0	0	0
Doc. about La Silla	11	10	1	0	0
Instrument manuals	13	8	1	0	0

(22 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

Distribution of telescope usage – Period 74

Fraction of available time (%)	Oct04	Nov04	Dec04	Jan05	Feb05	Mar05
EMMI	41.9	45.7	30.8	48.6	72.1	
SUSI-2	16.1	5.7	15.4	20.0	4.9	
SOFI	41.9	48.6	53.8	31.4	23.0	
Engineering time	6.5	10.0	3.2	0.0	14.3	
Science time	93.5	90.0	96.8	100.0	85.7	
Technical downtime	3.3	0.5	1.1	1.6	1.9	
Weather downtime	20.3	35.0	3.9	8.9	3.4	

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between October 2004 and February 2005

```
EMMI                 70.9 nights or  46.9% of the time
SUSI-2               19.0 nights or  12.6% of the time
SOFI                 61.1 nights or  40.5% of the time


Engineering time       10.0 nights or   6.6% of the time
Science time          141.0 nights or  93.4% of the time

Total technical downtime:     1116 minutes or   1.5%
Total weather downtime:      11244 minutes or  15.0%
```

Instrument efficiency – Period 74

Efficiency (%)	Oct04	Nov04	Dec04	Jan05	Feb05	Mar05
EMMI	77	76	79	76	77	
SUSI-2	72	72	73	76	N/A	
SOFI	-	-	-	-	-	

Users' feedback – Period 74

	E	G	A	P	NA
Setup and introduction	13	5	0	0	0
Telescope operator	13	3	2	0	0
Technical support	13	5	0	0	0
On-line computers	7	5	2	1	3
Off-line computers	7	4	0	0	7
Doc. about ESO	10	6	1	0	1
Doc. about La Silla	9	9	0	0	0
Instrument manuals	9	5	4	0	0

(18 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

3.6m telescope operations

Distribution of telescope usage – Period 73

Fraction of available time (%)	Apr04	May04	Jun04	Jul04	Aug04	Sep04
EFOSC-2	11.1	9.7	20.0	0.0	35.3	0.0
TIMMI-2	29.6	25.8	46.7	0.0	0.0	0.0
CES	0.0	0.0	0.0	0.0	0.0	33.3
HARPS	0.0	64.5	33.3	100.0	64.7	66.7
Visitor instrument	59.3	0.0	0.0	0.0	0.0	0.0
Engineering time	6.7	19.4	3.3	12.9	48.4	13.3
Science time	93.3	80.6	96.7	87.1	51.6	86.7
Technical downtime	0.5	0.4	0.8	0.3	2.2	0.5
Weather downtime	17.4	18.5	13.8	36.2	21.4	6.3

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between April and September 2004

```
EFOSC-2           20.2 nights or  11.0% of the time
TIMMI-2           33.7 nights or  18.4% of the time
CES               12.3 nights or   6.7% of the time
HARPS             98.8 nights or  54.0% of the time
Visitor instr.    18.0 nights or   9.8% of the time

Engineering time       37.0 nights or  20.2% of the time
Science time          146.0 nights or  79.8% of the time

Total technical downtime:      849 minutes or   0.8%
Total weather downtime:      21270 minutes or  19.0%
```

Instrument efficiency – Period 73

Efficiency (%)	Apr04	May04	Jun04	Jul04	Aug04	Sep04
EFOSC-2	69.0	56.8	62.7	N/A	61.0	N/A
TIMMI-2	N/A	N/A	N/A	N/A	N/A	N/A
CES	N/A	N/A	N/A	N/A	N/A	77.0
HARPS	N/A	72.5	72.8	N/A	59.9	70.0

Users' feedback – Period 73

	E	G	A	P	NA
Setup and introduction	5	2	0	0	0
Telescope operator	6	1	0	0	0
Technical support	6	1	0	0	0
On-line computers	2	4	1	0	0
Off-line computers	3	3	0	0	1
Doc. about ESO	4	2	1	0	0
Doc. about La Silla	4	2	1	0	0
Instrument manuals	3	2	1	1	0

(7 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

Distribution of telescope usage – Period 74

Fraction of available time (%)	Oct04	Nov04	Dec04	Jan05	Feb05	Mar05
EFOSC-2	0.0	24.0	32.1	24.1	19.2	
TIMMI-2	19.4	0.0	0.0	24.1	26.9	
CES	0.0	0.0	3.6	12.0	0.0	
HARPS	80.6	76.0	64.3	48.0	53.8	
Engineering time	19.4	16.7	9.7	16.7	21.4	
Science time	80.6	83.3	90.3	83.3	78.6	
Technical downtime	1.2	0.3	1.5	0.6	1.9	
Weather downtime	9.7	36.9	4.5	6.5	6.4	

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between October 2004 and February 2005

```
EFOSC-2            29.3 nights or  19.4% of the time
TIMMI-2            21.7 nights or  14.4% of the time
CES                 4.3 nights or   2.9% of the time
HARPS              95.6 nights or  63.3% of the time


Engineering time       25.0 nights or  16.6% of the time
Science time          126.0 nights or  83.4% of the time

Total technical downtime:      768 minutes or   1.1%
Total weather downtime:       9060 minutes or  12.9%
```

Instrument efficiency – Period 74

Efficiency (%)	Oct04	Nov04	Dec04	Jan05	Feb05	Mar05
EFOSC-2	N/A	76	77	73	78	
TIMMI-2	-	N/A	N/A	-	-	
CES	N/A	N/A	N/A	85	N/A	
HARPS	58	66	-	53	78	

Users' feedback – Period 74

	E	G	A	P	NA
Setup and introduction	7	1	0	0	0
Telescope operator	7	1	0	0	0
Technical support	5	1	0	0	2
On-line computers	5	2	0	0	1
Off-line computers	3	1	0	0	4
Doc. about ESO	5	1	0	0	2
Doc. about La Silla	6	0	1	0	1
Instrument manuals	5	2	1	0	0

(8 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

2.2m telescope operations

Distribution of telescope usage – Period 73

Fraction of available time (%)	Apr04	May04	Jun04	Jul04	Aug04	Sep04
Engineering time	0.0	6.5	3.3	0.0	16.1	10.0
Science time	100.0	93.5	96.7	100.0	83.9	90.0
Technical downtime	1.1	2.3	1.8	0.9	2.4	0.4
Weather downtime	12.2	20.1	15.5	48.0	40.0	5.1

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between April and September 2004

```
Engineering time       11.0 nights or   6.0% of the time
Science time          172.0 nights or  94.0% of the time

Total technical downtime:     1605 minutes or   1.5%
Total weather downtime:      26940 minutes or  24.9%
```

Instrument efficiency – Period 73

Efficiency (%)	Apr04	May04	Jun04	Jul04	Aug04	Sep04
FEROS	78	81	83	69	65	80
WFI	67	54	54	62	N/A	55

Users' feedback – Period 73

	E	G	A	P	NA
Setup and introduction	5	3	1	0	0
Telescope operator	7	2	0	0	0
Technical support	5	4	0	0	0
On-line computers	5	3	0	0	1
Off-line computers	3	2	0	0	4
Doc. about ESO	6	3	0	0	0
Doc. about La Silla	5	4	0	0	0
Instrument manuals	4	4	1	0	0

(9 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

Distribution of telescope usage – Period 74

Fraction of available time (%)	Oct04	Nov04	Dec04	Jan05	Feb05	Mar05
Engineering time	0.0	6.7	0.0	3.2	0.0	16.1
Science time	100.0	93.3	100.0	96.8	100.0	83.9
Technical downtime	3.3	0.7	1.1	1.6	1.4	1.2
Weather downtime	12.2	37.0	3.7	10.4	1.6	2.1

(Visitor/service mode and downtime are expressed as fraction of the science time; all other entries as fraction of the total available time.)

Summary of period between October 2004 and March 2005

```
Engineering time          8.0 nights or   4.4% of the time
Science time            174.0 nights or  95.6% of the time

Total technical downtime:     1422 minutes or   1.6%
Total weather downtime:      10092 minutes or  11.6%
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Instrument efficiency – Period 74

Efficiency (%)	Oct04	Nov04	Dec04	Jan05	Feb05	Mar05
FEROS	70	67	84	66	77	73
WFI	54	72	79	72	73	69

Users' feedback – Period 74

	E	G	A	P	NA
Setup and introduction	5	1	0	0	0
Telescope operator	4	2	0	0	0
Technical support	4	2	0	0	0
On-line computers	4	2	0	0	0
Off-line computers	3	1	0	0	2
Doc. about ESO	5	1	0	0	0
Doc. about La Silla	6	0	0	0	0
Instrument manuals	5	1	0	0	0

(6 end-of-run reports received. E = excellent; G = good; A = acceptable; P = poor; NA = not applicable.)

Instruments

FORS-1 & FORS-2

Smooth operation throughout Periods 73 and 74.

FORS-1 was moved from UT1 to UT2 and FORS-2 was moved from UT4 to UT1 beginning of June 2004. The plate scales of both instruments were accurately re-determined. The move was fully transparent for the users. Advantage was taken of the move for modification of the external calibration unit of FORS-2, upgrade of its worm gear and repair of its cryostat.

Final implementation and testing of the Rapid Response Mode for both instruments was successfully completed. Several programmes using this mode were allocated time in Period 74, but due to delays in the launch of SWIFT, no trigger has occurred yet.

FORS-1: header errors generated sporadically due to scanlink problems seem to have been eradicated by application of a software patch and installation of a new TIM board. The headers of all the affected frames created between June and November 2004 have been fixed in the archive, and the corrected files have been re-sent to the users.

FORS-1: the off-axis instrumental polarisation was confirmed to be inherent to the optical design: the measured values match well ray tracing calculation results.

FORS-1: a new VPH grism (central wavelength 488 nm; resolving power 1650 with an 1.0 arcsec slit) has been installed and used in science operations in Period 74.

FORS-2: the HIT mode was offered again in Period 73. Two SM runs were successfully executed, but some concerns remain about the accuracy of the absolute time calibration. This is under investigation.

FORS-2: an intervention on the cryostat had to be performed in January 2005 to fix a vacuum leak. The lower part was replaced by the one of the old FORS-2 cryostat.

ISAAC

Smooth and efficient operation throughout Period 73. Period 74 operation was hampered by a failure of the collimator but otherwise smooth (LW observations, which were most affected, represent only a small fraction of all ISAAC observations).

The collimator broke down at the end of October 2004, and had to be put in simulation. The resulting poor image quality in the LW arm led to temporary suspension of LW operation. It was resumed in January 2005, after implementation of an operational workaround (telescope guide probe offsets are applied to absorb most of the aberrations). A technical intervention has been scheduled for beginning of April 2005.

Rapid Response Mode was implemented and was offered for use in Period 74.

Repeated problems with selected functions, occurring since January 2004, did not happen again after a faulty handset was identified and disconnected, at the beginning of Period 73.

Occasional problems with the closed cycle cooler and pre-cooling circuits (without significant impact on observation) were temporarily solved by helium refills. The problem will be further investigated during the April intervention.

UVES

Smooth and efficient operation throughout Periods 73 and 74.

Following a FIERA upgrade beginning of April 2004, the format of the Red UVES (and FLAMES-UVES) files has changed; the new format is a single FITS file with one extension per detector. A new pipeline version has been released to handle this format (old format is still supported).

A new blue-arm CCD has been installed in October 2004, in collaboration with the Instrumentation Division. Contrary to expectations, no significant overall efficiency increase was achieved. It is suspected that the laboratory measurements of the efficiency of the original CCD may have been incorrect. This original chip has been sent back to Garching to be re-measured in the lab. The UVES pipeline has been upgraded so as to be able to process frames obtained with both the old and the new CCD.

A new design bearing has been installed in January 2005 for the red cross-dispersers, with a view to improving motion accuracy and stability. If the performance proves satisfactory, the blue-cross dispersers will be upgraded with the same design.

Rapid Response Mode has been operational since the second half of Period 73, but no observations were triggered due to delay in the launch of the SWIFT satellite.

Exposure meter sensitivity has been progressively decreasing over the past couple of years and is now at least three times lower than originally. Further investigation is under way.

New standard dichroic settings have been offered for Period 75. They have a red central wavelength of 760 nm, allowing all three lines of the Ca II infrared triplet to be recorded simultaneously along with Hα and other diagnostic spectral lines of interest in studies of cool and hot stars.

FLAMES

Smooth and efficient operation throughout Periods 73 and 74. The instrument has reached full maturity.

Contamination of the GIRAFFE CCD was identified by monthly tests in the first part of Period 73. A decontamination procedure was successfully completed in July 2004. But the CCD started to show again contamination in March 2005; a new decontamination will be scheduled soon. Intermittent, low-level pickup noise has been observed for a while; it now appears to have been eradicated for all scientific modes.

The GIRAFFE CCD shutter failed and had to be replaced. Shutter times will soon be monitored regularly to try and predict failures.

The fibre positioner and the GIRAFFE filter wheel had some rather minor malfunction in periods of cool weather.

One FACB had to be replaced after its prism fell out (and could not be found). The retractor of another FACB was replaced. One of the IFU plates has a broken fibre at the edge of the unit; it is not planned to replace it since only 1 of the 20 subfibres is missing.

Merging of the file headers with the data continues to fail occasionally, for unclear reasons (this can be assigned to operator errors in only a fraction of the cases). Attempts are made at detecting the error at the start of the exposure, so as to minimise time losses.

Several new GIRAFFE settings were offered for Period 74, with higher resolution but lower throughput (like the original settings).

The GIRAFFE on-line pipeline was installed in April 2004; it reduces most settings, but not all yet.

VIMOS

Much more reliable operation was achieved during Period 73, with technical downtime down to about 10%. This is in part due to systematic insertion of optical elements at a fixed rotator angle. The resulting overheads are offset by a large factor by the reduced downtime. Reliability improvement continued in Period 74; by its end, technical downtime was below 5%.

The filter exchange units were entirely refurbished during a scheduled intervention in January, performed in collaboration with the Instrument Division. Since then they have been working reliably. The grism exchange units are also reliable and were responsible for only a few minutes of technical downtime. The mask exchange units still show some reliability problems; this is primarily due to misalignment of the cabinets with the focal plane mask frame (a design flaw). For the time being, the workaround that consists of inserting all optical elements at the safest rotator angle so as to minimise failures is still in place.

IFU mask positioning was slowly degrading during Period 73, as the hinges were getting loose. This was fixed during an intervention in September 2004, and the IFU flexures are now within the general flexures of the instrument.

Flexures still represent a major limitation of instrument performance, in particular in MOS mode. A new flexure compensation system installed and tested on one channel in January 2005 will be installed also in the other three channels at the beginning of Period 75. This upgrade should allow the flexures to be reduced to approx. 1 pixel over the 360 degree rotation range, but should otherwise be transparent to users.

New sets of HR_red and HR_blue grisms have been ordered; they should hopefully be installed at the beginning of Period 75.

The Instrument Control Software is now under full control of the ESO VIMOS software support team, and no major problems have been reported in the last months. Improvement of the control and speed of the motors with a view to optimising the operations is ready to be implemented once the hardware is fully stabilised.

The on-line pipeline is now fully operational for imaging, MOS and IFU; the IFU pipeline has been released to the users.

VISIR

Operation successfully started on March 20 with execution of first P75 service mode runs.

Successful adjustment of the background levels yielded improved imaging sensitivities: by a factor of 2 to 4 in all N-band filters, and a factor of 4 to 8 in Q-band. The imaging sensitivities approach background limited performance for some filters (Ar III, Si V, PAH2_2).

Three slit widths are offered for observations starting in Period 75: 0.4", 0.75", and 1.0".

The main concerns arise from the detector cosmetics and bad pixel response, which in particular jeopardise spectroscopic performance. Therefore full spectral coverage in medium resolution could not be offered.

For Period 76, new high-resolution spectroscopic modes will be available: HR long-slit at 17.03 microns (first Q-band high-resolution spectroscopy) and HR cross-dispersed around 9.66 and 12.27microns (to cover the important H_2 transitions).

The basic daytime calibration procedures have been defined.

NACO

Generally smooth operations throughout Periods 73 and 74, with the exception of the modes requiring chopping with counter-chopping.

Chopping with counter-chopping is still unreliable; the origin of the problem is not fully understood yet. Investigation is still in progress.

The CONICA detector has been replaced at the beginning of Period 73, to general users' satisfaction. The new detector has a broader dynamic range and considerably better cosmetics, but suffers from increased remnants in case of strong saturation.

New NAOS elements were installed and tested during Period 73: half-wave plate, prism, and two order-sorting filters. They have been used for GTO in Period 73 and were available for general use in Period 74. Also, quite non-standard and challenging coronographic polarimetric observations were successfully performed in visitor mode in December 2004.

The RTC, which had been a major source of downtime in the early stages of operation of the instrument, is now well behaved (since May 2004).

SINFONI

The detector was upgraded from engineering grade to science grade in January-February 2005. Non-destructive readout mode with continuous reading of the detector was implemented to minimise the noise budget: less than 10 electrons for DITs between 15 s and 500 s. At longer DITs, the Poisson noise of the detector persistence effect dominates the noise budget. This mode does not have detector overheads like

the Fowler mode used with the engineering grade detector.

The measured transmissions are: 22% in J, 28% in H, and 27% in K.

Following optimisation of the overheads in the target acquisition procedure, shutter open times of 90% were achieved during GTO runs.

A new acquisition procedure was implemented to allow bright targets (J, H, K < 6 mag; H+K < 7 mag) and targets with bright AO reference stars to be observed. It is offered only in visitor mode as manual interaction is required to avoid detector saturation.

Spectral resolution is below expectation mostly in the J band, and less significantly in H and H+K, for image scales of 0.25 and 0.1. So far the origin of the degraded image/spectral quality in these spectral bands could not be identified. Further investigation requires a technical intervention with dewar warm-up.

SINFONI pipeline implementation in CPL (common pipeline library) is in progress. Export of some ECLIPSE routines into CPL is pending before any official package can be released.

MIDI

Regular science operation started in Period 73, in prism mode only, with high completion fraction of SM runs and to the satisfaction of most VM users. Operation continued successfully in Period 74, with both prism and grism mode. Use of MACAO for coude guiding represents a major improvement and is now the standard mode.

An improvement of the detector readout electronics was successfully completed as part of a technical intervention in September 2004.

The first fringes with the ATs were obtained in February 2005. As a result, some AT baselines are made available to the community for Period 76 (together with all UT baselines).

OPD offsets of fringe positions are recorded during regular operations with a view to implementing good OPD models for all baselines.

Daytime maintenance and calibration templates were developed and implemented by Paranal Observatory.

AMBER

The commissioning/paranalisation run of October 2004 was successful. Calibration of the absolute wavelength was implemented. Magnitude limits were determined for low- and medium- resolution K-band. Templates for acquisition, fringe-finding, injection of light into the fibers were considerably improved.

The SDT and GTO runs of February 2005, with 2 and 3 UTs, were successful.

AMBER will be available for regular operations in Period 76.

EMMI

Smooth operation throughout Periods 73 and 74.

Complete re-characterisation of the instrument took place after the upgrade of the red CCD. A new ETC for all EMMI modes is available.

Daytime commissioning of OS porting to BOSS successfully completed.

Automatic flat-field control implemented for RILD mode.

Second-order contamination measured for gratings #8 and #13; technical report issued.

Quick-look tool implemented for long-slit and echelle spectroscopy, and presented in a Messenger article.

SUSI-2

Smooth operation throughout Periods 73 and 74.

FIERA PCI tests on SUSI-2 on-going, in close interaction with ODT.

A major revision of the Users' Manual was released.

SOFI

Operation hampered by grism wheel failures.

Failure of the two init switches of the grism wheel was temporarily overcome by an operational workaround (restricting wheel motion to one direction only). Further degradation of the situation in November 2004 led to provisional decommissioning of the spectroscopic and polarimetric modes. An intervention performed in January-February 2005 failed to fully solve the problem. Another intervention is planned for end of March 2005. As a result of these repeated problems, major reschedulings of observing runs had to be performed.

The degradation of the image quality that had been present since the first half of 2004 was fixed during the January-February technical intervention. Until then, a workaround had been used for execution of programmes requiring the Small Field, however at the cost of a significant loss of efficiency.

A new Js filter (narrower than the original J filter) was offered to the user community since Period 73.

HARPS

Very smooth operation throughout Periods 73 and 74 in both visitor and service mode.

A new set of fibres, and a new fibre head, were installed, solving the problem of stains on the fibre head mirror. All malfunctioning iodine cells were removed from the instrument.

A new, high-sensitivity pressure sensor was installed along the cryostat vacuum line. Manual valves were installed in the vacuum line to allow future interventions on the pressure sensors to be performed without breaking the vacuum. The cryostat temperature sensors were repaired.

A major revision of the Users' Manual was released.

HARPS pipeline data products are now ingested in the ESO archive.

Fully automated monitoring of key instrument parameters (from data extraction to publication in the HARPS Web pages) has been implemented.

TIMMI-2

Smooth operation throughout Period 74, after efficiency loss in the first half of Period 73.

The nominal efficiency of the instrument was restored in June 2004, after realignment of the detector mask.

The dichroic has been recoated with gold.

EFOSC-2

Smooth operation throughout Periods 73 and 74.

After completion of the upgrade of the 3.6m secondary, image quality of 0.5" was achieved with EFOSC2.

The three broken grisms have been replaced; the performance of the new grisms matches the old ones.

Efficiency curves are now available for all grisms.

A major revision of the Users' Manual was released.

CES

Smooth operation throughout Periods 73 and 74.

Profundimeters were installed, and setup reproducibility and stability were verified.

The CES fibre head was successfully commissioned in the HARPS & CES Fibre Adapter. New observing templates were commissioned; the Instrument Package underwent major revision. CES and HARPS can be used on shared nights; the switching time between both is of the order of 1 min.

The monitoring of key instrument parameters was fully automated.

A tool to measure the scattered light over the full spectral range was developed and installed.

WFI

Smooth operation throughout Periods 73 and 74.

Improvements were made to improve the M1 baffle/FEROS adapter, to eliminate unwanted reflections. This led to a modification of the flat field properties of WFI.

FIERA PCI was tested but could not be implemented so far due to problems with the autoguider.

Media changeover (from DAT to USB disk) for VM runs is in progress.

FEROS

Smooth and efficient operation throughout Periods 73 and 74.

An innovative focus template based on IQ analysis of Fibre Head Viewing technical CCD images was successfully implemented.

The calibration unit was improved, yielding shorter exposure times and increased flux towards the blue end of the spectrum.

The ADC has been installed and successfully commissioned. However the current prisms yield a loss of efficiency of up to 50% blueward of 4000 Å; they are due to be replaced by new ones with a more appropriate broad spectrum cement in the course of Period 75.

The standard ESO ETC is now available for FEROS.

The pipeline reliability and user friendliness were significantly improved.
A Web-based quality control database was implemented.