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1998 GEMINI SITE TESTING CAMPAIGN Cerro Pachón and Cerro Tololo

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¹Thanks to Pablo BLAYER and to Bernhard LOPEZ who launched many balloons and help us in many circumstances.

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FIGURE 7.141: Temporal evolution of the optical turbulence .



FIGURE 7.142: Temporal evolution of the seeing. Red: Boundary layer (first km); Blue: Free atmosphere (above 1km); Black: Total.



FIGURE 7.143: Temporal evolution of the isoplanatic. Black: Adaptive optics, red: speckle interferometry.



FIGURE 7.144: Temporal evolution of the equivalent speed. Black: for adaptive optics; Red: for speckle interferometry.



FIGURE 7.145: Temporal evolution of the coherence time. Black: for adaptive optics; Red: for speckle interferometry.



FIGURE 7.146: Temporal evolution of the "cone effect" d_0 . Processing D, dome seeing removed.



FIGURE 7.147: Temporal evolution of h_{opt} in red, h_{dm} in green and h_{eq} in black. Processing D, dome seeing removed.



FIGURE 7.148: Temporal evolution of the optical turbulence .



FIGURE 7.149: Temporal evolution of the seeing. Red: Boundary layer (first km); Blue: Free atmosphere (above 1km); Black: Total.



FIGURE 7.150: Temporal evolution of the isoplanatic. Black: Adaptive optics, red: speckle interferometry.



FIGURE 7.151: Temporal evolution of the equivalent speed. Black: for adaptive optics; Red: for speckle interferometry.



FIGURE 7.152: Temporal evolution of the coherence time. Black: for adaptive optics; Red: for speckle interferometry.



FIGURE 7.153: Temporal evolution of the "cone effect" d_0 . Processing D, dome seeing removed.



FIGURE 7.154: Temporal evolution of h_{opt} in red, h_{dm} in green and h_{eq} in black. Processing D, dome seeing removed.



FIGURE 7.155: Temporal evolution of the optical turbulence .



FIGURE 7.156: Temporal evolution of the seeing. Red: Boundary layer (first km); Blue: Free atmosphere (above 1km); Black: Total.



FIGURE 7.157: Temporal evolution of the isoplanatic. Black: Adaptive optics, red: speckle interferometry.



FIGURE 7.158: Temporal evolution of the equivalent speed. Black: for adaptive optics; Red: for speckle interferometry.



FIGURE 7.159: Temporal evolution of the coherence time. Black: for adaptive optics; Red: for speckle interferometry.



FIGURE 7.160: Temporal evolution of the "cone effect" d_0 . Processing D, dome seeing removed.



FIGURE 7.161: Temporal evolution of h_{opt} in red, h_{dm} in green and h_{eq} in black. Processing D, dome seeing removed.

7.2 BALLOONS

Here are presented the details of all the balloon flights.





FIGURE 7.162: Résumé of flight 116.



FIGURE 7.163: Résumé of flight 117.



FIGURE 7.164: Résumé of flight 118.



FIGURE 7.165: Résumé of flight 119.



FIGURE 7.166: Résumé of flight 120.



FIGURE 7.167: Résumé of flight 121.



FIGURE 7.168: Résumé of flight 122.



FIGURE 7.169: Résumé of flight 123.



FIGURE 7.170: Résumé of flight 124.



FIGURE 7.171: Résumé of flight 125.



FIGURE 7.172: Résumé of flight 126.



FIGURE 7.173: Résumé of flight 127.



FIGURE 7.174: Résumé of flight 128.



FIGURE 7.175: Résumé of flight 129.



FIGURE 7.176: Résumé of flight 130.



FIGURE 7.177: Résumé of flight 131.



FIGURE 7.178: Résumé of flight 132.



FIGURE 7.179: Résumé of flight 133.



FIGURE 7.180: Résumé of flight 134.


FIGURE 7.181: Résumé of flight 135.



FIGURE 7.182: Résumé of flight 136.



FIGURE 7.183: Résumé of flight 137.



FIGURE 7.184: Résumé of flight 138.



FIGURE 7.185: Résumé of flight 139.



FIGURE 7.186: Résumé of flight 140.



FIGURE 7.187: Résumé of flight 141.



FIGURE 7.188: Résumé of flight 142.



FIGURE 7.189: Résumé of flight 143.



FIGURE 7.190: Résumé of flight 144.



FIGURE 7.191: Résumé of flight 145.



N. B. : channel (0.95m;H)not avalable

FIGURE 7.192: Résumé of flight 146.



FIGURE 7.193: Résumé of flight 147.



N. B. : channel (0.95m;H)not avalable

FIGURE 7.194: Résumé of flight 148.



FIGURE 7.195: Résumé of flight 149.



FIGURE 7.196: Résumé of flight 150.



N. B. : channel (0.95m;H)not avalable

FIGURE 7.197: Résumé of flight 151.



FIGURE 7.198: Résumé of flight 152.



FIGURE 7.199: Résumé of flight 153.



FIGURE 7.200: Résumé of flight 154.



FIGURE 7.201: Résumé of flight 154.



FIGURE 7.202: Résumé of flight 155.



FIGURE 7.203: Résumé of flight 156.



FIGURE 7.204: Résumé of flight 157.



FIGURE 7.205: Résumé of flight 158.



FIGURE 7.206: Résumé of flight 159.



FIGURE 7.207: Résumé of flight 160.



FIGURE 7.208: Résumé of flight 161.



FIGURE 7.209: Résumé of flight 162.



FIGURE 7.210: Résumé of flight 163.



FIGURE 7.211: Résumé of flight 164.



FIGURE 7.212: Résumé of flight 165.

7.3 GSM

7.3.1 Night of 03/04 October 1998



Parameter	Median value
ϵ_0 (as)	0.83 ± 0.10
\mathcal{L}_0 (m)	19.1 ± 9.9
$\theta_0 \ (as)$	2.75 ± 0.52
$\frac{\sigma_I^2}{\langle I \rangle^2} (\%)$	1.24 ± 0.39



7.3.2 Night of 04/05 October 1998

Parameter	Median value
$\epsilon_0 (as)$	0.88 ± 0.14
$\mathcal{L}_0 (\mathrm{m})$	33.3 ± 17.8
θ_0 (as)	2.79 ± 0.76
$\frac{\sigma_I^2}{\langle I \rangle^2} (\%)$	1.21 ± 0.49

10-05-98 100 (آ ي د 50 ** 0 8.0 (as) ω 8.0 0.4 $\theta_0 (as)$ 2∟ 24 10 Data 25 26 27 28 29 30 31 32 3**3**8 20 UT

7.3.3 Night of 05/06 October 1998

Parameter	Median value
$\epsilon_0 (as)$	0.59 ± 0.13
$\mathcal{L}_0 (\mathrm{m})$	20.3 ± 14.7
θ_0 (as)	3.83 ± 0.61
$\frac{\sigma_I^2}{\langle I \rangle^2} (\%)$	0.71 ± 0.25

7.3.4 Night of 06/07 October 1998



Parameter	Median value
$\epsilon_0 (as)$	0.75 ± 0.16
$\mathcal{L}_0 (\mathrm{m})$	22.5 ± 15.2
θ_0 (as)	2.91 ± 0.44
$\frac{\sigma_I^2}{\langle I \rangle^2} (\%)$	1.13 ± 0.39
7.3.5 Night of 07/08 October 1998



Parameter	Median value
ϵ_0 (as)	0.74 ± 0.13
\mathcal{L}_{0} (m)	20.5 ± 12.3
θ_0 (as)	4.11 ± 0.59
$\frac{\sigma_I^2}{\langle I \rangle^2} (\%)$	0.64 ± 0.24

7.3.6 Night of 08/09 October 1998



Parameter	Median value
ϵ_0 (as)	0.91 ± 0.25
\mathcal{L}_0 (m)	46.2 ± 64.0
$\theta_0 \ (as)$	2.06 ± 0.52
$\frac{\sigma_I^2}{\langle I \rangle^2} (\%)$	2.01 ± 1.71



7.3.7 Night of 09/10 October 1998

Parameter	Median value
$\epsilon_0 (as)$	1.96 ± 0.44
$\mathcal{L}_0 (\mathrm{m})$	45.2 ± 38.1
θ_0 (as)	1.35 ± 0.29
$\frac{\sigma_I^2}{\langle I \rangle^2} $ (%)	4.09 ± 1.36