

Weather and Seeing Statistics

Nils Turner

16 March 2009 / CHARA Array Winter Meeting, Nice

Outline

- 1 Weather
 - What's New?
 - Stats
- 2 Seeing
 - t_0
 - r_0
- 3 Miscellaneous

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Weather

- New weather station for the lab
 - Peet Brothers Ultimeter 2100
 - Records barometric pressure, temperature/humidity in the lab, and temperature in the computer area.
 - Important for calibration of PAVO data.

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Weather

Cross-year Vital Stats

Year	2005	2006	2007	2008
Measurable Wind	11.6%	14.0%	12.9%	16.2%
High Wind [†]	0.8%	0.4%	0.8%	0.2%
High Humidity [‡]	20.0%	18.1%	10.9%	14.0%

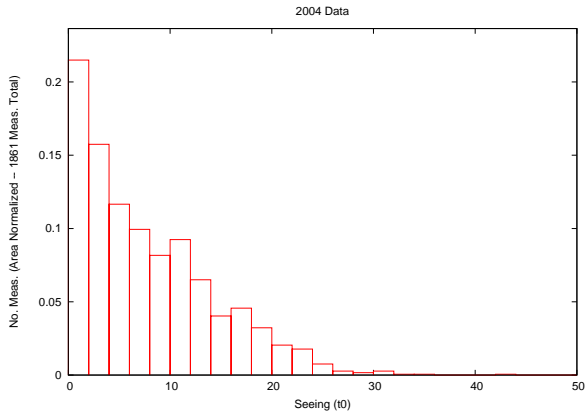
Table: Percentages indicate percentage of time. Values quoted are the largest of the six bunker weather stations. † High wind is defined as being above 20 kph. ‡ High Humidity is defined as being above 90%.

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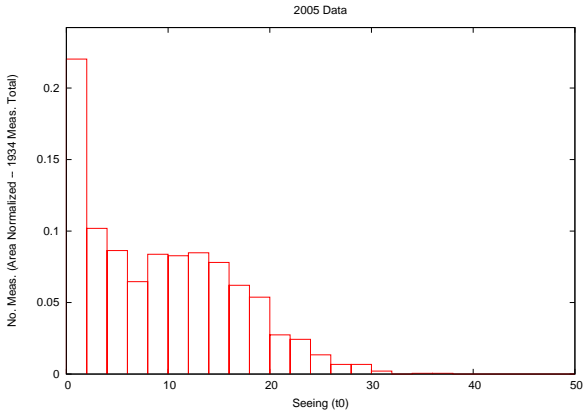
Seeing

t_0



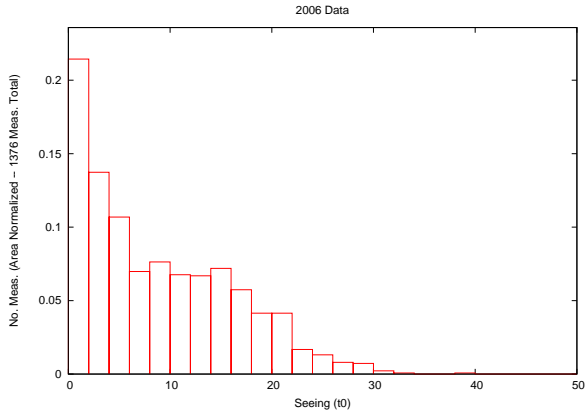
Seeing

t_0



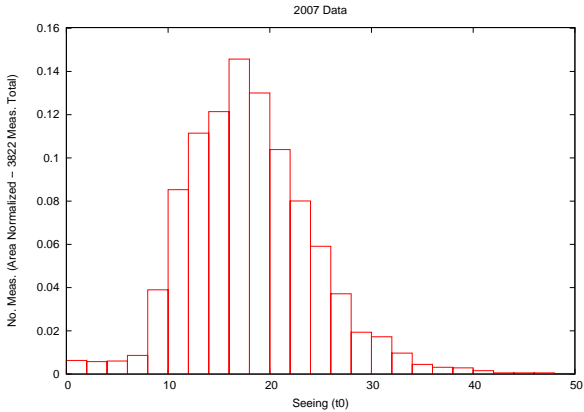
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t_0



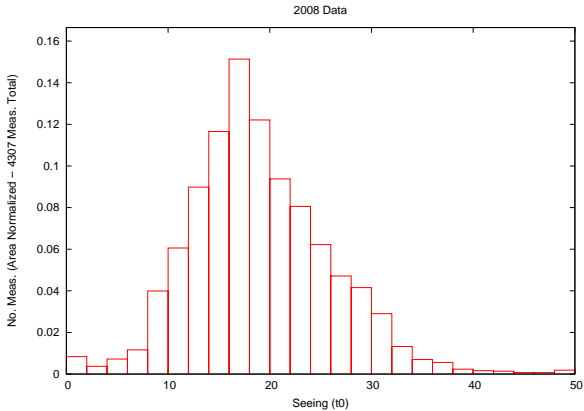
Seeing

t_0



Seeing

t_0



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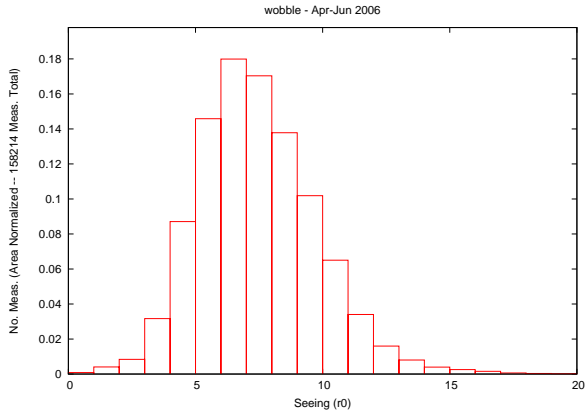
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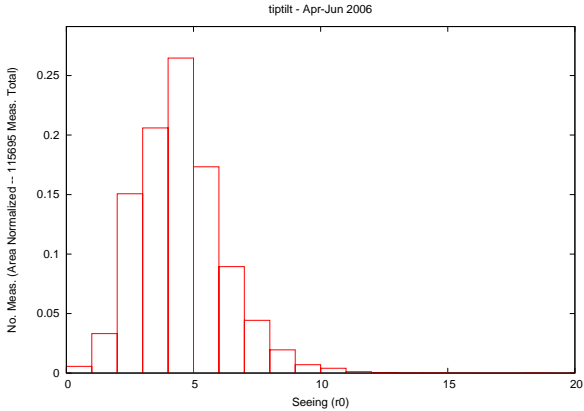
Two Tip/Tilt Systems

- wobble
 - PMT based
 - Two telescopes only
 - Operated from 2001-2006
- tiptilt
 - CCD based
 - Six telescopes
 - Zenith correction added 2008-08-01
 - Current system, 2006-present

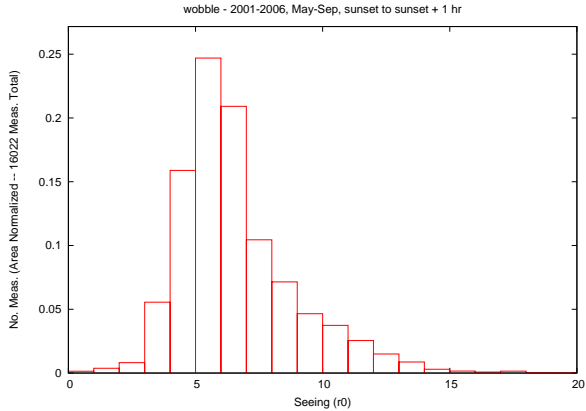
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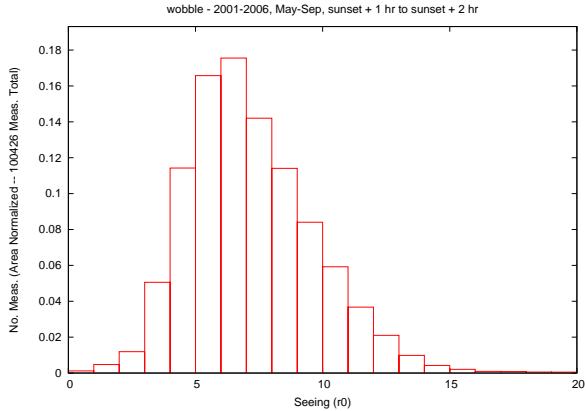
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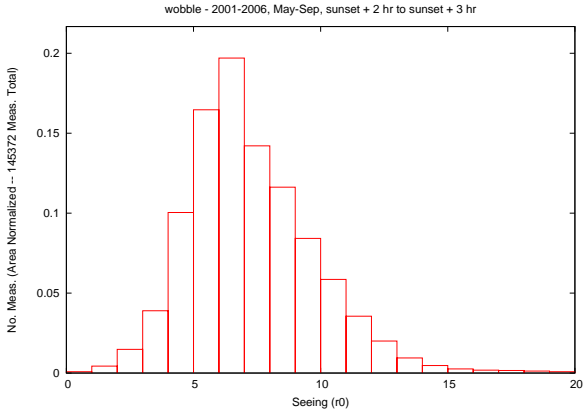
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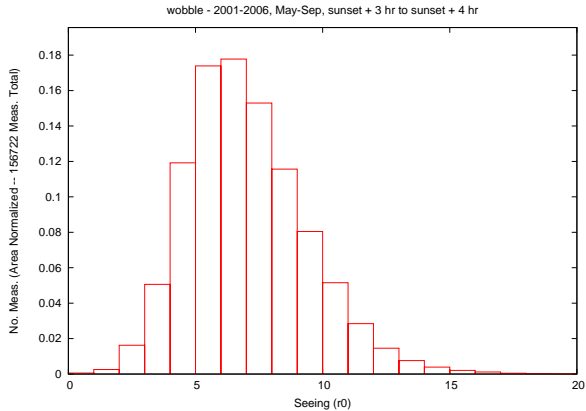
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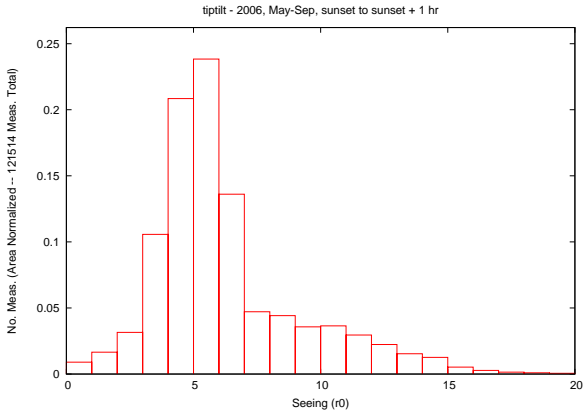
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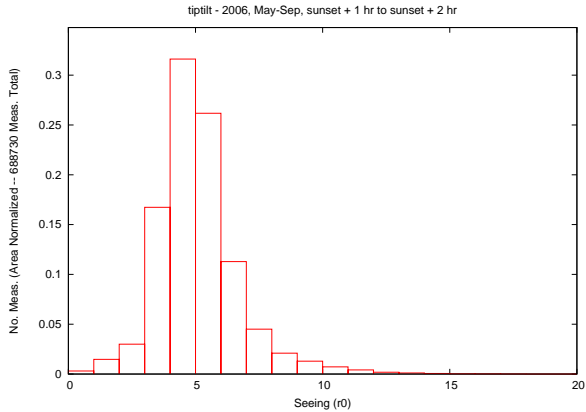
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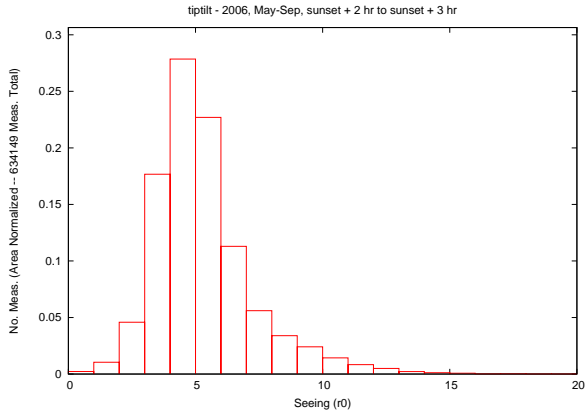
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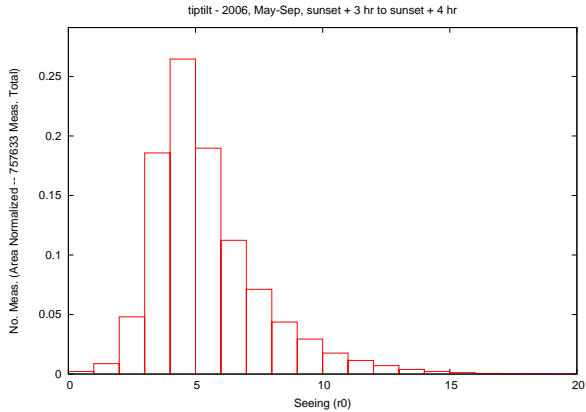
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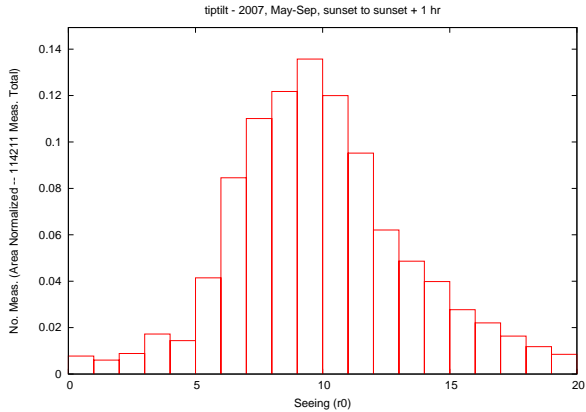
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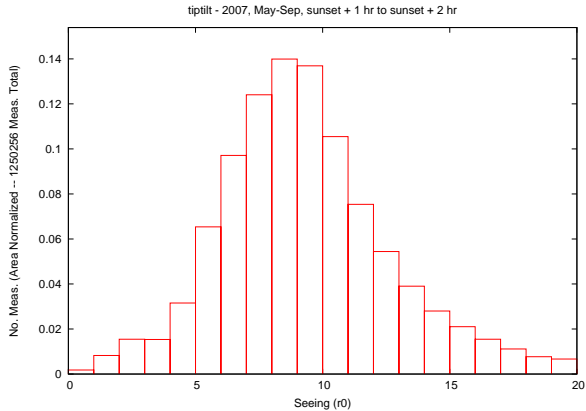
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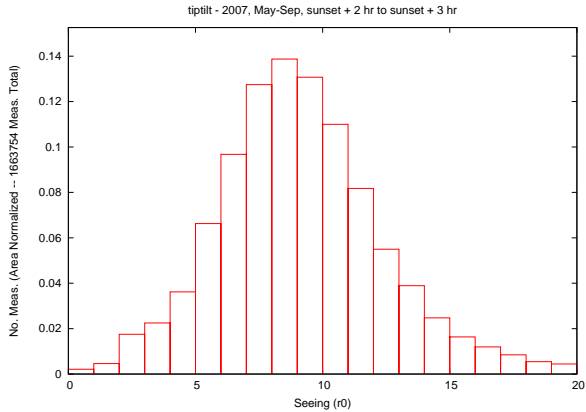
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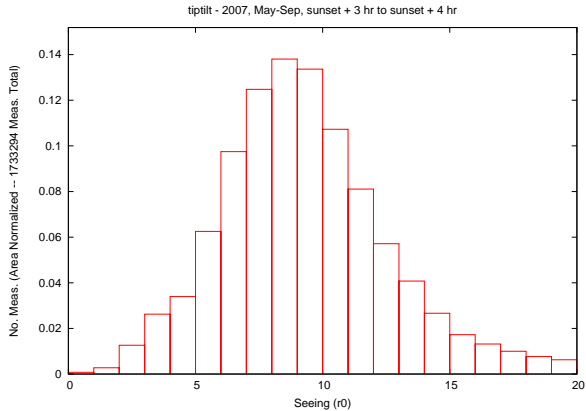
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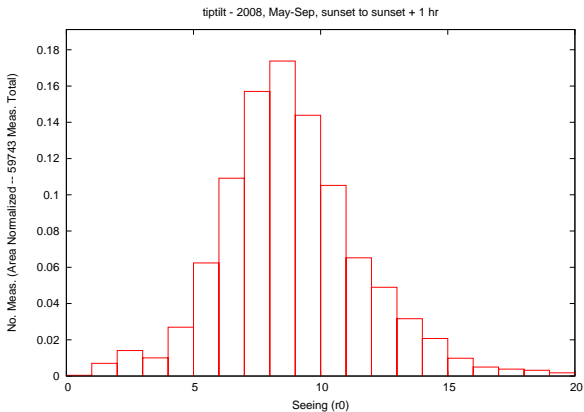
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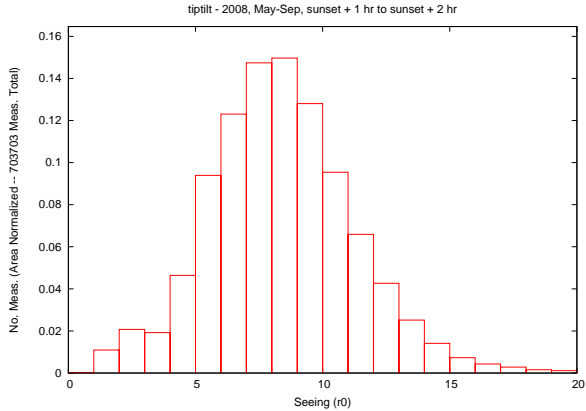
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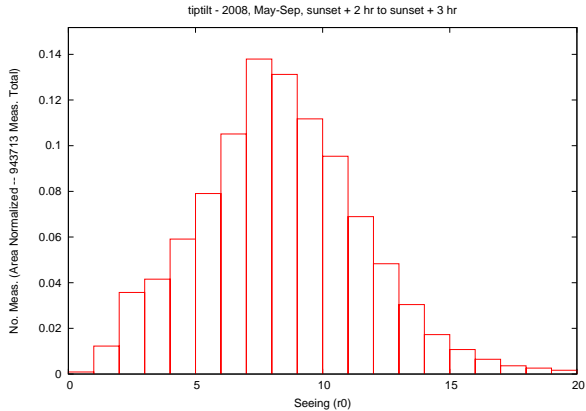
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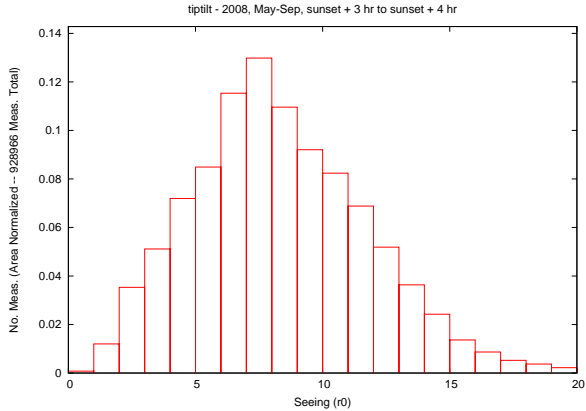
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Observing Report

We plan improvements to the observing report:

- Make them more easily searchable by using a fill-in form
- At least in the case of Classic data, include a listing of objects viewed.
- Include plots of humidity, temperature, seeing, etc.

Miscellaneous

New replacement control system computers

