

TNG 2000-2007 : science & productivity

Historical overview and international context

- 1987 GNA-CNR recommends VLT, “LBT” and a 4m-class telescope
- 1988 TNG phase-A study approved by C.R.A.
- 1990 ESO-NTT starts scientific operations
- 1994 Keck-I starts scientific operations
- 1997 ESO-NTT upgrade (big-bang)
- 1997 Keck-II starts scientific operations
- 1998 TNG first light
- 1999 ESO-VLT starts scientific operations with optical and IR imager-spectrometers (FORS1 + ISAAC)
- 1999 TNG starts scientific operations with optical and IR imagers (OIG + Arnica)
- 2000 First light of TNG spectrometers and multi-mode instruments

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May 2020 First light of DOLORES

Jun 2020 First light of SARG

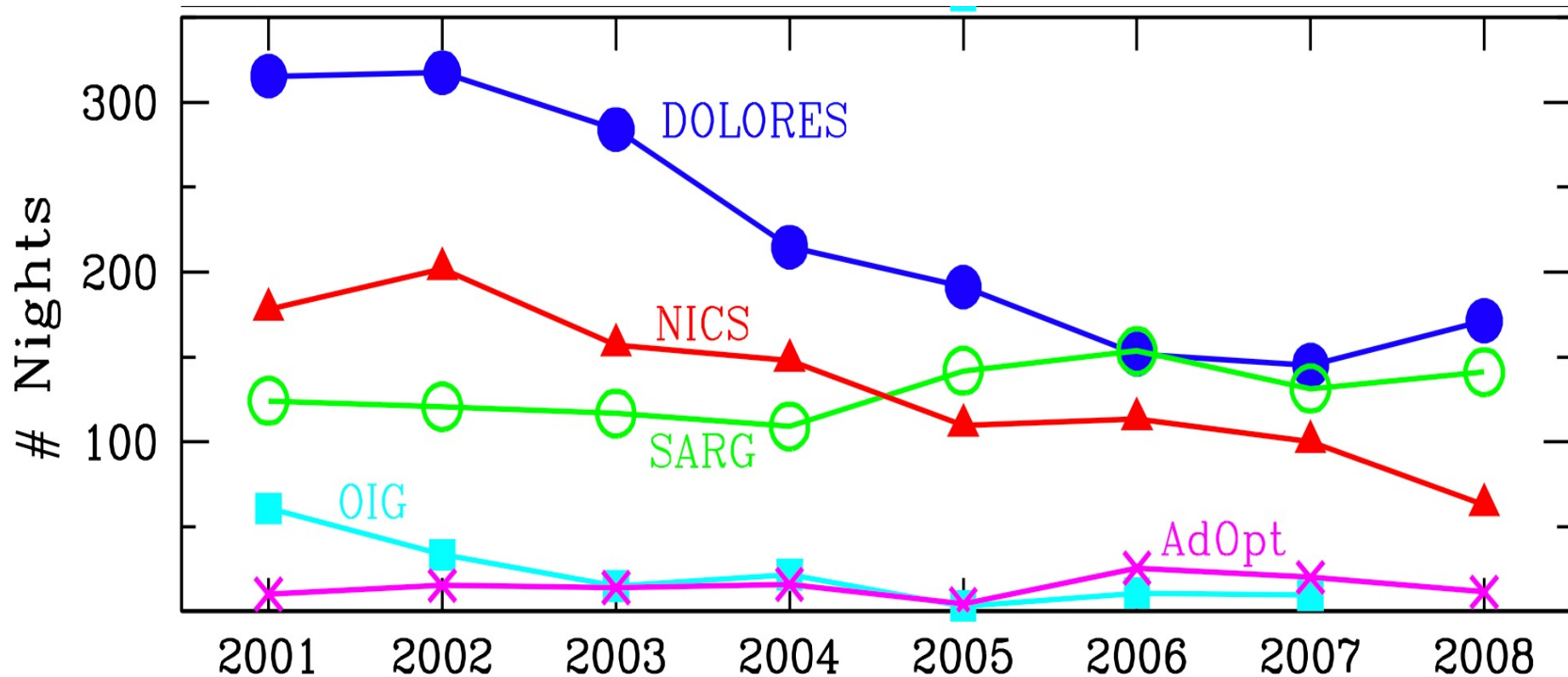
Sep 2020 First light of NICS

Dec 2020 First light of MOS

Sep 2021 First light of AdOpt + pyramid WFS

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Italian Astronomers eagerly interested in using TNG instruments
2001-2002 requests to TAC oversubscribed by a factor of 4



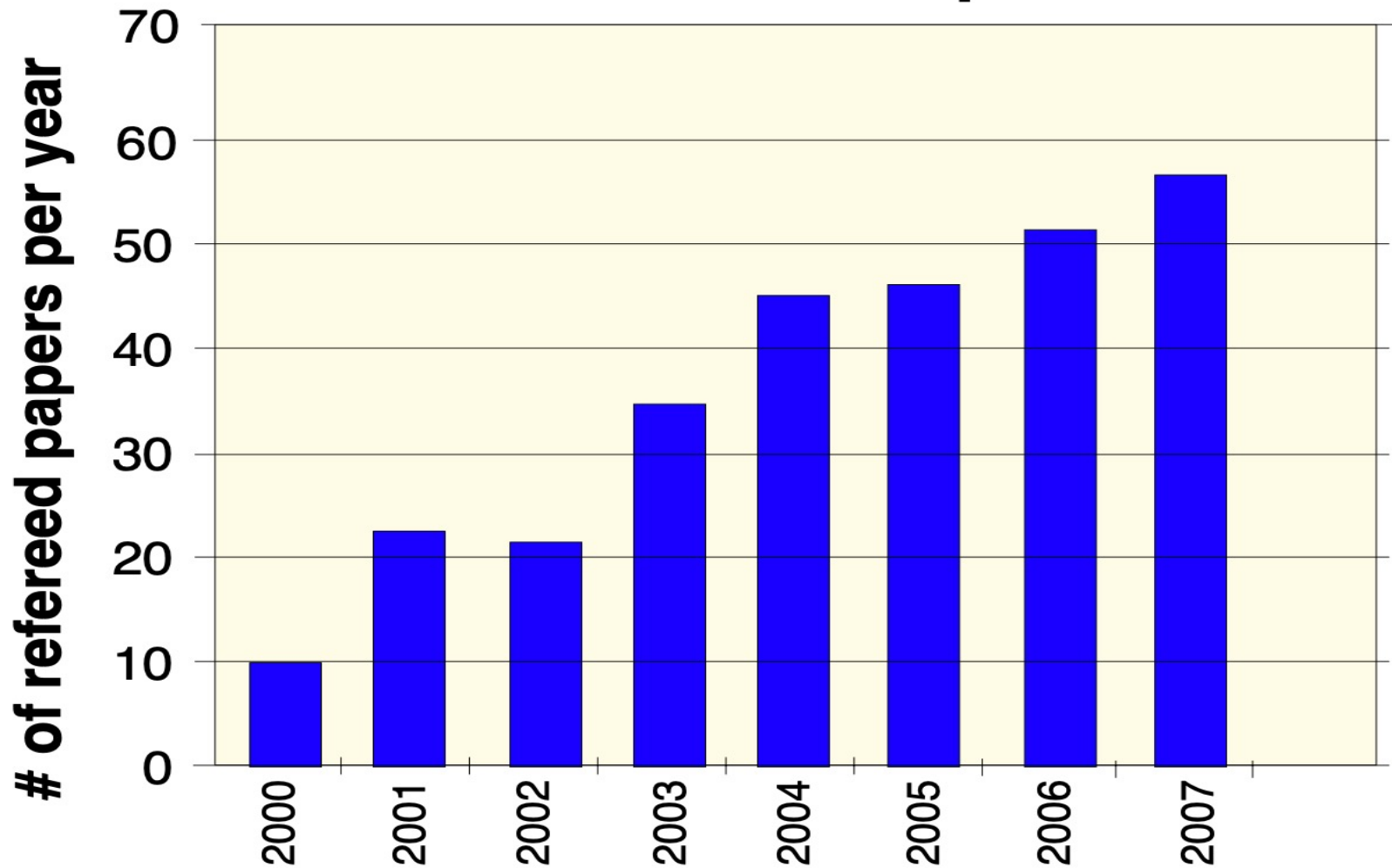
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Fast scientific reaction

- May 2000 First light of DOLORES
1st paper accepted by A&A in May 2001
- Jun 2000 First light of SARG
1st paper accepted by A&A in Feb 2001
- Sep 2000 First light of NICS
1st paper accepted by A&A in Feb 2001
- Dec 2000 First light of MOS
1st paper accepted by A&A in Nov 2003
- Sep 2001 First light of AdOpt + pyramid WFS
1st paper accepted by Nature in Jan 2000

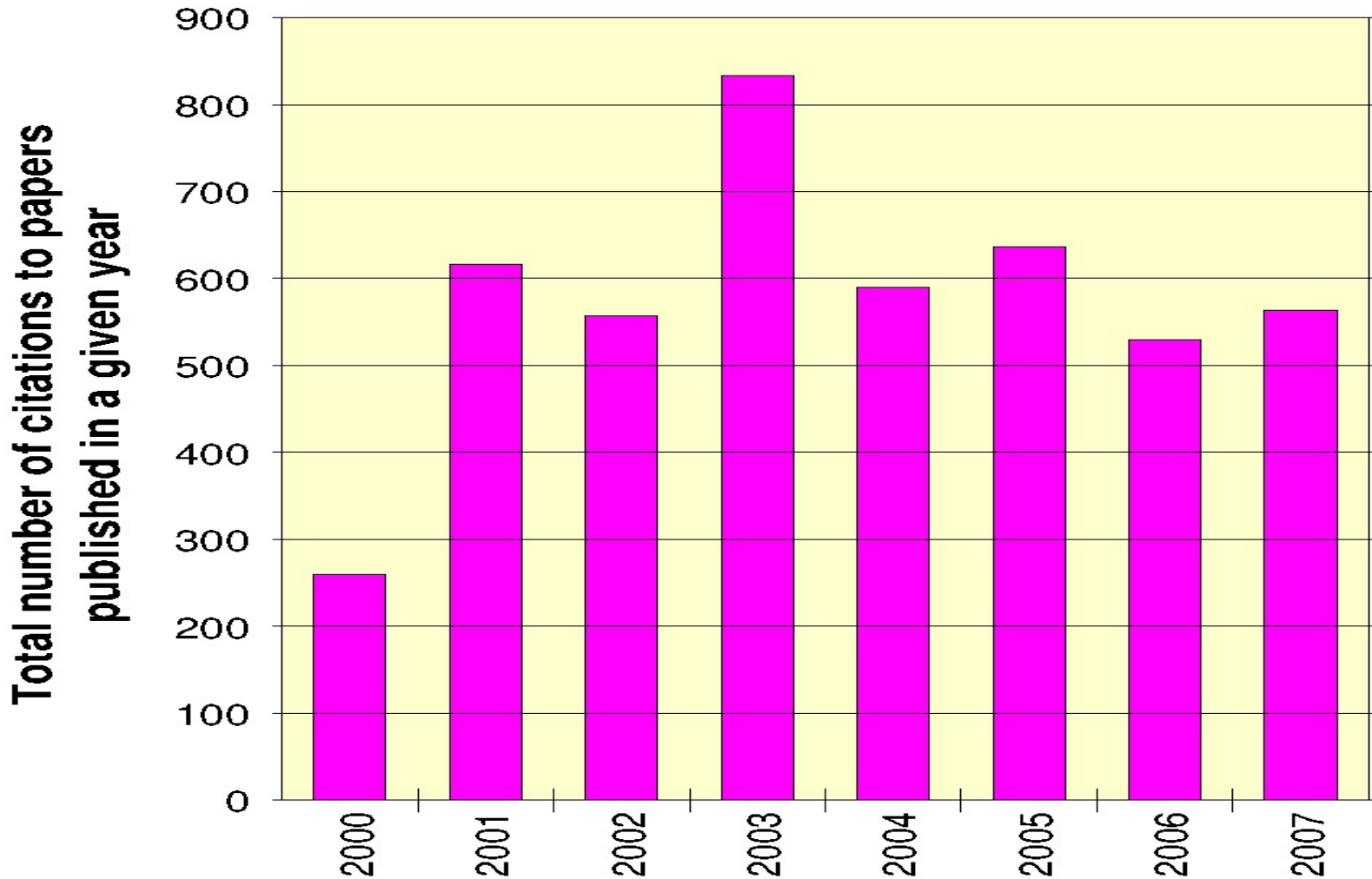
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*Healthy growth of scientific production
(about 1 paper per observing week)*



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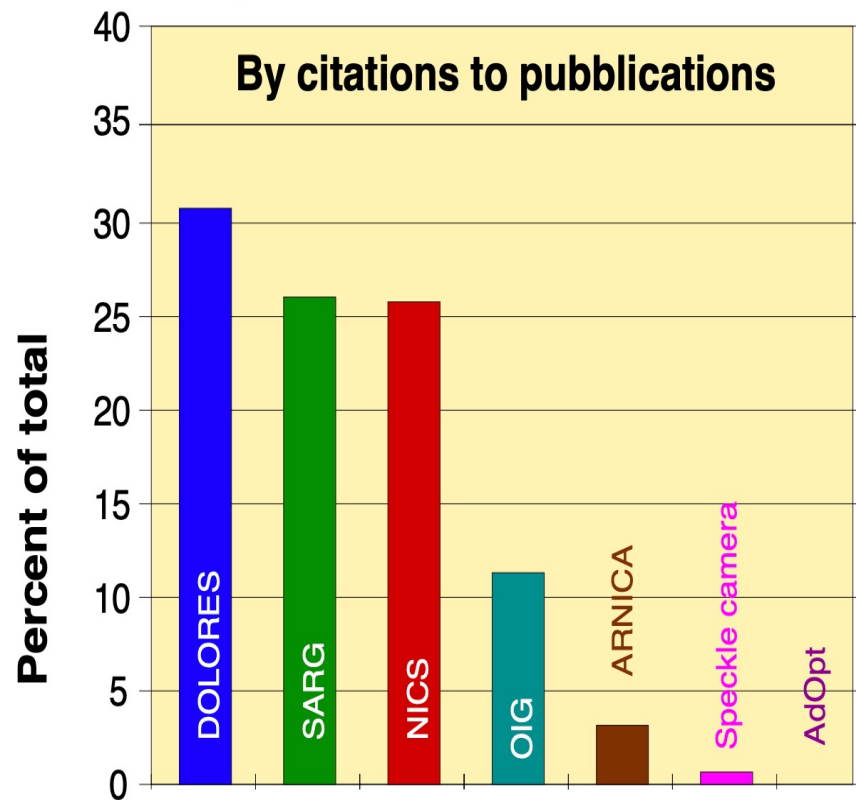
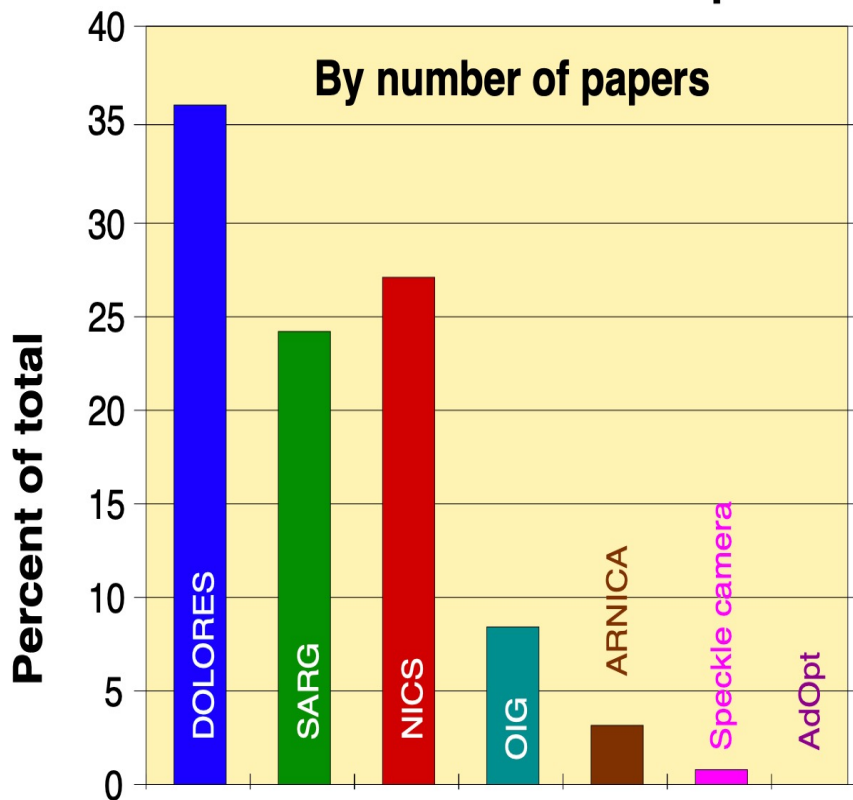
*Remarkable impact of scientific production
(about 2 citations per observing night)*



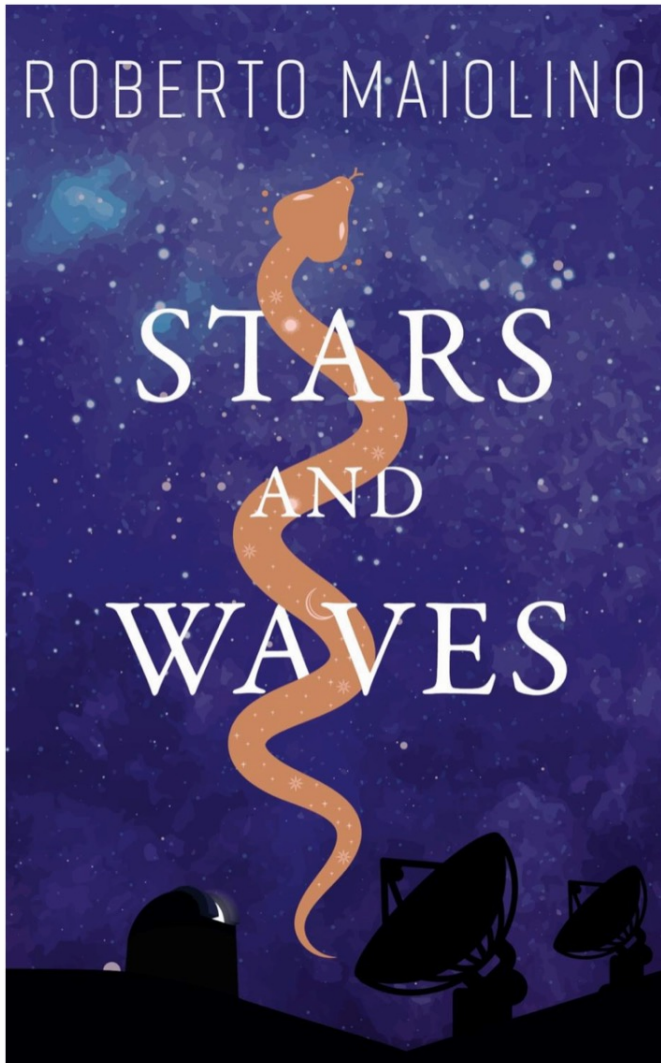
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Similar scientific production among spectrometers

Distribution of refereed publications according to instrument used



TNG 2000-2007 : behind the scenes



“It was an odd observing run,” responded Laura with a grimace

“Odd? In what sense?”

“For the first few nights, the telescope didn’t respond to the commands of the operator. It behaved like a defiant child.” Laura narrowed her eyes. “The telescope would simply refuse to point at the selected stars, it just moved to apparently random positions. Initially I couldn’t get any data.” She shook her head. “I was exasperated. And I was not the only one. The telescope operator and the engineering team had no idea what was going on.” She paused and sighed. “On the third night, they decided to completely shut down the computerised control system of the telescope. This meant that the telescope had to be guided manually from inside the dome, making the observations much more difficult and challenging... but at least I could get enough data for my PhD project.”

TNG 2000-2007 : behind the scenes

2000 “Da zero a cento in una notte”

2001 TRAM on DOLORES

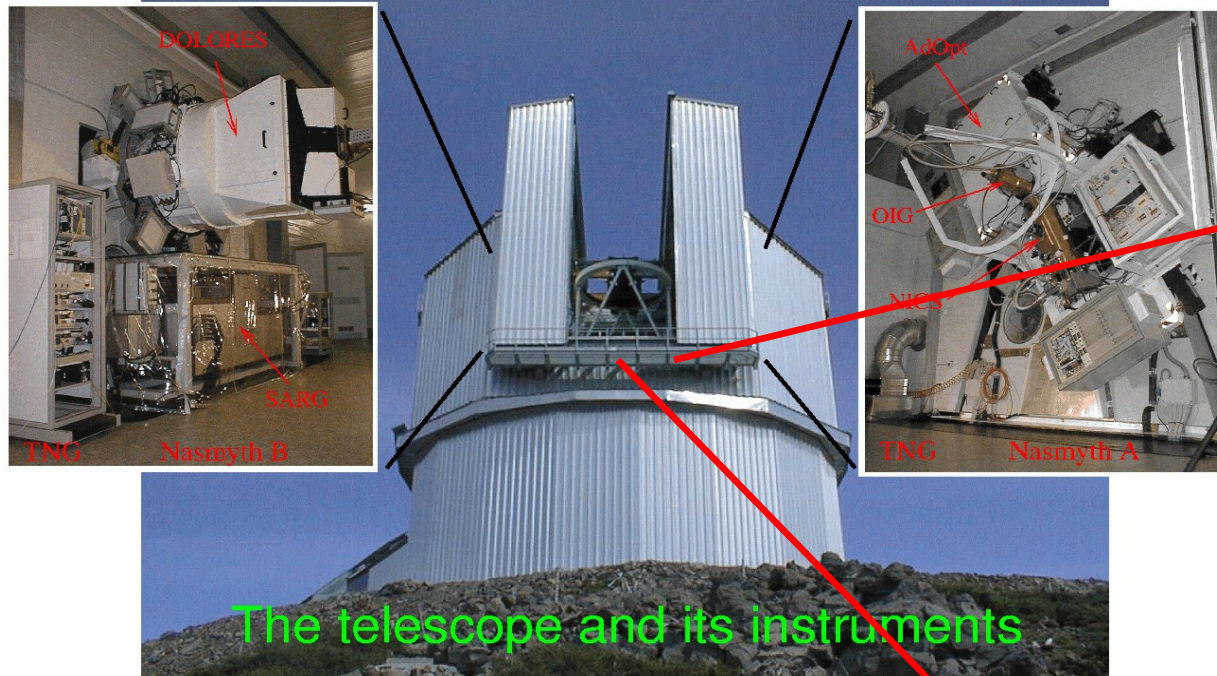
2002-3 Refurbishment of NICS

2003 SARG cross-dispersers fixed

2003-7 Queuing mode to optimize use of technical time

TNG 2000-2007 : behind the scenes

NAOPT control system developed in parallel with science operations



TNG 2000-2007 : un ricordo particolare

Favio Bortoletto

Marcello Rodonò

TNG 2000-2007 : preparing for the volcano

May 2005 Learning how to get rid of the dust from the primary mirror



TNG 2000-2007 : preparing for the volcano

Feb 2005 : pull through a snowstorm



TNG 2000-2007 : preparing for the volcano

Sep 2005 : fight a wildfire



TNG 2000-2007 : preparing for the volcano

Dec 2005 Survive Delta, the first ever hurricane at Canary islands



20.10.2021

E.Oliva Science with TNG 2000-2007

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