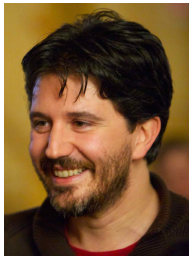
- **Community interfaces**
- Observatory status
- Science highlights
- Outreach

Community interfaces

- Not attending today (i.e., absence notified):
  Tony Bird, Søren Brandt, Neil Gehrels, Lorraine Hanlon, Dieter Hartmann, Norbert Schartel

- IUG member up to July 2016:
  Tony Bird, Lorraine Hanlon, Dieter Hartmann
- Suggested IUG members, from July 2016 (needs your blessing):
  Diego Götz (CEA-Saclay, France)
  Angela Malizia (INAF-IASF Bologna, Italy)
  Diego Torres (IEEC-CSIC, Spain)



- Mission Scientists Neil Gehrels & Wim Hermsen;
  to be re-appointed for 3 years from June 2016
- Co-PI IBIS: (Jan 2016) François Lebrun → Philippe Laurent
- EK: (1 March 2016) duty station ESAC → ESTEC

Community interfaces

Updates since last meeting

- Russian Advisory Committee (RAC) for INTEGRAL agreed with proposed changes in data rights policy from AO-13 onwards (*see next slide*)
- 16 March 2015: External experts report on INTEGRAL's science operations cost cuts
  & 9 July: IUG response
- April/May 2015: AO-13 call: 62 proposals received (30 normal, data rights on 292 sources & 32 ToO); oversubscription 4.8. TAC granted 153 ks of Swift time to 5 INTEGRAL proposals. No XMM-Newton time was granted.
- 28 May 2015: AWG #159 meeting: "best chance for the next extension, the publication rate should increase"
- 5–9 October 2015: INTEGRAL workshop "The New High-Energy Sky after a Decade of Discoveries", Rome.
  ~100 registered participants from 22 different countries.
  From 150 Mhz to 10 TeV science.
- Calibration issues & Italian/French funding discussion → "strict" roadmap for OSA
  10 December 2015: OSA 10.2; May/June 2016: OSA 11

Community interfaces

Near future

- AO-14 Observing Time proposals:
  - Release of AO-14: call for proposals: **29 February 2016**
  - Deadline for submission of proposals: **8 April 2016 (14:00 CEST)**
  - Meeting of the TAC: **17-19 May 2016**
  - Start of AO-14 cycle of observations: **1 January 2017**
- Coordination:
  - XMM-Newton (300 ksec) & Swift (150 ksec) [& Fermi through their AO]
  - New: NuSTAR (100 ksec)
  - More ideas to foster cooperation & INTEGRAL awareness?!
- Data rights (from AO-13 onwards):
  - Data or science rights to targets or science in the FOV of the instruments will be allocated to PIs of accepted proposals with the usual 1-year proprietary period.
  - If PI is from a country other than the Russian Federation, the rest of the field will be made public immediately.
  - If PI is from the Russian Federation follow a similar kind of policy, except that the rest of the field will be made public ***only*** through the consolidated data programme.

Community interfaces

- MoU
  - The INTEGRAL Project has signed a Memorandum of Understanding (MoU) with the LIGO/Virgo consortium to participate to the electro-magnetic follow-up campaign of GW signals until 1 June 2017; a renewal will be discussed in due time.

- Community interfaces
- **Observatory status**
- Science highlights
- Outreach

Observatory status

Update since last meeting

- Mid-February 2015: finalization of new orbit (64 hours vs 72 hours)
- SPI annealing: #24 (15/2-3/3 2015), #25 (7/9-26/9 2015), #26 (3/3-18/3 2016)
- June/July 2015: out-of-TAC ToO on V404 Cyg; also Dec 2015/Jan 2016 [see later slide]
- Cross-calibration observations with: Astrosat (e.g., Cyg X-1, Crab), Hitomi (TBD)
- 22 January 2016: 5th INTEGRAL/IBIS catalogue ("Cat1000"): 939 sources (17-100 keV)

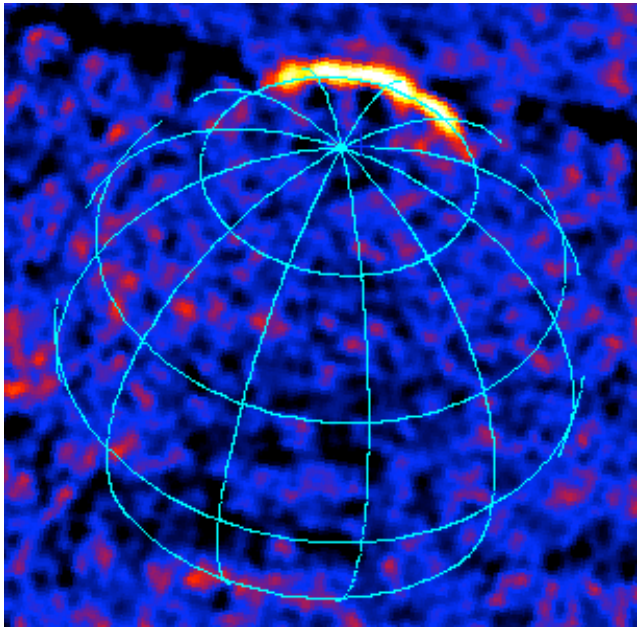
- 7 GRBs in FOV:

GRB 150219A, GRB 150305A, GRB 150831A, GRB 150912A, GRB 151120A, GRB 160221A, GRB 160223B

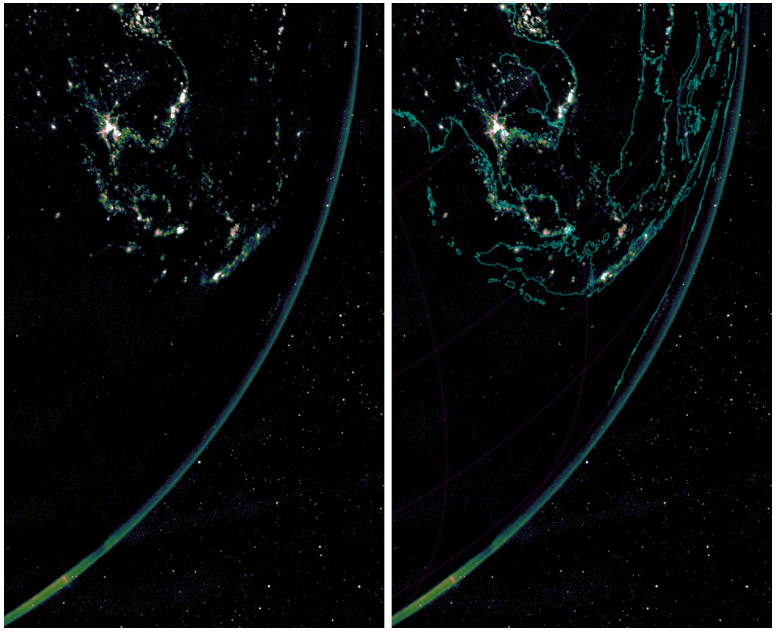
Observatory status

- 10 November Earth/CXB observation (EO4.1) → Earth aurora → magnetospheric studies

[next (EO4.2): 11/12 May 2016]

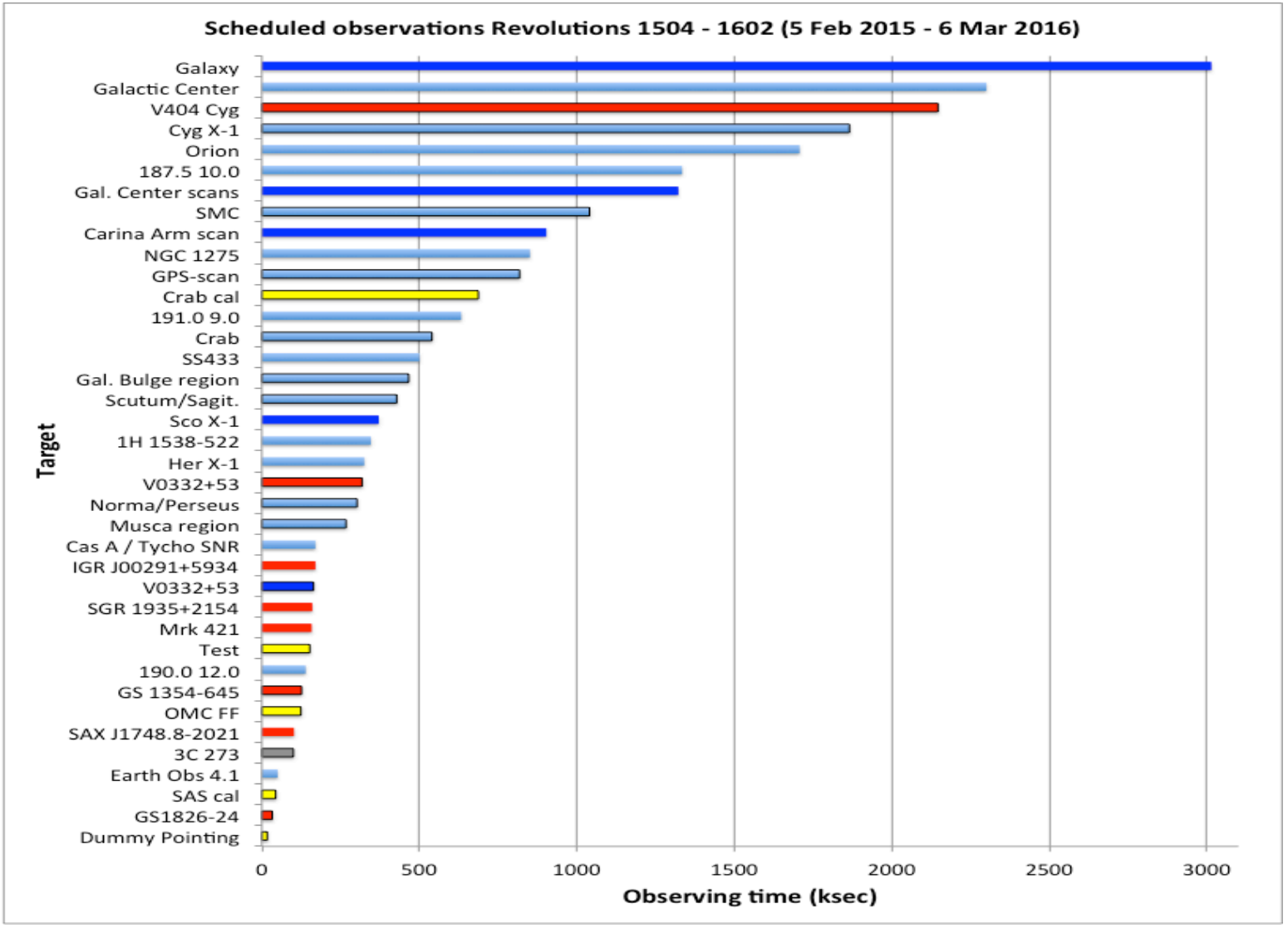


Credits: E. Churazov (IKI/MPA)/ M. Türler (ISDC/Univ. of Geneva)



Credits: A. Domingo (CAB-CSIC/INTA, INTEGRAL/OMC team)

Observatory status



Normal

ToO

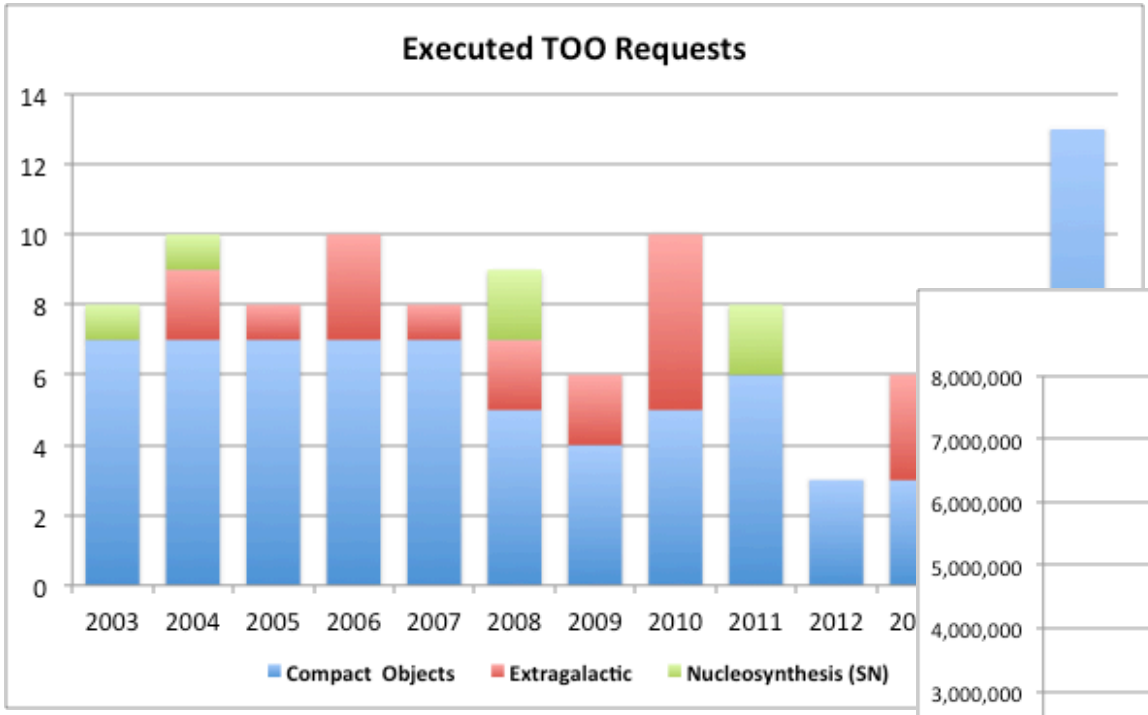
Russian

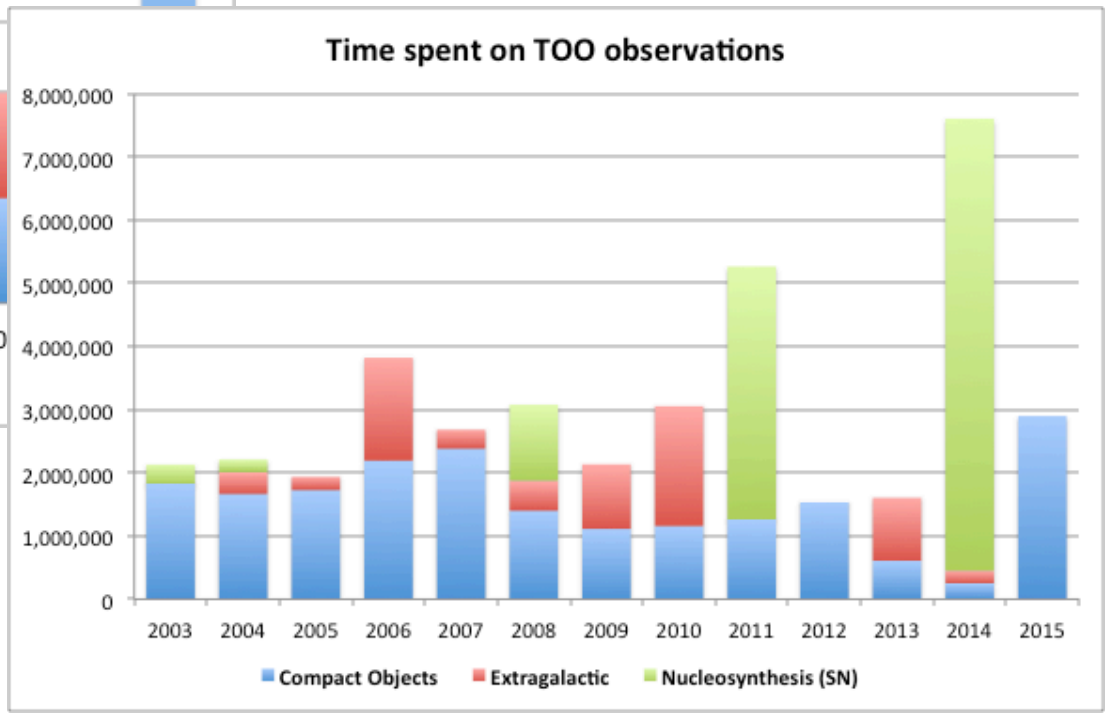
Calibration

Public

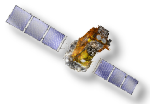
Observatory status

INTEGRAL ToOs (up to end 2015)

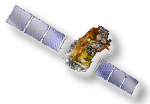




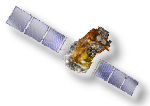
- 2015: 5 ToO requests on V404 Cyg!



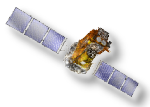
Observatory status



Community interfaces



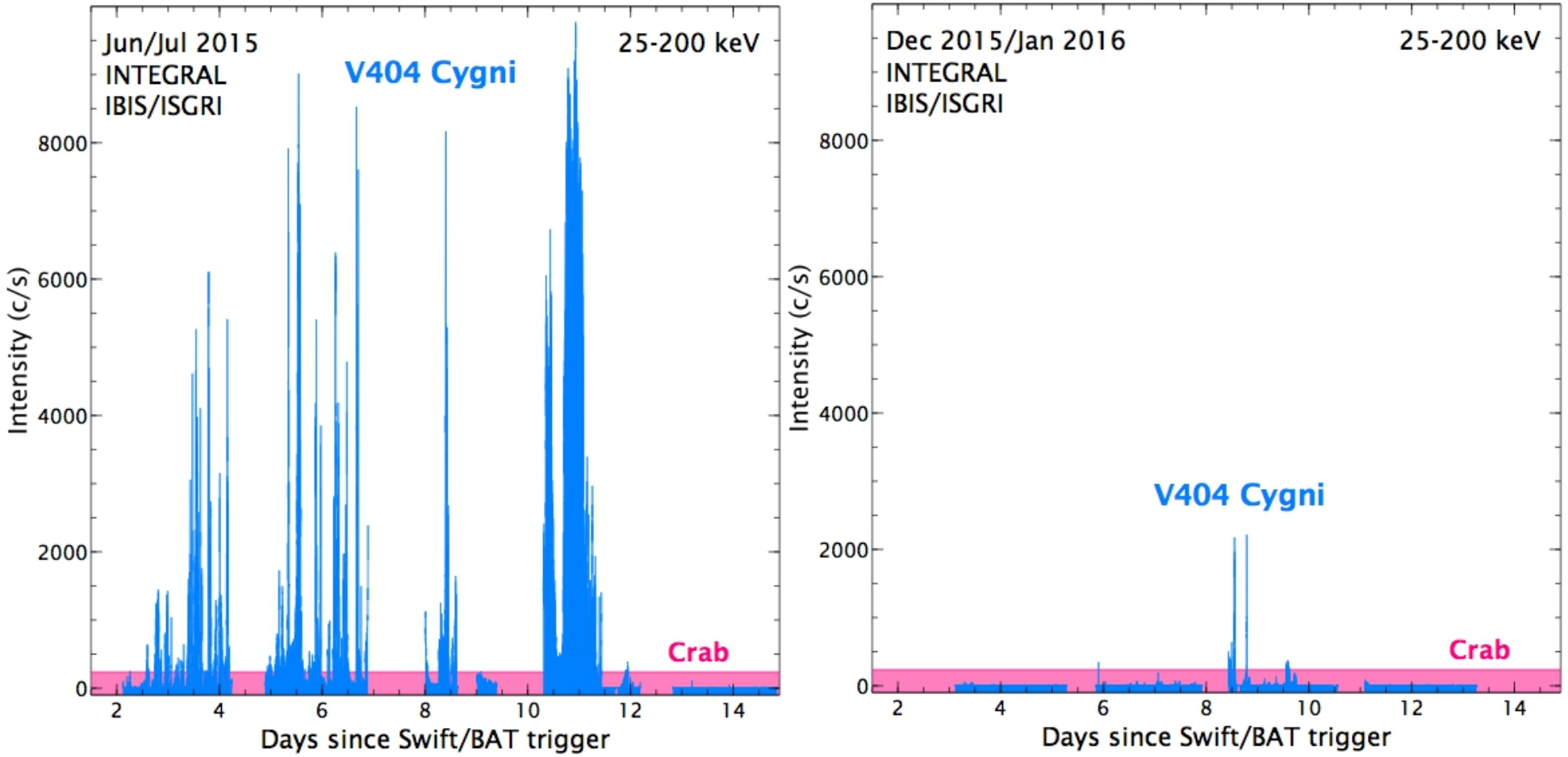
Science highlights



Outreach

Observatory status

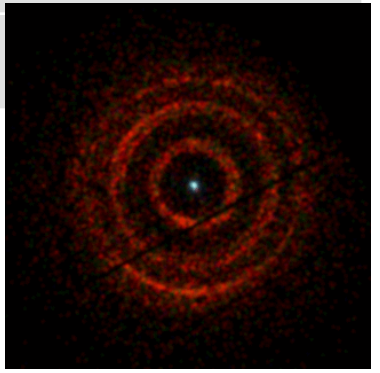
ToO on V404 Cyg



Observatory status

V404 Cyg - INTEGRAL-related publications

Title	Reference
Correlated optical, X-ray, and γ-ray flaring activity seen with INTEGRAL during the 2015 outburst of V404 Cygni	Rodriguez et al. 2015, A&A 581, L9
High Energy Spectral Evolution of V404 Cygni during the 2015 June Outburst as Observed by INTEGRAL	Natalucci et al. 2015, ApJ 813, L21
First INTEGRAL Observations of V404 Cygni during the 2015 Outburst: Spectral Behavior in the 20-650 keV Energy Range	Roques et al. 2015, ApJ 813, L22
Repetitive patterns in rapid optical variations in the nearby black-hole binary V404 Cygni	Kimura et al. 2016, Nat 529, 54
The X-ray dust-scattered rings of the black hole low-mass binary V404 Cyg	Vasilopoulos & Petropoulou 2016, MNRAS 455, 4426
Positron annihilation signatures associated with the outburst of the microquasar V404 Cygni	Siegert et al. 2016, Nat doi:10.1038/ nature16978

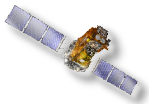


- Most of the data public immediately + ready-to-go data products
- In 2015: out of 40 INTEGRAL-related ATels → 11 on V404 Cyg!

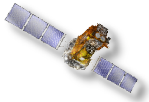
Science highlights (POM)

Title	Reference	POM
The Galactic ^{26}Al Emission Map as Revealed by INTEGRAL SPI	L. Bouchet al. 2015, ApJ 801, 142	March 2015
The ephemeris, orbital decay, and masses of 10 eclipsing HMXBs	M. Falanga et al. 2015, A&A 577, A130	May 2015
Anatomy of the AGN in NGC 5548. I & III	M. Mehdipour et al. 2015, A&A, 575, A22 & F. Ursini et al. 2015, A&A, 577, A38	June 2015
Central engine of a gamma-ray blazar resolved through the magnifying glass of gravitational microlensing	A. Neronov et al. 2015, NatPh 11, 664	August 2015
A recent change in the optical and γ-ray polarization of the Crab nebula and pulsar	P. Moran et al. 2016, MNRAS 456, 2974	January 2016
JEM-X/INTEGRAL X-ray Survey of the Galactic Center Region	S.A. Grebenev & I.A. Mereminskiy 2015, AstL 41, 765	March 2016

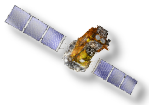
INTEGRAL POM: http://www.cosmos.esa.int/web/integral/pom-archive



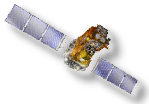
Observatory status



Community interfaces



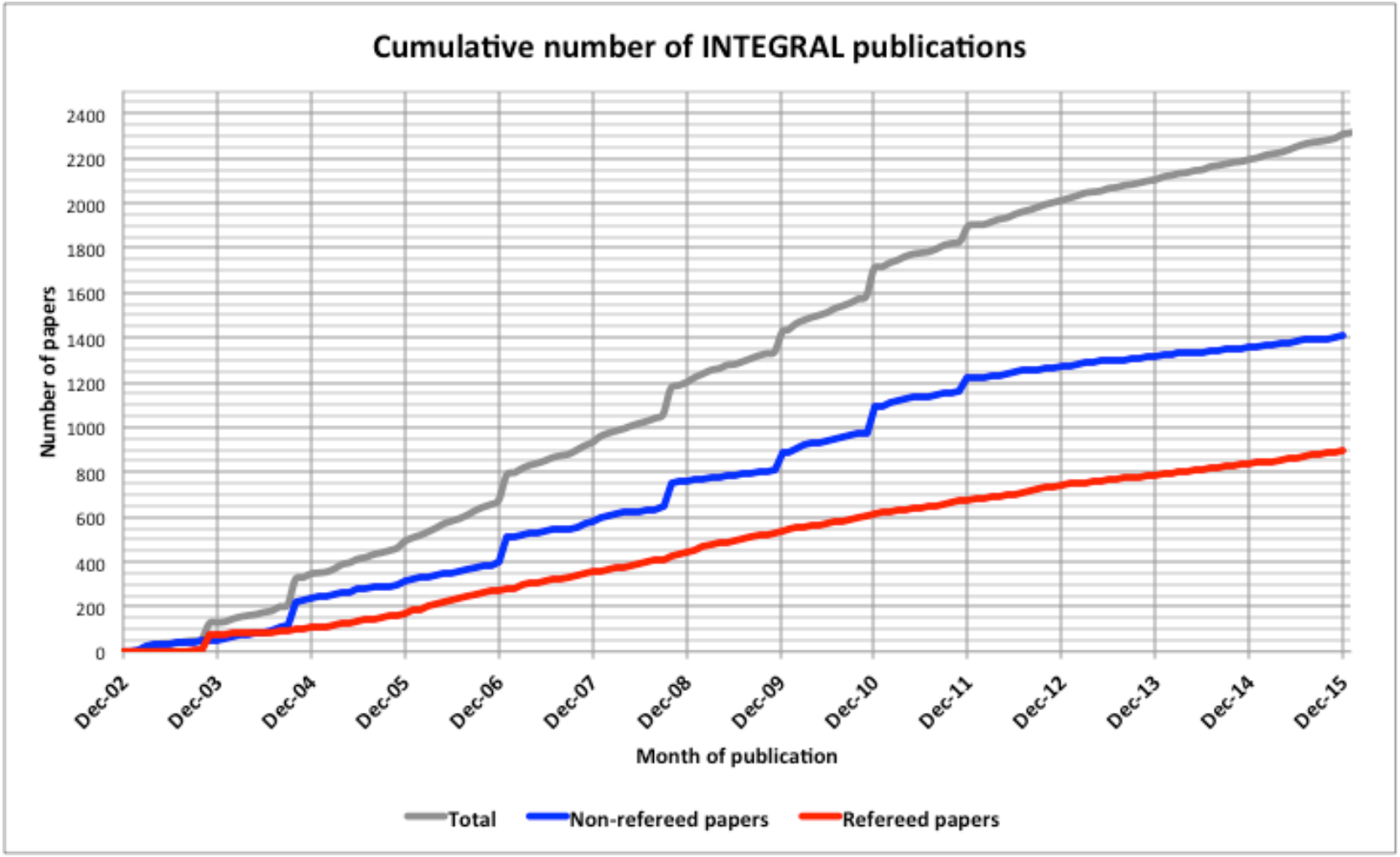
Science highlights



Outreach

Outreach

Refereed publication statistics (up to/including Jan 2016)



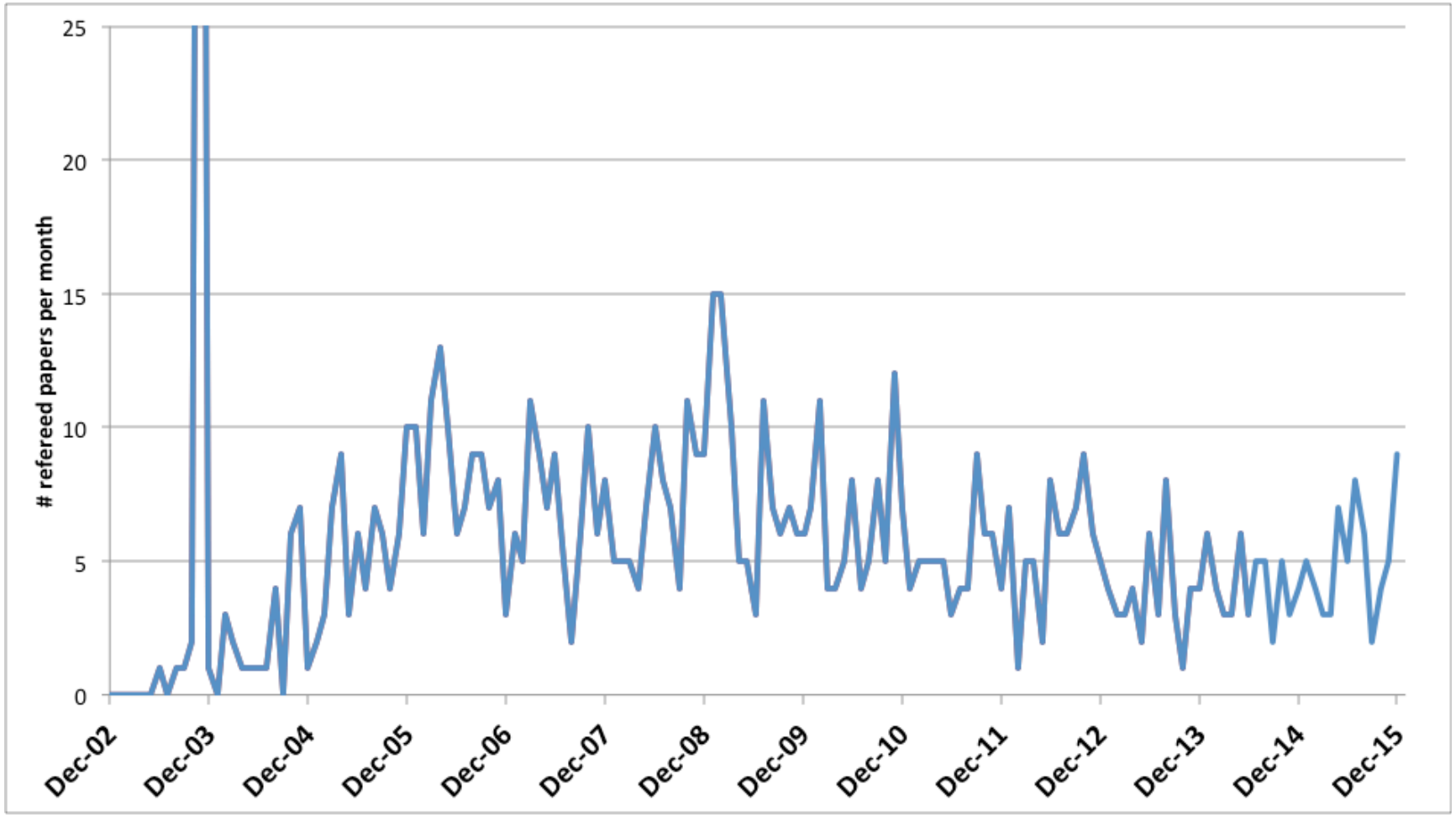
2316

1415

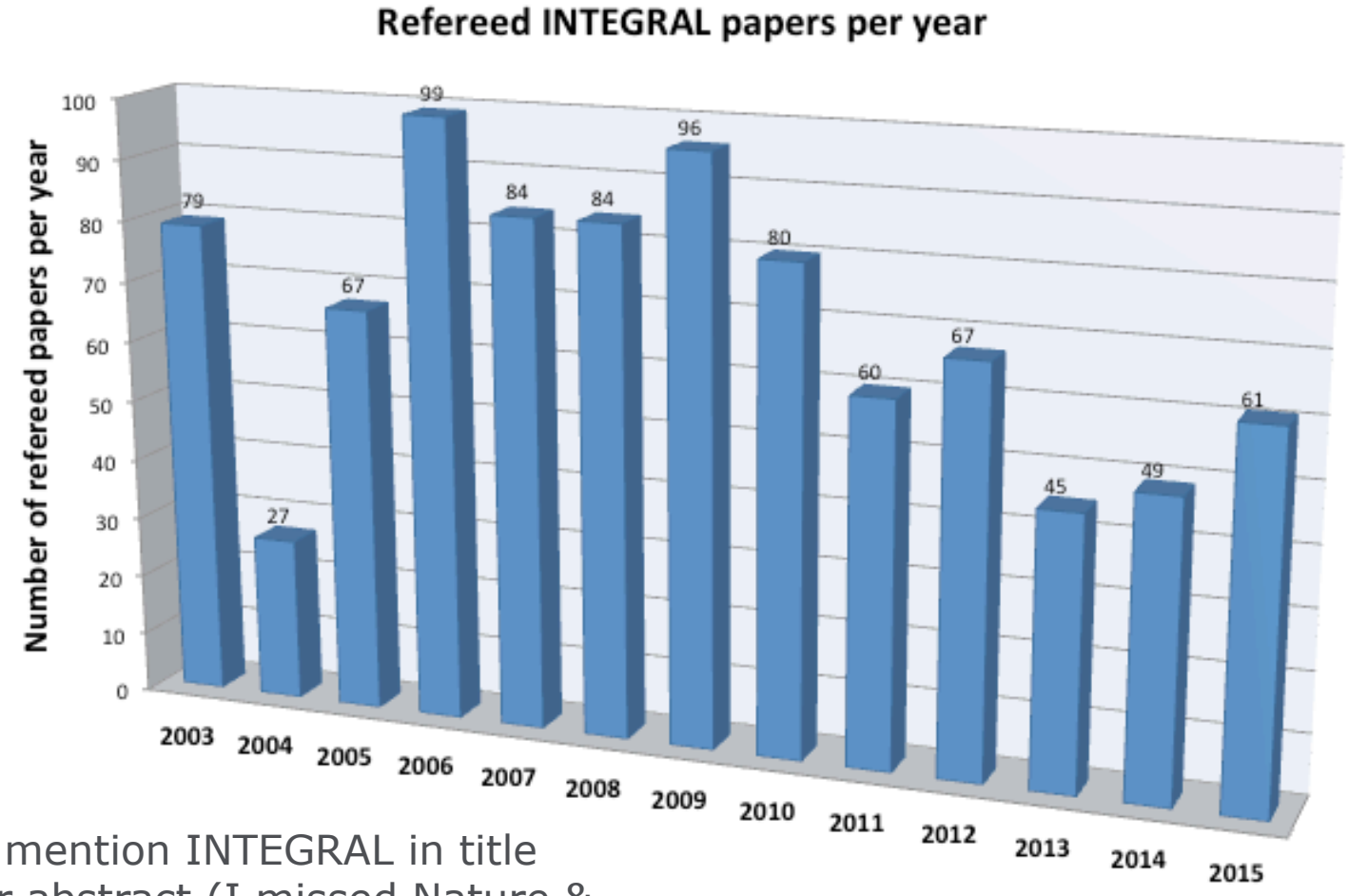
901

Outreach

Refereed publication statistics (up to/including Jan 2016)



Outreach



Total since launch (up to Feb 2016): **2316** papers

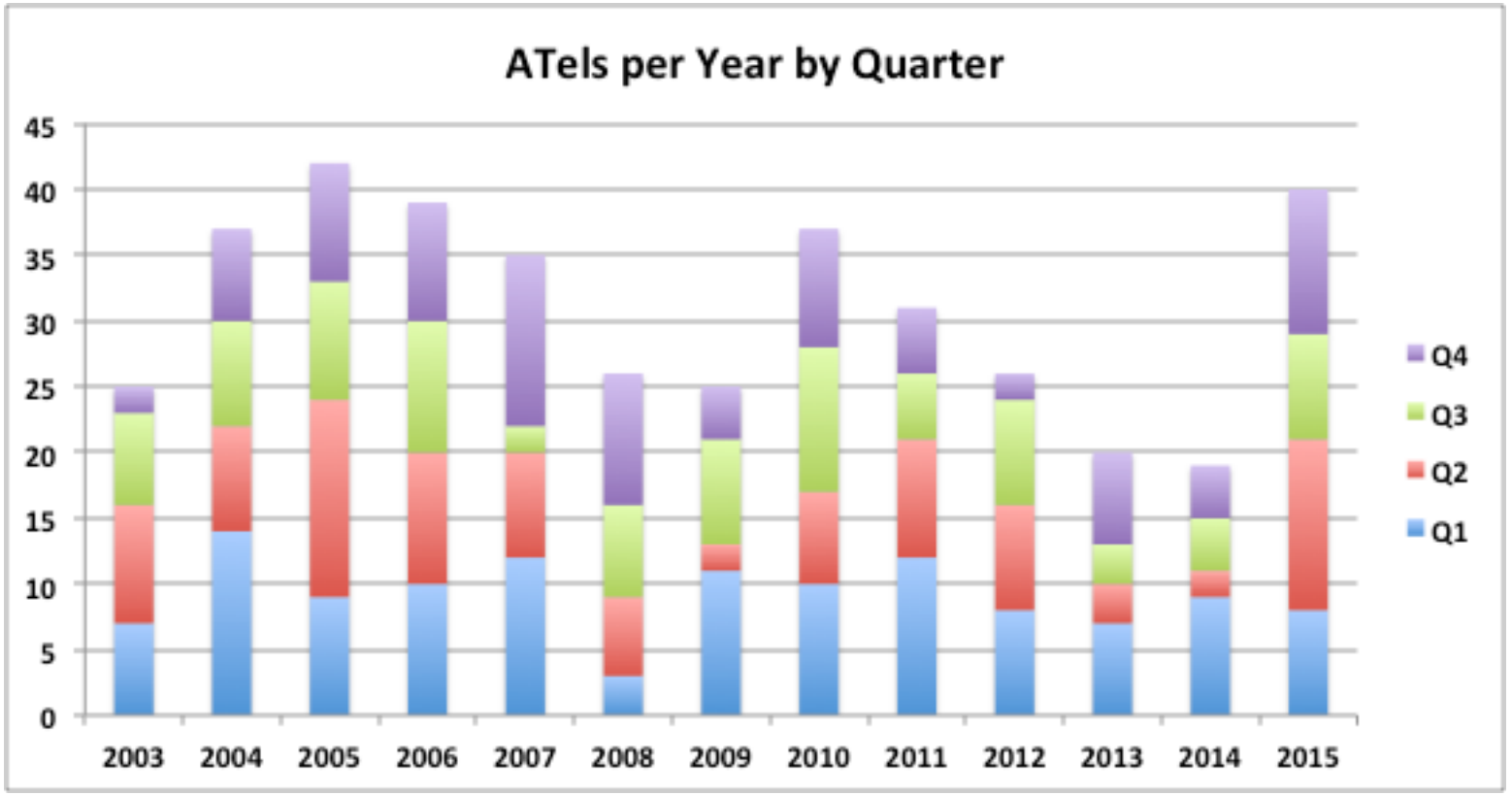
901 refereed, **1415** non-refereed

Note: mention INTEGRAL in title and/or abstract (I missed Nature & Science paper on SN2014J in 2014!)

2014 → 2015: ~25% increase!

Outreach

ATel publication rate (up to/including Jan 2016)



- 2015: out of 40 INTEGRAL-related ATels → 11 on V404 Cyg!

Outreach

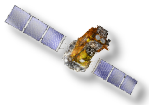
Status since last meeting (February 2015)

ESA web-stories	
Monster black hole wakes up after 26 years (European Week of Astronomy and Space Science, Tenerife)	25 June 2015
Astronomers use cosmic gravity to create a 'black-hole-scope' (Neronov et al.)	6 July 2015
INTEGRAL X-rays Earth's aurora (Churazov, Türler et al.)	26 January 2016

Average # stories in:

2016 - 1 + Twitter!
2015 - 3 + Twitter!
2014 - 1
2013 - 4
2012 - 7
2011 - 9
2010 - 6

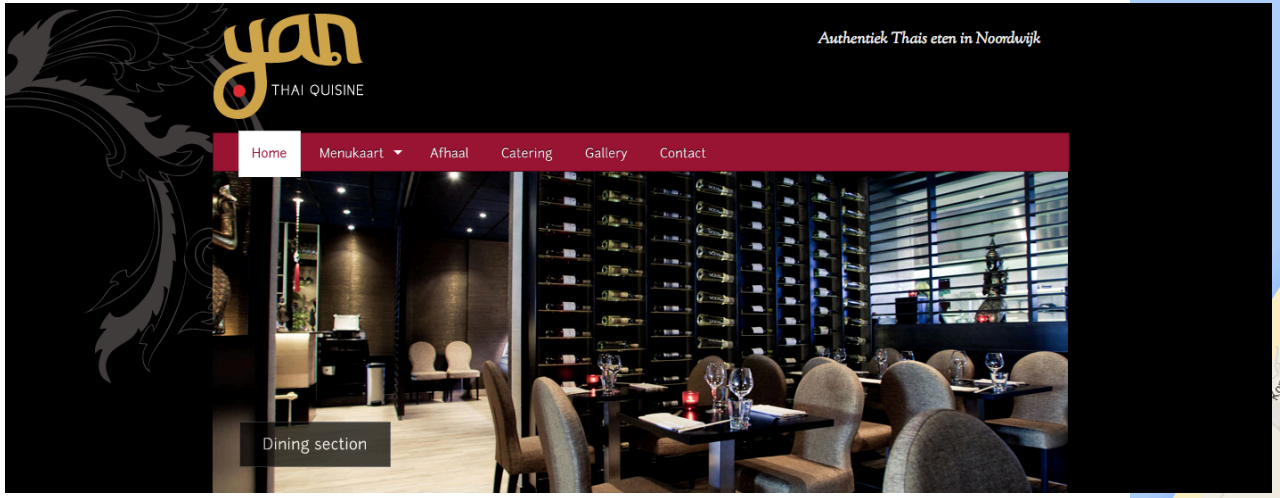
Suggestions and proposals for new outreach products welcome!
(not only Nature or Science papers…)

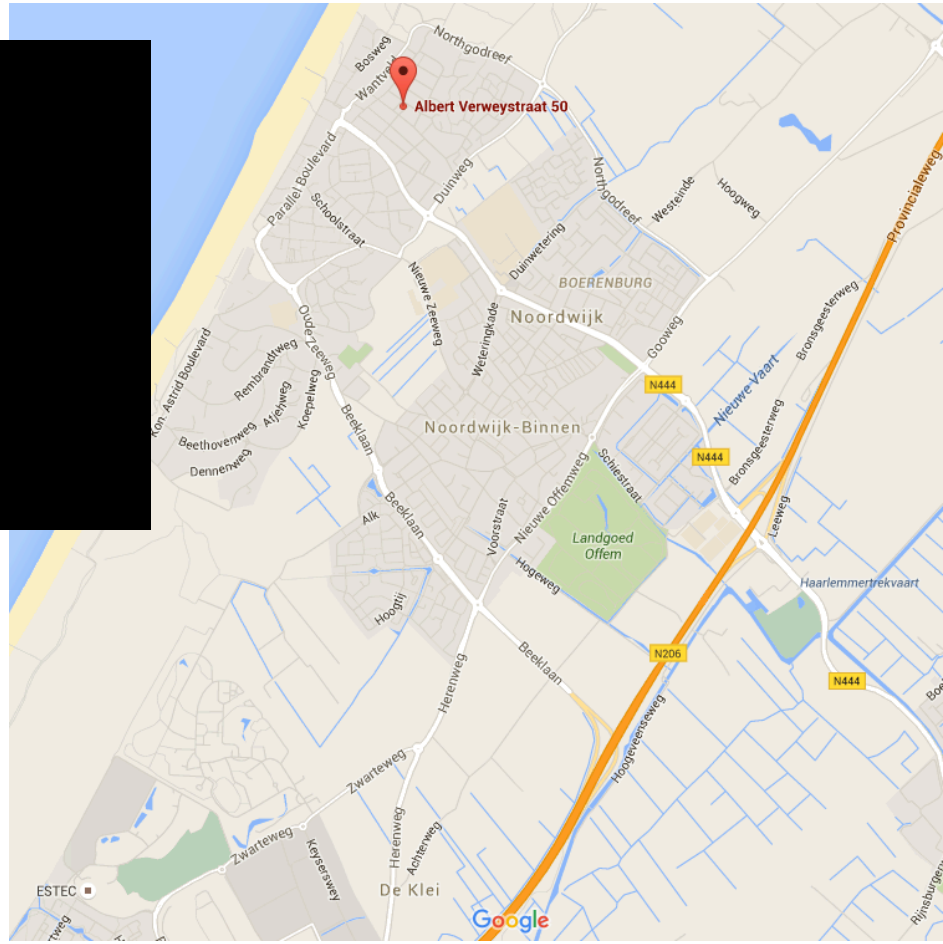


Miscellaneous

Dinner tonight

Thai restaurant "Yan" – *Authentiek Thais eten in Noordwijk*
http://yannoordwijk.nl





Albert Verweystraat 50
Noordwijk

35€ - special menu
including vegetarian

19:00
Who's joining?

That's it for now