

Top ten reasons to close Pine Gap

1. Facilitates US nuclear war first strike
2. Improves targetting for US nuclear second strike
3. Is a priority Russian and Chinese nuclear target
4. Contributes to US drone attack targeting
5. Critical for viability of destabilising US-Japan missile defence system
6. Deeply involved in battlefield activities in US global military operations
7. Situational Space Awareness role – the essential requirement for US space war
8. Key part of US global surveillance network
9. Australian uses of Pine Gap capabilities hard wire ADF into US military systems
10. Limits Australian autonomy foreign policy autonomy; default = US position

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Pine Gap today



Richard Tanter

IPAN, Alice Springs, 1 October 2016

<http://nautilus.org/network/associates/richard-tanter/talks/>

(photo courtesy of Felicity Ruby)

1

Four systems now at Pine Gap: three space-based, one from the ground

- 1. Advanced Orion signals intelligence (SIGINT) satellites ground station**
 - Command, control, downlinking, processing, analyzing of electronic signals captured by three Advanced Orion satellites in geostationary orbit
- 2. Space-based Overhead Persistent Infrared satellites Relay Ground Station**
 - Automatic operation, downlinking and relaying of data from two generations of thermal imaging satellites (DSP and SBIRS):
- 3. Foreign Satellite/Communications Satellite (FORNSAT/COMSAT) ground-based monitoring and interception station**
- 4. Space Tracking and Surveillance System satellite ground station**
 - low earth orbit satellites for missile defence and for space situational awareness

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The networked alliance, involving:

- A greatly increased role for the joint facilities in
 - US global military operations,
 - US nuclear and conventional global conventional military operations,
 - drone assassinations,
 - missile defence, and
 - planning for space warfare;
- technological and organisational integration of Australian military forces with those of the US, as a niche auxiliary force for global deployment;
- an unprecedented missile defence role for Pine Gap in the defence of Japan;
- new capacities at a number of joint facilities transforming Australia's military relationship with China, as well as the US.

Richard Tanter, "Home base", *Australian Financial Review*, 25 January 2015, at <http://nautilus.org/network/associates/richard-tanter/publications/#axzz33Aoy6AAL>

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The government view of the alliance bargain –
hosting US bases as the price of “nuclear protection”

1. Australian security depends on US maintenance of a stable world nuclear order.

2. Kim Beazley: “We accepted that the joint facilities were probably targets, but we accepted the risk of that for what we saw as the benefits of global stability.”

- presentation to Seminar on the ANZUS alliance, Joint Standing Committee on Foreign Affairs, Defence and Trade, Parliament of Australia, 11 August 1997.

Paul Dobb, “We judged, for example, that the SS-11 ICBM site at Svobodny in Siberia was capable of inflicting one million instant deaths and 750,000 radiation deaths on Sydney. And you would not have wanted to live in Alice Springs, Woomera or Exmouth -- or even Adelaide.”

- “America has always kept us in the loop”, The Australian, 10 September 2005.

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The joint facilities =
“the strategic essence” of Australian defence;
the core utility of Australia to the US

- Australia’s contribution to the global signals intelligence agreement known as the UKUSA Agreements
- Despite the risks, Australian govts. justify alliance and the bases with three rationales:
 - Australia derives crucial intelligence from joint facilities
 - Australia gets access to higher levels of US military equipment (unlike non-UKUSA partners)
 - Australia gets a seat at the highest strategic discussions in Washington

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The Five Eyes intelligence context

- **UKUSA agreements 1946-56** on signals intelligence cooperation
- worldwide signals intelligence collection, processing, and analysis
- **Transnational political community between five agencies:**
 - National Security Agency (NSA – US)
 - Government Communications Headquarters (GCHQ – UK)
 - Communications Security Establishment (CSE - Canada)
 - Australian Signals Directorate (ASD -Australia),
 - Government Communications Security Establishment (GCSB -NZ)
- **U.S., U.K. = “First Parties”**
- **Australia, Canada, New Zealand = “Second Parties”**
- For Australia this is the critical element of the US alliance.

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Pine Gap: the old story (1)

- Established as a CIA station for the first geostationary signals intelligence collection satellites
- primary purpose: intercepting telemetry from Soviet (and other) missiles undergoing tests
- >>> arms control role: so US could know if the Soviets were adhering to the arms control treaty bargain
- Secondary roles:
 - a. Locating and characterising Soviet air defence radars, in order for US nuclear-armed bombers can evade/jam and reach their designated targets
 - b. Collect the content of a range of radio transmissions including military, diplomatic and Soviet elite phone calls through microwave towers etc.
- Until the mid-1980s:
 - Australia had access to data it asked for, but limited uses
 - Australians had limited access and restricted roles
- Location of the base in the middle of Australia determined primarily by need to prevent Soviet access to the downlink beam from the SIGINT satellites – approx. 160 km diameter circle.
- Pine Gap was a stand-alone station, controlling “its satellites” and their processing data, then forwarded as reels of tape on planes back to the US
- CIA built and run; very little US military involvement; primarily concerned with high-level strategic intelligence requirements rather than intelligence directly relevant to US military operations.

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The old story (2): Nurrungar inherited in 1999

- Joint Defence Space Communications Station (JDSCS) at Nurrungar, near Woomera in SA, (later called the Joint Defence Facility Nurrungar)
- a ground station for control, downlinking and processing of data from US early warning satellites:
 - Three Defense Support Program (DSP) thermal imaging satellites in geostationary orbits looking for the heat bloom of Soviet missiles being launched towards the US.
 - Primary function: early warning of surprise attack on US – ‘preventing a nuclear Pearl Harbour’
 - Secondary function:
 - a. identifying which Soviet missiles were then empty, which still had missiles, and then became nuclear targets in the next US strike.
 - b. During Gulf War, DSP satellites detected Iraqi Scud missile launches; interception success rate debatable
 - Very high priority Soviet nuclear target
- Nurrungar closed in September 1999
- Pine Gap Relay Ground Station (RGS) opened at the same time
 - new compound on the western edge of Pine Gap
 - radomes and other antennas for the DSP satellites
 - operated remotely and automatically from the US, except for maintenance and new construction

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Pine Gap: the new story (1)

- CIA control replaced by the military in late 1990s:
 - now National Reconnaissance Office control
 - smaller CIA role; large numbers of military personnel and NSA contractors
- Strategic intelligence role continues
 - Signals intelligence: Russian, Chinese, Pakistani etc. missile telemetry, etc .
 - Thermal imaging: early warning of missile launches through DSP and new generation of thermal imaging satellites (SBIRS)
- but, both systems expand in size and capability
 - expansion in the number of antennas
 - massive increase in satellite capabilities and ground system analytical capabilities

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Pine Gap: the new story (2)

- focus shifts to provision of actionable intelligence for and to US global military operations
- **Signals intelligence (SIGINT) and communications intelligence(FORNSAT/COMINT):**
 - provides content and geolocation data on cell phones and satellite phones and interception of internet connections,
 - contributing data to targetting process for USAF drone strikes in Iraq and Afghanistan and Syria, and CIA drone and special forces extrajudicial killings in countries with which neither US nor Australia is legally at war
- **Thermal imaging satellites (DSP + SBIRS)**
 - now contribute critical missile launch and trajectory data to US and Japanese ballistic missile defence systems
 - without the 'cueing' data and analysis provided in almost real time by Pine Gap, BMD systems in the Pacific have little chance of finding incoming missiles in time.

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The new story: (3)

- From 2008, a fourth system develops a toehold at Pine Gap: the low earth orbiting **Space Tracking and Surveillance System** satellites:
 - One pair of STSS-Demonstrator and one STSS Advanced technology Risk Reduction infrared sensor satellites in low earth orbit can detect adversary missiles as they cool after the boost phase.
 - Now judged 'almost operational' and 'the most valuable current missile defence sensor'
- The STSS-ATRR satellite revealed to have another function:
 - In addition to infrared sensor, a visible light sensor pointing not downward towards missiles after launch, but upwards towards the Geostationary Orbit belt of hundreds of satellites:
 - now providing high-value data on the position, character, and activities of adversary satellites
- takes Pine Gap, together with the new Space Telescope and Space Radar at Northwest Cape, into space warfare preparations as 'Space Situational Awareness' sensors - the prerequisite for anti-satellite warfare.

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The new story (4)

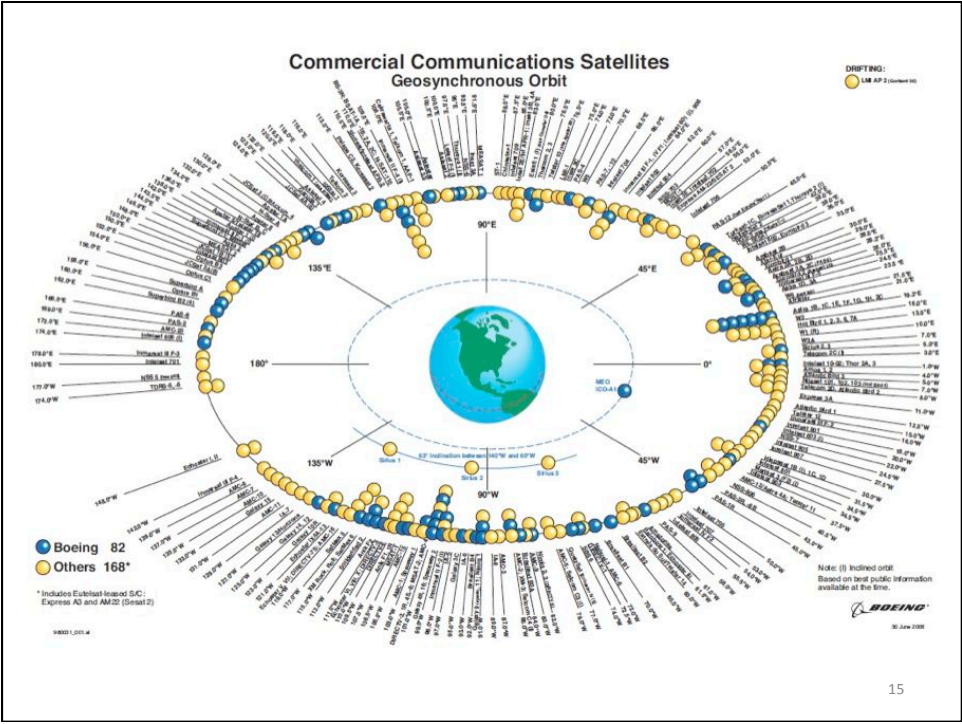
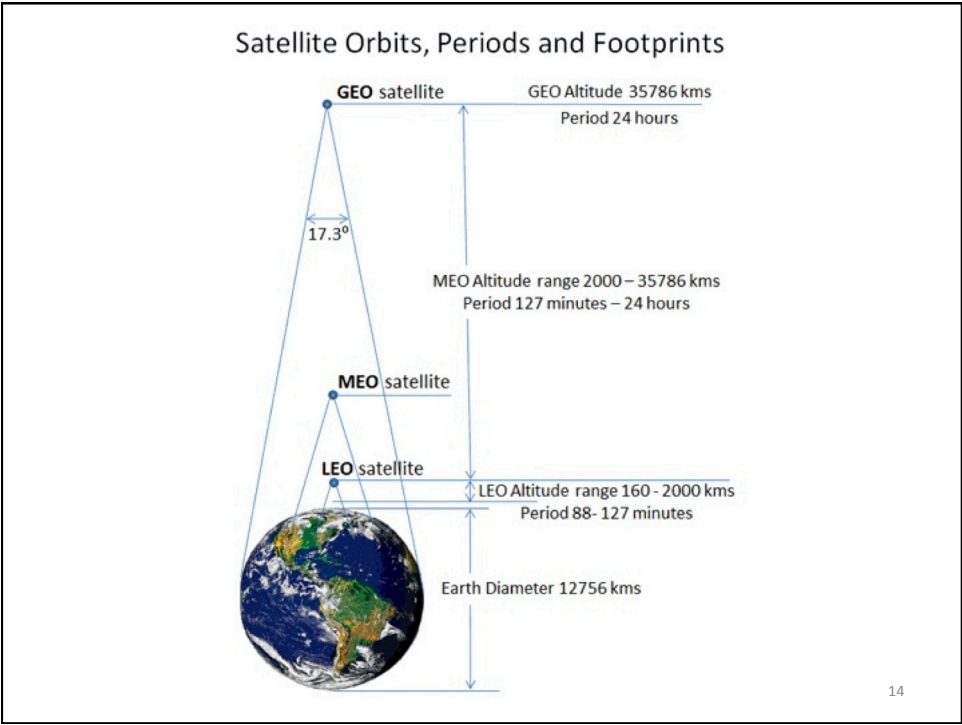
- Australians now fully integrated into all aspects of the base's functioning, and accesses of data
- **doctrine of 'Full Knowledge and Concurrence' – really?.**
- **Australian Signals** integration into US-directed 'Five Eyes' surveillance activities
- **Australia uses for its own intelligence and operations**
 - **signals intelligence and communications intelligence data goes to HMAS Harman and Australian Signals Directorate in Canberra**
 - **DSP/SBIRS 'Overhead Persistent Infrared' (OPIR):**
 - **to supplement radar capabilities of RAN's Air Warfare Destroyers**
 - **Data goes to RAAF Salisbury (SA) to the Australian Mission Processor operated by 1st Remote Surveillance Squadron (1 RSU).**
 - **1 RSU will operate the North West Cape Space Telescope and Space Radar, and integrating OPIR data with Australia's own Jindalee Over The Horizon Radar system.**

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The one technical detail you need to understand – satellites in Geostationary Orbit (GEO)

Geostationary Orbit (GEO) – 36,000 kms

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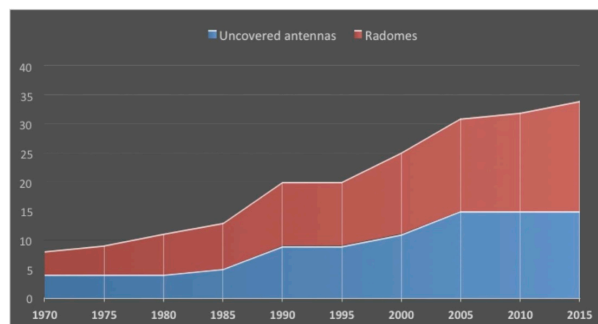




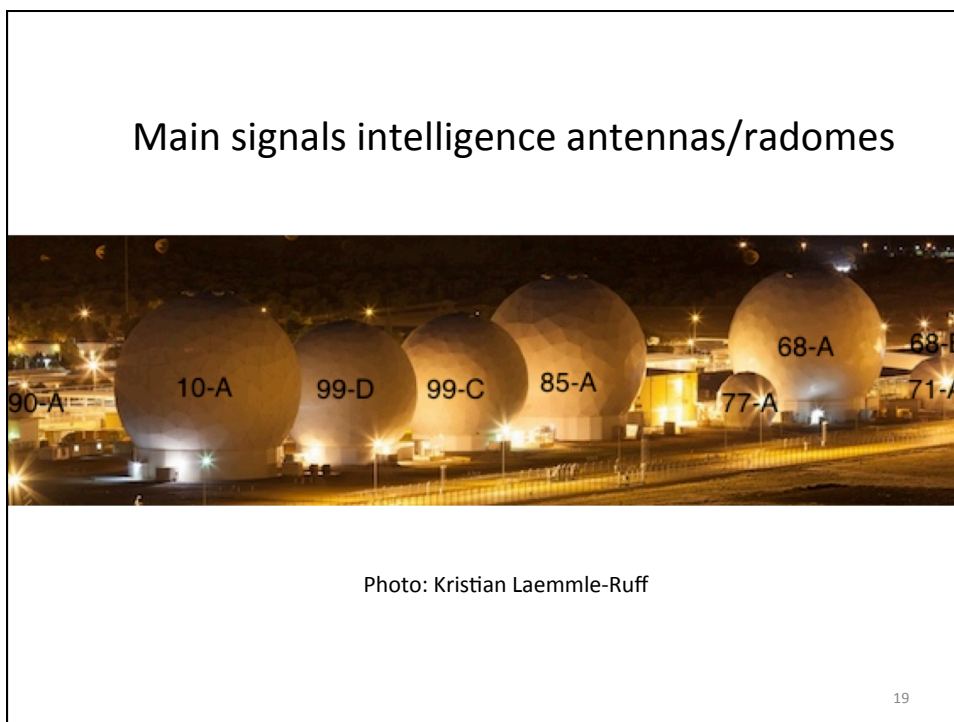
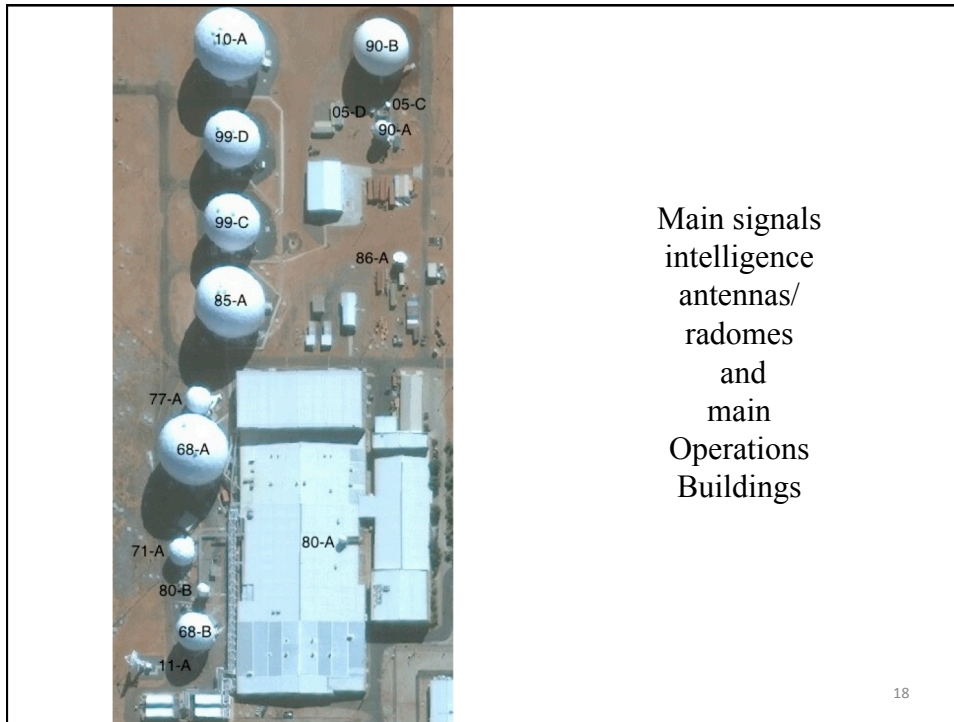
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Pine Gap by the numbers: a. antennas

- 46 installed since 1967
- 33 today
 - 19 in radomes (all parabolic dishes)
 - 14 uncovered (parabolic, high frequency masts, helical, and Torus multibeam)
- SIGINT: 21
- DSP/SBIRS: 6
- STSS: 3
- FORNSAT/COMSAT: 3



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Relay Ground Station
Space Tracking and Surveillance System
antennas
Antennas 05-B,12-A and 05-A



Photo: Kristian Laemmle-Ruff

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Antenna 34, Torus multibeam antenna (at rear)

12 October 2013.

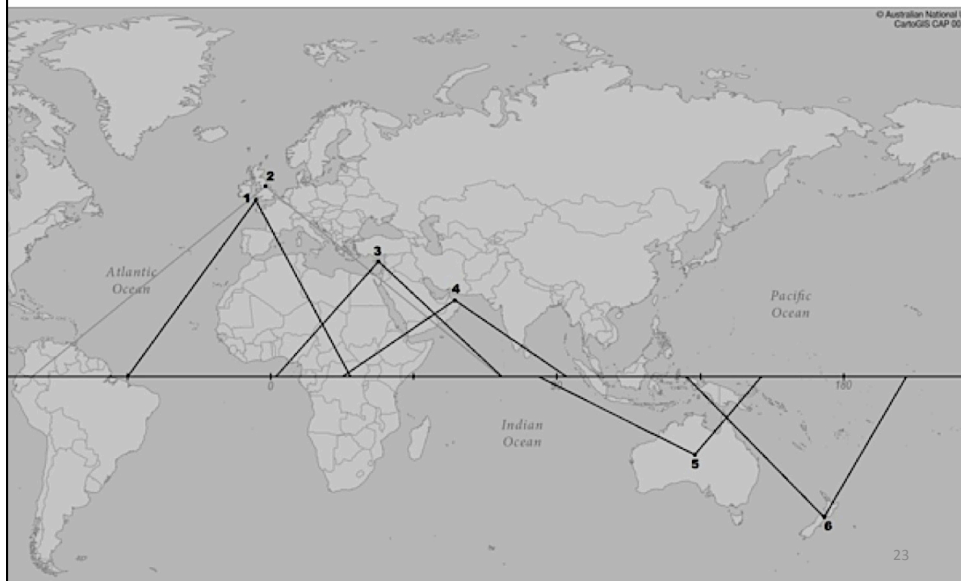
Front row from left to right: Antennas 2, 9, 3, 36

Source: Richard Tanter



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Coverage of GEO satellite belt by Torus multibeam surveillance antennas



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Pine Gap by the numbers
b. people

Year	Total number	Australian government employees	U.S. government employees	Australian contractors	U.S. contractors
2008	800	12%	18%	41%	29%
2015	800	10%	20%	40%	30%

Table 1. US personnel at Pine Gap, 2015

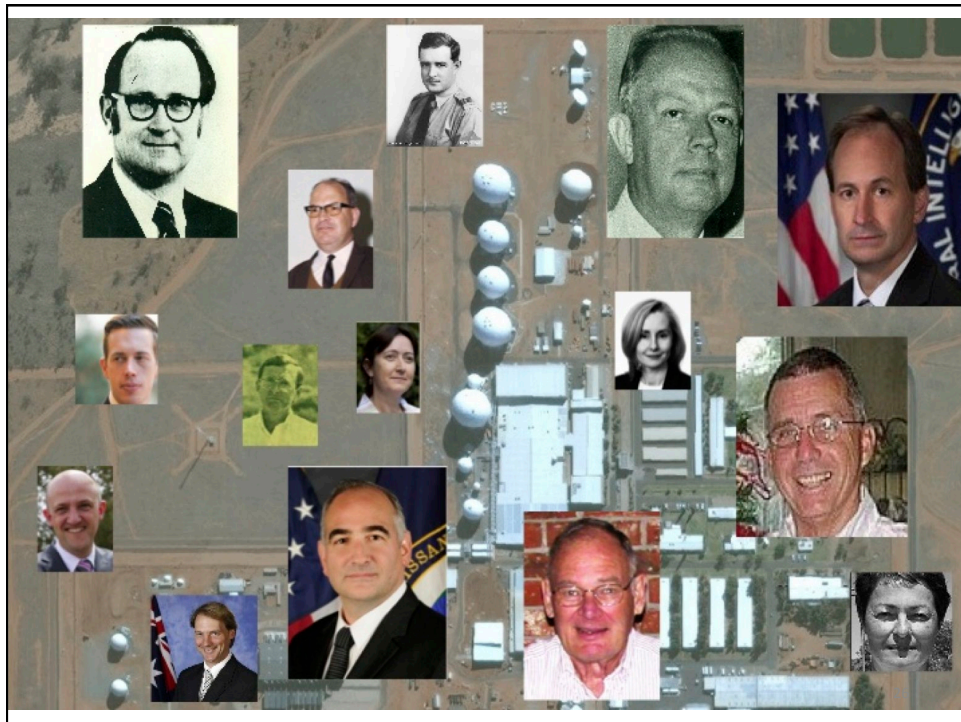
US Government: civilian (NRO, NSA, CIA)		US government: military		US contractor		Total	
No.	%	No.	%	No.	%	No.	%
55	14	105	26	240	60	400	100

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Table XX. Special Collection Elements resident at Pine Gap

Service	Branch	Unit
US Navy	Navy Information Operations Command	U.S. Naval Detachment Combined Support Group
US Air Force	Air Intelligence Agency	Detachment 2, 544th Information Operations Group
US Army	704th Military Intelligence Brigade	Remote Detachment, Alice Springs, 743rd Military Intelligence Battalion
US Marines	Marine Cryptologic Support Command	Sub-Unit 1, Alice Springs, Marine Cryptologic Support Battalion

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Amy Chaput
Chief of Station, JDFPG, 2015 -



Current
Australian
Deputy Chief:
Gary Thorpe



Pine Gap by the numbers: c. satellites

1. Advanced Orion SIGINT satellites (3)
2. Defense Support Program (DSP) early warning satellites (2)
3. Space-Based InfraRed System (SBIRS) early warning satellites
4. 4. Space Tracking and Surveillance System satellites
 - STSS – Demonstrator satellites (2)
 - STSS – Advanced Technology Risk Reduction satellite (1)

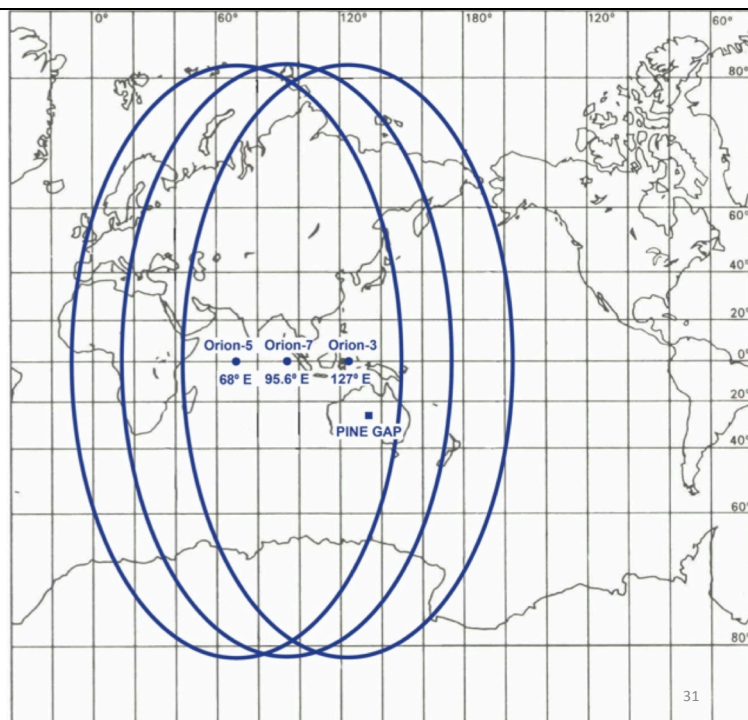
**Table 1. Geosynchronous SIGINT satellites
controlled from Pine Gap, 2015:
longitude and inclination**

	Orion-3 (1995-22A) (USA 110)	Orion-5 (2003-41A) (USA 171)	Orion-7 (2010-63A) (USA 223)
Longitude	126.9° E	67.9° E	95.6° E
Inclination	12.6°	7.7°	3.8°

Source: T. Flohrer, European Space Operations Centre,
Classification of Geosynchronous Objects, Issue 17, 28 March 2015.

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Pine Gap
controlled
GEO
SIGINT
satellites
– June
2015



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Antenna
forest on
Advanced
Orion
satellite
(Snowden
file)

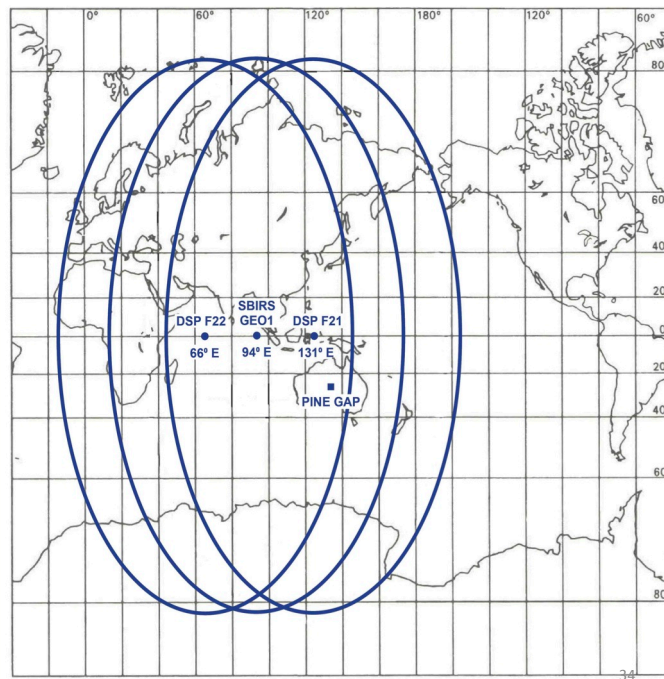


Table 1. Geosynchronous early warning satellites controlled via Pine Gap, 2016

DSP = Defense Support Program; SBIRS = Space Based Infrared System

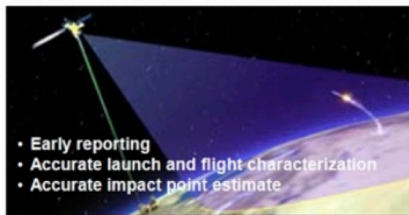
Designation	COSPAR ID	<u>Unclass. name</u>	Launch date	Launch vehicle	Est. mass (kg)
DSP F21	2001-033A	USA 159	6 August 2001	Titan 402B/IUS	2,386
DSP F22	2004-004A	USA 176	14 February 2004	Titan 402B/IUS	2386
SBIRS GEO1	2011-019A	USA 230	7 May 2011	Atlas V (401)	~4,500

Coverage of
geostationary
DSP and SBIRS
satellite
controlled via
Pine Gap,
2015



SBIRS Missions

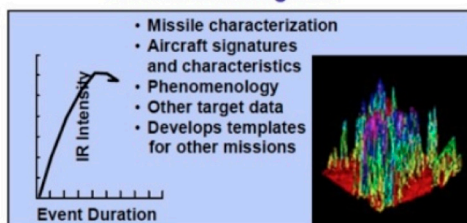
Missile Warning – Strategic and Theater



Missile Defense Support



Technical Intelligence



Battlespace Characterization



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Is Pine Gap is still a high priority target for Russia or China?

- **Cold War: definite high priority Soviet target**
- US-China nuclear relations today
 - unbalanced deterrence = unstable deterrence?
 - US/Japan missile defence and the erosion of Chinese nuclear deterrence capacity
- **why would China care about Pine Gap?:**
 - contribution to US nuclear targeting of Chinese ICBMs
 - US/Japanese missile defence
 - Priority of 'blinding' US space assets (and vice versa)
- **Mitigating factors**
 - redundancy in US systems (SIGINT and OPIR)
 - higher Chinese strategic priorities
 - limited number of Chinese nuclear delivery systems

Top ten reasons to close Pine Gap

1. Facilitates US nuclear war first strike
2. Improves targetting for US nuclear second strike
3. Is a priority Russian and Chinese nuclear target
4. Contributes to US drone attack targeting
5. Critical for viability of destabilising US-Japan missile defence system
6. Deeply involved in battlefield activities in US global military operations
7. Burgeoning involvement in Situational Space Awareness – the essential requirement for US space war
8. High value analysis of US electronic surveillance data collected worldwide and analyzed by globally networked system of bases
9. Australian uses of Pine Gap capabilities hard wire ADF into US military and intelligence systems
10. Critically limits Australian autonomy in foreign policy decisions, predisposing to default alignment with US

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What now for Australia?

- Building resources for an informed democratic debate about security and defence
- Understanding Australian interests vs. US interests, and then the human interest
- What are the consequences of our current and projected force structure and basing arrangements?
- Thinking deeply about China and making genuinely realistic assessments about China
- What actual security threats does Australia face?
- What intelligence and military force structure does Australia need for actual threats?
- What are the alternatives, and what are the consequences for the bases?

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Pine Gap – Kristian Laemme-Ruff, October 2014



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The Pine Gap project papers:
Desmond Ball, Bill Robinson and Richard Tanter,
at

[http://nautilus.org/briefing-books/australian-defence-facilities/
pine-gap/the-pine-gap-project/](http://nautilus.org/briefing-books/australian-defence-facilities/pine-gap/the-pine-gap-project/)

'Pine Gap today', IPAN, Alice Springs, 1 October 2016,
at

<http://nautilus.org/network/associates/richard-tanter/talks/>

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