

Economics Legislation Committee
ANSWERS TO QUESTIONS ON NOTICE
Industry, Innovation and Science Portfolio
2015-16 Additional Budget Estimates
11 February 2016

AGENCY: CSIRO

TOPIC: Australian Centre for Precision Optics

REFERENCE: Written question – Senator Carr

QUESTION No.: AI-146

Regarding the Australian Centre for Precision Optics:

- a. Please provide details of all redundancies in the Centre in 2014 and 2015.
- b. What is the anticipated change in the number of FTE positions in the Centre in 2016?
- c. Please list all the then CSIRO scientists who were involved in the development of the optical thin film and metrology capability that contributed to the success of the Advanced LIGO project.
- d. For each of the team members who contributed to this aspect of the LIGO project, please advise whether they remain with CSIRO and, if not, the nature of their departure (eg resignation, retirement, voluntary redundancy or forced redundancy).
- e. On 15 February, Dr Foley said in relation to CSIRO's contribution to Advanced LIGO that: "The coatings, which were developed and applied at our labs in Sydney, are among the most uniform and precise ever made. Despite what the articles state, we still have metrology capability and all of our gold coatings infrastructure. In fact Caltech, which leads the optics work for Advanced LIGO, is visiting CSIRO this week to progress some further work together. This is because CSIRO is one of the only research groups in the world who can do these coatings to this level of precision."
- i. How does CSIRO explain the disconnect between this statement and that of the former project manager, Dr Bob Oreb, that: "The sad thing to see is that [the] group has been closed down"?
- ii. How does CSIRO explain the views subsequently expressed by one of the visitors from Caltech that "the closure of the key team at CSIRO meant only one place in the world – France's Centre National de la Recherche Scientifique – could complete the work to the same standard" (Dr GariLynn Billingsley paraphrased by Peter Hannam in the Sydney Morning Herald of 24 February)?

ANSWER

- (a) There were two redundancies in 2014 and six in 2015 (for details please refer to the following table).
- (b) There is no anticipated change in this capability area in 2016.
- (c) The Advanced LIGO project was carried out over 3.5 years (July 2009 to February 2013), and drew on a research team made up of:
 - 8 (2.08 FTE) research scientists,
 - 3 (1.55 FTE) experimental scientists,
 - 3 (0 FTE) administration and contract staff and
 - 16 (4.5 FTE) technical officers(although they were not all working full time on the project – allocated time is given in the brackets) – a total of 30 CSIRO staff involved with 8.03 FTE allocated in the LIGO

contract. Refer to the table below. Most of the technical officers were part of a short-term team pulled together at the beginning of the project to build the facilities required. This team was dispersed once the task was complete.

(d) Refer to the table below

Role	Total FTE in LIGO Contract	Status	Date of Effect
Dielectric Coating Deposition and Characterisation			
Lead coating Scientist	1.0	Redundancy (now can access through the Australian National Fabrication Facility (ANFF))	6/7/2015
Scientist instrumentation and some metrology	0.60	Redundancy	7/7/2015
Scientist coatings	0.5	Redundancy	7/7/2015
Post retirement was a paid consultant for the project.		Retirement	14/8/2008 Consultant July 2009 to June 2011
Project Management and Administration			
Original bid leader and team leader.	0.4	Redundancy (voluntary substitution)**	14/11/2012
Admin assistant	In kind	Redundancy (voluntary substitution)**	7/11/2013
Contract Negotiation and responsible for project delivery	In kind	Currently employed at CSIRO	
Project Support officer	In kind	Currently employed at CSIRO	
Cleaning/Handling of Mirrors. Fabrication of test samples			
Polishing substrate management and polishing team leader	0.5	Currently employed at CSIRO	
Polishing	0.6	Invalidity (ill health)	20/5/2014
Lab assistant and polishing	0.4	Redundancy (voluntary substitution)**	16/4/2015
Polishing	0.05	Currently employed at CSIRO	
Polishing	0.5	Resignation	28/2/2013
Retired and returned for the project as a contractor		Completion of casual term	6/10/2015
Polishing (replaced a staff member who resigned)	In kind	Redundancy	12/6/2015
Gold Coating Deposition and Characterisation			
Project leader for a period before taking a VRS and becoming a CSIRO Honorary Fellow.	0.2	Redundancy (voluntary substitution)**	7/11/2013
Senior research scientist for Coatings and thin films	0.3	Currently employed at CSIRO	
Vacuum Technical officer	0.5	Passed Away	4/11/2012
Electronics and program		Redundancy (voluntary	7/11/2013

Role	Total FTE in LIGO Contract	Status	Date of Effect
technical officer		substitution)**	
Optical Surface Shape Metrology			
Scientist Metrology	0.3	Resignation	29/2/2012
Optics Group leader during the LIGO project also senior scientist with metrology capability	In kind	Currently employed at CSIRO	
Mechanical Design and Engineering Support			
Fitter and Turner (F/T) technical officer Optics based	0.7	Redundancy (voluntary substitution)**	4/2/2011
Fitter and Turner (F/T) indefinite technical officer on short term placement to Optics	Total 2.1	Redundancy (voluntary substitution)*	22/5/2015
Fitter and Turner (F/T) indefinite technical officer on short term placement to Optics		Redundancy*	27/5/2014
Fitter and Turner (F/T) indefinite technical officer on short term placement to Optics		Currently employed at CSIRO	
Fitter and Turner (F/T) indefinite technical officer on short term placement to Optics		Retirement	10/7/2012
Fitter and Turner (F/T) indefinite technical officer on short term placement to Optics		Currently employed at CSIRO	
Fitter and Turner (F/T) indefinite technical officer on short term placement to Optics		Redundancy (voluntary substitution)*	7/11/2013
Fitter and Turner (F/T) indefinite technical officer on short term placement to Optics		Redundancy*	9/11/2012
Fitter and Turner (F/T) indefinite technical officer on short term placement to Optics		Redundancy*	30/5/2014
* Note that these staff were made redundant subsequent to finishing their short term placement in the Optics project and returning to their substantive position and are not included in the total provided in the answer to question (a) above.			
**CSIRO does not have voluntary redundancy provisions. Hoever in some circumstance staff who are potentially redundant may swap positions with a person who would not contest redundancy. This is referred to as “redundancy substitution”.			

(e) While the Australian Centre for Precision Optics was closed in 2015, CSIRO has maintained core capability in this field through a smaller group, now known as CSIRO Optics. In

particular, CSIRO has retained the equipment and expertise to apply gold coatings to optics for Advanced LIGO. In order to apply the gold coatings, the large, heavy and very expensive optics must be properly handled, which is why handling experts from LIGO recently visited CSIRO facilities in Sydney – to work with gold coating experts to complete the project. CSIRO is expecting the team to coat another optics project with LIGO in the coming months.

i. It would not be appropriate for CSIRO to speculate on the reasons for Dr Oreb's views particularly as CSIRO does not know the context in which they were expressed.

ii. It would not be appropriate for CSIRO to speculate on the reasons for Dr Billingsley's views particularly as CSIRO does not know the context in which they were expressed and that the statement was paraphrased by the journalist.