

Title	<i>Linac RF Windows</i>		
Project Requestor	Dave Bromberek		
Date	4/20/09		
Group Leader(s)	Ali Nassiri		
Machine or Sector Manager	Nick Sereno		
Category	Obsolescence/Spares		
Content ID*	APS_1286118	Rev.	2
			4/20/09 2:17 PM

*This row is filled in automatically on check in to ICMS. See Note ¹

Description:

Start Year (FY)	2009	Duration (Yr)	2
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Objectives:

Procure and replace rf windows in the linac waveguide system. This will address component lifetime and available spares issues.

Benefit:

Reduced risk of catastrophic failure and injector downtime which could lead to extended downtime. Maintain adequate spares inventory

Risks of Project: See Note ²

LOW. A minimum of 20% of windows received will be high power tested utilizing the L6 Test stand.

Consequences of Not Doing Project: See Note ³

Extended downtime on the order of weeks or longer, from a catastrophic event due to component end-of-life failures, such as was seen with an rf window failure at the end of January 2009. It is believed that the lifetime of an rf window is between 10-15 years. The current linac waveguide system contains a total of 35 windows aged 9 years or greater. Ten Gamma windows installed in the system were manufactured in 1991 with the majority of those in continuous service since 1993. It should be considered a high risk to machine operations to delay purchases of new windows and spares.

Cost/Benefit Analysis: See Note ⁴

Undertaking this project will minimize injector downtime, mitigate the likelihood of a catastrophic failure, and bring spares inventory of rf windows up to acceptable levels.

Description:

Replace existing Gamma rf windows at accelerating structures inputs and rf guns, with new CML rf windows. Replace Titan-Beta windows with new CML windows.

Funding Details

Cost: (\$K)

Use FY08 dollars.

Year	AIP	Contingency
1	216	
2		
3		
4		
5		
6		
7		
8		
9		
Total	216	

Contingency may be in dollars or percent. Enter figure for total project contingency.

Effort: (FTE)

The effort portion need not be filled out in detail by March 28

Year	Mechanical Engineer	Electrical Engineer	Physicist	Software Engineer	Tech	Designer	Post Doc	Total
1		0.05						0.05
2	0.05				0.15			0.2
3								0
4								0
5								0
6								0
7								0
8								0
9								0

Notes:

¹ **ICMS.** Check in first revision to ICMS as a *New Check In*. Subsequent revisions should be checked in as revisions to that document i.e. *Check Out* the previous version and *Check In* the new version. Be sure to complete the *Document Date* field on the check in screen.

² **Risk Assessment.** Advise of the potential impact to the facility or operations that may result as a consequence of performing the proposed activity. Example: If the proposed project is undertaken then other systems impacted by the work include ... (If no assessment is appropriate then enter NA.)

³ **Consequence Assessment.** Advise of the potential consequences to the facility or to operations if the proposal is not executed. Example: If the proposed project is not undertaken then ____ may happen to the facility. (If no assessment is appropriate then enter NA.)

⁴ **Cost Benefit Analysis.** Describe cost efficiencies or value of the risk mitigated by the expenditure. Example: Failure to complete this maintenance project will result in increased total costs to the APS for emergency repairs and this investment of ____ will also result in improved reliability of _____. (If no assessment is appropriate then enter NA.)