

## Technical comment on the replacement of the 48" mirror for the F L Whipple Observatory

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### Evaluation matrix of different mirror options

	Existing LW design made in Pyrex (REFERENCE)	Same LW design, but made in Zerodur	LW design with circular holes made in Zerodur	Alternative symmetrical LW design made in Zerodur (MMT-M2)	Solid meniscus mirror made in Zerodur	Solid plano-concave mirror made in Zerodur
Temperature sensitivity	-	+++	++	+++	+++	++
Polishing effort / print through effect	--	-	+	+	+++	+
Achievement of given weight limit	+++	+	-	+	+++	++
Maintain position of support points	+	+	+	--	--	+
Maintain existing "old" dimensions	+	+	+	+	--	-
Low price	?	--	○	-	+	++
Durability during recoating	--	+++	++	+++	+++	++
Mirror stiffness	--	-	++	+	?	?

Classification: **+++** excellent   **+** good   **○** moderate   **-** not favourable   **--** bad   **?** unknow