



## SOUTHERN AFRICAN LARGE TELESCOPE PHASE 1 OBSERVING TIME APPLICATION

<b>Year</b>	2017	<b>Semester</b> ( <i>1 = 1 May-31 Oct; 2 = 1 Nov-30 Apr</i> )	1	<b>Code</b>	2017-1-SCI-030
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### 1. TITLE

Target of opportunity for variable AGN

<b>2. PRINCIPAL INVESTIGATOR</b> Surname, First Name(s) of the PI	<b>Affiliation</b>	<b>PI Partner</b> (standard code)	<b>Time Requested</b> From Partner (sec)
Kollatschny, Wolfram	Institute for Astrophysics	GU	10770

<b>3. Co-INVESTIGATORS</b> Surname, First Name(s) of the Co-I	<b>Affiliation</b>	<b>Co-I Partner</b> (standard code)	<b>Time Requested</b> from Partner (sec)
Zetzl, Matthias	Institute for Astrophysics	GU	

<b>4. PRINCIPAL CONTACT</b> Surname, First Name(s) of the PC	<b>AFFILIATION</b>	<b>Email Address &amp; Telephone</b> Number
Kollatschny, Wolfram	Institute for Astrophysics	wkollat@astro.physik.uni-goettingen.de +49 0551 395065

### 5. ROLE OF THE SOUTH AFRICAN INVESTIGATORS AND STUDENTS

*No time has been requested from the South African TAC.*

<b>6. WILL THIS FORM PART OF A STUDENT THESIS ?</b>	No
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<b>7. IS THIS SUPPORTED EXTERNALLY ?</b>	No
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### 8. ABSTRACT

Based on optical broad band or X ray variations we intend to carry out follow-up spectroscopic observations of dedicated AGN.

### 9. NUMBER OF TARGETS, TOTAL OBSERVING TIME, TOO or TIME CRITICAL

<b>Number of Targets/Fields</b>	1	<b>Total Requested Time (sec)</b>	10770
<b>Target of Opportunity?</b>	Yes	<b>Minimum Useful Time (sec)</b>	10770
<b>Time Critical Observation?</b>	No	<b>This is mostly a non-dark time proposal.</b>	

### 10. MINIMUM OBSERVING CONDITIONS REQUIRED

<b>Sky Brightness</b>	See target information	<b>Maximum tolerable seeing</b>	3.0"
<b>Transparency Requirements</b>	Non-photometric	<b>Degree of cloud</b>	Any
<b>Description</b>	There are no specific constraints.		

### 11. INSTRUMENT CONFIGURATIONS REQUESTED

RSS longslit spectroscopy; 900 l/mm; full frame

### 12. TARGET INFORMATION

<b>Mandatory Targets (all are requested to be observed)</b>						
<i>Object Name</i>	<i>R.A. (J2000)</i>	<i>Dec (J2000)</i>	<i>Mag. (Filter)</i>	<i>Obs. Time (sec)</i>	<i>Max. Lunar Phase (%)</i>	<i>Ranking</i>
3C 120	00h 00m 00s	+00° 00' 00"	14.5 (V) to 15.5 (V)	10770	100	High
<i>Total Time/Range</i>	<i>00h 00m 00s</i>	<i>+00° 00' 00"</i>	<i>14.5 (V) to 15.5 (V)</i>	<i>10770</i>	<i>100</i>	<i>High</i>
<b>Optional Targets (a subset of any N = 0 targets are requested to be observed from the following list)</b>						
<i>There are no optional targets in the proposal.</i>						

<b>13. TRACK INFORMATION</b>					
<b>Mandatory Targets (all are requested to be observed)</b>					
<i>Object Name</i>	<i>Visits</i>	<i>Obs. Time per Visit (sec)</i>	<i>Max. Track (sec)</i>	<i>Number of Tracks</i>	<i>Number of Nights</i>
3C 120	5	2154	dummy target	dummy target	dummy target
<b>Optional Targets (a subset of any N = 0 targets are requested to be observed from the following list)</b>					
<i>There are no optional targets in the proposal.</i>					

<b>14. PREVIOUS PROPOSALS</b>		
<b>Proposal Code and Title</b>	<b>Status (completion as of 31 January 2017)</b>	<b>Publications</b>
2015-1-SCI-068	No status supplied.	
Line profile variations in He 1136-2304	Observed 18873 / 50268 seconds (38 % completed).	
2015-1-SCI-067	No status supplied.	
Spectroscopic verification of FU-Ori type outbursts	Observed 14234 / 14400 seconds (99 % completed).	
2016-1-SCI-035	No status supplied.	
Target of opportunity for variable AGN	Observed 0 / 1800 seconds (0 % completed).	
2016-2-SCI-020	No status supplied.	
Target of opportunity for variable AGN	Observed 0 / 2400 seconds (0 % completed).	
2016-2-SCI-021	No status supplied.	
Line profile variations in PKS 1020-103	Observed 17356 / 51420 seconds (34 % completed).	
2016-1-SCI-034	No status supplied.	
Line profile variations in PKS 2135-14	Observed 24994 / 74367 seconds (34 % completed).	

2016-1-SCI-033	No status supplied.	
Investigating the activity state of the changing look AGN HE1136-2304	Observed 6447 / 10755 seconds (60 % completed).	
2015-1-SCI-069	No status supplied.	
Target of opportunity for variable AGN	Observed 1535 / 54276 seconds (3 % completed).	

<b>15. INSTRUMENT SIMULATIONS</b>
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<i>No instrument simulations have been included in this proposal..</i>
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The following sections have been generated by the PI using version 2017-1 of the template for Science Proposals. The page limit for these sections is  $4 \times A4$  pages. Font size should not be less than 10 points.

#### 16. SCIENTIFIC RATIONALE

*This section needs to discuss the scientific background and aims of the proposal and why you want to make these observations. This section should not exceed 1000 words. Figures and graphics can be included, or appended in Section 21.*

Based on optical broad band or X ray variations we intend to carry out follow-up spectroscopic observations of dedicated AGN.

#### 17. IMMEDIATE OBJECTIVES

*This section needs to present the plan of how you will use the data you will gather to achieve the science goals set out above. There is a 250 word limit.*

The selection of our targets is based on observations done before in other bands.

#### 18. DATA REQUIREMENTS FOR PROPOSAL COMPLETION

*This section should explain what (if any) other observations are needed to complete the science objectives. If time is requested for more than one semester, the justification should be here. There is a 100 word limit.*

#### 19. TECHNICAL JUSTIFICATION

*This section should be limited to 500 words and needs to clearly demonstrate that you have used the SALT instrument simulation tools to find a configuration which makes sense and matches your science goals, including the S/N required. It needs to verbalize the overall observing strategy and to demonstrate that you understand the overheads involved in the observations and hence a justification of the total time requested.*

We will use the RSS in long-slit mode with PG0900 grating and 2" slit width.

#### 20. REFERENCES

*A list of all relevant references.*

Kollatschny et al. 1985, A&A, 146, L11  
Kollatschny & Zetzl 2010, A&A, 522, 36  
Kollatschny et al. 2015, A&A, 577, L1  
Parker, M. L., Komossa, S., Kollatschny, W., et al. 2016, MNRAS, 461, 1927  
Kollatschny W. 2003, A&A, 407, 461  
Kollatschny et al. 2014, A&A, 566, 106  
Kollatschny et al. 2016, A&A, 585, 18

#### 21. ADDITIONAL RELEVANT FIGURES AND GRAPHICS

*Any additional figures or graphics not already inserted in the text boxes can be placed here, provided the 4 page limit is maintained.*