

Department of Physics and Astronomy

TEL: 021959 2327
Cell: 082 202 3593
11 April 2017
Email: msherbert@uwc.ac.za

806\$(3 80 8:& /LQNDJH 5HSRUW
9LVLW WR 8QLYHUVLW\ RI 0LVVRXUL
6HSWHPEHU WR 2FWREHU

7RZDUGV %XLOGLQJ D 1HZ 80 8:& &ROOD
6XVWDLQDEOH 7HDFKHUV 'HYHORSPHQW 7
3KDVH 1DWXUDO 6FLHQFH 7HDFKHUV %D

6XEPLWWHG E\ 'U 0DUN +HUEHUW
'HSDUWPHQW RI 3K\VLV DQG \$VWL
8QLYHUVLW\ RI WKH :HVWHUQ &D

+RVW 'U 0HHUD &KDQGUDVHNKDU
&XUDWRUV¶ 7HDFKLQJ 3URIHVVR
'HSDUWPHQW RI 3K\VLV DQG \$VWL
8QLYHUVLW\ RI 0LVVRXUL &ROXP

7KDQNV WR VXSSRUW IURP WKH 806\$(B\Q LQNDJ MFSURJUDP U
8QLYHUVLW\ 08 &ROXPELD ZDV D VXFFHVVIXO DQG JRRG H
VWD\ , YLVLWHG WKH 'HSDUWPHQW RI 3K\VLV DQG \$VWU
VFKRRO DQG DW 806\$ 3HG W:K/LQNDJH 3URJUDP DQQLYHUVDU

7KH PDLQ UHDFRQ IRU P\ YLVLW ZDV WR PHHW ZLWK 3URI 0H
WR HVWDEOLVK FROODERUDWLRQV LQ DGGUHVVLQJ WUDLQL
VFLHQFH WHDFKHUV 6SHFWLRF D\KPDUHRH [SKUHVLVWLZLZKHU
VHWXS D SHGDJRJLFDQ EDVH DQG VXVWDLQDEOH WHDFKHU
VHUYLQJ WR VHMUDO VFLHQFH SK\VLFDQ VFLHQFH WHDFKHUV
WHDFKHUV WR GHOLYHU HIIHFWLYH WHDFKLQJ DQG OHDUQL
WHFKQRORJ\ DQG RWKHU PRGHUQ DSSURDFKHV DQG H VW
DQG LQWHUQDWLRQDOO\ WR VKDUH EHVW SUDFWLFHV LQ SK

,Q P\ ILUVW ZHHN RI YLVLW , KDG WKH SULYLOHJH WR PHHW
ZLGH UDQJLQJ H[SHULHQFH LQ WKH HGXFDWLRQ RI € 7

)RU WKH UHVV RI WKH WKUHH ZHHN , DWWHQGHG OHFWX
XQGHUJUDGXDW PDLQ VWUHP SURJUDP ZDV D IDLUO\ EL
DWWHQGHG ZHHNO\ VHPLQDUV ZKLFK WKH\ KDYH IRU DOO W
SK\VLV 7KH VHPLQDU VROH SXUSRVH ZDV WR VWLPXODWH
RXW KRZ WKH\ PDQDJLQJ WKHLU VWXGLHV DQG SURYLGH V
FDUHHU SDWKV LQ SK\VLV , GHILQLWHO\ VHH VRPHWKLQJ C
DW 8:& ,W ZLOO DOVR EXLOG FORVHU UHODWLRQV KLS EHWZ
DQG VKRZ WKDW WKH GHSDUWPHQW FDUHV (DHPXHQWKUHP 0F
SUVHUYLFH SK\VLV FODVV 3K\VLV 7KLV LV D FRXUVH
PDMRUV LQ D KLVVLRQ RULHQWHG FODVV WKDW KDV EH
,QTXLU\ DQG PRGHOLQJ WHFKQLTXHV DUH XVHG LQ WKLV F
PRVW , KDG XVHIXO GLVFXVLRQ ZLWK WKH HDFK RWLW, ZLW
DGDSW PRVW RI WHDFKLQJ RQ SUH HODERUDWLRQ HDSURD
8:& 7KH ODVW ZHHN RGEVFXVLRQV RYHDERUDWLRQ EHW
'HSDUWPHQWV RI 3K\VLV DQG \$VWURQRP\ RI 08 DQG (GXFD
'LVWULFWV LQ :HVWHUQ &DSH SURGHQW QIRURV VHQWRRQ
SKDVH QDWXUHV LHQFH W

7KH H[FKDQJH SURJUDP KDV DOORZHG PH WKH RSSRUWXQLW
ZLWK VWDII DQG VWXGHQWV DW WKH 0LVVRXUL 8QLYHUVLW
ZLWK SK\VLV ZKR DUH HQWKXVLDVWLF DQG SDVVLRQDW
ZLOOLQJ WR VKDUH ZLWK PH WKHLU H[SHULHQFH DQG NQRZ
VXVWDLQDEOH GHYHORSPHQW WUDLQLQJ SURJUDP IRU WHDF
WR FRODERUDWH ZLWK PH RQ WKLV SHURDWRQ ZLWK 3
&KDQGUDVHNKDU DQG KHU FROHDJXHV OHDG WR WKH HVV
'HSDUWPHQWV RI 3K\VLV DQG \$VWURQRP\ RI 08 DQG 8:& D
'LVWULFWV LQ :HVWHUQ &DSH RQ D WKUHH\H DU SLORW SU
3KDVH 1DWXUDO 6FLHQFH 7HDFKHUV ,W LV HQYLVDJHG WKD
RQ WKH WHDFKLQJ DQG OHDUQLQJ RI SK\VLV LQ WKH VHQ
VFKRROV , EHOLHYH WKLV LV WKH EHJLQQLQJ RI D ORQJ DQ

LQ WHUPV RI WKH SODQQLQJ DQG WKH DUUDQJHPHQWV PDC
&KDQGUDRINKRVLQJ PH KHERIDPHDPLW/PDHLQ &ROXPELD
0LVVRXUL SOHDWKH'HSDDWPHQR RI 3K\VLV DQG \$VWURQ
FDPSXV IRU WKH XVH RI WKHLU IDFLOLWLHV