Lunar and Planetary Imaging by George Tarsoudis

# Επεξεργασία εικόνας

#### Ταρσούδη Γιώργου

www.lunat-paplities.com



www.astrothraki.gr



### Φωτογραφική μου διάταξη

### Το σύστημα μου

### VirtualDub



#### Video -> Filters -> Add -> Resize

#### 200% Για να έχουμε ανάλυση 1280Χ960 αντί 640Χ480 του αρχικού μας βίντεο

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Εξετάζουμε αν θέλουμε ένα ένα τα καρέ και με το del κουμπί Η/Υ σβήνουμε τα άχρηστα καρέ. Αφού τελειώσουμε κάνουμε Save το νέο μας AVI αρχείο.

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### Crop περιοχής με resize



### Είμαστε έτοιμοι για την επεξεργασία

от зц

# RegiStax V 4.0

Free software for alignment/stacking/processing of images

Single alignment

**Multi-point Alignment** 

processe

processed

(Copyright © 2006 Cor Berrevoets)

### Εισαγωγή ΑVΙ αρχείου Επιλογή του καλύτερου frame/καρέ

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# Καλά είναι να βλέπουμε και την αρνητική εικόνα του καλύτερου καρέ μας, όταν κάνουμε την επιλογή για το καλύτερο καρέ.

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# Τι είναι το align ???



### Αμέσως μετά το Align βλέπουμε την γραφική παράσταση και σύμφωνα με αυτή ορίζουμε το όριο/Limit μετακινώντας την κάτω μπάρα

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### Στο στάδιο αυτό έχουμε 2 επιλογές : α. Να κάνουμε Optimize κατευθείαν β. Να πάμε να δημιουργήσουμε ένα νέο Reference frame





Processing limited to 2300 frames

#### Προσωπικά εφαρμόζω το (α) στην Σελήνη και το (β) στην Πλανητική

### Καλή λειτουργία είναι και το Resample

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### Μόλις τελειώσει το Optimize είμαστε έτοιμη

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# Τι είναι το stacking???



### Stacking

Ανεβάζει την τιμή του λόγου Σήματος / θόρυβο με ρυθμό ίσο με την ρίζα του αριθμού των εικόνων που είναι για stacking.

π.χ. 9 εικόνες -> 3 φορές
 100 εικόνες -> 10 φορές

Και φυσικά ανεβάζει το λεγόμενο Dynamic Range με αποτέλεσμα να έχουμε μεγαλύτερο εύρος συχνοτήτων και καλύτερο contrast.

# Πριν και μετά το Stacking



# Αν χρησιμοποιήσαμε ΜΑΡ καλά είναι να δούμε τι γίνετε με το διάγραμμα του Stack graph.

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### Βλέπουμε το διάγραμμα για όλα τα align points

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### Βλέπουμε και τα τμήματα των Align points

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### Για να καταλάβουμε τι μας έχει κάνει μέχρι τώρα το Registax δείτε την παρακάτω Stacklist

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#### Τελειώνοντας φτάνουμε στο τελευταίο τμήμα της επεξεργασίας του Registax και αν όλα είχαν πάει καλά παίρνουμε μια εικόνα σαν την παρακάτω.



# Η πρώτη ρύθμιση που κάνω είναι να έχει η εικόνα μου καλό contrast

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### Αν θέλουμε και πρέπει πειράζουμε και το Gamma

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#### Ακόμη και εδώ έχουμε την δυνατότητα να δούμε τα Align points



#### Χρήση παραθύρου Zoom & ρύθμιση των Wavelets



the second se

# Προσωπικά κρατάω μερικές ρυθμίσεις των Wavelets ανάλογα με το αντικείμενο που επεξεργάζομαι



# Τελειώνοντας με τις ρυθμίσεις μας κάνουμε εφαρμογή σε όλη την εικόνα Do all



#### Πολύ καλή εφαρμογή είναι και το Resize Image του Registax, συνήθως κρατάω και μια τελική έκδοση της εικόνας σε 200%



### Πολλές φορές αν και δεν το χρησιμοποιώ στην Σελήνη δοκιμάζω να χρησιμοποιήσω την τελική εικόνα μου σαν μια νέα Reference Image

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### Ρύθμιση με Grey scale για σωστή απόδοση contrast & brightness



### Σύνθεση L-RGB με <u>MaximDL</u>ή με το <u>Photoshop</u>



# Πάμε για Άρη

